

Mental Health Disorders

SOURCEBOOK

EIGHTH EDITION

Provides Basic Consumer Health Information about Healthy Brain Functioning and Mental Illnesses: Including Depression, Bipolar Disorder (BPD), Anxiety Disorders (ADs), Posttraumatic Stress Disorder (PTSD), Obsessive-Compulsive Disorder (OCD), Psychotic and Personality Disorders, Eating Disorders, Impulse Control Disorders (ICDs), and More.

Along with Information about Heredities and Treatments, Mental Health Concerns in Specific Groups Such as Children, Adolescents, Older Adults, Minority Populations, and Lesbian, Gay, Bisexual and Transsexual, a Glossary of Terms Related to Mental Health, and Directories of Resources for Additional Help and Information.

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Kevin Hayes, *Managing Editor*

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Preface

ABOUT THIS BOOK

Mental health encompasses thoughts, actions, and feelings. Individuals who are mentally healthy are able to cope with challenges in life, handle stress, deal with anger, maintain meaningful relationships with others, and enjoy a normal life. Despite the benefits, maintaining a healthy mind is not always possible, hence mental disorders are common. According to the 2019 National Survey on Drug Use and Health (NSDUH) by the Substance Abuse and Mental Health Services Administration (SAMHSA), at least one in five adults in the United States live with a mental disorder. Mental illnesses include various conditions that differ in degree of severity, ranging from mild to moderate to severe and estimates suggest that only half of people with mental illnesses receive treatment.

Mental Health Disorders Sourcebook, Eighth Edition discusses how the brain works, the components of mental health, and about developing and reinforcing mental wellness. It details the major types of mental illness and their treatments, including depressive disorders, anxiety disorders, psychotic disorders, personality disorders, and disorders that impact behavior, including impulse control disorders (ICDs), addictions, and eating disorders. A special section looks at pediatric mental-health concerns and another examines the distinctive concerns of other specific populations. Information about the relationship between mental health and other co-occurring illnesses, such as cancer, epilepsy, heart disease, pain, and sleep disorder, are also included. The book concludes with a glossary of terms related to mental health, a list of crisis hotlines, and a directory of mental-health organizations.

HOW TO USE THIS BOOK

This book is divided into parts and chapters. Parts focus on broad areas of interest. Chapters are devoted to single topics within a part.

Part 1: The Brain and Mental Health explains the components of healthy brain functioning and the statistics. It also discusses lifestyle and other factors that can help reinforce mental wellness such as controlling anger, coping with grief and breakup, and tips on handling stress.

Part 2: Mental Illnesses begins with information about the various classifications of mental-health disorders, including depressive disorders, anxiety disorders, psychotic disorders, personality disorders, and other disorders that impact behavior. It also includes details on the reproductive health, mania and hypomania, and postpartum depression.

Part 3: Pediatric Mental-Health Concerns describes the special issues that arise when children and teens have psychiatric needs. It offers specific details about some of the most commonly occurring mental-health issues among young people, including attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), learning disabilities (LDs), depression, and bipolar disorder.

Part 4: Other Populations with Distinctive Mental-Health Concerns addresses mental health concerns among men, women, older adults, and other groups. It includes issues that deal with the psychological impact of prejudice and discrimination by people of different sexual identity, people who have experienced trauma, disaster, or loss, and health issues that can arise for minority or immigrant population.

Part 5: Mental-Health Treatments addresses the different ways mental-health disorders are diagnosed and treated. It offers guidelines for identifying mental-health emergencies, explains the services available from different types of mental-health professionals, and discusses the medications used to help control symptoms of mental illness. The part also includes chapters about complementary and alternative medicine (CAM) for mental healthcare, types of therapies that are available, health insurance and its features, and how technology plays an important role in medical treatment.

Part 6: Mental Illness Co-occurring with Other Disorders explains the ways physical conditions can sometimes affect psychological well-being. It discusses some specific disorders commonly associated with changes in mental-health status, including cancer, diabetes, epilepsy, heart disease, and stroke. It also addresses issues related to sleep disorders and mental functioning, and it examines the complex relationship between mental health and the experience of pain.

Part 7: Additional Help and Information provides a glossary of terms related to mental health, a list of toll-free helplines and hotlines for people in crisis, and a directory of mental-health organizations.

BIBLIOGRAPHIC NOTE

This volume contains documents and excerpts from publications issued by the following U.S. government agencies: Centers for Disease Control and Prevention (CDC); Centers for Medicare & Medicaid Services (CMS); ClinicalTrials.gov; Early Childhood Learning and Knowledge Center (ECLKC); girlshealth.gov; HIV.gov; MedlinePlus; Mental Illness Research, Education and Clinical Centers (MIRECC); MentalHealth.gov; National Cancer Institute (NCI); National Center for Complementary and Integrative Health (NCCIH); National Center for Posttraumatic Stress Disorder (NCPTSD); National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); National Institute of Mental Health (NIMH); National Institute of Neurological Disorders and Stroke (NINDS); National Institute on Aging (NIA); National Institute on Drug Abuse (NIDA); *NIH News in Health*; Office of Disease Prevention and Health Promotion (ODPHP); Office of Minority Health (OMH); Office of the Assistant Secretary for Preparedness and Response (ASPR); Office on Women's Health (OWH); Substance Abuse and Mental Health Services Administration (SAMHSA); U.S. Department of Health and Human Services (HHS); and Youth.gov.

It also contains original material produced by Omnigraphics and reviewed by medical consultants.

ABOUT THE HEALTH REFERENCE SERIES

The *Health Reference Series* is designed to provide basic medical information for patients, families, caregivers, and the general public. Each volume provides comprehensive coverage on a particular topic. This is especially important for people who may be dealing with a newly diagnosed disease or a chronic disorder in themselves or in a family member. People looking for preventive guidance, information about disease warning signs, medical statistics, and risk factors for health problems will also find answers to their questions in the *Health Reference Series*. The *Series*, however, is not intended to serve as a tool for diagnosing illness, in prescribing treatments, or as a substitute for the physician–patient relationship. All people concerned about medical symptoms or the possibility of disease are encouraged to seek professional care from an appropriate healthcare provider.

A NOTE ABOUT SPELLING AND STYLE

Health Reference Series editors use *Stedman's Medical Dictionary* as an authority for questions related

to the spelling of medical terms and *The Chicago Manual of Style* for questions related to grammatical structures, punctuation, and other editorial concerns. Consistent adherence is not always possible, however, because the individual volumes within the *Series* include many documents from a wide variety of different producers, and the editor's primary goal is to present material from each source as accurately as is possible. This sometimes means that information in different chapters or sections may follow other guidelines and alternate spelling authorities. For example, occasionally a copyright holder may require that eponymous terms be shown in possessive forms (Crohn's disease vs. Crohn disease) or that British spelling norms be retained (leukaemia vs. leukemia).

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HEALTH REFERENCE SERIES UPDATE POLICY

The inaugural book in the *Health Reference Series* was the first edition of *Cancer Sourcebook* published in 1989. Since then, the *Series* has been enthusiastically received by librarians and in the medical community. In order to maintain the standard of providing high-quality health information for the layperson the editorial staff at Omnigraphics felt it was necessary to implement a policy of updating volumes when warranted.

Medical researchers have been making tremendous strides, and it is the purpose of the *Health Reference Series* to stay current with the most recent advances. Each decision to update a volume is made on an individual basis. Some of the considerations include how much new information is available and the feedback we receive from people who use the books. If there is a topic you would like to see added to the update list, or an area of medical concern you feel has not been adequately addressed, please write to:

Managing Editor

Health Reference Series

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Part 1 | **The Brain and Mental Health**

Chapter 1 | Mental Health Begins with Healthy Brain Functions

Chapter Contents

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Section 1.1 | Brain Basics

This section includes text excerpted from “Brain Basics: Know Your Brain,” National Institute of Neurological Disorders and Stroke (NINDS), June 9, 2021.

The brain is the most complex part of the human body. This three-pound organ is the seat of intelligence, interpreter of the senses, initiator of body movement, and controller of behavior. Lying in its bony shell and washed by protective fluid, the brain is the source of all the qualities that define our humanity. The brain is the crown jewel of the human body.

For centuries, scientists and philosophers have been fascinated by the brain, but until recently they viewed the brain as nearly incomprehensible. Now, however, the brain is beginning to relinquish its secrets. Scientists have learned more about the brain in the last ten years than in all previous centuries because of the accelerating pace of research in neurological and behavioral science and the development of new research techniques. As a result, Congress named the 1990s the Decade of the Brain. At the forefront of research on the brain and other elements of the nervous system is the National Institute of Neurological Disorders and

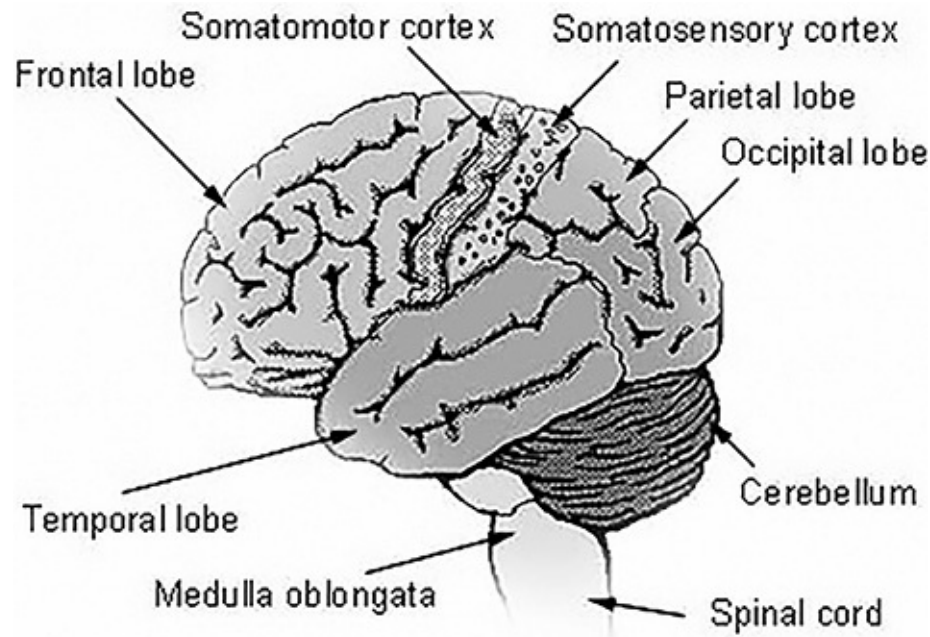


Figure 1.1. Know Your Brain (Source: “Brain,” Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute (NCI).)

Stroke (NINDS), which conducts and supports scientific studies in the United States and around the world.

This section is a basic introduction to the human brain. It may help you understand how the healthy brain works, how to keep it healthy, and what happens when the brain is diseased or dysfunctional.

THE ARCHITECTURE OF THE BRAIN

The brain is like a committee of experts. All the parts of the brain work together, but each part has its own

special properties. The brain can be divided into three basic units: the forebrain, the midbrain, and the hindbrain.

The hindbrain includes the upper part of the spinal cord, the brain stem, and a wrinkled ball of tissue called the “cerebellum.” The hindbrain controls the body’s vital functions such as respiration and heart rate. The cerebellum coordinates movement and is involved in learned rote movements. When you play the piano or hit a tennis ball you are activating the cerebellum. The uppermost part of the brainstem is the midbrain, which controls some reflex actions and is part of the circuit involved in the control of eye movements and other voluntary movements. The forebrain is the largest and most highly developed part of the human brain: it consists primarily of the cerebrum and the structures hidden beneath it.

When people see pictures of the brain it is usually the cerebrum that they notice. The cerebrum sits at the topmost part of the brain and is the source of intellectual activities. It holds your memories, allows you to plan, enables you to imagine and think. It allows you to recognize friends, read books, and play games.

The cerebrum is split into two halves (hemispheres) by a deep fissure. Despite the split, the two cerebral hemispheres communicate with each other through a thick tract of nerve fibers that lies at the base of this fissure. Although the two hemispheres seem to be mirror images of each other, they are different. For instance, the ability to form words seems to lie primarily in the left hemisphere, while the right hemisphere seems to control many abstract reasoning skills.



Figure 1.2. Forebrain



Figure 1.3. Midbrain



Figure 1.4. Hindbrain

For some as-yet-unknown reason, nearly all of the signals from the brain to the body and vice-versa cross over on their way to and from the brain. This means that the right cerebral hemisphere primarily controls the left side of the body and the left hemisphere primarily controls the right side. When one side of the brain is damaged, the opposite side of the body is affected. For example, a stroke in the right hemisphere of the brain can leave the left arm and leg paralyzed.

THE GEOGRAPHY OF THOUGHT

Each cerebral hemisphere can be divided into sections, or lobes, each of which specializes in different functions. To understand each lobe and its specialty we will take a tour of the cerebral hemispheres, starting with the two frontal lobes, which lie directly behind the forehead. When you plan a schedule, imagine the future, or use reasoned arguments, these two lobes do much of the work. One of the ways the frontal lobes seem to do these things is by acting as short-term storage sites, allowing one idea to be kept in mind while other ideas are considered. In the rearmost portion of each frontal lobe is a motor area, which helps control voluntary movement. A nearby place on the left frontal lobe called “Broca area” allows thoughts to be transformed into words.

When you enjoy a good meal – the taste, aroma, and texture of the food – two sections behind the frontal lobes called the “parietal lobes” are at work. The forward parts of these lobes, just behind the motor areas, are the primary sensory areas. These areas receive information about temperature, taste, touch, and movement from the rest of the body. Reading and arithmetic are also functions in the repertoire of each parietal lobe.

As you look at the words and pictures on this section, two areas at the back of the brain are at work. These lobes, called the “occipital lobes,” process images from the eyes and link that information with images stored in memory. Damage to the occipital lobes can cause blindness.

The last lobes on our tour of the cerebral hemispheres are the temporal lobes, which lie in front of the visual areas and nest under the parietal and frontal lobes. Whether you appreciate symphonies or rock music, your brain responds through the activity of these lobes. At the top of each temporal lobe is an area responsible for receiving information from the ears. The underside of each temporal lobe plays a crucial role in forming and retrieving memories, including those associated with music. Other parts of this lobe seem to integrate memories and sensations of taste, sound, sight, and touch.

THE CEREBRAL CORTEX

Coating the surface of the cerebrum and the cerebellum is a vital layer of tissue the thickness of a stack of two or three dimes. It is called the “cortex,” from the Latin word for bark. Most of the actual information processing in the brain takes place in the cerebral cortex. When people talk about “gray matter” in the brain they are talking about this thin rind. The cortex is gray because nerves in this area lack the insulation that makes most other parts of the brain appear to be white. The folds in the brain add to its surface area and therefore increase the amount of gray matter and the quantity of information that can be processed.

THE INNER BRAIN

Deep within the brain, hidden from view, lie structures that are the gatekeepers between the spinal cord and the cerebral hemispheres. These structures not only determine our emotional state, they also modify our perceptions and responses depending on that state, and allow us to initiate movements that you make without thinking about them. Like the lobes in the cerebral hemispheres, the structures described below come in pairs: each is duplicated in the opposite half of the brain.

The hypothalamus, about the size of a pearl, directs a multitude of important functions. It wakes you up in the morning, and gets the adrenaline flowing during a test or job interview. The hypothalamus is also an important emotional center, controlling the molecules that make you feel exhilarated, angry, or unhappy. Near the hypothalamus lies the thalamus, a major clearinghouse for information going to and from the spinal cord and the cerebrum.

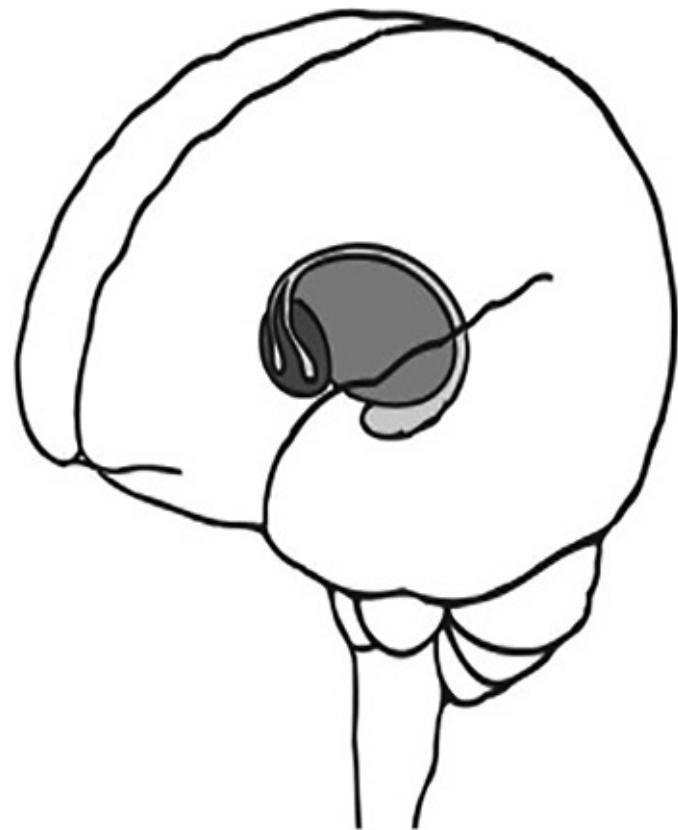


Figure 1.5. The Inner Brain

An arching tract of nerve cells leads from the hypothalamus and the thalamus to the hippocampus. This tiny nub acts as a memory indexer – sending memories out to the appropriate part of the cerebral hemisphere for long-term storage and retrieving them when necessary. The basal ganglia are clusters of nerve cells surrounding the thalamus. They are responsible for initiating and integrating movements.

Parkinson disease, which results in tremors, rigidity, and a stiff, shuffling walk, is a disease of nerve cells that lead into the basal ganglia.

MAKING CONNECTIONS

The brain and the rest of the nervous system are composed of many different types of cells, but the primary functional unit is a cell called the “neuron.” All sensations, movements, thoughts, memories, and feelings are the result of signals that pass through neurons. Neurons consist of three parts. The cell body contains the nucleus, where most of the molecules that the neuron needs to survive and function are manufactured. Dendrites extend out from



Figure 1.6. Axons

the cell body like the branches of a tree and receive messages from other nerve cells. Signals then pass from the dendrites through the cell body and may travel away from the cell body down an axon to another neuron, a muscle cell, or cells in some other organ. The neuron is usually surrounded by many support cells. Some types of cells wrap around the axon to form an insulating sheath. This sheath can include a fatty molecule called “myelin,” which provides insulation for the axon and helps nerve signals travel faster and farther. Axons may be very short, such as those that carry signals from one cell in the cortex to another cell less than a hair’s width away. Or axons may be very long, such as those that carry messages from the brain all the way down the spinal cord.

Scientists have learned a great deal about neurons by studying the synapse – the place where a signal passes from the neuron to another cell. When the signal reaches the end of the axon it stimulates the

release of tiny sacs. These sacs release chemicals known

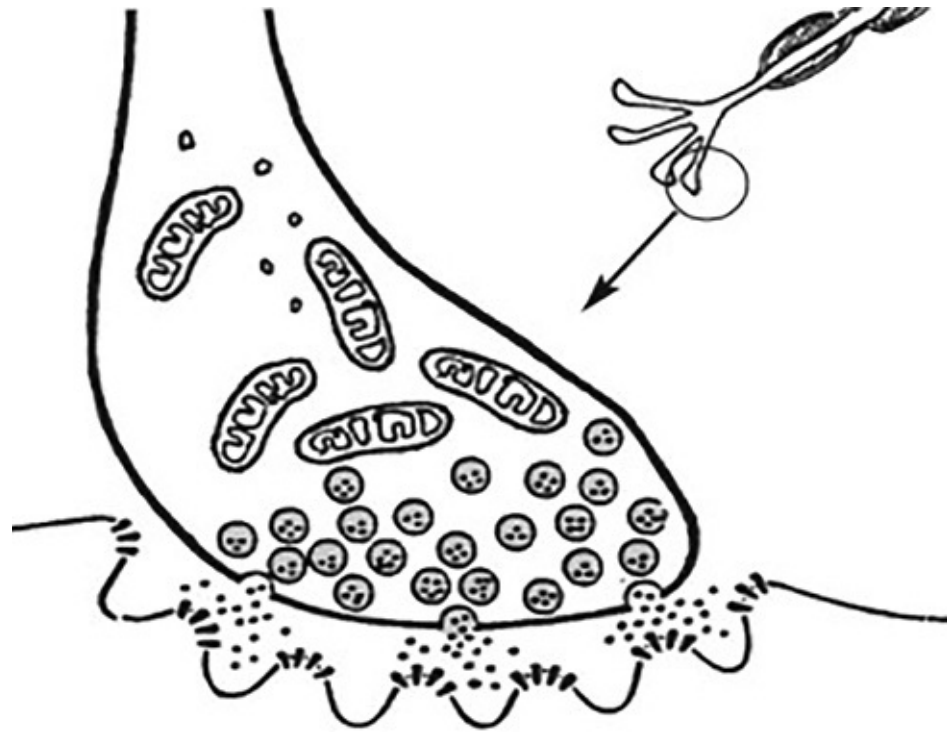


Figure 1.7. Cell Body

as “neurotransmitters” into the synapse. The neurotransmitters cross the synapse and attach to receptors on the neighboring cell. These receptors can change the properties of the receiving cell. If the receiving cell is also a neuron, the signal can continue the transmission to the next cell.

SOME KEY NEUROTRANSMITTERS AT WORK

Neurotransmitters are chemicals that brain cells use to talk to each other. Some neurotransmitters make cells more active (called “excitatory”) while others block or dampen a cell’s activity (called “inhibitory”).

Acetylcholine is an excitatory neurotransmitter because it generally makes cells more excitable. It governs muscle contractions and causes glands to secrete hormones. Alzheimer disease, which initially affects memory formation, is associated with a shortage of acetylcholine.

Glutamate is a major excitatory neurotransmitter. Too much glutamate can kill or damage neurons and has been linked to disorders including Parkinson disease, stroke, seizures, and increased sensitivity to pain.

GABA (gamma-aminobutyric acid) is an inhibitory neurotransmitter that helps control muscle activity and is an important part of the visual system. Drugs that increase GABA levels in the brain are used to treat epileptic seizures and tremors in patients with Huntington disease.

Serotonin is a neurotransmitter that constricts blood vessels and brings on sleep. It is also involved in temperature regulation. Low levels of serotonin may cause sleep problems and depression, while too much serotonin can lead to seizures.

Dopamine is an inhibitory neurotransmitter involved in mood and the control of complex movements. The loss of dopamine activity in some portions of the brain leads to the muscular rigidity of Parkinson disease. Many medications used to treat behavioral disorders work by modifying the action of dopamine in the brain.

NEUROLOGICAL DISORDERS

The brain is one of the hardest working organs in the body. When the brain is healthy it functions quickly and automatically. But when problems occur, the results can be devastating. Some 100 million Americans suffer from devastating brain disorders at some point in their lives. The NINDS supports research on more than 600 neurological diseases. Some of the major types of disorders include: neurogenetic diseases (such as Huntington disease and muscular dystrophy), developmental disorders (such as cerebral palsy), degenerative diseases of adult life (such as Parkinson disease and Alzheimer disease), metabolic diseases (such as Gaucher disease), cerebrovascular diseases (such as stroke and vascular dementia), trauma (such as spinal cord and head injury), convulsive disorders (such as epilepsy), infectious diseases (such as AIDS dementia), and brain tumors. Knowing more about the brain can lead to the development of new treatments for diseases and disorders of the nervous system and improve many areas of human health.

Section 1.2 | Mental-Health Problems

This section contains text excerpted from the following sources: Text under the heading “What Is Mental Health?” is excerpted from “What Is Mental Health?” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), May 28, 2020; Text beginning with the heading “What Are Mental Disorders?” is excerpted from “Mental Health,” MedlinePlus, National Institutes of Health (NIH), April 2, 2015. Reviewed August 2021.

WHAT IS MENTAL HEALTH?

Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood.

Over the course of your life, if you experience mental-health problems, your thinking, mood, and behavior could be affected.

Mental-health problems are common but help is available. People with mental-health problems can get better and many recover completely.

WHAT ARE MENTAL DISORDERS?

Mental disorders are serious conditions which can affect your thinking, mood, and behavior. They may be occasional or long-lasting. They can affect your ability to relate to others and function each day. Mental disorders are common; more than half of all Americans will be diagnosed with one at some time in their life. But, there are treatments. People with mental disorders can get better, and many of them recover completely.

WHY IS MENTAL HEALTH IMPORTANT?

Mental health is important because it can help you to:

- Cope with the stresses of life
- Be physically healthy
- Have good relationships
- Make meaningful contributions to your community
- Work productively
- Realize your full potential

Your mental health is also important because it can affect your physical health. For example, mental disorders can raise your risk for physical health problems such as stroke, type 2 diabetes, and heart disease.

WHAT CAN AFFECT YOUR MENTAL HEALTH?

There are many different factors that can affect your mental health, including:

- Biological factors, such as genes or brain chemistry
- Life experiences, such as trauma or abuse
- Family history of mental-health problems
- Your lifestyle, such as diet, physical activity, and substance use

You can also affect your mental health by taking steps to improve it, such as doing meditation, using relaxation techniques, and practicing gratitude.

CAN YOUR MENTAL HEALTH CHANGE OVER TIME?

Over time, your mental health can change. For example, you may be dealing with a difficult situation, such as trying to manage a chronic illness, taking care of an ill relative, or facing money problems. The situation may wear you out and overwhelm your ability to cope with it. This can worsen your mental health. On the other hand, getting therapy may improve your mental health.

WHAT ARE THE SIGNS THAT YOU MIGHT HAVE A MENTAL-HEALTH PROBLEM?

When it comes to your emotions, it can be hard to know what is normal and what is not. There are warning signs that you may have a mental-health problem, including:

- A change in your eating or sleeping habits
- Withdrawing from the people and activities you enjoy
- Having low or no energy
- Feeling numb or like nothing matters
- Having unexplained aches and pains
- Feeling helpless or hopeless
- Smoking, drinking, or using drugs more than usual
- Feeling unusually confused, forgetful, angry, upset, worried, or scared
- Having severe mood swings that cause problems in your relationships
- Having thoughts and memories that you cannot get out of your head
- Hearing voices or believing things that are not true
- Thinking of harming yourself or others
- Not being able to perform daily tasks like taking care of your kids or getting to work or school

WHAT SHOULD YOU DO IF YOU THINK YOU HAVE A MENTAL-HEALTH PROBLEM?

If you think that you may have a mental-health problem, get help. Talk therapy and/or medicines can treat mental disorders. If you do not know where to start, contact your primary care provider.

Section 1.3 | Impact and Determinants of Mental Health

This section includes text excerpted from "Mental Health," Office of Disease Prevention and Health Promotion (ODPHP), U.S. Department of Health and Human Services (HHS), October 31, 2011. Reviewed August 2021.

The burden of mental illness in the United States is among the highest of all diseases, and mental disorders are among the most common causes of disability. Figures suggest that, in 2004, approximately 1 in 4 adults in the United States had a mental-health disorder in the past year – most commonly anxiety or depression – and 1 in 17 had a serious mental illness. Mental-health disorders also affect children and adolescents at an increasingly alarming rate; in 2010, 1 in 5 children in the United States had a mental-

health disorder, most commonly attention deficit hyperactivity disorder (ADHD). It is not unusual for either adults or children to have more than one mental-health disorder.

Mental-health is essential to a person's well-being, healthy family and interpersonal relationships, and the ability to live a full and productive life. People, including children and adolescents, with untreated mental-health disorders are at high risk for many unhealthy and unsafe behaviors, including alcohol or drug abuse, violent or self-destructive behavior, and suicide – the 11th leading cause of death in the United States for all age groups and the second leading cause of death among people age 25 to 34.

Mental-health disorders also have a serious impact on physical health and are associated with the prevalence, progression, and outcome of some of today's most pressing chronic diseases, including diabetes, heart disease, and cancer. Mental-health disorders can have harmful and long-lasting effects – including high psychosocial and economic costs – not only for people living with the disorder, but also for their families, schools, workplaces, and communities.

Fortunately, a number of mental-health disorders can be treated effectively, and prevention of mental-health disorders is a growing area of research and practice. Early diagnosis and treatment can decrease the disease burden of mental-health disorders as well as associated chronic diseases. Assessing and addressing mental-health remains important to ensure that all Americans lead longer, healthier lives.

HEALTH IMPACT OF MENTAL HEALTH

Mental health and physical health are inextricably linked. Evidence has shown that mental-health disorders – most often depression – are strongly associated with the risk, occurrence, management, progression, and outcome of serious chronic diseases and health conditions, including diabetes, hypertension, stroke, heart disease, and cancer. This association appears to be caused by mental-health disorders that precede chronic disease; chronic disease can intensify the symptoms of mental-health disorders – in effect creating a cycle of poor health. This cycle decreases a person's ability to participate in the treatment of and recovery from mental-health disorders and chronic disease. Therefore, while efforts are underway to reduce the burden of death and disability caused by chronic disease in the United States, simultaneously improving mental health nationwide is critical to improving the health of all Americans.

MENTAL HEALTH ACROSS THE LIFE STAGES

Mental-health disorders are a concern for people of all ages, from early childhood through old age.

Children and Adolescents

- Approximately 20 percent of U.S. children and adolescents are affected by mental-health disorders during their lifetime. Often, symptoms of anxiety disorders emerge by age 6, behavior disorders by age 11, mood disorders by age 13, and substance-use disorders (SUDs) by age 15.
- 15 percent of high-school students have seriously considered suicide, and 7 percent have attempted to take their own life.
- Mental-health disorders among children and adolescents can lead to school failure, alcohol or other drug abuse, family discord, violence, and suicide.

Adults

- It is estimated that only about 17 percent of U.S. adults are considered to be in a state of optimal mental health.
- An estimated 26 percent of Americans age 18 and older are living with a mental-health disorder in any given year, and 46 percent will have a mental-health disorder over the course of their

lifetime.

- Almost 15 percent of women who recently gave birth reported symptoms of postpartum depression.

Older Adults

- Alzheimer disease is among the 10 leading causes of death in the United States. It is the 6th leading cause of death among American adults and the 5th leading cause of death for adults age 65 years and older.
- Among nursing home residents, 18.7 percent of people aged 65 to 74, and 23.5 percent of people aged 85 and older have reported mental illness.

DETERMINANTS OF MENTAL HEALTH

Several factors have been linked to mental health, including race and ethnicity, gender, age, income level, education level, sexual orientation, and geographic location. Other social conditions – such as interpersonal, family, and community dynamics, housing quality, social support, employment opportunities, and work and school conditions – can also influence mental-health risk and outcomes, both positively and negatively. For example, safe shared places for people to interact, such as parks and churches, can support positive mental health. A better understanding of these factors, how they interact, and their impact is key to improving and maintaining the mental health of all Americans.

Chapter 2 | The Components of Mental Health

Chapter Contents

[Section 2.1—Good Mental Health](#)

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[Section 2.3—Mental and Emotional Well-Being](#)

Section 2.1 | Good Mental Health

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Good Mental Health,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), August 28, 2018; Text beginning with the heading “How Does What You Eat and Drink Affect My Mental Health?” is excerpted from “Steps to Good Mental Health,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), August 28, 2018.

Good mental health means you are able to cope with daily stresses and accomplish personal goals. Many things, such as trauma, stress, and sleep problems, can affect your mental health. You may not be able to prevent a mental-health condition, but you can take steps to protect and support your mental health throughout your life.

HOW DOES WHAT YOU EAT AND DRINK AFFECT YOUR MENTAL HEALTH?

The foods you eat and what you drink can have a direct effect on your energy levels and mood. Researchers think that eating healthier foods can have a positive effect on your mood.

- Getting the right balance of nutrients, including enough fiber and water, can help your mood stay stable. Sugary, processed foods increase your blood sugar and then make you feel tired and irritable when your blood sugar levels drop.
- Some vitamins and minerals may help with the symptoms of depression. Experts are researching how a lack of some nutrients is linked to depression in new mothers. These include selenium, omega-3 fatty acids, folate, vitamin B₁₂, calcium, iron, and zinc.
- Drinking too much alcohol can lead to mental- and physical-health problems.
- Drinks with caffeine can make it harder for you to sleep, which can make some mental-health conditions worse. Also, drinking caffeine regularly and then suddenly stopping can cause caffeine withdrawal, which can make you irritable and give you headaches. Do not have drinks with caffeine within 5 hours of going to sleep.

Eating nutritious foods may not cure a mental-health condition, but eating healthy is a good way to start feeling better. Ask your doctor or nurse for more information about the right foods to eat to help keep your mind and body healthy. You can also visit one of these sites for healthy and free recipe ideas and meal plans:

- Delicious Heart Healthy Recipes from the U.S. Department of Health and Human Services (HHS)
- What is Cooking? USDA Mixing Bowl from the U.S. Department of Agriculture
- Eat Well on \$4/Day: Good and Cheap by Leanne Brown

HOW DOES PHYSICAL ACTIVITY AFFECT YOUR MENTAL HEALTH?

Physical activity can help your mental health in several ways:

- **Aerobic exercise can boost your mood.** Your body makes certain chemicals, called “endorphins,” during and after your workout. Endorphins relieve stress and make you feel calmer.
- **Getting physical activity during the day can make it easier to sleep at night.** Creating a routine can help you stay motivated and build a habit of getting regular physical activity.
- **Physical activity may help with depression and anxiety symptoms.** Studies show that regular aerobic exercise boosts your mood and lowers anxiety and depression.
- **Physical activity may help slow or stop weight gain,** which is a common side effect of some

medicines used to treat mental-health conditions.

Regular physical activity can benefit your health over the long term. Getting active every day (at least 30 minutes a day of moderate-intensity aerobic activity, like brisk walking) helps maintain your health. All Americans should also do strengthening exercises at least 2 days a week to build and maintain muscles. Your doctor or nurse may recommend exercise in addition to taking medicine and getting counseling for mental-health conditions.

HOW DOES AGING AFFECT YOUR MENTAL HEALTH?

As you age, your body and brain change. These changes can affect your physical and mental health. Older women may face more stressful living or financial situations than men do, because women live longer on average. They may also have spent more time staying home to raise children or care for loved ones instead of working outside of the home.

In the years leading up to menopause (perimenopause), women may experience shifts in mood because of hormone changes. They may also experience hot flashes, problems sleeping, and other symptoms that can make it harder to deal with stress or other life changes.

HOW DOES YOUR PHYSICAL HEALTH AFFECT YOUR MENTAL HEALTH?

People who are not physically healthy may have trouble staying mentally healthy. People living with chronic (long-term) health problems such as diabetes and heart disease are often more likely to have higher stress levels, depression, and anxiety. Researchers are not sure which problems happen first, but many people have a chronic disease and a mental-health condition. Having a chronic disease does not always mean you will have a mental-health condition, but if you are struggling with both, know that you are not alone. Support groups and health-care professionals can help. Healthy habits, like eating healthy and getting exercise, that help improve many chronic diseases may also help improve mental-health conditions.

HOW DOES SMOKING, DRINKING ALCOHOL, OR MISUSING DRUGS AFFECT MENTAL HEALTH?

The chemicals in tobacco and alcohol can change the chemicals in your brain, making you more likely to feel depressed or anxious. People with mental-health conditions are also more likely to smoke and drink alcohol.

Using illegal drugs, or misusing prescription drugs, is also linked to mental-health conditions. Researchers are not sure whether drugs can cause mental-health conditions, whether mental-health conditions cause addiction, or whether both are linked to another health problem. People who have experienced trauma, whether physical or emotional (or both), are more likely to misuse drugs and alcohol.

- Get tips for women about quitting smoking at women.smokefree.gov.
- Learn more about how alcohol and other substances are related to mental-health conditions.

HOW DO TRAUMATIC OR NEGATIVE CHILDHOOD EVENTS AFFECT MENTAL HEALTH?

Two out of every three women have experienced at least one serious traumatic or negative event during childhood, increasing their risk of adult health problems, including mental-health conditions.

- Traumatic events can include physical or sexual abuse, neglect, bullying, neighborhood violence, natural disasters, terrorism, and war. While many people in the United States experience at least one traumatic event in their lifetime, most do not suffer long-term problems

as a result.

- Negative events during childhood can include abuse (physical, emotional, verbal, or sexual), neglect, or a problem with an adult in the home, such as seeing domestic violence or having a caregiver go to prison. The more negative childhood events you have experienced, the higher your risk of a serious health problem as an adult.

Women are more likely than men to experience certain types of trauma, such as sexual abuse or assault, and are at higher risk of developing a mental-health condition.

WHAT ELSE CAN AFFECT YOUR MENTAL HEALTH?

Mental-health conditions affect women of all races and ethnicities. But, your environment – where and how you live – can have an effect on your mental health. Women who grew up in poverty or who live in poverty as adults and women in a sexual minority (such as women who identify as lesbian or bisexual) may be more likely to experience mental-health conditions, such as depression.

- Some studies show that children who grow up in poverty can have a higher risk of developing certain mental-health conditions, including depression and posttraumatic stress disorder, as adults.
- Children who witness domestic violence (also called “intimate partner violence”) are more likely to develop mental-health conditions, such as depression and anxiety, as adults.
- Lesbians and bisexual women are at higher risk of mood and anxiety disorders than heterosexual women.

DO PAST OR CURRENT DIFFICULTIES IN LIFE MEAN YOU WILL DEVELOP A MENTAL HEALTH CONDITION?

No. Many people experience major stress in life, including poverty, unemployment, trauma, abuse, family difficulties, or chronic health problems. Experiencing these stressful situations does not mean you will definitely develop a mental-health condition. But, if you do experience serious, stressful situations and develop a mental-health condition, know that it is not your fault. You can get help and treatment for mental-health conditions.

Learning ways to manage stress and reaching out for help when you need it can help you protect your mental health.

Section 2.2 | Good Emotional Health

This section includes text excerpted from “Positive Emotions and Your Health,” NIH News in Health, National Institutes of Health (NIH), August 10, 2015. Reviewed August 2021.

DEVELOPING A BRIGHTER OUTLOOK

Do you tend to look on the sunny side, or do you see a future filled with dark, stormy skies? A growing body of research suggests that having a positive outlook can benefit your physical health. NIH-funded scientists are working to better understand the links between your attitude and your body. They are finding some evidence that emotional wellness can be improved by developing certain skills.

Having a positive outlook does not mean you never feel negative emotions, such as sadness or anger, says Dr. Barbara L. Fredrickson, a psychologist and expert on emotional wellness at the University of North Carolina, Chapel Hill. “All emotions – whether positive or negative – are adaptive in the right circumstances. The key seems to be finding a balance between the two,” she says.

“Positive emotions expand our awareness and open us up to new ideas, so we can grow and add to our toolkit for survival,” Fredrickson explains. “But, people need negative emotions to move through difficult situations and respond to them appropriately in the short term. Negative emotions can get us into trouble, though, if they are based on too much rumination about the past or excessive worry about the future, and they are not really related to what is happening in the here and now.”

People who are emotionally well, experts say, have fewer negative emotions and are able to bounce back from difficulties faster. This quality is called “resilience.” Another sign of emotional wellness is being able to hold onto positive emotions longer and appreciate the good times. Developing a sense of meaning and purpose in life – and focusing on what is important to you – also contributes to emotional wellness.

Research has found a link between an upbeat mental state and improved health, including lower blood pressure, reduced risk for heart disease, healthier weight, better blood sugar levels, and longer life. But, many studies cannot determine whether positive emotions lead to better health, if being healthy causes positive emotions, or if other factors are involved.

“While earlier research suggests an association between positive emotions and health, it does not reveal the underlying mechanisms,” says Dr. Richard J. Davidson, a neuroscientist at the University of Wisconsin-Madison. “To understand the mechanisms, I think it will be crucial to understand the underlying brain circuits.”

By using brain imaging, Davidson and others have found that positive emotions can trigger “reward” pathways located deep within the brain, including in an area known as the “ventral striatum.”

“Individuals who are able to savor positive emotions have lasting activation in the ventral striatum,” Davidson says. “The longer the activation lasts, the greater her or his feelings of well-being.” Continued activation of this part of the brain has been linked to healthful changes in the body, including lower levels of a stress hormone.

Negative emotions, in contrast, can activate a brain region known as the “amygdala,” which plays a role in fear and anxiety. “We have shown that there are big differences among people in how rapidly or slowly the amygdala recovers following a threat,” Davidson says. “Those who recover more slowly may be more at risk for a variety of health conditions compared to those who recover more quickly.”

Among those who appear more resilient and better able to hold on to positive emotions are people who have practiced various forms of meditation. In fact, growing evidence suggests that several techniques – including meditation, cognitive-behavioral therapy (CBT) (a type of psychotherapy), and self-reflection (thinking about the things you find important) – can help people develop the skills needed to make positive, healthful changes.

“Research points to the importance of certain kinds of training that can alter brain circuits in a way that will promote positive responses,” Davidson says. “It is led us to conclude that well-being can be considered as a life skill. If you practice, you can actually get better at it.”

In one study, Davidson and his colleagues found changes in reward-related brain circuits after people had two weeks of training in a simple form of meditation that focuses on compassion and kindness. These changes, in turn, were linked to an increase in positive social behaviors, such as increased generosity.

Fredrickson and her colleagues are also studying meditation. They found that after six weeks of training in compassion and kindness meditation, people reported increased positive emotions and social connectedness compared to an untrained group. The meditation group also had improved functioning in a nerve that helps to control heart rate. “The results suggest that taking time to learn the skills to self-generate positive emotions can help us become healthier, more social, more resilient versions of ourselves,” Fredrickson says.

Dr. Emily Falk, a neuroscientist at the University of Pennsylvania, is taking a different approach. Falk is exploring how self-affirmation – that is, thinking about what is most important to you – can affect your brain and lead to positive, healthful behaviors. Her team found that when people are asked to think about things that they find meaningful, a brain region that recognizes personally relevant information becomes activated. This brain activity can change how people respond to health advice.

“In general, if you tell people that they sit too much and they need to change their behavior, they can become defensive. They will come up with reasons why the message does not apply to them,” Falk says. But, if people reflect on the things they value before the health message, the brain’s reward pathways are activated.

This type of self-affirmation, Falk’s research shows, can help physically inactive “couch potatoes” get more active. In a recent study, inactive adults received typical health advice about the importance of moving more and sitting less. But, before the advice, about half of the participants were asked to think about things that they value most.

The “self-affirmation” group became more physically active during the month-long study period that followed compared to the group that had not engaged in self-affirmation. “The study shows one way that we can open the brain to positive change and help people achieve their goals,” Falk says.

Being open to positive change is a key to emotional wellness. “Sometimes people think that emotions just happen, kind of like the weather,” Fredrickson says. “But, research suggests that we can have some control over which emotions we experience.” As mounting research suggests, having a positive mindset might help to improve your physical health as well.

Section 2.3 | Mental and Emotional Well-Being

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “National Prevention Strategy: America’s Plan for Better Health and Wellness,” U.S. Department of Health and Human Services (HHS), June 16, 2011. Reviewed August 2021; Text under the heading “Well-Being Concepts” is excerpted from “Well-Being Concepts,” Centers for Disease Control and Prevention (CDC), October 31, 2018.

Mental and emotional well-being is essential to overall health. Positive mental health allows people to realize their full potential, cope with the stresses of life, work productively, and make meaningful contributions to their communities. Early childhood experiences have lasting, measurable consequences later in life; therefore, fostering emotional well-being from the earliest stages of life helps build a foundation for overall health and well-being. Anxiety, mood (e.g., depression) and impulse control disorders are associated with a higher probability of risk behaviors (e.g., tobacco, alcohol and other drug use, risky sexual behavior), intimate partner and family violence, many other chronic and acute conditions (e.g., obesity, diabetes, cardiovascular disease, HIV/STIs), and premature death.

RECOMMENDATIONS: WHAT CAN BE DONE?

Positive mental and emotional well-being depends on many factors, including quality relationships with family and friends, employment in a positive workplace environment, the ability to participate and contribute to the community, and the ability to access appropriate mental-health services when needed.

Promote Positive Early Childhood Development, including Positive Parenting and Violence-Free Homes

The early years of life are crucial to a child’s social, emotional, and cognitive development. Positive parenting practices (e.g., spending time interacting with children, communication and supportive supervision, appropriate disciplinary actions, lack of alcohol and other drug abuse in the home, and lack of violence directed to children and others) reduce the likelihood of child maltreatment and of the

emergence of child behavioral problems. Family interventions (e.g., home visitation, parenting training), and comprehensive center-based early childhood development programs (e.g., Head Start) reduce the development of aggressive and antisocial behaviors in children (e.g., bullying) and their associated problems, such as substance abuse and delinquency. Such programs also improve parent-child interactions and promote healthy development and well-being in both parents and children.

Facilitate Social Connectedness and Community Engagement across the Lifespan

Safe shared places for people to interact (e.g., parks, faith-based and community organizations) foster healthy relationships and positive mental health among community residents and help prevent depression and suicide. Supportive relationships, such as family connections, longterm friendships, and meaningful connections between youth and adults including students and teachers or coaches, build resilience and well-being. Adolescents who feel more connected to their families, schools, and society are less likely to have suicidal thoughts or behavior. Creating safe, supportive, and healthy schools also promotes student attendance and academic achievement. Support for older adults who choose to remain in their homes and communities and retain their independence (“aging in place”) helps promote and maintain positive mental and emotional health. Increasing accessibility and employment opportunities for people with disabilities helps improve social connectedness, life satisfaction, and sense of fulfillment.

Provide Individuals and Families with the Support Necessary to Maintain Positive Mental Well-Being

Enhancing problem-solving and coping skills and improving relationships supports mental and emotional well-being. Social developmental strategies (e.g., enhancing social and life skills, positive peer-bonding) can enhance self-esteem, help people handle difficult social situations, and empower people to seek help when needed.

In addition, regular physical activity enhances thinking, learning, and judgment skills, reduces risk of depression, and helps people sleep better, especially as they age. Community wide programs

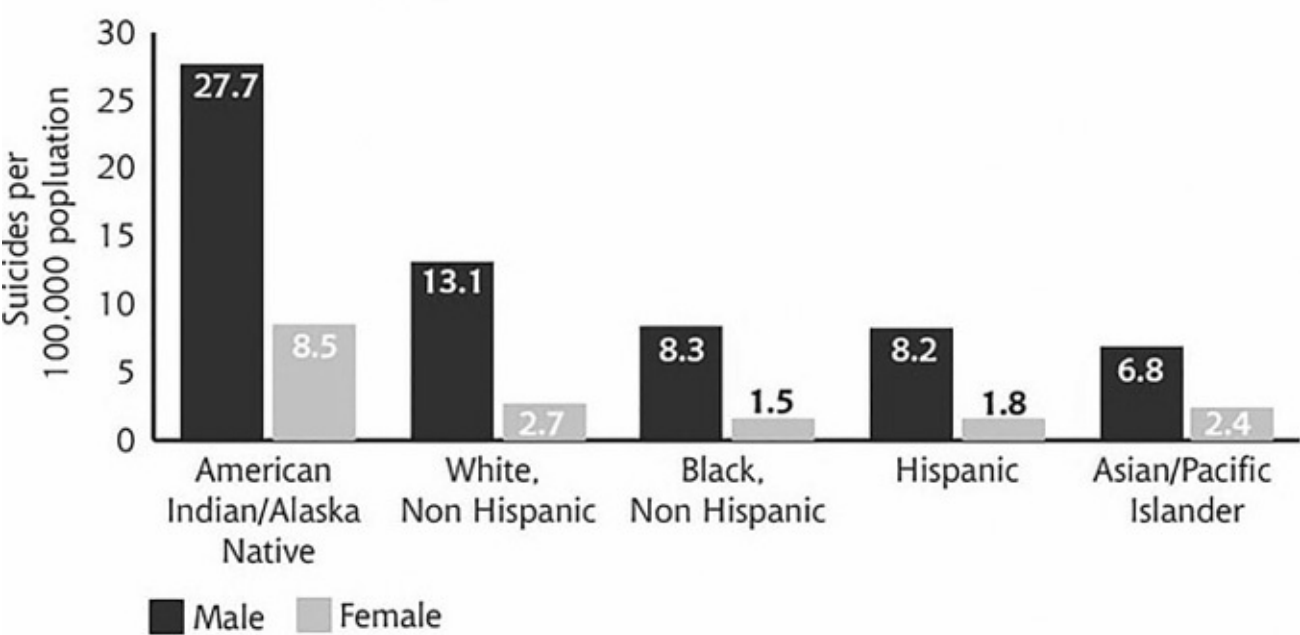


Figure 2.1. The Suicide Rate Is Highest among Males in All Population Groups (Source: *Web-based Injury Statistics Query and Reporting System (WISQARS)*, Centers for Disease Control and Prevention, 2009.)

and policies can increase public awareness of mental-health concerns (e.g., depression, warning signs for suicide) and encourage people to identify and address mental-health needs.

Promote Early Identification of Mental-Health Needs and Access to Quality Services.

Clinicians are key to identifying mental-health needs as early as possible and making appropriate referrals. Reducing the stigma associated with mental-health services is important to improve access to and utilization of effective mental-health treatment. Identifying and integrating mental-health needs into traditional healthcare, social service, community, and work-site settings is particularly important for youth and those who have experienced trauma. Promoting stress identification and prevention in work sites can reduce job stress, promote health, and prevent injury.

ACTIONS

The Federal Government Will

- Improve access to high-quality mental-health services and facilitate integration of mental-health services into a range of clinical and community settings (e.g., Federally Qualified Health Centers, Bureau of Prisons, Department of Defense, and Veterans Affairs facilities)
- Support programs to ensure that employees have tools and resources needed to balance work and personal life and provide support and training to help them recognize coworkers in distress and respond accordingly
- Provide tools, guidance, and best practices to promote positive early childhood and youth development and prevent child abuse
- Provide easy-to-use information about mental and emotional well-being for consumers, especially groups that experience unique stressors (e.g., U.S. Armed Forces, firefighters, police officers, and other emergency response workers)
- Research policies and programs that enhance mental and emotional well-being, especially for potentially vulnerable populations

Partners Can

STATE, TRIBAL, LOCAL, AND TERRITORIAL GOVERNMENTS CAN

- Enhance data collection systems to better identify and address mental and emotional health needs
- Include safe shared spaces for people to interact (e.g., parks, community centers) in community development plans which can foster healthy relationships and positive mental health among community residents
- Ensure that those in need, especially potentially vulnerable groups, are identified and referred to mental-health services
- Pilot and evaluate models of integrated mental and physical health in primary care, with particular attention to underserved populations and areas, such as rural communities

BUSINESSES AND EMPLOYERS CAN

- Implement organizational changes to reduce employee stress (e.g., develop clearly defined roles and responsibilities) and provide reasonable accommodations (e.g., flexible work schedules, assistive technology, adapted work stations)
- Ensure that mental health services are included as a benefit on health plans and encourage employees to use these services as needed
- Provide education, outreach, and training to address mental-health parity in employment-based health insurance coverage and group health plans

HEALTHCARE SYSTEMS, INSURERS, AND CLINICIANS CAN

- Educate parents on normal child development and conduct early childhood interventions to enhance mental and emotional well-being and provide support (e.g., home visits for pregnant women and new parents)
- Screen for mental health needs among children and adults, especially those with disabilities and chronic conditions, and refer people to treatment and community resources as needed
- Develop integrated care programs to address mental health, substance abuse, and other needs within primary care settings
- Enhance communication and data sharing (with patient consent) with social services networks to identify and treat those in need of mental-health services

EARLY LEARNING CENTERS, SCHOOLS, COLLEGES, AND UNIVERSITIES CAN

- Implement programs and policies to prevent abuse, bullying, violence, and social exclusion, build social connectedness, and promote positive mental and emotional health
- Implement programs to identify risks and early indicators of mental, emotional, and behavioral problems among youth and ensure that youth with such problems are referred to appropriate services
- Ensure students have access to comprehensive health services, including mental health and counseling services

COMMUNITY, NONPROFIT, AND FAITH-BASED ORGANIZATIONS CAN

- Provide space and organized activities (e.g., opportunities for volunteering) that encourage social participation and inclusion for all people, including older people and persons with disabilities
- Support child and youth development programs (e.g., peer mentoring programs, volunteering programs) and promote inclusion of youth with mental, emotional, and behavioral problems
- Train key community members (e.g., adults who work with the elderly, youth, and armed services personnel) to identify the signs of depression and suicide and refer people to resources
- Expand access to mental-health services (e.g., patient navigation and support groups) and enhance linkages between mental health, substance abuse, disability, and other social services

INDIVIDUALS AND FAMILIES CAN

- Build strong, positive relationships with family and friends
- Become more involved in their community (e.g., mentor or tutor youth, join a faith or spiritual community)
- Encourage children and adolescents to participate in extracurricular and out-of-school activities
- Work to make sure children feel comfortable talking about problems such as bullying and seek appropriate assistance as needed

WELL-BEING CONCEPTS

Well-being is a positive outcome that is meaningful for people and for many sectors of society, because it tells us that people perceive that their lives are going well. Good living conditions (e.g., housing, employment) are fundamental to well-being. Tracking these conditions is important for public policy. However, many indicators that measure living conditions fail to measure what people think and feel about their lives, such as the quality of their relationships, their positive emotions and resilience, the realization of their potential, or their overall satisfaction with life – that is, their “well-being.” Well-being generally includes global judgments of life satisfaction and feelings ranging from depression to joy.

Why Is Well-Being Useful for Public Health?

- Well-being integrates mental health (mind) and physical health (body) resulting in more holistic

approaches to disease prevention and health promotion.

- Well-being is a valid population outcome measure beyond morbidity, mortality, and economic status that tells us how people perceive their life is going from their own perspective.
- Well-being is an outcome that is meaningful to the public.
- Advances in psychology, neuroscience, and measurement theory suggest that well-being can be measured with some degree of accuracy.
- Results from cross-sectional, longitudinal and experimental studies find that well-being is associated with:
 - Self-perceived health
 - Longevity
 - Healthy behaviors
 - Mental and physical illness
 - Social connectedness
 - Productivity
 - Factors in the physical and social environment
- Well-being can provide a common metric that can help policy makers shape and compare the effects of different policies (e.g., loss of greenspace might impact well-being more so than commercial development of an area).
- Measuring, tracking and promoting well-being can be useful for multiple stakeholders involved in disease prevention and health promotion.

Well-being is associated with numerous health-, job-, family-, and economically-related benefits. For example, higher levels of well-being are associated with decreased risk of disease, illness, and injury; better immune functioning; speedier recovery; and increased longevity. Individuals with high levels of well-being are more productive at work and are more likely to contribute to their communities.

How Does Well-Being Relate to Health Promotion?

Health is more than the absence of disease; it is a resource that allows people to realize their aspirations, satisfy their needs and to cope with the environment in order to live a long, productive, and fruitful life. In this sense, health enables social, economic and personal development fundamental to well-being. Health promotion is the process of enabling people to increase control over, and to improve their health. Environmental and social resources for health can include: peace, economic security, a stable ecosystem, and safe housing. Individual resources for health can include: physical activity, healthful diet, social ties, resiliency, positive emotions, and autonomy. Health promotion activities aimed at strengthening such individual, environmental and social resources may ultimately improve well-being.

How Is Well-Being Defined?

There is no consensus around a single definition of well-being, but there is general agreement that at minimum, well-being includes the presence of positive emotions and moods (e.g., contentment, happiness), the absence of negative emotions (e.g., depression, anxiety), satisfaction with life, fulfillment and positive functioning. In simple terms, well-being can be described as judging life positively and feeling good. For public health purposes, physical well-being (e.g., feeling very healthy and full of energy) is also viewed as critical to overall well-being. Researchers from different disciplines have examined different aspects of well-being that include the following:

- Physical well-being
- Economic well-being
- Social well-being

- Development and activity
- Emotional well-being
- Psychological well-being
- Life satisfaction
- Domain specific satisfaction
- Engaging activities and work

How Is Well-Being Measured?

Because well-being is subjective, it is typically measured with self-reports. The use of self-reported measures is fundamentally different from using objective measures (e.g., household income, unemployment levels, neighborhood crime) often used to assess well-being. The use of both objective and subjective measures, when available, are desirable for public policy purposes.

There are many well-being instruments available that measure self-reported well-being in different ways, depending on whether one measures well-being as a clinical outcome, a population health outcome, for cost-effectiveness studies, or for other purposes. For example, well-being measures can be psychometrically-based or utility-based. Psychometrically-based measures are based on the relationship between, and strength among, multiple items that are intended to measure one or more domains of well-being. Utility-based measures are based on an individual or group's preference for a particular state, and are typically anchored between 0 (death) to 1 (optimum health). Some studies support use of single items (e.g., global life satisfaction) to measure well-being parsimoniously. Peer reports, observational methods, physiological methods, experience sampling methods, ecological momentary assessment, and other methods are used by psychologists to measure different aspects of well-being.

Chapter 3 | Mental-Health Statistics

Mental illnesses are common in the United States. Nearly one in five U.S. adults live with a mental illness (51.5 million in 2019). Mental illnesses include many different conditions that vary in degree of severity, ranging from mild to moderate to severe. Two broad categories can be used to describe these conditions: any mental illness (AMI) and serious mental illness (SMI). AMI encompasses all recognized mental illnesses. SMI is a smaller and more severe subset of AMI.

The data presented in this chapter are from the 2019 National Survey on Drug Use and Health (NSDUH) by the Substance Abuse and Mental Health Services Administration (SAMHSA). For inclusion in NSDUH prevalence estimates, mental illnesses include those that are diagnosable currently or within the past year; of sufficient duration to meet diagnostic criteria specified within the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*; and, exclude developmental and substance use disorders.

Any Mental Illness

Any mental illness is defined as a mental, behavioral, or emotional disorder. AMI can vary in impact, ranging from no impairment to mild, moderate, and even severe impairment.

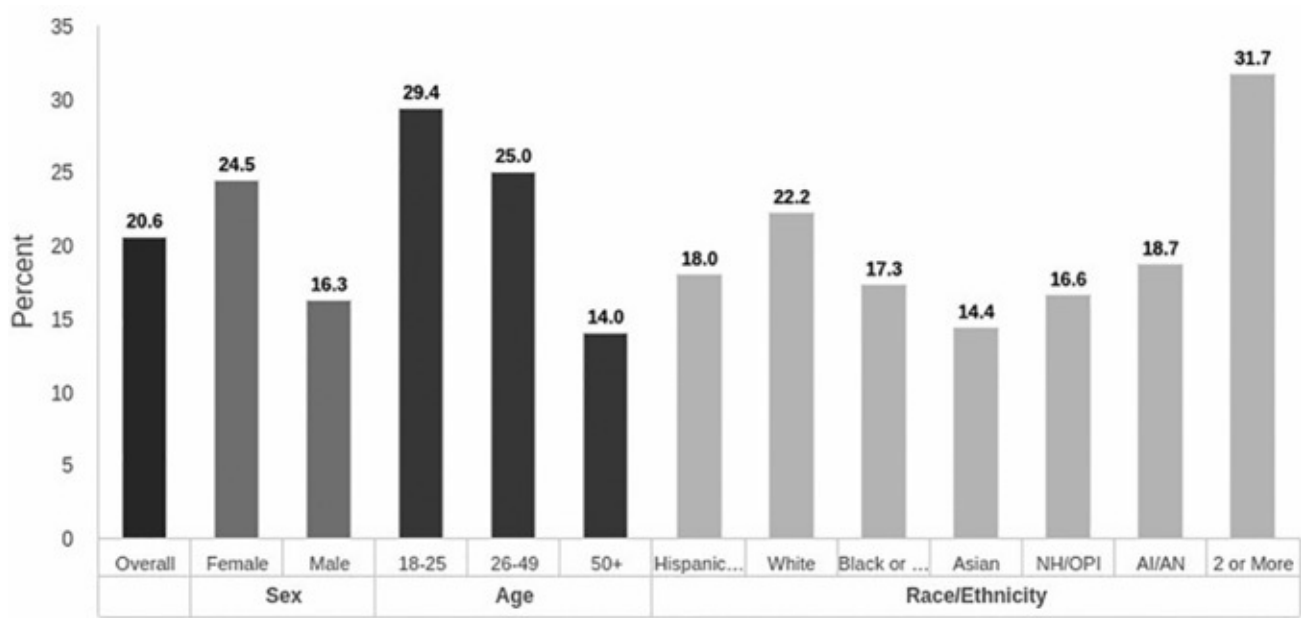


Figure 3.1. Past Year Prevalence of Any Mental Illness among U.S. Adults (2019)

Note: *Persons of Hispanic origin may be of any race; all other racial/ethnic groups are non-Hispanic. NH/OPI = Native Hawaiian/Other Pacific Islander | AI/AN = American Indian/Alaskan Native

Serious Mental Illness

Serious mental illness is defined as a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities. The burden of mental illnesses is particularly concentrated among those who experience disability due to SMI.

PREVALENCE OF ANY MENTAL ILLNESS

- **Figure 3.1** shows the past year prevalence of AMI among U.S. adults.
 - In 2019, there were an estimated 51.5 million adults aged 18 or older in the United States with AMI. This number represented 20.6 percent of all U.S. adults.
 - The prevalence of AMI was higher among females (24.5 percent) than males (16.3 percent).
 - Young adults aged 18–25 years had the highest prevalence of AMI (29.4 percent) compared to adults aged 26–49 years (25.0 percent) and aged 50 and older (14.1 percent).

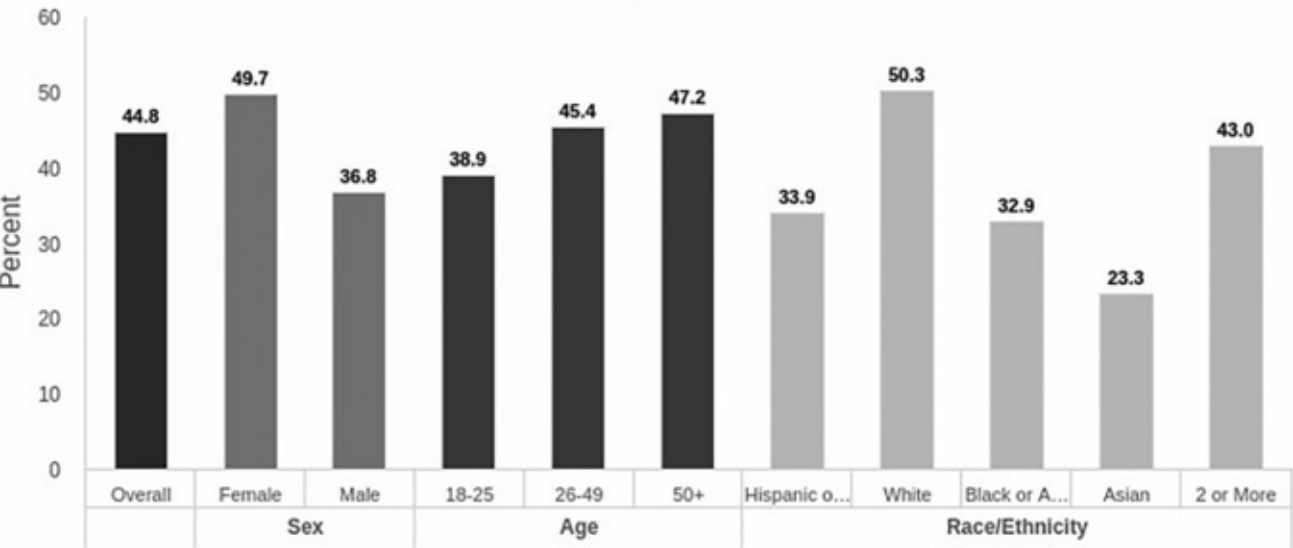


Figure 3.2. Mental-Health Services Received in Past Year among U.S. Adults with Any Mental Illness (2019)

Persons of Hispanic origin may be of any race; all other racial/ethnic groups are non-Hispanic. **Note: Estimates for Native Hawaiian/Other Pacific Islander and American Indian/Alaskan Native groups are not reported in the above figure due to low precision.*

- The prevalence of AMI was highest among the adults reporting two or more races (31.7 percent), followed by White adults (22.2 percent). The prevalence of AMI was lowest among Asian adults (14.4 percent).

MENTAL-HEALTH SERVICES – ANY MENTAL ILLNESS

- **Figure 3.2** presents data on mental-health services received within the past year by U.S. adults aged 18 or older with any mental illness (AMI). NSDUH defines mental-health services as having received inpatient treatment/counseling or outpatient treatment/counseling, or having used prescription medication for problems with emotions, nerves, or mental health.
 - In 2019, among the 51.5 million adults with AMI, 23.0 million (44.8 percent) received mental-health services in the past year.
 - More females with AMI (49.7 percent) received mental-health services than males with AMI (36.8 percent).

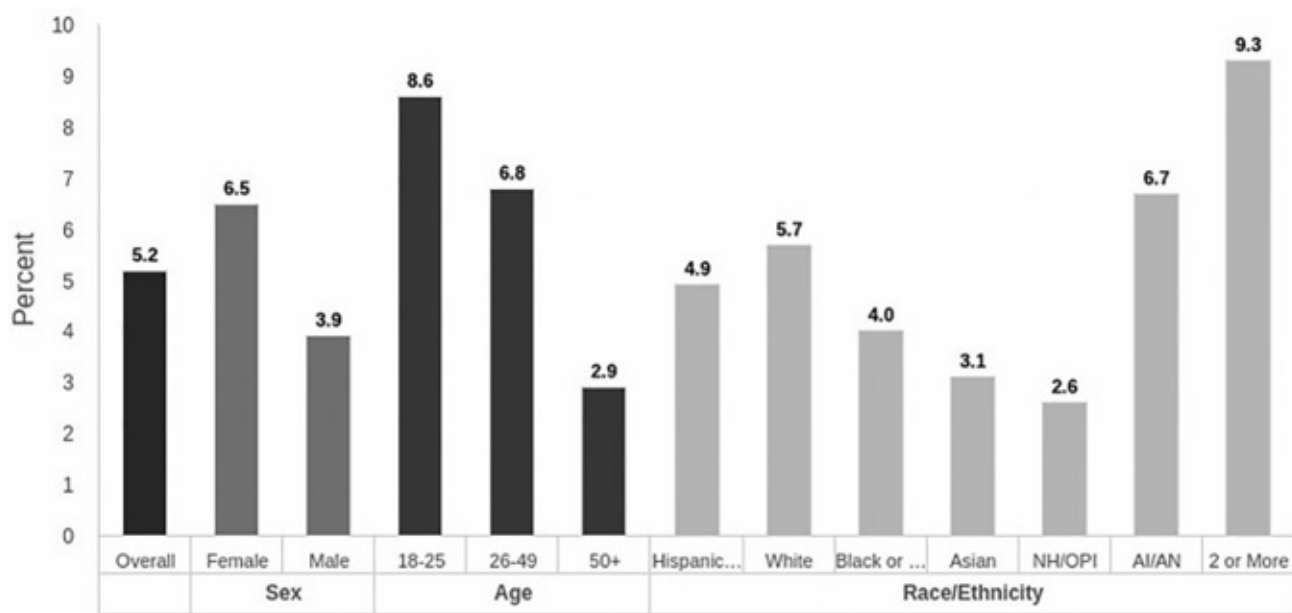


Figure 3.3. Past Year Prevalence of Serious Mental Illness among U.S. Adults (2019)

**Persons of Hispanic origin may be of any race; all other racial/ethnic groups are non-Hispanic.*

NH/OPI = Native Hawaiian/Other Pacific Islander | AI/AN = American Indian/Alaskan Native

- The percentage of young adults aged 18-25 years with AMI who received mental-health services (38.9 percent) was lower than adults with AMI aged 26–49 years (45.4 percent) and aged 50 and older (47.2 percent).

PREVALENCE OF SERIOUS MENTAL ILLNESS

- [Figure 3.3](#) shows the past year prevalence of SMI among U.S. adults.
 - In 2019, there were an estimated 13.1 million adults aged 18 or older in the United States with SMI. This number represented 5.2 percent of all U.S. adults.
 - The prevalence of SMI was higher among females (6.5 percent) than males (3.9 percent).
 - Young adults aged 18–25 years had the highest prevalence of SMI (8.6 percent) compared to adults aged 26–49 years (6.8 percent) and aged 50 and older (2.9 percent).
 - The prevalence of SMI was highest among the adults reporting two or more races (9.3 percent), followed by AI/AN adults (6.7 percent). The prevalence of SMI was lowest among NH/OPI adults (2.6 percent).

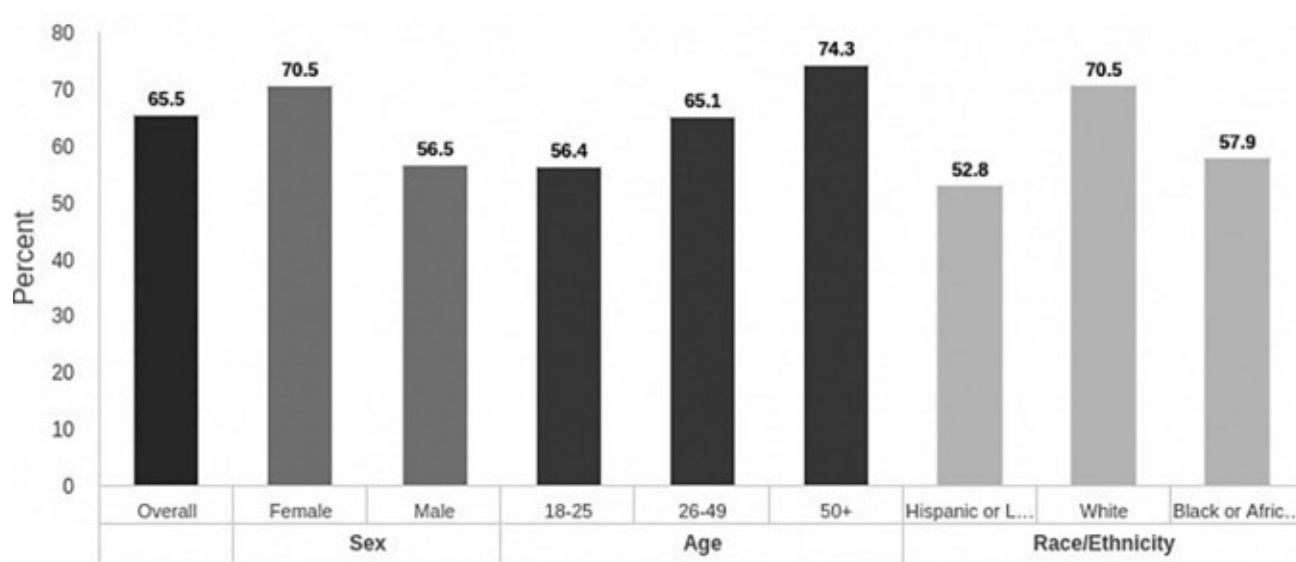


Figure 3.4. Mental-Health Services Received in Past Year among U.S. Adults with Serious Mental Illness (2019)

Persons of Hispanic origin may be of any race; all other racial/ethnic groups are non-Hispanic. **Note: Estimates for Asian, Native Hawaiian/Other Pacific Islander, and American Indian/Alaskan Native groups are not reported in the above figure due to low precision.*

MENTAL-HEALTH SERVICES – SERIOUS MENTAL ILLNESS

- [Figure 3.4](#) presents data on mental-health services received within the past year by U.S. adults 18 or older with serious mental illness (SMI). The NSDUH defines mental-health services as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health.
 - In 2019, among the 13.1 million adults with SMI, 8.6 million (65.5 percent) received mental-health treatment in the past year.
 - More females with SMI (70.5 percent) received mental-health treatment than males with SMI (56.5 percent).
 - The percentage of young adults aged 18–25 years with SMI who received mental-health treatment (56.4 percent) was lower than adults with SMI aged 26–49 years (65.1 percent) and aged 50 and older (74.3 percent).

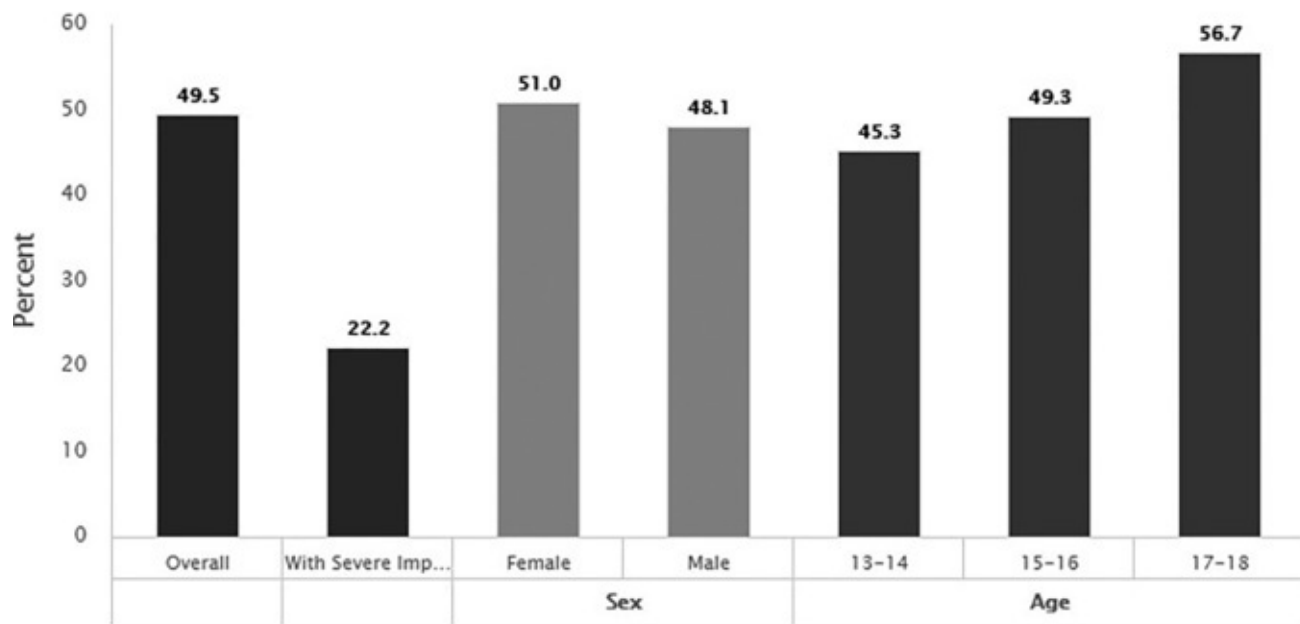


Figure 3.5. Lifetime Prevalence of Any Mental Disorder among Adolescents (2001–2004)

PREVALENCE OF ANY MENTAL DISORDER AMONG ADOLESCENTS

- Based on diagnostic interview data from National Comorbidity Survey Adolescent Supplement (NCS-A), [Figure 3.5](#) shows lifetime prevalence of any mental disorder among U.S. adolescents aged 13–18.
 - An estimated 49.5 percent of adolescents had any mental disorder.
 - Of adolescents with any mental disorder, an estimated 22.2 percent had severe impairment. *DSM-IV* based criteria were used to determine impairment level.

Chapter 4 | Lifestyles and Mental Health

Chapter Contents

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[Section 4.4—Keeping Mentally Fit as You Age](#)

Section 4.1 | Eating Well and Mental Health

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Since childhood, we are often told that a healthy diet is a must for our physical well-being. But, growing evidence suggests there is also a connection between diet and mental health. This new field of psychology is called “nutritional psychiatry,” where researchers are looking into nutritional approaches to treat mental-health disorders. The gut produces 95 percent of the body’s serotonin, a neurotransmitter responsible for sleep, appetite, mood, and inhibiting pain. In addition, the gastrointestinal tract is lined with a hundred million nerve cells or neurons, and these neurons are affected by billions of good bacteria in the gut that keeps the body healthy, known as the “microbiome.” These good bacteria protect the lining of the intestines, create a strong barrier against toxins or bad bacteria, limit inflammation, improve how well the gut absorbs nutrients from the food, and activate neural pathways that run from the gut to the brain. Therefore, the gut plays a huge role with regard to mental health as everything we eat passes through the gut.

Serotonin deficiency may lead to psychological issues such as:

- Anxiety
- Irritability
- Depression
- Low self-esteem
- Insomnia
- Aggression
- Impulsive behavior
- Poor memory

According to the Centers for Disease Control and Prevention (CDC) estimates, about half of the American population will be diagnosed with a mental-health condition at some point during their lives. Currently in the U.S., 40 million people aged 18 and above are affected by anxiety disorders every year. That is 18.1 percent of the entire population.

The studies around the connection between diet and mood disorders such as depression and anxiety are relatively new, but here are a few things discovered about a healthy diet:

- It improves brain development
- Promotes good bacteria in the gut
- Changes brain protein and enzymes to increase neurotransmitters, thus improving brain health
- Improves serotonin levels, which boosts mood

A Western-style diet containing food high in sugar, sodium, saturated fats, and rich in red and processed meat, with a low intake of fruits and vegetables, is linked to an increased risk of depression. Traditional Mediterranean and Japanese diets, on the other hand, have been shown to lower the risk of depression by 25–35 percent. These traditional diets focus on food rich in nutrients such as fish, whole grains, vegetables, fruits, and modest amounts of lean meat and dairy.

Foods for Brain Health

Nutrition plays a key role in building new proteins, cells and tissues in the brain and nervous system. A well-rounded diet for a healthy body and mind should include the following:

- **Complex carbohydrates.** This food group includes brown rice, millets, starchy vegetables, quinoa, beets, and sweet potatoes and provides your body with energy.
- **Fiber.** Fruits, vegetables, whole grains, and beans are all excellent sources of fiber. Fiber helps the body to slowly absorb glucose (food sugars) and avoid sugar rushes.
- **Omega 3s.** Found in foods like salmon and black chia seeds, these improve memory and thinking.
- **Antioxidants.** A variety of berries, turmeric, dark chocolate, and green leafy vegetables are rich in antioxidants which help reduce inflammation in the body.
- **Iron.** Anemia caused by iron deficiency can trigger depression.
- **Lean proteins.** These include chicken, meat, nuts and beans, eggs, and soybeans. This food group, too, provides the body with the energy it requires day-to-day.
- **Vitamins and minerals.** These keep the body healthy and protect against diseases.

Healthy Eating Tips

- Healthy fats such as coconut oil, olive oil, and avocados promote brain function. Find ways to include this in your regular diet.
- Gut health is also enhanced by probiotic-rich foods such as plain yogurt (unsweetened) and fermented foods like kimchi, miso, sauerkraut, and kombucha.
- Enjoy your food by chewing slowly. This has shown improved absorption and support for a healthy gut.
- Instead of reaching out for processed snacks such as potato chips and soda, try healthier snack options such as fruits and nuts.
- Make a healthy shopping list and avoid grocery shopping while hungry as it may lead to impulse buying of unhealthy options.

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Section 4.2 | Sleep and Mental Health

This section contains text excerpted from the following sources: Text in this section begins with excerpts from "Sleep and Your Health," Office on Women's Health (OWH), U.S. Department of Health and Human Services (HHS), March 14, 2019; Text beginning with the heading "Get Enough Sleep" is excerpted from "Get Enough Sleep," Office of Disease Prevention and Health Promotion (ODPHP), U.S. Department of Health and Human Services (HHS), July 8, 2021.

Sleep affects your mental and physical health. Getting good sleep helps boost your mind and mood and can help prevent health problems. Women are more likely than men to have insomnia and other sleep problems. Changing hormones during the menstrual cycle, pregnancy, and menopause can affect how well

a woman sleeps. But, there are steps you can take to get the rest you need.

HOW DOES SLEEP AFFECT YOUR MENTAL HEALTH?

Your mind and body are healthier when you sleep well. Your body needs time every day to rest and heal. Some sleep disorders, such as insomnia, sleep apnea, and restless legs syndrome, make it harder to fall asleep or stay asleep. This can lead to daytime sleepiness and make it more difficult to stay in good mental health.

Having a sleep problem can also trigger a mental-health condition or make current mental-health conditions worse. Also, mental-health conditions or treatments can sometimes cause sleep problems.

HOW MUCH SLEEP DO WOMEN NEED EACH NIGHT?

Most adults need between 7 and 9 hours of sleep a night to feel refreshed, although women who are pregnant may need more and older adults may average less.

WHAT SLEEP PROBLEMS AFFECT WOMEN?

Sleep problems that affect women more or differently from men include:

- **Insomnia.** More than 1 in 4 women in the United States experience insomnia, or the inability to fall asleep or stay asleep. Insomnia is also more common in people with depression and anxiety, which also affect more women than men.
- **Restless legs syndrome.** More women than men experience restless legs syndrome. It can happen to women of all ages, but it happens most often during pregnancy. Also, some medicines used to treat depression can cause restless legs syndrome. Depression is more likely to affect women compared to men.
- **Sleep apnea.** It may be underdiagnosed in women. Snoring is one of the main signs of sleep apnea. Women with sleep apnea may be underdiagnosed, because they usually report more general symptoms, such as insomnia, anxiety, and nightmares.

WHY DO WOMEN HAVE MORE SLEEP PROBLEMS?

Women may be more likely to have sleep problems because women experience hormonal changes during certain times and events that are unique to women. These include:

- **Premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD).** Women with PMS commonly report trouble sleeping. Nearly 7 in 10 women with PMDD say they have problems going to sleep and staying asleep in the days leading up to their period.
- **Pregnancy.** Especially in the third trimester, when women may wake up more often than usual because of discomfort, leg cramps, or needing to use the bathroom.
- **Perimenopause.** When hot flashes and night sweats often can disturb sleep. Also, about half of women report problems sleeping after menopause.

CAN YOU TAKE AN OVER-THE-COUNTER (OTC) MEDICINE TO HELP YOU SLEEP?

Yes, but talk to your doctor or nurse about your sleep problems before using an OTC product. Your sleep problem may be a symptom of a different medical problem that needs to be treated. Also, OTC products are not meant for regular or long-term use. If you decide to use a sleep medicine, doctors recommend that you:

- Read the medicine label and directions first
- Use the medicine at the time of day directed by your doctor or nurse
- Do not drive or do activities that require you to be alert

- Always take only the amount your doctor or nurse tells you to take
- Tell your doctor or nurse about other medicines you use
- Call your doctor or nurse right away if you have any problems while using the medicine
- Do not drink alcohol or use drugs
- Talk to your doctor or nurse if you want to stop using the sleep medicine. Some medicines must be stopped gradually.

WHAT CAN YOU TRY AT HOME TO HELP YOUR SLEEP BETTER?

Try these tips to help improve your sleep:

- Try to go to sleep when you feel sleepy and then get up at the same time each morning.
- Do not take naps after 3 p.m. if you normally sleep at night.
- Do not drink caffeinated or alcoholic drinks or smoke late in the day or at night.
- Exercise on most days. Exercise or physical activity done too close to bedtime can make it harder to fall asleep. Experts recommend exercising at least 5 or 6 hours before your bedtime, especially if you have insomnia.
- Do not eat or drink a lot within about 3 hours of bedtime.
- Keep your bedroom dark, quiet, and cool. If light is a problem, try a sleeping mask. If noise is a problem, try earplugs, a fan, or a “white noise” machine to cover up the sounds.
- Follow a routine to help relax and wind down before sleep, such as reading a book, listening to music, or taking a bath.
- If you cannot sleep within 20 minutes of going to bed or do not feel drowsy, get out of bed. Read or do a quiet activity until you feel sleepy. Then try going back to bed.
- Do not do anything in your bed that could make you more awake. Using a mobile phone, watching TV, or eating in bed can make it harder for you to fall asleep in bed.
- Do not look at lighted screens like a laptop or smartphone before bed.
- See your doctor or a sleep specialist if you think that you have a sleep problem.

HOW CAN YOU IMPROVE YOUR SLEEP WITH A NEW BABY?

Having a baby can make it a challenge to get enough sleep. It can take babies weeks or months to adjust to a sleeping routine or to start sleeping through the night. Also, changing hormone levels after giving birth can disrupt your sleep for a time. For some women, severe swings in hormone levels during and after pregnancy may cause a mental-health condition called “postpartum depression.” Postpartum depression can also cause trouble sleeping.

If you have a new baby, here are some ways to get more rest or get help:

- Sleep when the baby is sleeping.
- Do not try to do too much or to do everything by yourself. Ask your partner, family, and friends for help.
- Have a partner, a friend, or another caregiver help take care of your baby for a while so you can sleep.
- Talk with other mothers so that you can learn from their experiences.
- Join a support group for new mothers. Ask your doctor, nurse, or midwife about groups in your area.
- If you go back to work after childbirth, ask your employer if you can work part-time or reduced hours at first.
- If you continue to have trouble sleeping, or if you think you are depressed, talk to your doctor, nurse, or midwife.

GET ENOUGH SLEEP

It is important to get enough sleep. Sleep helps keep your mind and body healthy.

How Much Sleep Do You Need?

Most adults need 7 to 8 hours of good quality sleep on a regular schedule each night. Make changes to your routine if you cannot find enough time to sleep.

Getting enough sleep is not only about total hours of sleep. It is also important to get good quality sleep on a regular schedule so you feel rested when you wake up.

If you often have trouble sleeping – or if you often still feel tired after sleeping – talk with your doctor.

How Much Sleep Do Children Need?

Kids need even more sleep than adults.

- Teens need 8 to 10 hours of sleep each night.
- School-aged children need 9 to 12 hours of sleep each night.
- Preschoolers need to sleep between 10 and 13 hours a day (including naps).
- Toddlers need to sleep between 11 and 14 hours a day (including naps).
- Babies need to sleep between 12 and 16 hours a day (including naps).

HEALTH BENEFITS

Why Is Getting Enough Sleep Important?

Getting enough sleep has many benefits. It can help you:

- Get sick less often
- Stay at a healthy weight
- Lower your risk for serious health problems, like diabetes and heart disease
- Reduce stress and improve your mood
- Think more clearly and do better in school and at work
- Get along better with people
- Make good decisions and avoid injuries – for example, drowsy drivers cause thousands of car accidents every year

SLEEP SCHEDULE

Does It Matter When You Sleep?

Yes. Your body sets your “biological clock” according to the pattern of daylight where you live. This helps you naturally get sleepy at night and stay alert during the day.

If you have to work at night and sleep during the day, you may have trouble getting enough sleep. It can also be hard to sleep when you travel to a different time zone.

Get sleep tips to help you:

- Work the night shift
- Deal with jet lag (trouble sleeping in a new time zone)

TROUBLE SLEEPING

Why Can You Not Fall Asleep?

Many things can make it harder for you to sleep, including:

- Stress or anxiety
- Pain
- Certain health conditions, such as heartburn or asthma
- Some medicines

- Caffeine (usually from coffee, tea, and soda)
- Alcohol and other drugs
- Untreated sleep disorders, like sleep apnea or insomnia

If you are having trouble sleeping, try making changes to your routine to get the sleep you need. You may want to:

- Change what you do during the day – for example, get your physical activity in the morning instead of at night
- Create a comfortable sleep environment – for example, make sure your bedroom is dark and quiet
- Set a bedtime routine – for example, go to bed at the same time every night

SLEEP DISORDERS

How Can You Tell If You Have a Sleep Disorder?

Sleep disorders can cause many different problems. Keep in mind that it is normal to have trouble sleeping every now and then. People with sleep disorders generally experience these problems on a regular basis.

Common signs of sleep disorders include:

- Trouble falling or staying asleep
- Still feeling tired after a good night's sleep
- Sleepiness during the day that makes it difficult to do everyday activities, like driving or concentrating at work
- Frequent loud snoring
- Pauses in breathing or gasping while sleeping
- Tingling or crawling feelings in your legs or arms at night that feel better when you move or massage the area
- Feeling like it is hard to move when you first wake up

If you have any of these signs, talk to a doctor or nurse. You may need testing or treatment for a sleep disorder.

DAYTIME HABITS

Making small changes to your daily routine can help you get the sleep you need.

Change What You Do during the Day

- Try to spend some time outdoors every day.
- Plan your physical activity for earlier in the day, not right before you go to bed.
- Stay away from caffeine (including coffee, tea, and soda) late in the day.
- If you have trouble sleeping at night, limit daytime naps to 20 minutes or less.
- If you drink alcohol, drink only in moderation (less than 1 drink in a day for women and less than 2 drinks in a day for men) – alcohol can keep you from sleeping well.
- Do not eat a big meal close to bedtime.
- If you smoke, make a plan to quit – the nicotine in cigarettes can make it harder for you to sleep.

Get tips for:

- Drinking alcohol only in moderation
- Quitting smoking

NIGHTTIME HABITS

Create a Good Sleep Environment

- Make sure your bedroom is dark – if there are streetlights near your window, try putting up light-blocking curtains.
- Keep your bedroom quiet.
- Consider keeping electronic devices – like TVs, computers, and smartphones – out of your bedroom.

Set a Bedtime Routine

- Go to bed at the same time every night.
- Try to get the same amount of sleep each night.
- Avoid eating, talking on the phone, or reading in bed.
- Avoid using computers or smartphones, watching TV, or playing video games at bedtime.
- If you find yourself up at night worrying about things, use these tips to help manage stress.

If you are still awake after staying in bed for more than 20 minutes, get up. Do something relaxing, like reading or meditating, until you feel sleepy.

Section 4.3 | Physical Activity and Mental Health

“Physical Activity and Mental Health,” © 2021 Omnigraphics. Reviewed August 2021.

Regular exercise has many physical benefits such as improved heart health, weight management, reduced risk of diabetes, and lower blood pressure. Along with physical benefits, exercise also has plenty of mental-health benefits:

- **Reduced stress.** When something upsets us or makes us feel threatened, our body kicks in a stress response, usually in the form of loss of appetite, insomnia, a pounding pulse, muscle cramps, tense muscles in the neck and shoulders, followed by back and neck pain. Exercising releases endorphins and norepinephrine that help relieve stress and improve cognition and mood.
- **Improves sleep.** Exercising increases the body’s temperature, which has a calming effect on the mind, which can help you sleep better. Good sleep helps to regulate your mood. Exercise also affects the body’s circadian rhythm, which is your body’s natural alarm clock.
- **Better self-esteem and self-confidence.** Regular exercise can help you maintain a healthy weight, improve muscle tone and increase endurance, all of which help you feel better about yourself.
- **Improved memory and sharper thinking.** According to studies, cardiovascular exercise increases the creation of new brain cells (neurogenesis). Regular exercise also strengthens the hippocampus and prevents cognitive decline, and improves memory.
- **Help reduce anxiety and depression.** Exercise releases endorphins, the body’s “feel-good” chemical, and these boost mood, reducing symptoms of anxiety and depression. Exercise is also said to treat symptoms of mild-to-moderate depression as effectively as antidepressants.
- **Reduced attention deficit hyperactivity disorder (ADHD) symptoms.** Exercise increases dopamine, serotonin, and norepinephrine levels that increase focus and attention.
- Exercise helps reduce muscle tension and provides a healthy outlet to release pent-up anger or frustration.

HOW TO GET STARTED WITH EXERCISE

Incorporating exercise into your routine can be challenging and overwhelming. But, that should not discourage you. Five to ten minutes of moderate exercise is an excellent place to start, building your energy levels and endurance. As your endurance builds up, increase the exercise time to 15–30 minutes. A 30-minute session can also be split into smaller sessions depending on your stamina. Things to consider before starting exercise:

- Talk to your doctor about any medical conditions that you might be having.
- Pick something that you like or enjoy. You are more likely to continue exercising if it is a form of exercise that you like.
- Write your exercise regime down on a calendar or diary as part of your schedule. Do not be hard on yourself if you miss a day. Although, try to stick to it as much as possible. Consistency is key.
- You can also consult a personal trainer or a physiotherapist based on your needs.

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Section 4.4 | Keeping Mentally Fit as You Age

“Keeping Mentally Fit as You Age,” © 2021 Omnigraphics. Reviewed August 2021.

We all notice certain changes in our ability to remember things as we become older, with most people experiencing a “senior moment” now and again. Perhaps you went into the kitchen and forgot what you had to take, or you could not recall a familiar name during a chat. Memory lapses can happen at any age, but as we become older, we are more concerned about them because we think they are an indication of dementia or a lack of intellectual function. Significant memory loss in old adults is only caused by biological illnesses, brain injury, or neurological sickness, not by aging itself.

CHANGES THAT OCCUR IN THE BRAIN AS WE AGE

As we become older, the volume of our brain reduces. Few nerve cells in our brain may shrink or lose connections with other nerve cells as a result of this. The blood flow to the brain may also slow down over the years. These age-related alterations are assumed to be the cause of the cognitive deficits that many people perceive as they get older.

The various strategies that one can adapt to keep their mind sharp and fit are as follows:

To Be Physically Active

Unhealthy diet, obesity, and sedentary lifestyle choices are linked to some illnesses that can damage the brain’s ability to function, such as stroke. If you want an active mind, you must keep your body active. The following are suggestions to lead an active lifestyle, both physically and mentally:

- At least 30 minutes of moderate exercise every day provides an oxygen boost to the brain.
- Three 10-minute workout sets everyday are enough to have considerable health advantages.
- Exercise can help you improve your memory and reasoning skills.
- Maintain a healthy weight for your height (according to your BMI) to avoid the risks of obesity.
- Excessive drinking and smoking should be avoided.

To Follow a Healthy Diet

One of the most important things to keep your brain in perfect shape and being mentally fit is proper nutrition and a healthy diet. The Mediterranean diet is the most commonly recommended diet for seniors and aging individuals. Leafy vegetables and seafood are abundant in this diet. Fish contains a high amount of Omega-3 fatty acids, which helps in the brain's memory stimulation.

It has been proven that reducing the consumption of dairy products and red meat improves general health and brain health. One should consume a diet rich in whole grains, beans, lentils, nuts, fruits, and vegetables. Also, try including blueberries, as they are high in antioxidants and decrease short-term memory loss.

Staying Mentally Fit

Keeping your mind intellectually fit is not as difficult as keeping your body fit. Mental exercises can be added to the many activities you already do, such as:

- Reading newspapers, magazines, and books
- Scrabble, cards, and trivial pursuit are examples of thinking games that can be played
- Playing word games and crossword puzzles
- Chess, for example, is a game that tests one's brain and memory
- Woodworking, for example, helps boost spatial awareness in the brain
- Taking part in a variety of intriguing conversations

Making Sure to Get Adequate Sleep

Not getting enough sleep can impair one's memory and thinking ability. An individual should aim for seven to eight hours of uninterrupted sleep each night to have an active mind. For people having trouble sleeping, a few steps that can improve their sleep are:

- Maintaining a consistent bedtime and wake-up schedule.
- Keeping away pets and electronic devices from the bedroom, including mobile phones and television during bedtime.
- Maintaining a dark and comfortable environment in your bedroom.
- To avoid overeating and exercising before bedtime.

To Stay Connected

Maintaining your support network is one of the most difficult aspects of aging. Even for individuals who have always had an active social life, staying connected as you get older is not always easy. Close friends and family members can be taken away by career changes, retirement, illness, and moving out of the neighborhood. It is possible that traveling around in older age will be challenging for you or others on your social network.

Whether or not you live with a spouse or partner, it is critical to find ways to reach out and interact with people. Staying sociable, in addition to regular exercise, can have the greatest impact on your mental health as you age. As you get older, having a diverse group of people to turn to for company and support might help you avoid loneliness, difficulty, and loss.

Listening to Music and Playing an Instrument

Music has been proved to have a positive effect on the brain. When you hear music, it can transport you back in time and resurrect a memory you had completely forgotten about. Our memories and relationship with music are inextricably linked.

Learning to read musical notes and play an instrument can help you remember things better. It has been proven that learning new things keeps people mentally fit. The brain, like any other muscle in the body,

gets stronger as you utilize it more.

Growing older does not necessarily indicate a decline in mental health. Many of the alleged age-related changes in the mind, such as memory loss, are believed to be lifestyle-related, according to researchers. The brain and mind, like muscles, get lazy from sitting around and doing nothing. Mental health is equally as essential as physical health and should not be ignored. Incorporating mental dexterity exercises into your daily routine can help you gain the long-term benefits of a sharper mind and a healthier body.

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Chapter 5 | Developing and Reinforcing Mental Wellness

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Section 5.1 | Becoming More Resilient

This section includes text excerpted from “Individual Resilience,” Office of the Assistant Secretary for Preparedness and Response (ASPR), U.S. Department of Health and Human Services (HHS), September 8, 2020.

WHAT IS INDIVIDUAL RESILIENCE?

Individual resilience involves behaviors, thoughts, and actions that promote personal well-being and mental health. People can develop the ability to withstand, adapt to, and recover from stress and adversity – and maintain or return to a state of mental health well-being – by using effective coping strategies. We call this individual resilience.

A disaster can impair resilience due to stress, traumatic exposure, distressing psychological reactions, and disrupted social networks. Feelings of grief, sadness, and a range of other emotions are common after traumatic events. Resilient individuals, however, are able to work through the emotions and effects of stress and painful events and rebuild their lives.

WHAT CONTRIBUTES TO INDIVIDUAL RESILIENCE

People develop resilience by learning better skills and strategies for managing stress and better ways of thinking about life’s challenges. To be resilient one must tap into personal strengths and the support of family, friends, neighbors, and/or faith communities.

WHAT ARE THE CHARACTERISTICS THAT SUPPORT INDIVIDUAL RESILIENCE?

Age, gender, health, biology, education level, cultural beliefs and traditions, and economic resources can play important roles in psychological resilience. The following characteristics also contribute to individual resilience:

- **Social support and close relationships with family and friends.** People who have close social support and strong connections with family and friends are able to get help during tough times and also enjoy their relationships during everyday life.
- **The ability to manage strong feelings and impulses.** People who are able to manage strong emotions are less likely to get overwhelmed, frustrated, or aggressive. People who are able to manage feelings can still feel sadness or loss, but they are also able to find healthy ways to cope and heal.
- **Good problem-solving skills.** People problem-solve daily. Thinking, planning, and solving problems in an organized way are important skills. Problem-solving skills contribute to feelings of independence and self-competence.
- **Feeling in control.** After the chaos of a disaster, it can be useful to engage in activities that help people regain a sense of control. This will help support the healing and recovery process.
- **Asking for help and seeking resources.** Resourceful people will get needed help more quickly if they know how to ask questions, are creative in their thinking about situations, are good problem solvers and communicators, and have a good social network to reach out to.
- **Seeing yourself as resilient.** After a disaster many people may feel helpless and powerless, especially when there has been vast damage to the community. Being able to see yourself as resilient, rather than as helpless or as a victim, can help build psychological resilience.
- **Coping with stress in healthy ways.** People get feelings of pleasure and self-worth from doing things well. Strategies that use positive and meaningful ways to cope are better than those which can be harmful such as drinking too much or smoking.
- **Helping others and finding positive meaning in life.** Positive emotions like gratitude, joy,

kindness, love, and contentment can come from helping others. Acts of generosity can add meaning and purpose to your life, even in the face of tragedy.

RESILIENT INDIVIDUALS ARE ABLE TO

- Care for themselves and others day-to-day and during emergency situations
- Actively support their neighborhoods, workplaces, and communities to recover after disaster
- Be confident and hopeful about overcoming present and future difficulties
- Get needed resources more effectively and quickly
- Be physically and mentally healthier and have overall lower recovery expenses and service needs
- Miss fewer days of work
- Maintain stable family and social connections
- Reestablish routines more quickly, which helps children and adults alike

WAYS TO STRENGTHEN RESILIENCE

You can build your resilience by taking care of your health, managing stress, and being an active participant in the life of your community. For example, try to:

- Develop coping skills and practice stress management activities, such as yoga, exercise, and meditation
- Eat healthy and exercise
- Get plenty of sleep
- Maintain social connections to people and groups that are meaningful for you
- Volunteer in your community
- Get training in first aid, cardiopulmonary resuscitation (CPR), computer emergency response team (CERT), and psychological first aid
- Create evacuation and family reunification plans
- Make a disaster kit and stock supplies to shelter in place for up to three days
- Find things that bring you pleasure and enjoyment such as reading a book or watching a movie, writing in a journal, or engaging in an art activity

DOES INDIVIDUAL RESILIENCE HELP BUILD COMMUNITY RESILIENCE?

Yes! Individual resilience is important to community resilience in that healthy people make for a healthier community. Healthy communities are better able to manage and recover from disasters and other emergencies.

Section 5.2 | Stress and How to Handle It

This section contains text excerpted from the following sources: Text beginning with the heading “5 Things You Should Know about Stress” is excerpted from “5 Things You Should Know about Stress,” National Institute of Mental Health (NIMH), January 11, 2012. Reviewed August 2021; Text beginning with the heading “Manage Stress” is excerpted from “Manage Stress,” Office of Disease Prevention and Health Promotion (ODPHP), U.S. Department of Health and Human Services (HHS), June 10, 2021.

FIVE THINGS YOU SHOULD KNOW ABOUT STRESS

Everyone feels stressed from time to time, but what is stress? how does it affect your overall health? and what can you do to manage your stress?

Stress is how the brain and body respond to any demand. Any type of challenge – such as performance at work or school, a significant life change, or a traumatic event – can be stressful.

Stress can affect your health. It is important to pay attention to how you deal with minor and major stressors, so you know when to seek help.

Here are five things you should know about stress.

STRESS AFFECTS EVERYONE

Everyone experiences stress from time to time. There are different types of stress – all of which carry physical and mental-health risks. A stressor may be a one-time or short-term occurrence, or it can happen repeatedly over a long time. Some people may cope with stress more effectively and recover from stressful events more quickly than others.

Examples of stress include:

- Routine stress related to the pressures of school, work, family, and other daily responsibilities
- Stress brought about by a sudden negative change, such as losing a job, divorce, or illness
- Traumatic stress experienced during an event such as a major accident, war, assault, or natural disaster where people may be in danger of being seriously hurt or killed. People who experience traumatic stress may have very distressing temporary emotional and physical symptoms, but most recover naturally soon after.

NOT ALL STRESS IS BAD

In a dangerous situation, stress signals the body to prepare to face a threat or flee to safety. In these situations, your pulse quickens, you breathe faster, your muscles tense, and your brain uses more oxygen and increases activity – all functions aimed at survival and in response to stress. In nonlife-threatening situations, stress can motivate people, such as when they need to take a test or interview for a new job.

LONG-TERM STRESS CAN HARM YOUR HEALTH

Coping with the impact of chronic stress can be challenging. Because, the source of long-term stress is more constant than acute stress, the body never receives a clear signal to return to normal functioning. With chronic stress, those same lifesaving reactions in the body can disturb the immune, digestive, cardiovascular, sleep, and reproductive systems. Some people may experience mainly digestive symptoms, while others may have headaches, sleeplessness, sadness, anger, or irritability.

Over time, continued strain on your body from stress may contribute to serious health problems, such as heart disease, high blood pressure, diabetes, and other illnesses, including mental disorders such as depression or anxiety.

THERE ARE WAYS TO MANAGE STRESS

If you take practical steps to manage your stress, you may reduce the risk of negative health effects. Here are some tips that may help you to cope with stress:

- **Be observant.** Recognize the signs of your body's response to stress, such as difficulty sleeping, increased alcohol and other substance use, being easily angered, feeling depressed, and having low energy.
- **Talk to your health-care provider or a health professional.** Do not wait for your health-care provider to ask about your stress. Start the conversation and get proper healthcare for existing or new health problems. Effective treatments can help if your stress is affecting your relationships or ability to work.
- **Get regular exercise.** Just 30 minutes per day of walking can help boost your mood and improve your health.
- **Try a relaxing activity.** Explore relaxation or wellness programs, which may incorporate

meditation, muscle relaxation, or breathing exercises. Schedule regular times for these and other healthy and relaxing activities.

- **Set goals and priorities.** Decide what must get done now and what can wait. Learn to say “no” to new tasks if you start to feel like you are taking on too much. Try to be mindful of what you have accomplished at the end of the day, not what you have been unable to do.
- **Stay connected.** You are not alone. Keep in touch with people who can provide emotional support and practical help. To reduce stress, ask for help from friends, family, and community or religious organizations.
- **Consider a clinical trial.** Researchers at the National Institute of Mental Health (NIMH) and other research facilities across the country are studying the causes and effects of psychological stress as well as stress management techniques.

IF YOU ARE OVERWHELMED BY STRESS, ASK FOR HELP FROM A HEALTH PROFESSIONAL

You should seek help right away if you have suicidal thoughts, are overwhelmed, feel you cannot cope, or are using drugs or alcohol more frequently as a result of stress. Your doctor may be able to provide a recommendation. Resources are available to help you find a mental-health provider.

Call the National Suicide Prevention Lifeline

Anyone can become overwhelmed. If you or a loved one is having thoughts of suicide, call the confidential toll-free National Suicide Prevention Lifeline at 800-273-8255, available 24 hours a day, 7 days a week. Lifeline chat is a service available to everyone.

MANAGE STRESS

Not all stress is bad. But, long-term stress can lead to health problems.

Preventing and managing long-term stress can lower your risk for other conditions like heart disease, obesity, high blood pressure, and depression.

You can prevent or reduce stress by:

- Planning ahead
- Deciding which tasks to do first
- Preparing for stressful events

Some stress is hard to avoid. You can find ways to manage stress by:

- Noticing when you feel stressed
- Taking time to relax
- Getting active and eating healthy
- Talking to friends and family

WHAT ARE THE SIGNS OF STRESS?

When you are under stress, you may feel:

- Worried
- Angry
- Irritable
- Depressed
- Unable to focus

Stress also affects your body. Physical signs of stress include:

- Headaches
- Trouble sleeping or sleeping too much
- Upset stomach
- Weight gain or loss
- Tense muscles
- Frequent or more serious colds

Stress is different for everyone.

WHAT CAUSES STRESS

Stress is how the body reacts to a challenge or demand.

Change is often a cause of stress. Even positive changes, like having a baby or getting a job promotion, can be stressful.

Stress can be short-term or long-term.

Common Causes of Short-Term Stress

- Needing to do a lot in a short amount of time
- Having a lot of small problems in the same day, like getting stuck in traffic jam or running late
- Getting ready for a work or school presentation
- Having an argument

Common Causes of Long-Term Stress

- Having problems at work or at home
- Having money problems
- Having a long-term illness
- Taking care of someone with an illness
- Dealing with the death of a loved one

WHAT ARE THE BENEFITS OF MANAGING STRESS?

Over time, long-term stress can lead to health problems. Managing stress can help you:

- Sleep better
- Control your weight
- Get sick less often
- Feel better faster when you do get sick
- Have less muscle tension
- Be in a better mood
- Get along better with family and friends

PLAN AND PREPARE

You cannot always avoid stress, but you can take steps to deal with stress in a positive way. Follow these tips for preventing and managing stress.

Being prepared and feeling in control of your situation might help lower your stress.

Plan Your Time

Think ahead about how you are going to use your time. Write a to-do list and figure out what is most important – then do that thing first. Be realistic about how long each task will take.

Prepare Yourself

Prepare ahead for stressful events like a hard conversation with a loved one. You can:

- Picture what the room will look like and what you will say
- Think about different ways the conversation could go – and how you could respond
- Have a plan for ending the conversation early if you need time to think

RELAX

Relax with Deep Breathing or Meditation

Deep breathing and meditation can help relax your muscles and clear your mind. You can:

- Learn how to use deep breathing to relax
- Try meditating for a few minutes today

Relax Your Muscles

Stress causes tension in your muscles. Try stretching or taking a hot shower to help you relax.

GET ACTIVE

Regular physical activity can help prevent and manage stress. It can also help relax your muscles and improve your mood. So get active:

- Aim for 150 minutes a week of moderate-intensity aerobic activity – try going for a bike ride or taking a walk
- Do strengthening activities – like push-ups or lifting weights – at least two days a week

Remember, any amount of physical activity is better than none!

FOOD AND ALCOHOL

Eat Healthy

Give your body plenty of energy by eating healthy – including vegetables, fruits, grains, and proteins.

Drink Alcohol Only in Moderation

Avoid using alcohol or other drugs to manage stress. If you choose to drink, drink only in moderation.

This means:

- 1 drink or less in a day for women
- 2 drinks or less in a day for men

Section 5.3 | Controlling Anger

This section contains text excerpted from the following sources: Text beginning with the heading “What Is Anger?” is excerpted from “Anger Management,” Mental Illness Research, Education and Clinical Centers (MIRECC), U.S. Department of Veterans Affairs (VA), July 2013. Reviewed August 2021; Text under the heading “Coping with Anger” is excerpted from “Anger: What you may be experiencing,” Centers for Disease Control and Prevention (CDC), April 16, 2021.

WHAT IS ANGER?

Anger is a complex and confusing emotion that you may experience in response to specific stressors. It is a feeling, an emotion, and is quite different than aggression, which is an action and intended to cause harm to others. Anger is created by how you think about external events that are occurring, therefore you can have control over your anger.

WHAT ARE THE FUNCTIONS OF ANGER?

Anger may have both positive and negative effects on you. When you learn how to appropriately express

your anger, it can lead to beneficial consequences.

Some Examples of Positive Functions Include

- Anger can serve as a signal to you that you are becoming frustrated or annoyed
- It can be an energizer and may help you to deal with conflict and solve problems
- Anger can prompt us to communicate with others to resolve a conflict
- It may create a sense of control and allow us to be more assertive

Some Examples of Negative Functions Include

- Being in a state of anger may cause increased heart rate, blood pressure, and tension headaches (among other negative physical effects)
- Excess anger may disrupt thoughts and make it difficult to think clearly
- It may help us to avoid other feelings like sadness, anxiety, or embarrassment
- Anger can lead to aggression
- It may cause problems in relationships, if it builds up.

WHAT CAUSES ANGER

Anger is an internal response to things in your environment that happen (external factors), based on how you experience and think about those things. It is important to remember that while you may have no control over the external factors, you do have control over how you think about and interpret them. The following are examples of external and internal factors, which may cause you to become angry.

- **Frustrations.** When you try to do something and you are prevented, blocked or disappointed
- **Tension.** When you are feeling “strung out” and your stress level is high, you may be quicker to anger
- **Ill humor.** When you take things too seriously and are unable to “roll with the punches;” when you become moody or crabby and are more inclined to become angry easily.
- **Withdrawal avoidance.** When you actively avoid conflict and walk away without resolving an issue, you tend to internalize the feelings and become angry.

HOW CAN YOU CONTROL YOUR ANGER?

Controlling your anger means learning how to manage the frequency and duration of your anger. Anger that happens often and lasts a long time can be a heavy burden. The continuous increased emotional state can drain your energy and affect you physically. Learning anger management will help you to become aware of your triggers to anger and will teach you more productive ways to respond to the feeling. It also provides you with skills to learn how to control those internal factors which you have control over. There are several strategies you can use to help you gain control over your anger. They include:

- Relaxation techniques
- Quick stress relievers
- Time-out
- Humor
- Thought stopping
- Conflict negotiation
- Problem solving
- Challenging negative thinking
- Choosing assertiveness versus Aggression

COPING WITH ANGER

What You May Be Experiencing

These days you may feel frustrated, stressed or overwhelmed. You may have a shorter fuse than usual. That is okay.

Anger and irritability are common emotions in response to stress. Loss of control and predictability or worries about meeting basic needs can all contribute to feelings of anger. Sometimes feelings of sadness and anxiety come out as anger.

You may get easily irritated or angry at your partner, children, friends, coworkers or neighbors in ways that are not typical for you.

What You Can Do

Take a calming breath. Even a five-minute break can make a difference.

Acknowledge how you are feeling. It is okay to not feel okay.

Take time to care for yourself. Consider simple strategies to reduce stress like exercising and making time for rest.

Create a daily routine to increase feelings of control. Prioritize healthy eating habits, sleep and exercise whenever possible.

Monitor your social media use and limit time on news. Too much media can increase feelings of frustration and anger.

Seek help from a professional if your anger becomes overwhelming or feels unmanageable

- Talk to your doctor about how you are feeling.
- Find mental-health services.

Section 5.4 | Coping with a Breakup

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Relationships,” girlshealth.gov, Office on Women’s Health (OWH), September 16, 2015. Reviewed August 2021; Text beginning with the heading “Breaking Up” is excerpted from “Breaking Up,” girlshealth.gov, Office on Women’s Health (OWH), September 16, 2015. Reviewed August 2021.

Relationships can make us feel fantastic! But, a fight with a close friend can really hurt. It is also upsetting when the people closest to you, like your family, do not seem to get you. Plus, relationships can be very confusing, especially when they change as you get older.

BREAKING UP

Breakups can be so hard! We can help you get through them.

HOW DO YOU GET OVER A BREAKUP?

You may feel awful after a breakup. In fact, scientists say breaking up may have the same effects in a person’s brain as getting off a drug like cocaine! But, time really does help heal wounds.

Sometimes, people blame themselves too much for a breakup. Just because this relationship did not work out does not mean there is something wrong with you. It just means this was not a good fit. Try to remember what is great about you.

Keep doing things you love. This might include hanging out with friends or writing in a journal. Learn ways to cope when you are feeling sad.

Give yourself a break. If the relationship is over, try to move on. Do not check your ex’s social media accounts or find excuses to be in touch a lot.

HOW DO YOU BREAK UP WITH SOMEONE?

Here are some tips to help make a breakup easier – and kinder.

- **Remember your rights.** You deserve to have the kind of relationship you want. It is OK to break up if this one is not working for you.
- **Remember the other's person's feelings.** Say what is true for you, but gently. Avoid blaming, complaining, or yelling. If you are feeling angry, try to calm down before talking.
- **Plan ahead.** Think about what to say so you are not on the spot. You might practice with a trusted adult.
- **Face the person.** Breaking up online or by text may seem easier, but think about how that must feel. Plus, when a person cannot see your face or hear your voice, there is a greater chance of misunderstandings.
- **Leave others out.** Do not spread nasty gossip or blab on social media. Meanness likely will lower other people's respect for you – and your respect for yourself!
- **Think back.** Was there anything good about this relationship? Tell your partner what worked.
- **Think ahead.** What can you learn from this about the kind of relationship you would like to have in the future?

Section 5.5 | Coping with Grief

This section includes text excerpted from "Coping with Grief," NIH News in Health, National Institutes of Health (NIH), October 2017. Reviewed August 2021.

LIFE AFTER LOSS

Losing someone you love can change your world. You miss the person who has died and want them back. You may feel sad, alone, or even angry. You might have trouble concentrating or sleeping. If you were a busy caregiver, you might feel lost when you are suddenly faced with lots of unscheduled time. These feelings are normal. There is no right or wrong way to mourn. Scientists have been studying how we process grief and are learning more about healthy ways to cope with loss.

The death of a loved one can affect how you feel, how you act, and what you think. Together, these reactions are called "grief." It is a natural response to loss. Grieving does not mean that you have to feel certain emotions. People can grieve in very different ways.

Cultural beliefs and traditions can influence how someone expresses grief and mourns. For example, in some cultures, grief is expressed quietly and privately. In others, it can be loud and out in the open. Culture also shapes how long family members are expected to grieve.

"People often believe they should feel a certain way," says Dr. Wendy Lichtenthal, a psychologist at Memorial Sloan-Kettering Cancer Center. "But, such 'shoulds' can lead to feeling badly about feeling badly. It is hugely important to give yourself permission to grieve and allow yourself to feel whatever you are feeling. People can be quite hard on themselves and critical of what they are feeling. Be compassionate and kind to yourself."

ADAPTING TO LOSS

Experts say you should let yourself grieve in your own way and time. People have unique ways of expressing emotions. For example, some might express their feelings by doing things rather than talking about them. They may feel better going on a walk or swimming, or by doing something creative like writing or painting. For others, it may be more helpful to talk with family and friends about the person who is gone, or with a counselor.

"Though people do not often associate them with grief, laughing and smiling are also healthy responses

to loss and can be protective,” explains Dr. George Bonanno, who studies how people cope with loss and trauma at Columbia University. He has found that people who express flexibility in their emotions often cope well with loss and are healthier over time.

“It is not about whether you should express or suppress emotion, but that you can do this when the situation calls for it,” he says. For instance, a person with emotional flexibility can show positive feelings, like joy, when sharing a happy memory of the person they lost and then switch to expressing sadness or anger when recalling more negative memories, like an argument with that person.

Grief is a process of letting go and learning to accept and live with loss. The amount of time it takes to do this varies with each person. “Usually people experience a strong acute grief reaction when someone dies and at the same time they begin the gradual process of adapting to the loss,” explains psychiatrist Dr. M. Katherine Shear at Columbia University. “To adapt to a loss, a person needs to accept its finality and understand what it means to them. They also have to find a way to re-envision their life with possibilities for happiness and for honoring their enduring connection to the person who died.”

Researchers like Lichtenthal have found that finding meaning in life after loss can help you adapt. Connecting to those things that are most important, including the relationship with the person who died, can help you coexist with the pain of grief.

TYPES OF GRIEF

About 10 percent of bereaved people experience complicated grief, a condition that makes it harder for some people to adapt to the loss of a loved one. People with this prolonged, intense grief tend to get caught up in certain kinds of thinking, says Shear, who studies complicated grief. They may think the death did not have to happen or happen in the way that it did. They also might judge their grief – questioning if it is too little or too much – and focus on avoiding reminders of the loss.

“It can be very discouraging to experience complicated grief, but it is important not to be judgmental about your grief and not to let other people judge you,” Shear explains.

Shear and her research team created and tested a specialized therapy for complicated grief in three National Institutes of Health (NIH)-funded studies. The therapy aimed to help people identify the thoughts, feelings, and actions that can get in the way of adapting to loss. They also focused on strengthening one’s natural process of adapting to loss. The studies showed that 70 percent of people taking part in the therapy reported improved symptoms. In comparison, only 30 percent of people who received the standard treatment for depression had improved symptoms.

You may begin to feel the loss of your loved one even before their death. This is called “anticipatory grief.” It is common among people who are long-term caregivers. You might feel sad about the changes you are going through and the losses you are going to have. Some studies have found that when patients, doctors, and family members directly address the prospect of death before the loss happens, it helps survivors cope after the death.

LIFE BEYOND LOSS

The NIH-funded scientists continue to study different aspects of the grieving process. They hope their findings will suggest new ways to help people cope with the loss of a loved one.

Although the death of a loved one can feel overwhelming, many people make it through the grieving process with the support of family and friends. Take care of yourself, accept offers of help from those around you, and be sure to get counseling if you need it.

“We believe grief is a form of love and it needs to find a place in your life after you lose someone close,” Shear says. “If you are having trouble moving forward in your own life, you may need

professional help. Please do not lose hope. We have some good ways to help you.”

Section 5.6 | Myths about Mental Health

This section includes text excerpted from “Mental Health Myths and Facts,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), August 29, 2017. Reviewed August 2021.

MENTAL-HEALTH PROBLEMS AFFECT EVERYONE

Myth: Mental-health problems do not affect me.

Fact: Mental-health problems are actually very common. In 2014, about:

- One in five American adults experienced a mental-health issue
- One in 10 young people experienced a period of major depression
- One in 25 Americans lived with a serious mental illness, such as schizophrenia, bipolar disorder, or major depression

Suicide is the 10th leading cause of death in the United States. It accounts for the loss of more than 41,000 American lives each year, more than double the number of lives lost to homicide.

Myth: Children do not experience mental-health problems.

Fact: Even very young children may show early warning signs of mental-health concerns. These mental-health problems are often clinically diagnosable, and can be a product of the interaction of biological, psychological, and social factors.

Half of all mental-health disorders show first signs before a person turns 14 years old, and three quarters of mental-health disorders begin before age 24.

Unfortunately, less than 20 percent of children and adolescents with diagnosable mental-health problems receive the treatment they need. Early mental-health support can help a child before problems interfere with other developmental needs.

Myth: People with mental-health problems are violent and unpredictable.

Fact: The vast majority of people with mental-health problems are no more likely to be violent than anyone else. Most people with mental illness are not violent and only 3 percent to 5 percent of violent acts can be attributed to individuals living with a serious mental illness. In fact, people with severe mental illnesses are over 10 times more likely to be victims of violent crime than the general population. You probably know someone with a mental-health problem and do not even realize it, because many people with mental-health problems are highly active and productive members of our communities.

Myth: People with mental-health needs, even those who are managing their mental illness, cannot tolerate the stress of holding down a job.

Fact: People with mental-health problems are just as productive as other employees. Employers who hire people with mental-health problems report good attendance and punctuality as well as motivation, good work, and job tenure on par with or greater than other employees.

When employees with mental-health problems receive effective treatment, it can result in:

- Lower total medical costs
- Increased productivity
- Lower absenteeism
- Decreased disability costs

Myth: Personality weakness or character flaws cause mental-health problems. People with mental-health problems can snap out of it if they try hard enough.

Fact: Mental-health problems have nothing to do with being lazy or weak and many people need help to get better. Many factors contribute to mental-health problems, including:

- Biological factors, such as genes, physical illness, injury, or brain chemistry
- Life experiences, such as trauma or a history of abuse
- Family history of mental-health problems

People with mental-health problems can get better and many recover completely.

HELPING INDIVIDUALS WITH MENTAL-HEALTH PROBLEMS

Myth: There is no hope for people with mental-health problems. Once a friend or family member develops mental-health problems, she or he will never recover.

Fact: Studies show that people with mental-health problems get better and many recover completely. Recovery refers to the process in which people are able to live, work, learn, and participate fully in their communities. There are more treatments, services, and community support systems than ever before, and they work.

Myth: Therapy and self-help are a waste of time. Why bother when you can just take a pill?

Fact: Treatment for mental-health problems varies depending on the individual and could include medication, therapy, or both. Many individuals work with a support system during the healing and recovery process.

Myth: I cannot do anything for a person with a mental-health problem.

Fact: Friends and loved ones can make a big difference. Only 44 percent of adults with diagnosable mental-health problems and less than 20 percent of children and adolescents receive needed treatment. Friends and family can be important influences to help someone get the treatment and services they need by:

- Reaching out and letting them know you are available to help
- Helping them access mental-health services
- Learning and sharing the facts about mental health, especially if you hear something that is not true
- Treating them with respect, just as you would anyone else
- Refusing to define them by their diagnosis or using labels such as “crazy”

Myth: Prevention does not work. It is impossible to prevent mental illnesses.

Fact: Prevention of mental, emotional, and behavioral disorders focuses on addressing known risk factors such as exposure to trauma that can affect the chances that children, youth, and young adults will develop mental-health problems. Promoting the social-emotional well-being of children and youth leads to:

- Higher overall productivity
- Better educational outcomes
- Lower crime rates
- Stronger economies
- Lower healthcare costs
- Improved quality of life
- Increased lifespan
- Improved family life

Chapter 6 | Mental Health at Work

Mental-health disorders are among the most burdensome health concerns in the United States. Nearly 1 in 5 U.S. adults aged 18 or older (18.3 percent or 44.7 million people) reported any mental illness in 2016. In addition, 71 percent of adults reported at least one symptom of stress, such as a headache or feeling overwhelmed or anxious.

Many people with mental-health disorders also need care for other physical-health conditions, including heart disease, diabetes, respiratory illness, and disorders that affect muscles, bones, and joints. The costs for treating people with both mental-health disorders and other physical conditions are 2 to 3 times higher than for those without co-occurring illnesses. By combining medical and behavioral health-care services, the United States could save \$37.6 billion to \$67.8 billion a year.

About 63 percent of Americans are part of the U.S. labor force. The workplace can be a key location for activities designed to improve well-being among adults. Workplace wellness programs can identify those at risk and connect them to treatment and put in place supports to help people reduce and manage stress. By addressing mental-health issues in the workplace, employers can reduce healthcare costs for their businesses and employees.

PROBLEM

Mental-Health Issues Affect Businesses and Their Employees

Poor mental health and stress can negatively affect employee:

- Job performance and productivity
- Engagement with one's work
- Communication with coworkers
- Physical capability and daily functioning

Mental illnesses such as depression are associated with higher rates of disability and unemployment.

- Depression interferes with a person's ability to complete physical job tasks about 20 percent of the time and reduces cognitive performance about 35 percent of the time.
- Only 57 percent of employees who report moderate depression and 40 percent of those who report severe depression receive treatment to control depression symptoms.

Even after taking other health risks – such as smoking and obesity – into account, employees at high risk of depression had the highest healthcare costs during the 3 years after an initial health risk assessment.

SOLUTION

Employers Can Promote Awareness about the Importance of Mental Health and Stress Management

Workplace health promotion programs have proven to be successful, especially when they combine mental- and physical-health interventions.

The workplace is an optimal setting to create a culture of health because:

- Communication structures are already in place
- Programs and policies come from one central team
- Social support networks are available
- Employers can offer incentives to reinforce healthy behaviors
- Employers can use data to track progress and measure the effects

Action steps employers can take include:

- Make mental-health self-assessment tools available to all employees
- Offer free or subsidized clinical screenings for depression from a qualified mental-health professional, followed by directed feedback and clinical referral when appropriate
- Offer health insurance with no or low out-of-pocket costs for depression medications and mental-health counseling
- Provide free or subsidized lifestyle coaching, counseling, or self-management programs
- Distribute materials, such as brochures, fliers, and videos, to all employees about the signs and symptoms of poor mental health and opportunities for treatment.
- Host seminars or workshops that address depression and stress management techniques, such as mindfulness, breathing exercises, and meditation, to help employees reduce anxiety and stress and improve focus and motivation
- Create and maintain dedicated, quiet spaces for relaxation activities
- Provide managers with training to help them recognize the signs and symptoms of stress and depression in team members and encourage them to seek help from qualified mental-health professionals
- Give employees opportunities to participate in decisions about issues that affect job stress

This chapter includes text excerpted from "Mental Health in the Workplace," Centers for Disease Control and Prevention (CDC), April 10, 2019.

Chapter 7 | The Stigma of Mental Illness

ATTITUDES TOWARD MENTAL ILLNESS AND STIGMA

People's beliefs and attitudes toward mental illness set the stage for how they interact with, provide opportunities for, and help support a person with mental illness. People's beliefs and attitudes toward mental illness also frame how they experience and express their own emotional problems and psychological distress and whether they disclose these symptoms and seek care. About one in four U.S. adults (26.2 percent) age 18 and older, in any given year, has a mental disorder (e.g., mood disorder, anxiety disorder, impulse control disorder, or substance abuse disorder), meaning that mental disorders are common and can affect anyone. Many adults with common chronic conditions such as arthritis, cancer, diabetes, heart disease, and epilepsy experience concurrent depression and anxiety – further complicating self-management of these disorders and adversely affecting quality of life (QOL).

Attitudes and beliefs about mental illness are shaped by personal knowledge about mental illness, knowing and interacting with someone living with mental illness, cultural stereotypes about mental illness, media stories, and familiarity with institutional practices and past restrictions (e.g., health insurance restrictions, employment restrictions; adoption restrictions). When such attitudes and beliefs are expressed positively, they can result in supportive and inclusive behaviors (e.g., willingness to date a person with mental illness or to hire a person with mental illness). When such attitudes and beliefs are expressed negatively, they may result in avoidance, exclusion from daily activities, and, in the worst case, exploitation and discrimination.

Stigma has been described as “a cluster of negative attitudes and beliefs that motivate the general public to fear, reject, avoid, and discriminate against people with mental illnesses.” When stigma leads to social exclusion or discrimination (“experienced” stigma), it results in unequal access to resources that all people need to function well: educational opportunities, employment, a supportive community, including friends and family, and access to quality healthcare. These types of disparities in education, employment, and access to care can have cumulative long-term negative consequences.

For example, a young adult with untreated mental illness who is unable to graduate from high school is less likely to find a good paying job that can support her or his basic needs, including access to healthcare. These disadvantages can cause a person to experience more negative outcomes. Being unemployed, living at or below the poverty line, being socially isolated, and living with other social disadvantages can further deflate self-esteem, compounding mental illness symptoms, and add to the burden of stigma. Sometimes stigma is simply “felt” in the absence of being discriminated against and results from internalizing perceived negative attitudes associated with a characteristic (e.g., age), a disorder (e.g., Human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS)), a behavior (e.g., smoking), or other factor (e.g., place of birth).

Whether stigma is experienced as social exclusion or discrimination or felt as a pervasive and underlying sense of being different from others, it can be debilitating for people and poses a challenge for public-health prevention efforts. Different opinions exist regarding the implications of different labels associated with describing mental illness (e.g., brain disease) and felt or experienced stigma. However, the prevailing view of health-related stigma is that it refers to perceived, enacted, or anticipated avoidance or social exclusion, and not to an individual blemish or mark. Different methods exist for measuring health-related stigma, and challenges and limitations associated with distinguishing between felt versus experienced stigma in attitudinal research have been described.

WHAT ARE THE CONSEQUENCES OF NEGATIVE ATTITUDES TOWARD MENTAL ILLNESS AND STIGMA?

Only about 20 percent of adults with a diagnosable mental disorder or with a self-reported mental-health condition saw a mental-health provider in the previous year. Embarrassment associated with accessing mental-health services is one of the many barriers that cause people to hide their symptoms and to prevent them from getting necessary treatment for their mental illness symptoms. Stigma poses a barrier for public health primary prevention efforts designed to minimize the onset of mental illness, as well as with secondary prevention efforts aimed at promoting early treatment to prevent worsening of symptoms over time.

Stigma can also interfere with self-management of mental disorders (tertiary prevention). Untreated symptoms can have grave consequences for people living with mental illness and negatively impact families affected by these disorders. For example, most people with serious and persistent mental illness (mental disorders that interfere with some area of social functioning) are unemployed and live below the poverty line, and many face major barriers to obtaining decent, affordable housing. These individuals may need a number of additional social supports (e.g., job training, peer-support networks) to live successfully in the community, but such supports may not be available. Other individuals with depression and anxiety might avoid disclosing their symptoms and instead adopt unhealthy behaviors to help them cope with their distress (e.g., smoking, excessive alcohol use, binge eating). These behaviors can increase their risk for developing chronic diseases, worsening their overall health over time. Recent studies have found an increased risk of death at younger ages for people with mental illness.

Attitudes toward mental illness can also influence how policymakers allocate public resources to mental-health services, pose challenges for staff retention in mental-health settings, result in poorer quality of medical care administered to people with mental illness, and create fundraising challenges for organizations who serve people with mental illness and their families. State-level factors such as unemployment levels and access to mental-health services, and the presence or absence of other state resources may affect public attitudes and merit study.

WHY IS IT IMPORTANT TO TRACK ATTITUDES TOWARD MENTAL ILLNESS?

People's attitudes and beliefs predict their behavior. People's beliefs and attitudes about mental illness might predict whether they disclose their symptoms and seek treatment and support. Knowledge and beliefs that can aid in the recognition, management, or prevention of mental-health disorders are defined as mental-health literacy. Tracking attitudes toward mental illness can serve as an indicator of the public's mental-health literacy. For example, in a 1996 study, 54 percent of the U.S. public attributed major depression to neurobiological causes, and this increased to 67 percent in 2006. Similarly, a larger percentage of people endorsed the benefits of treatment by a physician for people with major depression in 2006 (91 percent) than in 1996 (78 percent). However, improvements in neurobiological understanding of mental illness were unrelated to negative attitudes and, in some cases, increased the odds of negative attitudes (e.g., need for social distance, perceived dangerousness).

In another study of U.S. adults, only about one fourth agreed that people are caring and sympathetic to people with mental illness. When asked about how much it would be worth to avoid mental illness compared to general medical illnesses, the public was less willing to pay to avoid mental-health treatment than they were to pay to avoid physical-health treatment. These studies provide important snapshots of attitudes toward mental illness across the country; however, studies that examine attitudes in depth such as distinguishing between attitudes relative to perceived or experienced stigma, studies that link attitudes to actual behavior, or studies that track attitudes toward mental illness at the state level do

not occur routinely.

These limited, cross-sectional studies tell us little about how attitudes shift in relation to historical events (e.g., media over-sensationalization of the rare violence associated with a person with mental illness), how attitudes shift over time in the same people, and how these attitudes differ within a state relative to characteristics of the state such as the average unemployment rate or per capita expenditures on state mental-health agencies.

This chapter includes text excerpted from “Attitudes toward Mental Illness: Results from the Behavioral Risk Factor Surveillance System,” Centers for Disease Control and Prevention (CDC), 2012. Reviewed August 2021.

Part 2 | Mental Illnesses

Chapter 8 | **Suicide and Mental Illness**

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[Section 8.1—Facts about Suicide](#)

[Section 8.2—Questions about Suicide Risk](#)

[Section 8.3—Suicidal Ideation among LGBT Youth](#)

Section 8.1 | Facts about Suicide

This section contains text excerpted from the following sources: Text beginning with the heading “Suicide Is a Leading Cause of Death” is excerpted from “Suicide Prevention: Fast Facts,” Centers for Disease Control and Prevention (CDC), May 22, 2021; Text under the heading “Suicide Rising across the United States” is excerpted from “Suicide Rising across the U.S.,” Centers for Disease Control and Prevention (CDC), June 7, 2018.

SUICIDE IS A LEADING CAUSE OF DEATH

Suicide is death caused by injuring oneself with the intent to die. A suicide attempt is when someone harms themselves with any intent to end their life, but they do not die as a result of their actions.

Many factors can increase the risk for suicide or protect against it. Suicide is connected to other forms of injury and violence. For example, people who have experienced violence, including child abuse, bullying, or sexual violence have a higher suicide risk. Being connected to family and community support and having easy access to healthcare can decrease suicidal thoughts and behaviors.

SUICIDE IS A LARGE AND GROWING PUBLIC-HEALTH PROBLEM

Suicide rates increased 33 percent between 1999 and 2019, with a small decline in 2019. Suicide is the 10th leading cause of death in the United States. It was responsible for more than 47,500 deaths in 2019, which is about one death every 11 minutes. The number of people who think about or attempt suicide is even higher. In 2019, 12 million American adults seriously thought about suicide, 3.5 million planned a suicide attempt, and 1.4 million attempted suicide.

Suicide affects all ages. It is the second leading cause of death for people ages 10–34, the fourth leading cause among people ages 34–54, and the fifth leading cause among people ages 45–54.

Some groups have higher suicide rates than others. Suicide rates vary by race/ethnicity, age, and other factors. The highest rates are among American-Indian/Alaska-Native and non-Hispanic white populations. Other Americans with higher than average rates of suicide are veterans, people who live in rural areas, and workers in certain industries and occupations such as mining and construction. Young people who are lesbian, gay, or bisexual have a higher rate of suicidal ideation and behavior compared to their peers who identify as straight.

- More than 47,500 people died by suicide in 2019
- One death in every 11 minutes
- Many adults think about suicide or attempt suicide:
- 12 million seriously thought about suicide
- 3.5 million made a plan for suicide
- 1.4 million attempted suicide

If you or someone you know is in crisis, please contact the National Suicide Prevention Lifeline:

- Call 800-273-8255
- Use the online lifeline crisis chat
- www.suicidepreventionlifeline.org

SUICIDE HAS FAR-REACHING IMPACT

Suicide and suicide attempts cause serious emotional, physical, and economic impacts. People who attempt suicide and survive may experience serious injuries that can have long-term effects on their health. They may also experience depression and other mental-health concerns. The good news is that more than 90 percent of people who attempt suicide and survive never go on to die by suicide.

Suicide and suicide attempts affect the health and well-being of friends, loved ones, co-workers, and

the community. When people die by suicide, their surviving family and friends may experience shock, anger, guilt, symptoms of depression or anxiety, and may even experience thoughts of suicide themselves.

The financial toll of suicide on society is also costly. Suicides and suicide attempts cost the nation over \$70 billion per year in lifetime medical and work-loss costs alone.

SUICIDE RISING ACROSS THE UNITED STATES

Suicide rates have been rising in nearly every state, according to the latest vital signs report by the Centers for Disease Control and Prevention (CDC). In 2016, nearly 45,000 Americans age 10 or older died by committing suicide. Suicide is the 10th leading cause of death and is one of just three leading causes that are on the rise.

Suicide is rarely caused by a single factor. Although suicide prevention efforts largely focus on identifying and providing treatment for people with mental-health conditions, there are many additional opportunities for prevention.

“Suicide is a leading cause of death for Americans – and it is a tragedy for families and communities across the country,” said CDC Principal Deputy Director Anne Schuchat, M.D. “From individuals and communities to employers and health-care professionals, everyone can play a role in efforts to help save lives and reverse this troubling rise in suicide.”

Many Factors Contribute to Suicide

For this vital signs report, the CDC researchers examined state-level trends in suicide rates from 1999–2016. In addition, they used 2015 data from the CDC National Violent Death Reporting System, which covered 27 states, to look at the circumstances of suicide among people with and without known mental-health conditions.

Researchers found that more than half of people who died by suicide did not have a known diagnosed mental-health condition at the time of death. Relationship problems or loss, substance misuse; physical health problems; and job, money, legal, or housing stress often contributed to risk for suicide. Firearms were the most common method of suicide used by those with and without a known diagnosed mental-health condition.

State Suicide Rates Vary Widely

The most recent overall suicide rates (2014–2016) varied four-fold; from 6.9 per 100,000 residents per year in Washington, DC to 29.2 per 100,000 residents in Montana.

Across the study period, rates increased in nearly all states. Percentage increases in suicide rates ranged from just under 6 percent in Delaware to over 57 percent in North Dakota. 25 states had suicide rate increases of more than 30 percent.

Wide Range of Prevention Activities Needed

The study recommends that states take a comprehensive public-health approach to suicide prevention and address the range of factors contributing to suicide. This requires coordination and cooperation from every sector of society: government, public health, healthcare, employers, education, media, and community organizations.

To help states with this important work, in 2017 the CDC released a technical package on suicide prevention that describes strategies and approaches based on the best available evidence. This can help inform states and communities as they make decisions about prevention activities and priorities.

Everyone can help prevent suicide:

- Learn the warning signs of suicide to identify and appropriately respond to people at risk.

- Reduce access to lethal means – such as medications and firearms – among people at risk of suicide.
- Contact the National Suicide Prevention Lifeline for help: 800-273-TALK (800-273-8255).

The media can avoid increasing risk when reporting on suicide by:

- Providing information on suicide warning signs and suicide prevention resources
- Sharing stories of hope and healing

Section 8.2 | Questions about Suicide Risk

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Frequently Asked Questions about Suicide,” National Institute of Mental Health (NIMH), August 4, 2021; Text under the heading “Prevention Strategies” is excerpted from “Prevention Strategies,” Centers for Disease Control and Prevention (CDC), June 4, 2021.

Suicide is a leading cause of death in the United States and a major public-health concern. When a person dies by suicide, the effects are felt by family, friends, and communities.

WHAT IS SUICIDE?

Suicide is when people harm themselves with the goal of ending their life, and they die as a result.

A suicide attempt is when people harm themselves with the goal of ending their life, but they do not die.

Avoid using terms such as “committing suicide,” “successful suicide,” or “failed suicide” when referring to suicide and suicide attempts, as these terms often carry negative meanings.

WHO IS AT RISK FOR SUICIDE?

People of all genders, ages, and ethnicities can be at risk for suicide.

The main risk factors for suicide are:

- A history of suicide attempts
- Depression, other mental disorders, or substance-use disorder
- Chronic pain
- Family history of a mental disorder or substance use
- Family history of suicide
- Exposure to family violence, including physical or sexual abuse
- Presence of guns or other firearms in the home
- Having recently been released from prison or jail
- Exposure, either directly or indirectly, to others’ suicidal behavior, such as that of family members, peers, or celebrities

Most people who have risk factors for suicide will not attempt suicide, and it is difficult to tell who will act on suicidal thoughts. Although risk factors for suicide are important to keep in mind, someone who is showing warning signs of suicide may be at higher risk for danger and need immediate attention.

Stressful life events (such as the loss of a loved one, legal troubles, or financial difficulties) and interpersonal stressors (such as shame, harassment, bullying, discrimination, or relationship troubles) may contribute to suicide risk, especially when they occur along with suicide risk factors.

WHAT ARE THE WARNING SIGNS OF SUICIDE?

Warning signs that someone may be at immediate risk for attempting suicide include:

- Talking about wanting to die or wanting to kill themselves

- Talking about feeling empty or hopeless or having no reason to live
- Talking about feeling trapped or feeling that there are no solutions
- Feeling unbearable emotional or physical pain
- Talking about being a burden to others
- Withdrawing from family and friends
- Giving away important possessions
- Saying goodbye to friends and family
- Putting affairs in order, such as making a will
- Taking great risks that could lead to death, such as driving extremely fast
- Talking or thinking about death often

Other serious warning signs that someone may be at risk for attempting suicide include:

- Displaying extreme mood swings, suddenly changing from very sad to very calm or happy
- Making a plan or looking for ways to kill themselves, such as searching for lethal methods online, stockpiling pills, or buying a gun
- Talking about feeling great guilt or shame
- Using alcohol or drugs more often
- Acting anxious or agitated
- Changing eating or sleeping habits
- Showing rage or talking about seeking revenge

DOES ASKING SOMEONE ABOUT SUICIDE PUT THE IDEA IN THEIR HEAD?

No. Studies have shown that asking people about suicidal thoughts and behaviors does not cause or increase such thoughts. Asking someone directly, “Are you thinking of killing yourself?” can be the best way to identify someone at risk for suicide.

DO CERTAIN GROUPS OF PEOPLE HAVE HIGHER RATES OF SUICIDE?

According to the Centers for Disease Control and Prevention (CDC), women are more likely to attempt suicide than men, but men are more likely to die by suicide than women. This may be because men are more likely to attempt suicide using very lethal methods, such as firearm or suffocation (e.g., hanging), and women are more likely to attempt suicide by poisoning, including overdosing on prescribed or unprescribed prescription drugs. However, recent CDC data suggest that the leading means of suicide for women may be shifting toward more lethal methods.

The CDC data also show that suicide rates vary by race, ethnicity, age, and gender. American-Indian and Alaska-Native men have the highest rates of suicide, followed by non-Hispanic white males.

Although the rate of suicide death among preteens and younger teens is lower than that of older adolescents and adults, it has increased over time. Suicide now ranks as the second leading cause of death for youth ages 10 to 14. For children under age 12, research indicates that Black children have a higher rate of suicide death than white children.

DO PEOPLE ‘THREATEN’ SUICIDE TO GET ATTENTION?

Suicidal thoughts or actions are a sign of extreme distress and an indicator that someone needs help. Talking about wanting to die by suicide is not a typical response to stress. All talk of suicide should be taken seriously and requires immediate attention.

WHAT TREATMENT OPTIONS AND THERAPIES ARE AVAILABLE?

Effective, evidence-based interventions are available to help people who are at risk for suicide:

- **Cognitive-behavioral therapy (CBT).** CBT is a type of psychotherapy that can help people learn new ways of dealing with stressful experiences. CBT helps people learn to recognize their thought patterns and consider alternative actions when thoughts of suicide arise.
- **Dialectical behavior therapy (DBT).** DBT is a type of psychotherapy that has been shown to reduce suicidal behavior in adolescents. DBT also has been shown to reduce the rate of suicide attempts in adults with borderline personality disorder, a mental illness characterized by an ongoing pattern of varying moods, self-image, and behavior that often results in impulsive actions and problems in relationships. A therapist trained in DBT can help a person recognize when their feelings or actions are disruptive or unhealthy and teach the person skills that can help them cope more effectively with upsetting situations.
- **Brief intervention strategies.** Research has shown that creating a safety plan or crisis response plan – with specific instructions for what to do and how to get help when having thoughts about suicide – can help reduce a person’s risk of acting on suicidal thoughts. Staying connected and following up with people who are at risk for suicide also has been shown to help lower the risk of future suicide attempts. Research also has shown that increasing safe storage of lethal means can help reduce suicide attempts and deaths by suicide. In addition, collaborative assessment and management of suicidality can help to reduce suicidal thoughts.
- **Collaborative care.** Collaborative care is a team-based approach to mental healthcare. A behavioral healthcare manager will work with the person, their primary health-care provider, and mental-health specialists to develop a treatment plan. Collaborative care has been shown to be an effective way to treat depression and reduce suicidal thoughts.

WHAT SHOULD YOU DO IF YOU ARE IN CRISIS OR SOMEONE YOU KNOW IS CONSIDERING SUICIDE?

If you notice warning signs of suicide – especially a change in behavior or new, concerning behavior – get help as soon as possible.

Family and friends are often the first to recognize the warning signs of suicide, and they can take the first step toward helping a loved one find mental-health treatment.

If someone tells you that they are going to kill themselves, do not leave them alone. Do not promise that you will keep their suicidal thoughts a secret – tell a trusted friend, family member, or other trusted adult.

Call 911 if there is immediate danger, or go to the nearest emergency room.

WHAT IF YOU SEE SUICIDAL MESSAGES ON SOCIAL MEDIA?

Knowing how to get help when someone posts suicidal messages can help save a life. Many social media sites have a process to get help for the person posting the message.

If you see messages or live streaming content that suggests someone is actively engaging in suicidal behavior, call 911 or call the National Suicide Prevention Lifeline at 800-273-8255.

HOW CAN YOU FIND HELP?

If you have thoughts of suicide, tell your health-care provider. Your health-care provider will listen to your concerns and can help you figure out next steps.

To find mental-health treatment services in your area, call the Substance Abuse and Mental Health Services Administration (SAMHSA) Treatment Referral Helpline at 800-662-4357.

WHAT SHOULD YOU KNOW ABOUT CLINICAL TRIALS?

Clinical trials are research studies that look at new ways to prevent, detect, or treat diseases and conditions. Although individuals may benefit from being part of a clinical trial, participants should be aware that the primary purpose of a clinical trial is to gain new scientific knowledge so that others may be better helped in the future.

Talk to your health-care provider about clinical trials, their benefits and risks, and whether one is right for you.

PREVENTION STRATEGIES

A comprehensive public-health approach to suicide prevention can decrease risk.

Suicide is a serious public-health problem that can have long-lasting effects on individuals, families, and communities. The good news is that suicide is preventable. Preventing suicide requires strategies at all levels of society. This includes prevention and protective strategies for individuals, families, and communities. Everyone can help prevent suicide by learning the warning signs, promoting prevention and resilience, and a committing to social change.

Section 8.3 | Suicidal Ideation among LGBT Youth

This section includes text excerpted from “Behavioral Health,” Youth.gov, July 1, 2014. Reviewed August 2021.

As the Institute of Medicine (IOM) has noted, lesbian, gay, bisexual, and transgender (LGBT) youth are typically well adjusted and mentally healthy. However, they experience higher rates of mental-health challenges and increased health complications arising

Table 8.1. Preventing Suicide: Strategy and Approach

Strategy	Approach
Strengthen economic supports	Strengthen household financial security Housing stabilization policies
Strengthen access and delivery of suicide care	Coverage of mental-health conditions in health insurance policies Reduce provider shortages in under-served areas Safer suicide care through systems change
Create protective environments	Reduce access to lethal means among persons at risk of suicide Organizational policies and culture Community-based policies to reduce excessive alcohol use
Promote connectedness	Peer norm programs Community engagement activities
Teach coping and problem-solving skills	Social-emotional learning programs Parenting skill and family relationship programs
Identify and support people at risk	Gatekeeper training Crisis intervention Treatment for people at risk of suicide Treatment to prevent reattempts
Lessen harms and prevent future	Postvention

from these challenges compared to their heterosexual peers. Research on transgender youth outcomes as separate from lesbian, gay, and bisexual youth outcomes is more limited, though growing. Some recent nonrandom surveys of self-identified transgender people indicate that up to one-third reported attempting suicide at least once, with higher rates for youth and young adults than for older adults. Moreover, suicide is the third leading cause of death among youth ages 15 to 24, and LGBT youth are more likely to attempt suicide than their peers. This does not mean, however, that LGBT identity itself is the cause of these challenges. Rather, these higher rates may be due to bias, discrimination, family rejection, and other stressors associated with how they are treated because of their sexual identity or gender identity/expression. These challenges, which researchers refer to as “microaggressions,” can contribute to anxiety, depression, and other mental-health challenges, as well as to suicide and self-harming behavior.

Research has found that lesbian, gay, and bisexual youth have much higher levels of suicidal ideation than their heterosexual peers. Also, population-based studies suggest that the reported rates of suicide attempts for high school students who identify as LGBT are two to seven times higher than rates among high school students who describe themselves as heterosexual. LGBT youth are also twice as likely to have thoughts about suicide. The 2009 Youth Risk Behavior Surveillance System (YRBSS) found that during the 12 months before the survey was administered, across the sites evaluated:

- The percentage of students who reported having felt sad or hopeless ranged from 19.3 percent to 29.0 percent among heterosexual students, from 28.8 percent to 52.8 percent among lesbian and gay students, and from 47.2 percent to 62.9 percent among bisexual students;
- The percentage of students who seriously considered attempting suicide ranged from 9.9 percent to 13.2 percent for heterosexual students, but from 18.8 percent to 43.4 percent among lesbian and gay students; and
- The percentage of students who attempted suicide one or more times ranged from 3.8 percent to 9.6 percent among heterosexual students, but from 15.1 percent to 34.3 percent among lesbian and gay students.

Strategies to improve mental-health and prevent self-harming behavior and suicide include

- Providing safe and supportive environments, particularly through affirming relationships with family and peers;
- Enacting legislation to protect the safety of LGBT youth;
- Reevaluating institutional practices that undermine positive child and youth development; and
- Building community awareness and capacity to understand and address stressors that LGBT youth may experience.

Chapter 9 | Depressive Disorders

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[Section 9.3—Seasonal Affective Disorder](#)

Section 9.1 | Depression

This section includes text excerpted from “Depression,” National Institute of Mental Health (NIMH), February 8, 2021.

WHAT IS DEPRESSION?

Everyone feels sad or low sometimes, but these feelings usually pass with a little time. Depression (also called “major depressive disorder” or “clinical depression”) is different. It can cause severe symptoms that affect how you feel, think, and handle daily activities, such as sleeping, eating, or working. It is an illness that can affect anyone – regardless of age, race, income, culture, or education.

Depression may occur with other mental disorders and other illnesses, such as diabetes, cancer, heart disease, and chronic pain. Depression can make these conditions worse, and vice versa. Sometimes medications taken for these illnesses cause side effects that contribute to depression symptoms.

What Are the Different Types of Depression?

Two common forms of depression are:

- **Major depression.** This includes symptoms of depression most of the time for at least two weeks that typically interfere with one’s ability to work, sleep, study, and eat.
- **Persistent depressive disorder (dysthymia).** This often includes less severe symptoms of depression that last much longer, typically for at least two years.

Other forms of depression include:

- **Perinatal depression.** This occurs when a woman experiences major depression during pregnancy or after delivery (postpartum depression).
- **Seasonal affective disorder (SAD).** This comes and goes with the seasons, typically starting in late fall and early winter and going away during spring and summer.
- **Depression with symptoms of psychosis.** This is a severe form of depression where a person experiences psychosis symptoms, such as delusions (disturbing, false fixed beliefs) or hallucinations (hearing or seeing things that others do not see or hear).

Individuals diagnosed with bipolar disorder (formerly called “manic depression” or “manic-depressive illness”) also experience depression.

WHAT ARE THE SIGNS AND SYMPTOMS OF DEPRESSION?

Common symptoms of depression include:

- Persistent sad, anxious, or “empty” mood
- Feelings of hopelessness or pessimism
- Feelings of irritability, frustration, or restlessness
- Feelings of guilt, worthlessness, or helplessness
- Loss of interest or pleasure in hobbies or activities
- Decreased energy, fatigue, or being “slowed down”
- Difficulty concentrating, remembering, or making decisions
- Difficulty sleeping, early morning awakening, or oversleeping
- Changes in appetite or unplanned weight changes
- Aches or pains, headaches, cramps, or digestive problems without a clear physical cause and that do not ease even with treatment
- Suicide attempts or thoughts of death or suicide

HOW IS DEPRESSION DIAGNOSED?

To be diagnosed with depression, an individual must have five depression symptoms every day, nearly all day, for at least two weeks. One of the symptoms must be a depressed mood or a loss of interest or pleasure in almost all activities. Children and adolescents may be irritable rather than sad.

If you think you may have depression, talk to your health-care provider. Primary care providers routinely diagnose and treat depression and refer individuals to mental-health professionals, such as psychologists or psychiatrists.

During the visit, your provider may ask when your symptoms began, how long they last, how often they occur, and if they keep you from going out or doing your usual activities. It may help to make some notes about your symptoms before your visit. Certain medications and some medical conditions, such as viruses or a thyroid disorder, can cause the same depression symptoms. Your provider can rule out these possibilities by doing a physical exam, interview, and lab tests.

DOES DEPRESSION LOOK THE SAME IN EVERYONE?

Depression can affect people differently, depending on their age.

- Children with depression may be anxious, cranky, pretend to be sick, refuse to go to school, cling to a parent, or worry that a parent may die.
- Older children and teens with depression may get into trouble at school, sulk, be easily frustrated, feel restless, or have low self-esteem. They also may have other disorders, such as anxiety and eating disorders, attention deficit hyperactivity disorder (ADHD), or substance use disorder (SUD). Older children and teens are more likely to experience excessive sleepiness (called “hypersomnia”) and increased appetite (called “hyperphagia”). In adolescence, females begin to experience depression more often than males, likely due to the biological, life cycle, and hormonal factors unique to women.
- Younger adults with depression are more likely to be irritable, complain of weight gain and hypersomnia, and have a negative view of life and the future. They often have other disorders, such as generalized anxiety disorder, social phobia, panic disorder, and substance-use disorders.
- Middle-aged adults with depression may have more depressive episodes, decreased libido, middle-of-the-night insomnia, or early morning awakening. They also may more frequently report having gastrointestinal (GI) symptoms such as diarrhea or constipation.
- Older adults with depression commonly experience sadness or grief or may have other less obvious symptoms. They may report a lack of emotions rather than a depressed mood. Older adults also are more likely to have other medical conditions or pain that may cause or contribute to depression. In severe cases, memory and thinking problems (called “pseudodementia”) may be prominent.

HOW IS DEPRESSION TREATED?

Depression treatment typically involves medication, psychotherapy, or both. If these treatments do not reduce symptoms, brain stimulation therapy may be another treatment option. In milder cases of depression, treatment might begin with psychotherapy alone, and medication added if the individual continues to experience symptoms. For moderate or severe depression, many mental-health professionals recommend a combination of medication and therapy at the start of treatment.

Choosing the right treatment plan should be based on a person’s individual needs and medical situation under a provider’s care. It may take some trial and error to find the treatment that works best for you.

Medications

Antidepressants are medications commonly used to treat depression. They take time to work – usually four to eight weeks – and symptoms such as problems with sleep, appetite, or concentration often improve before mood lifts. It is important to give medication a chance before deciding whether or not it works.

Treatment-resistant depression occurs when a person does not get better after trying at least two antidepressants. Esketamine is a newer U.S. Food and Drug Administration (FDA)-approved medication for treatment-resistant depression delivered as a nasal spray in a doctor's office, clinic, or hospital. It often acts rapidly – typically within a couple of hours – to relieve depression symptoms. Individuals usually continue to take an oral antidepressant to maintain the improvement in depression.

Another option for treatment-resistant depression is to add a different type of medication that may make an antidepressant more effective, such as an antipsychotic or anticonvulsant medication or bupropion, an antidepressant that works differently from most.

Medications prescribed by your health-care provider for depression can have side effects, but these may lessen over time. Talk to your provider about any side effects that you have. Do not stop taking medications without the help of a health-care provider. If you abruptly stop taking your medicine, you may experience severe withdrawal symptoms.

Psychotherapy

Psychotherapy (also called “talk therapy” or “counseling”) teaches individuals with depression new ways of thinking and behaving and helps with changing habits that contribute to depression. Most psychotherapy occurs with a licensed, trained mental-health professional in one-on-one sessions or with other individuals in a group setting. Two effective psychotherapies to treat depression include cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT). The use of older forms of psychotherapy, such as dynamic therapy, for a limited time also may help some people with depression.

With CBT, people learn to challenge and change unhelpful thinking patterns and behavior to improve their depressive and anxious feelings. Recent advances in CBT include introducing mindfulness principles and the development of specialized forms of therapy targeting particular symptoms, such as insomnia.

Interpersonal therapy focuses on interpersonal and life events that impact mood and vice versa. The goal of IPT is to help people improve their communication skills within relationships, establish social support networks, and develop realistic expectations to help them deal with crises or other issues that may be contributing to or worsening their depression.

Brain Stimulation Therapy

Brain stimulation therapy, which involves activating or inhibiting the brain directly with electricity or magnetic waves, is another option for some people when other depression treatments have not been effective.

The most common forms of brain stimulation therapy include electroconvulsive therapy (ECT) and repetitive transcranial magnetic stimulation (rTMS). Other brain stimulation therapies are newer and, in some cases, still experimental.

HOW CAN YOU FIND HELP?

The Substance Abuse and Mental Health Services Administration (SAMHSA) provides the Behavioral Health Treatment Services Locator (www.findtreatment.samhsa.gov), an online tool for finding mental-health treatment and support groups in your area.

HOW CAN YOU TAKE CARE OF YOURSELF?

Once you begin treatment, you should gradually start to feel better. Go easy on yourself during this time. Try to do things you used to enjoy. Even if you do not feel like doing them, they can improve your mood. Other things that may help:

- Try to get some physical activity. Just 30 minutes a day of walking can boost mood.
- Try to maintain a regular bedtime and wake-up time.
- Eat regular, healthy meals.
- Do what you can as you can. Decide what must get done and what can wait.
- Try to connect with other people, and talk with people you trust about how you are feeling.
- Postpone important life decisions until you feel better.
- Avoid using alcohol, nicotine, or drugs, including medications not prescribed for you.

HOW CAN YOU HELP A LOVED ONE WHO IS DEPRESSED?

If someone you know has depression, help them see a health-care provider or mental-health professional. You also can:

- Offer support, understanding, patience, and encouragement.
- Invite them out for walks, outings, and other activities.
- Help them stick to their treatment plan, such as setting reminders to take prescribed medications.
- Make sure they have transportation to therapy appointments.

Remind them that, with time and treatment, the depression will lift.

Section 9.2 | Persistent Depressive Disorder

This section includes text excerpted from "Persistent Depressive Disorder (Dysthymic Disorder)," National Institute of Mental Health (NIMH), October 10, 2014. Reviewed August 2021..

Persistent depressive disorder (formerly dysthymic disorder) is characterized by chronic low-level depression that is not as severe but may be longer lasting than, major depressive disorder (MDD). A diagnosis of persistent depressive disorder requires having experienced a combination of depressive symptoms for two years or more.

PREVALENCE OF PERSISTENT DEPRESSIVE DISORDER AMONG ADULTS

Based on diagnostic interview data from National Comorbidity Survey Replication (NCS-R), [Figure 9.1](#) shows past year prevalence of persistent depressive disorder among U.S. adults aged 18 or older.

- An estimated 1.5 percent of U.S. adults had persistent depressive disorder in the past year.
- Past year prevalence of persistent depressive disorder among adults higher for females (1.9 percent) than for males (1 percent).
- An estimated 1.3 percent of U.S. adults experience persistent depressive disorder at some time in their lives.

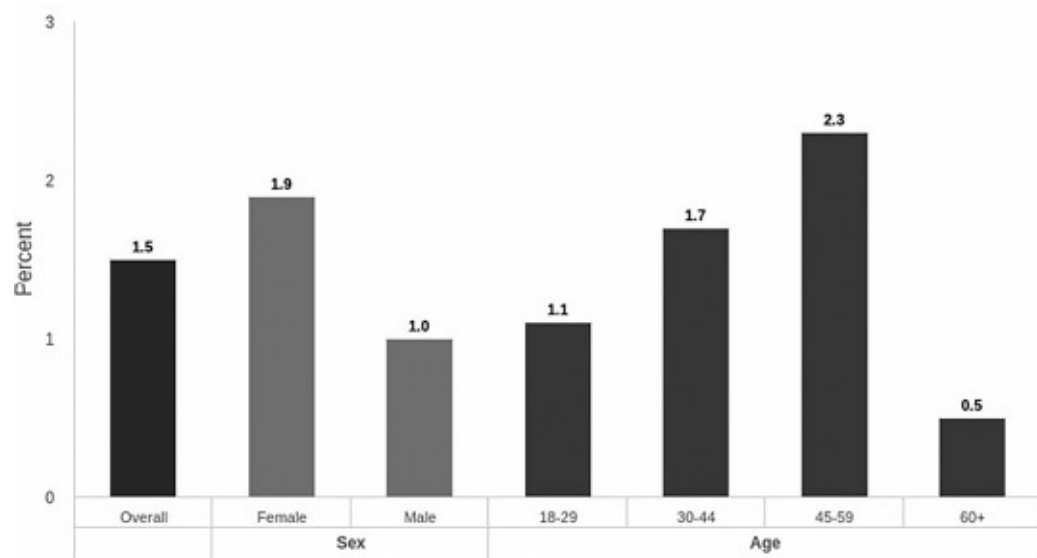


Figure 9.1. Past Year Prevalence of Persistent Depressive Disorder among U.S. Adults (2001–2003)

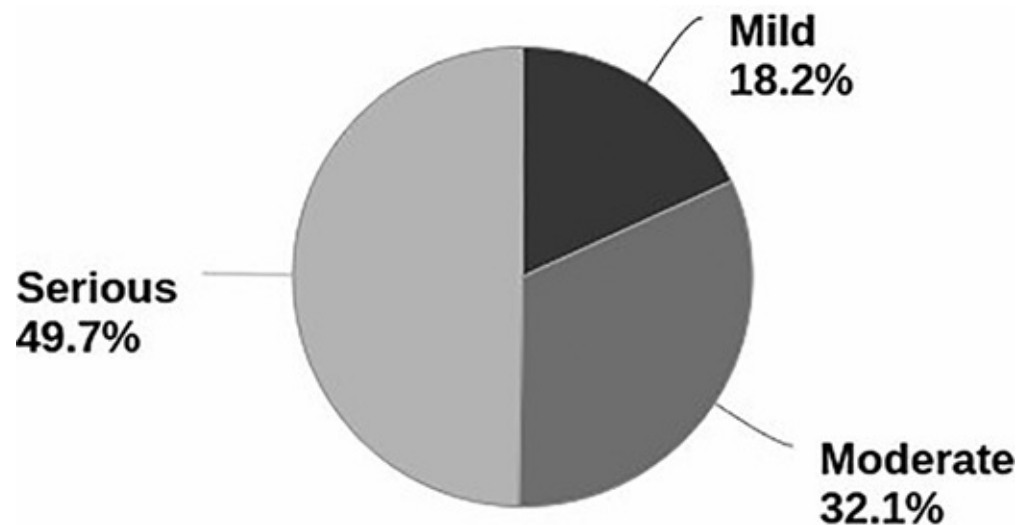


Figure 9.2. Past Year Severity of Persistent Depressive Disorder among U.S. Adults (2001–2003)

PERSISTENT DEPRESSIVE DISORDER WITH IMPAIRMENT AMONG ADULTS

Of adults with persistent depressive disorder in the past year, degree of impairment ranged from mild to severe, as shown in [Figure 9.2](#). Impairment was determined by scores on the Sheehan Disability Scale (SDS).

An estimated 49.7 percent of people with persistent depressive disorder had serious impairment, 32.1 percent had moderate impairment, and 18.2 percent had mild impairment.

Section 9.3 | Seasonal Affective Disorder

This section includes text excerpted from “Seasonal Affective Disorder,” National Institute of Mental Health (NIMH), October 23, 2020.

WHAT IS SEASONAL AFFECTIVE DISORDER?

Many people go through short periods of time where they feel sad or not like their usual selves. Sometimes, these mood changes begin and end when the seasons change. People may start to feel “down”

when the days get shorter in the fall and winter (also called “winter blues”) and begin to feel better in the spring, with longer daylight hours.

In some cases, these mood changes are more serious and can affect how a person feels, thinks, and handles daily activities. If you have noticed significant changes in your mood and behavior whenever the seasons change, you may be suffering from seasonal affective disorder (SAD), a type of depression.

In most cases, SAD symptoms start in the late fall or early winter and go away during the spring and summer; this is known as “winter-pattern SAD” or “winter depression.” Some people may experience depressive episodes during the spring and summer months; this is called “summer-pattern SAD” or “summer depression” and is less common.

WHAT ARE THE SIGNS AND SYMPTOMS OF SEASONAL AFFECTIVE DISORDER?

Seasonal affective disorder is not considered a separate disorder but is a type of depression characterized by its recurrent seasonal pattern, with symptoms lasting about four to five months per year. Therefore, the signs and symptoms of SAD include those associated with major depression, and some specific symptoms that differ for winter-pattern and summer-pattern SAD. Not every person with SAD will experience all of the symptoms listed below.

Symptoms of major depression may include:

- Feeling depressed most of the day, nearly every day
- Losing interest in activities you once enjoyed
- Experiencing changes in appetite or weight
- Having problems with sleep
- Feeling sluggish or agitated
- Having low energy
- Feeling hopeless or worthless
- Having difficulty concentrating
- Having frequent thoughts of death or suicide

For winter-pattern SAD, additional specific symptoms may include:

- Oversleeping (hypersomnia)
- Overeating, particularly with a craving for carbohydrates
- Weight gain
- Social withdrawal (feeling like “hibernating”)

Specific symptoms for summer-pattern SAD may include:

- Trouble sleeping (insomnia)
- Poor appetite, leading to weight loss
- Restlessness and agitation
- Anxiety
- Episodes of violent behavior

HOW IS SEASONAL AFFECTIVE DISORDER DIAGNOSED?

If you think you may be suffering from SAD, talk to your health-care provider or a mental-health specialist about your concerns. They may have you fill out specific questionnaires to determine if your symptoms meet the criteria for SAD.

To be diagnosed with SAD, a person must meet the following criteria:

- They must have symptoms of major depression or the more specific symptoms listed above.

- The depressive episodes must occur during specific seasons (i.e., only during the winter months or the summer months) for at least two consecutive years. However, not all people with SAD do experience symptoms every year.
- The episodes must be much more frequent than other depressive episodes that the person may have had at other times of the year during their lifetime.

WHO DEVELOPS SEASONAL AFFECTIVE DISORDER

Millions of American adults may suffer from SAD, although many may not know they have the condition. SAD occurs much more often in women than in men, and it is more common in those living farther north, where there are shorter daylight hours in the winter. For example, people living in Alaska or New England may be more likely to develop SAD than people living in Florida. In most cases, SAD begins in young adulthood.

Seasonal affective disorder is more common in people with major depressive disorder (MDD) or bipolar disorder, especially bipolar II disorder, which is associated with recurrent depressive and hypomanic episodes (less severe than the full-blown manic episodes typical of bipolar I disorder). Additionally, people with SAD tend to have other mental disorders, such as attention deficit hyperactivity disorder (ADHD), an eating disorder, an anxiety disorder, or panic disorder.

SAD sometimes runs in families. SAD is more common in people who have relatives with other mental illnesses, such as major depression or schizophrenia.

WHAT CAUSES SEASONAL AFFECTIVE DISORDER

Scientists do not fully understand what causes SAD. Research indicates that people with SAD may have reduced activity of the brain chemical (neurotransmitter) serotonin, which helps regulate mood. Research also suggests that sunlight controls the levels of molecules that help maintain normal serotonin levels, but in people with SAD, this regulation does not function properly, resulting in decreased serotonin levels in the winter.

Other findings suggest that people with SAD produce too much melatonin – a hormone that is central for maintaining the normal sleep-wake cycle. Overproduction of melatonin can increase sleepiness.

Both serotonin and melatonin help maintain the body's daily rhythm that is tied to the seasonal night-day cycle. In people with SAD, the changes in serotonin and melatonin levels disrupt the normal daily rhythms. As a result, they can no longer adjust to the seasonal changes in day length, leading to sleep, mood, and behavior changes.

Deficits in vitamin D may exacerbate these problems because vitamin D is believed to promote serotonin activity. In addition to vitamin D consumed with diet, the body produces vitamin D when exposed to sunlight on the skin. With less daylight in the winter, people with SAD may have lower vitamin D levels, which may further hinder serotonin activity.

Negative thoughts and feelings about the winter and its associated limitations and stresses are common among people with SAD (as well as others). It is unclear whether these are “causes” or “effects” of the mood disorder, but they can be a useful focus of treatment.

HOW IS SEASONAL AFFECTIVE DISORDER TREATED?

Treatments are available that can help many people with SAD. They fall into four main categories that may be used alone or in combination:

- Light therapy
- Psychotherapy

- Antidepressant medications
- Vitamin D

Talk to your health-care provider about which treatment, or combination of treatments, is best for you.

Light Therapy

Since the 1980s, light therapy has been a mainstay for the treatment of SAD. It aims to expose people with SAD to a bright light every day to make up for the diminished natural sunshine in the darker months.

For this treatment, the person sits in front of a very bright light box (10,000 lux) every day for about 30 to 45 minutes, usually first thing in the morning, from fall to spring. The light boxes, which are about 20 times brighter than ordinary indoor light, filter out the potentially damaging ultraviolet (UV) light, making this a safe treatment for most. However, people with certain eye diseases or people taking certain medications that increase sensitivity to sunlight may need to use alternative treatments or use light therapy under medical supervision.

Psychotherapy or “Talk Therapy”

Cognitive-behavioral therapy (CBT) is a type of talk therapy aimed at helping people learn how to cope with difficult situations; CBT also has been adapted for people with SAD (CBT-SAD). It is typically conducted in two weekly group sessions for six weeks and focuses on replacing negative thoughts related to the winter season (e.g., about the darkness of winter) with more positive thoughts. CBT-SAD also uses a process called “behavioral activation,” which helps individuals identify and schedule pleasant, engaging indoor or outdoor activities to combat the loss of interest they typically experience in the winter.

When researchers directly compared CBT with light therapy, both treatments were equally effective in improving SAD symptoms. Some symptoms seemed to get better a little faster with light therapy than with CBT. However, a long-term study that followed SAD patients for two winters found that the positive effects of CBT seemed to last longer over time.

Medications

Because SAD, like other types of depression, is associated with disturbances in serotonin activity, antidepressant medications called “selective serotonin reuptake inhibitors” (SSRIs) are also used to treat SAD when symptoms occur. These agents can significantly enhance patients’ moods. Commonly used SSRIs include fluoxetine, citalopram, sertraline, paroxetine, and escitalopram.

The U.S. Food and Drug Administration (FDA) also has approved another type of antidepressant, bupropion, in an extended-release form, that can prevent recurrence of seasonal major depressive episodes when taken daily from the fall until the following early spring.

All medications can have side effects. Talk to your doctor about the possible risk of using these medications for your condition. You may need to try several different antidepressant medications before finding one that improves your symptoms without causing problematic side effects.

Vitamin D

Because many people with SAD often have vitamin D deficiency, nutritional supplements of vitamin D may help improve their symptoms. However, studies testing whether vitamin D is effective in SAD treatment have produced mixed findings, with some results indicating that it is as effective as light therapy but others detecting no effect.

CAN SEASONAL AFFECTIVE DISORDER BE PREVENTED?

Because the timing of the onset of winter pattern-SAD is so predictable, people with a history of SAD

might benefit from starting the treatments mentioned above before the fall to help prevent or reduce the depression. To date, very few studies have investigated this question, and existing studies have found no convincing evidence that starting light therapy or psychotherapy ahead of time could prevent the onset of depression. Only preventive treatment with the antidepressant bupropion prevented SAD in study participants, but it also had a higher risk of side effects. Therefore, people with SAD should discuss with their health-care providers if they want to initiate treatment early to prevent depressive episodes.

Chapter 10 | Bipolar Disorder

WHAT IS BIPOLAR DISORDER?

Bipolar disorder (formerly called “manic-depressive illness” or “manic depression”) is a mental disorder that causes unusual shifts in mood, energy, activity levels, concentration, and the ability to carry out day-to-day tasks.

There are three types of bipolar disorder. All three types involve clear changes in mood, energy, and activity levels. These moods range from periods of extremely “up,” elated, irritable, or energized behavior (known as “manic episodes”) to very “down,” sad, indifferent, or hopeless periods (known as “depressive episodes”). Less severe manic periods are known as “hypomanic episodes.”

- **Bipolar I disorder.** It is defined by manic episodes that last at least seven days, or by manic symptoms that are so severe that the person needs immediate hospital care. Usually, depressive episodes occur as well, typically lasting at least two weeks. Episodes of depression with mixed features (having depressive symptoms and manic symptoms at the same time) are also possible.
- **Bipolar II disorder.** It is defined by a pattern of depressive episodes and hypomanic episodes, but not the full-blown manic episodes that are typical of bipolar I disorder.
- **Cyclothymic disorder (also called “cyclothymia”).** It is defined by periods of hypomanic symptoms as well as periods of depressive symptoms lasting for at least two years (one year in children and adolescents). However, the symptoms do not meet the diagnostic requirements for a hypomanic episode and a depressive episode.

Sometimes a person might experience symptoms of bipolar disorder that do not match the three categories listed above, which is referred to as “other specified and unspecified bipolar and related disorders.”

Bipolar disorder is typically diagnosed during late adolescence (teen years) or early adulthood. Occasionally, bipolar symptoms can appear in children. bipolar disorder can also first appear during a woman’s pregnancy or following childbirth. Although the symptoms may vary over time, bipolar disorder usually requires lifelong treatment. Following a prescribed treatment plan can help people manage their symptoms and improve their quality of life (QOL).

SIGNS AND SYMPTOMS OF BIPOLAR DISORDER

People with bipolar disorder experience periods of unusually intense emotion, changes in sleep patterns and activity levels, and uncharacteristic behaviors – often without recognizing their likely harmful or undesirable effects. These distinct periods are called “mood episodes.” Mood episodes are very different from the moods and behaviors that are typical for the person. During an episode, the symptoms last every day for most of the day. Episodes may also last for longer periods, such as several days or weeks.

Sometimes people experience both manic and depressive symptoms in the same episode. This kind of episode is called an “episode with mixed features.” People experiencing an episode with mixed features may feel very sad, empty, or hopeless, while, at the same, time feeling extremely energized.

A person may have bipolar disorder even if their symptoms are less extreme. For example, some people with bipolar disorder (bipolar II) experience hypomania, a less severe form of mania. During a hypomanic episode, a person may feel very good, be able to get things done, and keep up with day-to-day life. The person may not feel that anything is wrong, but family and friends may recognize the changes in

mood or

Table 10.1. Symptoms of Bipolar Disorder

People Having a Manic Episode May:	People Having a Depressive Episode May:
Feel very “up,” “high,” elated, or irritable or touchy	Feel very sad, “down,” empty, worried, or hopeless
Feel “jumpy” or “wired”	Feel slowed down or restless
Have a decreased need for sleep	Have trouble falling asleep, wake up too early, or sleep too much
Have a loss of appetite	Experience increased appetite and weight gain
Talk very fast about a lot of different things	Talk very slowly, feel like they have nothing to say, forget a lot
Feel like their thoughts are racing	Have trouble concentrating or making decisions
Think they can do a lot of things at once	Feel unable to do even simple things
Do risky things that show poor judgment, such as eat and drink excessively, spend or give away a lot of money, or have reckless sex	Have little interest in almost all activities, a decreased or absent sex drive, or an inability to experience pleasure (“anhedonia”)
Feel like they are unusually important, talented, or powerful	Feel hopeless or worthless, think about death or suicide

activity levels as possible bipolar disorder. Without proper treatment, people with hypomania can develop severe mania or depression.

Diagnosis

Proper diagnosis and treatment can help people with bipolar disorder lead healthy and active lives. Talking with a doctor or other licensed health-care provider is the first step. The health-care provider can complete a physical exam and order necessary medical tests to rule out other conditions. The health-care provider may then conduct a mental-health evaluation or provide a referral to a trained mental health-care provider, such as a psychiatrist, psychologist, or clinical social worker who has experience in diagnosing and treating bipolar disorder.

Mental-healthcare providers usually diagnose bipolar disorder based on a person’s symptoms, lifetime history, experiences, and, in some cases, family history. Accurate diagnosis in youth is particularly important.

Bipolar Disorder and Other Conditions

Some bipolar disorder symptoms are similar to those of other illnesses, which can make it challenging for a health-care provider to make a diagnosis. In addition, many people may have bipolar disorder along with another mental disorder or condition, such as an AD, substance use disorder (SUD), or an ED. People with bipolar disorder have an increased chance of having thyroid disease, migraine headaches, heart disease, diabetes, obesity, and other physical illnesses.

Psychosis. Sometimes, a person with severe episodes of mania or depression may experience psychotic symptoms, such as hallucinations or delusions. The psychotic symptoms tend to match the

person's extreme mood. For example:

- People having psychotic symptoms during a manic episode may have the unrealistic belief that they are famous, have a lot of money, or have special powers.
- People having psychotic symptoms during a depressive episode may falsely believe they are financially ruined and penniless, have committed a crime, or have an unrecognized serious illness.

As a result, people with bipolar disorder who also have psychotic symptoms are sometimes incorrectly diagnosed with schizophrenia. When people have symptoms of bipolar disorder and also experience periods of psychosis that are separate from mood episodes, the appropriate diagnosis may be schizoaffective disorder.

Anxiety. It is common for people with bipolar disorder to also have an AD.

Attention deficit hyperactivity disorder (ADHD). It is common for people with bipolar disorder to also have ADHD.

Misuse of drugs or alcohol. People with bipolar disorder may misuse alcohol or drugs and engage in other high-risk behaviors at times of impaired judgment during manic episodes. Although the negative effects of alcohol use or drug use may be most evident to family, friends, and health-care providers, it is important to recognize the presence of an associated mental disorder.

Eating disorders. In some cases, people with bipolar disorder also have an eating disorder, such as binge eating or bulimia.

RISK FACTORS OF BIPOLAR DISORDER

Researchers are studying the possible causes of bipolar disorder. Most agree that there is no single cause and it is likely that many factors contribute to a person's chance of having the illness.

Brain structure and functioning. Some studies indicate that the brains of people with bipolar disorder may differ from the brains of people who do not have bipolar disorder or any other mental disorder. Learning more about these differences may help scientists understand bipolar disorder and determine which treatments will work best. At this time, health-care providers base the diagnosis and treatment plan on a person's symptoms and history, rather than brain imaging or other diagnostic tests.

Genetics. Some research suggests that people with certain genes are more likely to develop bipolar disorder. Research also shows that people who have a parent or sibling with bipolar disorder have an increased chance of having the disorder themselves. Many genes are involved, and no one gene can cause the disorder. Learning more about how genes play a role in bipolar disorder may help researchers develop new treatments.

TREATMENTS AND THERAPIES FOR BIPOLAR DISORDER

Treatment can help many people, including those with the most severe forms of bipolar disorder. An effective treatment plan usually includes a combination of medication and psychotherapy, also called "talk therapy."

Bipolar disorder is a lifelong illness. Episodes of mania and depression typically come back over time. Between episodes, many people with bipolar disorder are free of mood changes, but some people may have lingering symptoms. Long-term, continuous treatment can help people manage these symptoms.

Medications

Certain medications can help manage symptoms of bipolar disorder. Some people may need to try several different medications and work with their health-care provider before finding medications that work best.

Medications generally used to treat bipolar disorder include mood stabilizers and second-generation (“atypical”) antipsychotics. Treatment plans may also include medications that target sleep or anxiety. Health-care providers often prescribe antidepressant medication to treat depressive episodes in bipolar disorder, combining the antidepressant with a mood stabilizer to prevent triggering a manic episode.

People taking medication should:

- Talk with their health-care provider to understand the risks and benefits of the medication
- Tell their health-care provider about any prescription drugs, over-the-counter (OTC) medications, or supplements they are already taking
- Report any concerns about side effects to a health-care provider right away. The health-care provider may need to change the dose or try a different medication.
- Remember that medication for bipolar disorder must be taken consistently, as prescribed, even when one is feeling well

Avoid stopping a medication without talking to a health-care provider first. Suddenly stopping a medication may lead to a “rebound” or worsening of bipolar disorder symptoms.

Psychotherapy

Psychotherapy, also called “talk therapy,” can be an effective part of the treatment plan for people with bipolar disorder. Psychotherapy is a term for a variety of treatment techniques that aim to help a person identify and change troubling emotions, thoughts, and behaviors. It can provide support, education, and guidance to people with bipolar disorder and their families. Treatment may include therapies such as cognitive-behavioral therapy (CBT) and psychoeducation, which are used to treat a variety of conditions.

Treatment may also include newer therapies designed specifically for the treatment of bipolar disorder, including interpersonal and social rhythm therapy (IPSRT) and family-focused therapy (FFT). Determining whether intensive psychotherapeutic intervention at the earliest stages of bipolar disorder can prevent or limit its full-blown onset is an important area of ongoing research.

Other Treatment Options

Some people may find other treatments helpful in managing their bipolar symptoms, including:

Electroconvulsive therapy (ECT). It is a brain stimulation procedure that can help people get relief from severe symptoms of bipolar disorder. With modern ECT, a person usually goes through a series of treatment sessions over several weeks. ECT is delivered under general anesthesia and is safe. It can be effective in treating severe depressive and manic episodes, which occur most often when medication and psychotherapy are not effective or are not safe for a particular patient. ECT can also be effective when a rapid response is needed, as in the case of suicide risk or catatonia (a state of unresponsiveness).

Transcranial magnetic stimulation (TMS). It is a newer approach to brain stimulation that uses magnetic waves. It is delivered to an awake patient most days for one month. Research shows that TMS is helpful for many people with various subtypes of depression, but its role in the treatment of bipolar disorder is still under study.

Beyond Treatment: Things You Can Do

Regular exercise. Regular aerobic exercise, such as jogging, brisk walking, swimming, or bicycling, helps with depression and anxiety, promotes better sleep, and is healthy for your heart and brain. There is also some evidence that anaerobic exercise such as weightlifting, yoga, and Pilates can be helpful. Check with your health-care provider before you start a new exercise regimen.

Keeping a life chart. Even with proper treatment, mood changes can occur. Treatment is more effective when a patient and health-care provider work together and talk openly about concerns and choices.

Keeping a life chart that records daily mood symptoms, treatments, sleep patterns, and life events can help patients and health-care providers track and treat bipolar disorder over time. Patients can easily share data collected via smartphone apps – including self-reports, self-ratings, and activity data – with their health-care providers and therapists.

Coping with Bipolar Disorder

Living with bipolar disorder can be challenging, but there are ways to help make it easier for yourself, a friend, or a loved one.

- Get treatment and stick with it – recovery takes time and it is not easy. But, treatment is the best way to start feeling better.
- Keep medical and therapy appointments and talk with the provider about treatment options.
- Take all medicines as directed.
- Structure activities: keep a routine for eating and sleeping, and make sure to get enough sleep and exercise.
- Learn to recognize your mood swings and warning signs, such as decreased sleep.
- Ask for help when trying to stick with your treatment.
- Be patient; improvement takes time. Social support helps.
- Avoid misuse of alcohol and drugs.
- **Remember:** bipolar disorder is a lifelong illness, but longterm, ongoing treatment can help control symptoms and enable you to live a healthy life.

This chapter includes text excerpted from “Bipolar Disorder,” National Institute of Mental Health (NIMH), January 2020.

Chapter 11 | Anxiety Disorders

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Section 11.1 | Understanding Anxiety Disorders

This section includes text excerpted from “Understanding Anxiety Disorders,” NIH News in Health, National Institutes of Health (NIH), March 2016. Reviewed August 2021.

Many of us worry from time to time. We fret over finances, feel anxious about job interviews, or get nervous about social gatherings. These feelings can be normal or even helpful. They may give us a boost of energy or help us focus. But, for people with anxiety disorders, they can be overwhelming.

Anxiety disorders affect nearly 1 in 5 American adults each year. People with these disorders have feelings of fear and uncertainty that interfere with everyday activities and last for 6 months or more. Anxiety disorders can also raise your risk for other medical problems such as heart disease, diabetes, substance abuse, and depression.

The good news is that most anxiety disorders get better with therapy. The course of treatment depends on the type of anxiety disorder. Medications, psychotherapy (“talk therapy”), or a combination of both can usually relieve troubling symptoms.

“Anxiety disorders are one of the most treatable mental-health problems we see,” says Dr. Daniel Pine, an National Institute of Health (NIH) neuroscientist and psychiatrist. “Still, for reasons we do not fully understand, most people who have these problems do not get the treatments that could really help them.”

One of the most common types of anxiety disorder is social anxiety disorder, or social phobia. It affects both women and men equally – a total of about 15 million U.S. adults. Without treatment, social phobia can last for years or even a lifetime. People with social phobia may worry for days or weeks before a social event. They are often embarrassed, self-conscious, and afraid of being judged. They find it hard to talk to others. They may blush, sweat, tremble, or feel sick to their stomach when around other people.

Other common types of anxiety disorders include generalized anxiety disorder, which affects nearly 7 million American adults, and panic disorder, which affects about 6 million. Both are twice as common in women as in men.

People with generalized anxiety disorder worry endlessly over everyday issues – like health, money, or family problems – even if they realize there is little cause for concern. They startle easily, cannot relax, and cannot concentrate. They find it hard to fall asleep or stay asleep. They may get headaches, muscle aches, or unexplained pains. Symptoms often get worse during times of stress.

People with panic disorder have sudden, repeated bouts of fear – called “panic attacks” – that last several minutes or more. During a panic attack, they may feel that they cannot breathe or that they are having a heart attack. They may fear loss of control or feel a sense of unreality. Not everyone who has panic attacks will develop panic disorder. But, if the attacks recur without warning, creating fear of having another attack at any time, then it is likely panic disorder.

Anxiety disorders tend to run in families. But, researchers are not certain why some family members develop these conditions while others do not. No specific genes have been found to actually cause an anxiety disorder. “Many different factors – including genes, stress, and the environment – have small effects that add up in complex ways to affect a person’s risk for these disorders,” Pine says.

“Many kids with anxiety disorders will outgrow their conditions. But, most anxiety problems we see in adults started during their childhood,” Pine adds.

“Anxiety disorders are among the most common psychiatric disorders in children, with an estimated 1 in 3 suffering anxiety at some point during childhood or adolescence,” says Dr. Susan Whitfield-Gabrieli, a brain imaging expert at the Massachusetts Institute of Technology. “About half of diagnosable mental-

health disorders start by age 14, so there is a lot of interest in uncovering the factors that might influence the brain by those early teen years.”

Whitfield-Gabrieli is launching an NIH-funded study to create detailed MRI images of the brains of more than 200 teens, ages 14–15, with and without anxiety or depression. The scientists will then assess what brain structures and activities might be linked to these conditions. The study is part of NIH’s Human Connectome Project, in which research teams across the country are studying the complex brain connections that affect health and disease.

Whitfield-Gabrieli and colleagues have shown that analysis of brain connections might help predict which adults with social phobia will likely respond to cognitive-behavioral therapy (CBT). CBT is a type of talk therapy known to be effective for people with anxiety disorders. It helps them change their thinking patterns and how they react to anxiety-provoking situations. But, it does not work for everyone.

Of 38 adults with social phobia, those who responded best after 3 months of CBT had similar patterns of brain connections. This brain analysis led to major improvement, compared to a clinician’s assessment alone, in predicting treatment response. Larger studies will be needed to confirm the benefits of the approach.

“Ultimately, we hope that brain imaging will help us predict clinical outcomes and actually tailor the treatment to each individual – to know whether they will respond best to psychotherapy or to certain medications,” Whitfield-Gabrieli says.

Other researchers are focusing on our emotions and our ability to adjust them. “We want to understand not only how emotions can help us, but also how they can create difficulties if they are of the wrong intensity or the wrong type for a particular situation,” says Dr. James Gross, a clinical psychologist at Stanford University.

We all use different strategies to adjust our emotions, often without thinking about it. If something makes you angry, you may try to tamp down your emotion to avoid making a scene. If something annoys you, you might try to ignore it, modify it, or entirely avoid it.

But, these strategies can turn harmful over time. For instance, people with social phobia might decide to avoid attending a professional conference so they can keep their anxiety in check. That makes them lose opportunities at work and miss chances to meet people and make friends.

Gross and others are examining the differences between how people with and without anxiety disorders regulate their emotions. “We are finding that CBT is helpful in part, because it teaches people to more effectively use emotion regulation strategies,” Gross says. “They then become more competent in their ability to use these strategies in their everyday lives.”

“It is important to be aware that many different kinds of treatments are available, and people with anxiety disorders tend to have very good responses to those treatments,” Pine adds. The best way to start is often by talking with your physician. If you are a parent, talk with your child’s pediatrician. “These health professionals are generally prepared to help identify such problems and help patients get the appropriate care they need,” Pine says.

Section 11.2 | Generalized Anxiety Disorder

This section includes text excerpted from “Generalized Anxiety Disorder: When Worry Gets Out of Control,” National Institute of Mental Health (NIMH), 2016. Reviewed August 2021.

WHAT IS GENERALIZED ANXIETY DISORDER?

Occasional anxiety is a normal part of life. You might worry about things such as health, money, or family

problems. But, people with generalized anxiety disorder (GAD) feel extremely worried or feel nervous about these and other things – even when there is little or no reason to worry about them. People with GAD find it difficult to control their anxiety and stay focused on daily tasks.

The good news is that GAD is treatable. Call your doctor to talk about your symptoms so that you can feel better.

WHAT ARE THE SIGNS AND SYMPTOMS OF GENERALIZED ANXIETY DISORDER?

Generalized anxiety disorder develops slowly. It often starts during the teen years or young adulthood.

People with GAD may:

- Worry very much about everyday things
- Have trouble controlling their worries or feelings of nervousness
- Know that they worry much more than they should
- Feel restless and have trouble relaxing
- Have a hard time concentrating
- Be easily startled
- Have trouble falling asleep or staying asleep
- Feel easily tired or tired all the time
- Have headaches, muscle aches, stomach aches, or unexplained pains
- Have a hard time swallowing
- Tremble or twitch
- Be irritable or feel “on edge”
- Sweat a lot, feel light-headed or out of breath
- Have to go to the bathroom a lot

Children and teens with GAD often worry excessively about:

- Their performance, such as in school or in sports
- Catastrophes, such as earthquakes or war

Adults with GAD are often highly nervous about everyday circumstances, such as:

- Job security or performance
- Health
- Finances
- The health and well-being of their children
- Being late
- Completing household chores and other responsibilities

Both children and adults with GAD may experience physical symptoms that make it hard to function and that interfere with daily life.

WHAT CAUSES GENERALIZED ANXIETY DISORDER

Generalized anxiety disorder sometimes runs in families, but no one knows for sure why some family members have it while others do not. Researchers have found that several parts of the brain, as well as biological processes, play a key role in fear and anxiety. By learning more about how the brain and body function in people with anxiety disorders, researchers may be able to create better treatments. Researchers are also looking for ways in which stress and environmental factors play a role.

HOW IS GENERALIZED ANXIETY DISORDER TREATED?

First, talk to your doctor about your symptoms. Your doctor should do an exam and ask you about your health history to make sure that an unrelated physical problem is not causing your symptoms. Your doctor may refer to you a mental-health specialist, such as a psychiatrist or psychologist.

GAD is generally treated with psychotherapy, medication, or both. Talk with your doctor about the best treatment for you.

Psychotherapy

A type of psychotherapy called “cognitive-behavioral therapy” (CBT) is especially useful for treating GAD. CBT teaches a person different ways of thinking, behaving, and reacting to situations that help her or him feel less anxious and worried.

Medication

Doctors may also prescribe medication to help treat GAD. Your doctor will work with you to find the best medication and dose for you. Different types of medication can be effective in GAD:

- Selective serotonin reuptake inhibitors (SSRIs)
- Serotonin-norepinephrine reuptake inhibitors (SNRIs)
- Other serotonergic medication
- Benzodiazepines

Doctors commonly use SSRIs and SNRIs to treat depression, but they are also helpful for the symptoms of GAD. They may take several weeks to start working. These medications may also cause side effects, such as headaches, nausea, or difficulty sleeping. These side effects are usually not severe for most people, especially if the dose starts off low and is increased slowly over time. Talk to your doctor about any side effects that you have.

Buspirone is another serotonergic medication that can be helpful in GAD. Buspirone needs to be taken continuously for several weeks for it to be fully effective.

Benzodiazepines, which are sedative medications, can also be used to manage severe forms of GAD. These medications are powerfully effective in rapidly decreasing anxiety, but they can cause tolerance and dependence if you use them continuously. Therefore, your doctor will only prescribe them for brief periods of time if you need them.

Do not give up on treatment too quickly. Both psychotherapy and medication can take some time to work. A healthy lifestyle can also help combat anxiety. Make sure to get enough sleep and exercise, eat a healthy diet, and turn to family and friends who you trust for support.

Section 11.3 | Obsessive-Compulsive Disorder

This section includes text excerpted from “Obsessive-Compulsive Disorder,” National Institute of Mental Health (NIMH), October 2019.

Obsessive-compulsive disorder (OCD) is a common, chronic, and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts (obsessions) and/or behaviors (compulsions) that she or he feels the urge to repeat over and over.

SIGNS AND SYMPTOMS OF OBSESSIVE-COMPULSIVE DISORDER

People with OCD may have symptoms of obsessions, compulsions, or both. These symptoms can interfere with all aspects of life, such as work, school, and personal relationships.

Obsessions are repeated thoughts, urges, or mental images that cause anxiety. Common symptoms

include:

- Fear of germs or contamination
- Unwanted forbidden or taboo thoughts involving sex, religion, or harm
- Aggressive thoughts towards others or self
- Having things symmetrical or in a perfect order

Compulsions are repetitive behaviors that a person with OCD feels the urge to do in response to an obsessive thought. Common compulsions include:

- Excessive cleaning and/or handwashing
- Ordering and arranging things in a particular, precise way
- Repeatedly checking on things, such as repeatedly checking to see if the door is locked or that the oven is off
- Compulsive counting

Not all rituals or habits are compulsions. Everyone double checks things sometimes. But, a person with OCD generally:

- Cannot control her or his thoughts or behaviors, even when those thoughts or behaviors are recognized as excessive
- Spends at least one hour a day on these thoughts or behaviors
- Does not get pleasure when performing the behaviors or rituals, but may feel brief relief from the anxiety the thoughts cause
- Experiences significant problems in their daily life due to these thoughts or behaviors

Some individuals with OCD also have a tic disorder. Motor tics are sudden, brief, repetitive movements, such as eye blinking and other eye movements, facial grimacing, shoulder shrugging, and head or shoulder jerking. Common vocal tics include repetitive throat-clearing, sniffing, or grunting sounds.

Symptoms may come and go, ease over time, or worsen. People with OCD may try to help themselves by avoiding situations that trigger their obsessions, or they may use alcohol or drugs to calm themselves. Although most adults with OCD recognize that what they are doing does not make sense, some adults and most children may not realize that their behavior is out of the ordinary. Parents or teachers typically recognize OCD symptoms in children.

If you think you have OCD, talk to your doctor about your symptoms. If left untreated, OCD can interfere in all aspects of life.

RISK FACTORS OF OBSESSIVE-COMPULSIVE DISORDER

Obsessive-compulsive disorder (OCD) is a common disorder that affects adults, adolescents, and children all over the world. Most people are diagnosed by about age 19, typically with an earlier age of onset in boys than in girls, but onset after age 35 does happen.

The causes of OCD are unknown, but risk factors include:

Genetics

Twin and family studies have shown that people with first-degree relatives (such as a parent, sibling, or child) who have OCD are at a higher risk for developing OCD themselves. The risk is higher if the first-degree relative developed OCD as a child or teen. Ongoing research continues to explore the connection between genetics and OCD and may help improve OCD diagnosis and treatment.

Brain Structure and Functioning

Imaging studies have shown differences in the frontal cortex and subcortical structures of the brain in patients with OCD. There appears to be a connection between the OCD symptoms and abnormalities in certain areas of the brain, but that connection is not clear. Research is still underway. Understanding the causes will help determine specific, personalized treatments to treat OCD.

Environment

An association between childhood trauma and obsessive-compulsive symptoms has been reported in some studies.

In some cases, children may develop OCD or OCD symptoms following a streptococcal infection – this is called “pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections” (PANDAS).

TREATMENTS AND THERAPIES OF OBSESSIVE-COMPULSIVE DISORDER

Obsessive-compulsive disorder (OCD) is typically treated with medication, psychotherapy, or a combination of the two. Although most patients with OCD respond to treatment, some patients continue to experience symptoms.

Sometimes people with OCD also have other mental disorders, such as anxiety, depression, and body dysmorphic disorder, a disorder in which someone mistakenly believes that a part of their body is abnormal. It is important to consider these other disorders when making decisions about treatment.

Medication

Serotonin reuptake inhibitors (SRIs), which include selective serotonin reuptake inhibitors (SSRIs) are used to help reduce OCD symptoms.

SRIs often require higher daily doses in the treatment of OCD than of depression and may take 8 to 12 weeks to start working, but some patients experience more rapid improvement.

If symptoms do not improve with these types of medications, research shows that some patients may respond well to an antipsychotic medication. Although research shows that an antipsychotic medication may help manage symptoms for people who have both OCD and a tic disorder, research on the effectiveness of antipsychotics to treat OCD is mixed.

If you are prescribed a medication, be sure you:

- Talk with your doctor or a pharmacist to make sure you understand the risks and benefits of the medications you are taking.
- Do not stop taking a medication without talking to your doctor first. Suddenly stopping a medication may lead to “rebound” or worsening of OCD symptoms. Other uncomfortable or potentially dangerous withdrawal effects are also possible.
- Report any concerns about side effects to your doctor right away. You may need a change in the dose or a different medication.
- Report serious side effects to the U.S. Food and Drug Administration (FDA) MedWatch Adverse Event Reporting program online or by phone at 1-800-332-1088. You or your doctor may send a report.

Psychotherapy

Psychotherapy can be an effective treatment for adults and children with OCD. Research shows that certain types of psychotherapy, including cognitive-behavior therapy (CBT) and other related therapies (e.g., habit reversal training) can be as effective as medication for many individuals. Research also shows that a type of CBT called “exposure and response prevention” (EX/RP) – spending time in the very situation that triggers compulsions (e.g., touching dirty objects), but then being prevented from undertaking

the usual resulting compulsion (e.g., handwashing) – is effective in reducing compulsive behaviors in OCD, even in people who did not respond well to SRI medication.

As with most mental disorders, treatment is usually personalized and might begin with either medication or psychotherapy, or with a combination of both. For many patients, EX/RP is the add-on treatment of choice when SRIs or SSRIs medication does not effectively treat OCD symptoms or vice versa for individuals who begin treatment with psychotherapy.

Other Treatment Options

In 2018, the FDA approved transcranial magnetic stimulation (TMS) as an adjunct in the treatment of OCD in adults.

NIMH is supporting research into other new treatment approaches for people whose OCD does not respond well to the usual therapies. These new approaches include combination and add-on (augmentation) treatments, as well as novel techniques such as deep brain stimulation.

Section 11.4 | Panic Disorder

This section includes text excerpted from “Panic Disorder: When Fear Overwhelms,” National Institute of Mental Health (NIMH), November 2016. Reviewed August 2021.

Do you sometimes have sudden attacks of anxiety and overwhelming fear that last for several minutes? Maybe your heart pounds, you sweat, and you feel like you cannot breathe or think. Do these attacks occur at unpredictable times with no obvious trigger, causing you to worry about the possibility of having another one at any time?

If so, you may have a type of anxiety disorder called “panic disorder.” Left untreated, panic disorder can lower your quality of life because it may lead to other fears and mental-health disorders, problems at work or school, and social isolation.

WHAT IS PANIC DISORDER?

People with panic disorder have sudden and repeated attacks of fear that last for several minutes or longer. These are called “panic attacks.” Panic attacks are characterized by a fear of disaster or of losing control even when there is no real danger. A person may also have a strong physical reaction during a panic attack. It may feel like having a heart attack. Panic attacks can occur at any time, and many people with panic disorder worry about and dread the possibility of having another attack.

A person with panic disorder may become discouraged and feel ashamed because she or he cannot carry out normal routines like going to school or work, going to the grocery store, or driving.

Panic disorder often begins in the late teens or early adulthood. More women than men have panic disorder. But, not everyone who experiences panic attacks will develop panic disorder.

WHAT CAUSES PANIC DISORDER

Panic disorder sometimes runs in families, but no one knows for sure why some family members have it while others do not. Researchers have found that several parts of the brain, as well as biological processes, play a key role in fear and anxiety. Some researchers think that people with panic disorder misinterpret harmless bodily sensations as threats. By learning more about how the brain and body functions in people with panic disorder, scientists may be able to create better treatments. Researchers are also looking for ways in which stress and environmental factors may play a role.

WHAT ARE THE SIGNS AND SYMPTOMS OF PANIC DISORDER?

People with panic disorder may have:

- Sudden and repeated panic attacks of overwhelming anxiety and fear
- A feeling of being out of control, or a fear of death or impending doom during a panic attack
- Physical symptoms during a panic attack, such as a pounding or racing heart, sweating, chills, trembling, breathing problems, weakness or dizziness, tingly or numb hands, chest pain, stomach pain, and nausea
- An intense worry about when the next panic attack will happen
- A fear or avoidance of places where panic attacks have occurred in the past

HOW IS PANIC DISORDER TREATED?

First, talk to your doctor about your symptoms. Your doctor should do an exam and ask you about your health history to make sure that an unrelated physical problem is not causing your symptoms. Your doctor may refer to you a mental-health specialist, such as a psychiatrist or psychologist.

Panic disorder is generally treated with psychotherapy, medication, or both. Talk with your doctor about the best treatment for you.

Psychotherapy. A type of psychotherapy called “cognitive- behavioral therapy” (CBT) is especially useful as a first-line treatment for panic disorder. CBT teaches you different ways of thinking, behaving, and reacting to the feelings that come on with a panic attack. The attacks can begin to disappear once you learn to react differently to the physical sensations of anxiety and fear that occur during panic attacks.

Medication. Doctors also may prescribe different types of medications to help treat panic disorder:

- Selective serotonin reuptake inhibitors (SSRIs)
- Serotonin-norepinephrine reuptake inhibitors (SNRIs)
- Beta-blockers
- Benzodiazepines

SSRIs and SNRIs are commonly used to treat depression, but they are also helpful for the symptoms of panic disorder. They may take several weeks to start working. These medications may also cause side-effects, such as headaches, nausea, or difficulty sleeping. These side effects are usually not severe for most people, especially if the dose starts off low and is increased slowly over time. Talk to your doctor about any side effects that you have.

Another type of medication called “beta-blockers” can help control some of the physical symptoms of panic disorder, such as rapid heart rate. Although doctors do not commonly prescribe beta-blockers for panic disorder, they may be helpful in certain situations that precede a panic attack.

Benzodiazepines, which are sedative medications, are powerfully effective in rapidly decreasing panic attack symptoms, but they can cause tolerance and dependence if you use them continuously. Therefore, your doctor will only prescribe them for brief periods of time if you need them.

Your doctor will work with you to find the best medication and dose for you.

Do not give up on treatment too quickly. Both psychotherapy and medication can take some time to work. A healthy lifestyle can also help combat panic disorder. Make sure to get enough sleep and exercise, eat a healthy diet, and turn to family and friends who you trust for support.

Section 11.5 | Social Anxiety Disorder

Are you extremely afraid of being judged by others?

Are you very self-conscious in everyday social situations?

Do you avoid meeting new people?

If you have been feeling this way for at least six months and these feelings make it hard for you to do everyday tasks – such as talking to people at work or school – you may have a social anxiety disorder.

Social anxiety disorder (also called “social phobia”) is a mental-health condition. It is an intense, persistent fear of being watched and judged by others. This fear can affect work, school, and your other day-to-day activities. It can even make it hard to make and keep friends. But, social anxiety disorder does not have to stop you from reaching your potential. Treatment can help you overcome your symptoms.

WHAT IS SOCIAL ANXIETY DISORDER?

Social anxiety disorder is a common type of anxiety disorder. A person with social anxiety disorder feels symptoms of anxiety or fear in certain or all social situations, such as meeting new people, dating, being on a job interview, answering a question in class, or having to talk to a cashier in a store. Doing everyday things in front of people – such as eating or drinking in front of others or using a public restroom – also causes anxiety or fear. The person is afraid that she or he will be humiliated, judged, and rejected.

The fear that people with social anxiety disorder have in social situations is so strong that they feel it is beyond their ability to control. As a result, it gets in the way of going to work, attending school, or doing everyday things. People with social anxiety disorder may worry about these and other things for weeks before they happen. Sometimes, they end up staying away from places or events where they think they might have to do something that will embarrass them.

Some people with the disorder do not have anxiety in social situations but have performance anxiety instead. They feel physical symptoms of anxiety in situations such as giving a speech, playing a sports game, or dancing or playing a musical instrument on stage.

Social anxiety disorder usually starts during youth in people who are extremely shy. Social anxiety disorder is not uncommon; research suggests that about 7 percent of Americans are affected. Without treatment, social anxiety disorder can last for many years or a lifetime and prevent a person from reaching her or his full potential.

WHAT ARE THE SIGNS AND SYMPTOMS OF SOCIAL ANXIETY DISORDER?

When having to perform in front of or be around others, people with social anxiety disorder tend to:

- Blush, sweat, tremble, feel a rapid heart rate, or feel their “mind going blank”
- Feel nauseous or sick to their stomach
- Show a rigid body posture, make little eye contact, or speak with an overly soft voice
- Find it scary and difficult to be with other people, especially those they do not already know, and have a hard time talking to them even though they wish they could
- Be very self-conscious in front of other people and feel embarrassed and awkward
- Be very afraid that other people will judge them
- Stay away from places where there are other people

WHAT CAUSES SOCIAL ANXIETY DISORDER

Social anxiety disorder sometimes runs in families, but no one knows for sure why some family members have it while others do not. Researchers have found that several parts of the brain are involved in fear and anxiety. Some researchers think that misreading of others’ behavior may play a role in causing or worsening social anxiety. For example, you may think that people are staring or frowning at you when they

truly are not. Underdeveloped social skills are another possible contributor to social anxiety. For example, if you have underdeveloped social skills, you may feel discouraged after talking with people and may worry about doing it in the future. By learning more about fear and anxiety in the brain, scientists may be able to create better treatments. Researchers are also looking for ways in which stress and environmental factors may play a role.

HOW IS SOCIAL ANXIETY DISORDER TREATED?

First, talk to your doctor or health-care professional about your symptoms. Your doctor should do an exam and ask you about your health history to make sure that an unrelated physical problem is not causing your symptoms. Your doctor may refer you to a mental-health specialist, such as a psychiatrist, psychologist, clinical social worker, or counselor. The first step to effective treatment is to have a diagnosis made, usually by a mental-health specialist.

Social anxiety disorder is generally treated with psychotherapy (sometimes called “talk” therapy), medication, or both. Speak with your doctor or health-care provider about the best treatment for you.

Psychotherapy

A type of psychotherapy called “cognitive-behavioral therapy” (CBT) is especially useful for treating social anxiety disorder. CBT teaches you different ways of thinking, behaving, and reacting to situations that help you feel less anxious and fearful. It can also help you learn and practice social skills. CBT delivered in a group format can be especially helpful.

Section 11.6 | Compulsive Hoarding

“Compulsive Hoarding,” © 2021 Omnigraphics. Reviewed August 2021.

People with hoarding disorder persistently find it difficult to discard possessions that others may consider worthless. This leads to excessive accumulation of items that cramp up living and work areas, leaving narrow spaces to walk between stacks of clutter. The mere thought of discarding these items causes distress to a person with hoarding disorder. Unlike collectors who collect specific items of value such as coins or stamps, hoarders collect random items they perceive they will need in the future. As a result, cupboards, desktops, countertops, hallways, stairs, and sinks may be overflowing with items such as newspapers, magazines, clothes, cardboard boxes, household items, etc. This haphazard clutter may extend to outside spaces and the garage if there is no more room inside the house. This may turn the person’s living environment into an unhealthy and unsafe place to live. The condition also causes the person to feel shame and cause stress.

SYMPTOMS OF COMPULSIVE HOARDING

Symptoms of compulsive hoarding vary from mild to severe and may begin to surface as early as during the teenage year and early adulthood. By middle age, the symptoms may turn severe and harder to treat. In the United States, an estimated 2–6 percent of the population is affected by hoarding disorder. Signs and symptoms may include the following:

- Inability to throw away things regardless of their value
- Constantly acquiring items despite lack of space
- Anxiety to save items for future use and experiencing distress at the thought of throwing them away
- Cluttered living and workspaces that hamper the quality of life, making the living conditions

unsafe and unhealthy

- Difficulty in organizing their belongings
- Distrusting others touching their possession
- Withdrawal from family and friends over time

CAUSES OF COMPULSIVE HOARDING

- Compulsive shopping habits
- A family member or close relative who has the disorder
- A traumatic life event
- Brain injury
- Other mental-health disorders such as depression, obsessive-compulsive disorder (OCD), attention deficit hyperactivity disorder (ADHD), and obsessive-compulsive personality disorder (OCPD)
- Inability to say 'no' to free item

DIAGNOSING COMPULSIVE HOARDING

People with hoarding disorder may not always recognize their condition. Concerned family members or friends may reach out to a mental-health professional to avail help for their loved one. To diagnose the condition, the mental-health professional:

- Will ask questions regarding your collecting habits
- Interview your family and friends regarding their observations of your condition

The diagnosis will be confirmed based on the current symptoms such as inability to throw away items, feeling distressed at the thought of getting rid of their possessions, and cluttered living spaces that are almost unusable. In addition, hoarding disorder may also be associated with:

- Perfectionism
- Procrastination
- Indecisiveness
- Distractibility

People with hoarding disorder may also hoard a large number of animals. Due to its large number, the animals may be kept in inappropriate places and may not be cared for properly, leading to unsanitary living conditions.

TREATING COMPULSIVE HOARDING

Two ways to treat compulsive hoarding are:

1. Cognitive-behavioral therapy (CBT) helps a person to identify their hoarding behavior and teach ways to deal with anxiety when throwing away possessions. The mental-health professional may also teach them organization and decision-making skills.
2. Antidepressants such as venlafaxine (Effexor) and paroxetine (Paxil) may be prescribed to treat symptoms along with CBT.

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1. "Hoarding Disorder," Mayo Clinic, February 3, 2018.
2. "Hoarding Disorder," Cleveland Clinic, January 24, 2018.
3. "What Is Hoarding Disorder?" American Psychiatric Association (APA), July 24, 2017.
4. "Hoarding: The Basics," Anxiety and Depression Association of America (ADAA), January 25,

2021.

Chapter 12 | Phobias and Fears

A phobia is a type of anxiety disorder. It is a strong, irrational fear of something that poses little or no actual danger. There are many specific phobias. Acrophobia is a fear of heights. You may be able to ski the world’s tallest mountains but be unable to go above the fifth floor of an office building. Agoraphobia is a fear of public places, and claustrophobia is a fear of closed-in places. If you become anxious and extremely self-conscious in everyday social situations, you could have a social phobia. Other common phobias involve tunnels, highway driving, water, flying, animals, and blood.

People with phobias try to avoid what they are afraid of. If they cannot, they may experience:

- Panic and fear
- Rapid heartbeat
- Shortness of breath
- Trembling
- A strong desire to get away

Treatment helps most people with phobias. Options include medicines, therapy, or both.

SPECIFIC PHOBIA

Specific phobia is an intense, irrational fear of something that poses little or no actual danger. Although adults with phobias may realize

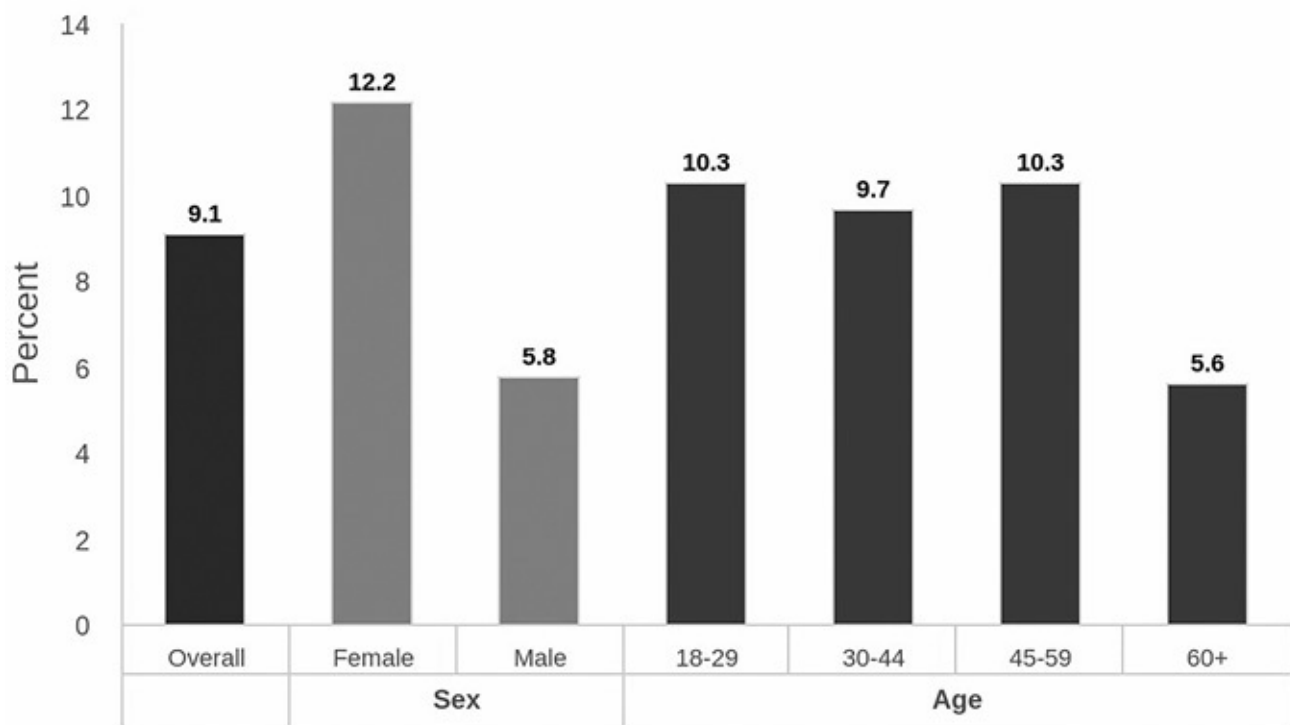


Figure 12.1. Past Year Prevalence of Specific Phobia among U.S. Adults

that these fears are irrational, even thinking about facing the feared object or situation brings on severe anxiety symptoms.

PREVALENCE OF SPECIFIC PHOBIA AMONG ADULTS

- Based on diagnostic interview data from National Comorbidity Survey Replication (NCS-R), [Figure 12.1](#) shows past year prevalence of specific phobia among U.S. adults 18 years of age or older.
 - An estimated 9.1 percent of U.S. adults had specific phobia in the past year.
 - Past year prevalence of specific phobia among adults was higher for females (12.2 percent) than for males (5.8 percent).
- An estimated 12.5 percent of U.S. adults experience specific phobia at some time in their lives.

SPECIFIC PHOBIA WITH IMPAIRMENT AMONG ADULTS

- Of adults with specific phobia in the past year, degree of impairment ranged from mild to serious, as shown in

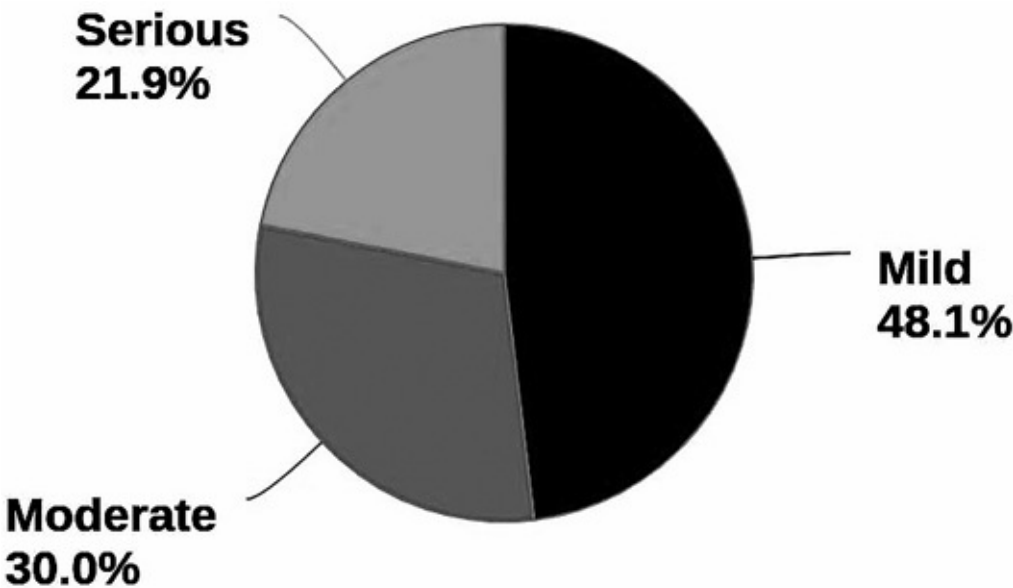


Figure 12.2. Past Year Severity of Specific Phobia among U.S. Adults (2001–2003)

- [Figure 12.2.](#) Impairment was determined by scores on the Sheehan Disability Scale (SDS).
- Of adults with specific phobia in the past year, an estimated 21.9 percent had serious impairment, 30 percent had moderate impairment, and 48.1 percent had mild impairment.

LIFETIME PREVALENCE OF SPECIFIC PHOBIA AMONG ADOLESCENTS

- Based on diagnostic interview data from National Comorbidity Survey Adolescent Supplement (NCS-A), [Figure 12.3](#) shows lifetime prevalence of specific phobia among U.S. adolescents 13–18 years of age.
- An estimated 19.3 percent of adolescents had specific phobia, and an estimated 0.6 percent had severe impairment. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* criteria were used to determine impairment.
- The prevalence of specific phobia among adolescents was higher for females (22.1 percent) than for males (16.7 percent).

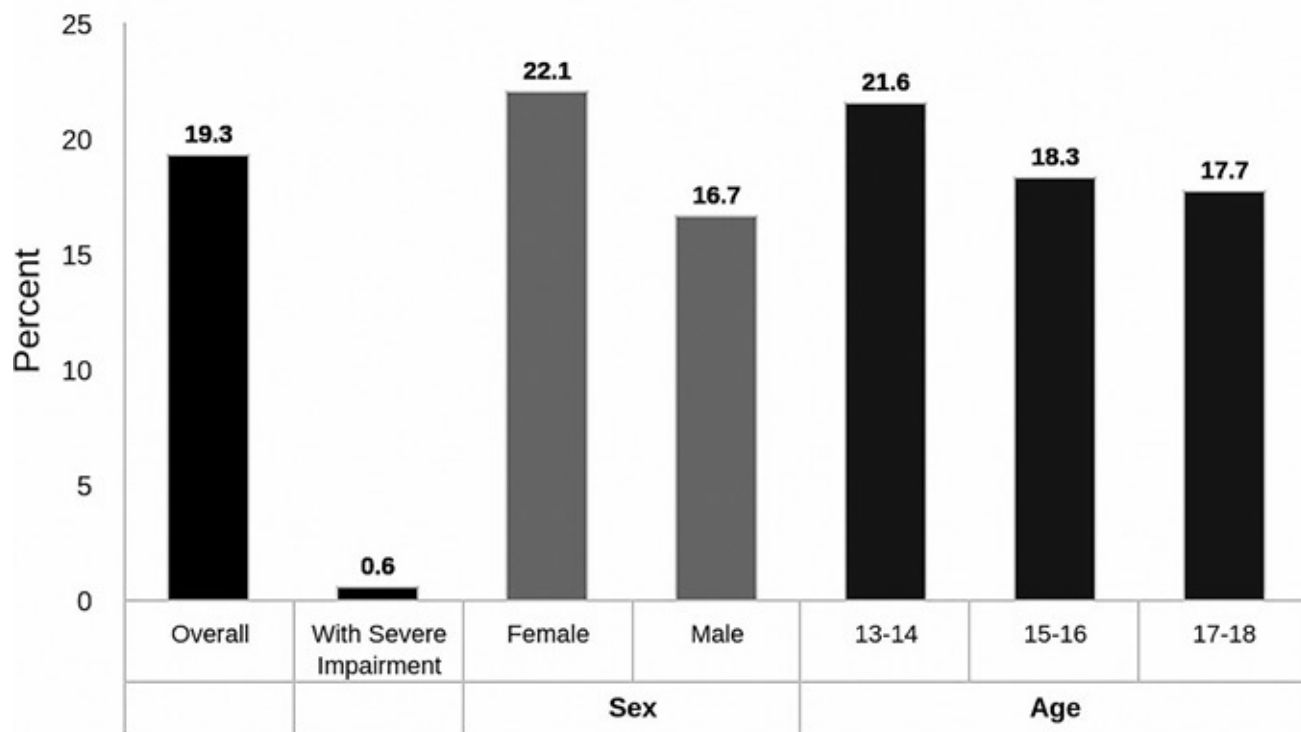


Figure 12.3. Lifetime Prevalence of Phobia

This chapter contains text excerpted from the following sources: Text in this chapter begins with excerpts from “Phobias,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), August 22, 2017. Reviewed August 2021; Text beginning with the heading “Specific Phobia” is excerpted from “Specific Phobia,” National Institute of Mental Health (NIMH), October 10, 2014. Reviewed August 2021.

Chapter 13 | Posttraumatic Stress Disorder

WHAT IS POSTTRAUMATIC STRESS DISORDER?

Posttraumatic stress disorder (PTSD) is a disorder that develops in some people who have experienced a shocking, scary, or dangerous event.

It is natural to feel afraid during and after a traumatic situation. Fear triggers many split-second changes in the body to help defend against danger or to avoid it. This “fight-or-flight” response is a typical reaction meant to protect a person from harm. Nearly everyone will experience a range of reactions after trauma, yet most people recover from initial symptoms naturally. Those who continue to experience problems may be diagnosed with PTSD. People who have PTSD may feel stressed or frightened, even when they are not in danger.

SIGNS AND SYMPTOMS OF POSTTRAUMATIC STRESS DISORDER

While most but not all traumatized people experience short-term symptoms, the majority do not develop ongoing (chronic) PTSD. Not everyone with PTSD has been through a dangerous event. Some experiences, such as the sudden, unexpected death of a loved one, can also cause PTSD. Symptoms usually begin early, within three months of the traumatic incident, but sometimes they begin years afterward. Symptoms must last more than a month and be severe enough to interfere with relationships or work to be considered PTSD. The course of the illness varies. Some people recover within six months, while others have symptoms that last much longer. In some people, the condition becomes chronic.

A doctor who has experience helping people with mental illnesses, such as a psychiatrist or psychologist, can diagnose PTSD.

To be diagnosed with PTSD, an adult must have all of the following for at least one month:

- At least one reexperiencing symptom
- At least one avoidance symptom
- At least two arousal and reactivity symptoms
- At least two cognition and mood symptoms

Reexperiencing Symptoms

- Flashbacks – reliving the trauma over and over, including physical symptoms like a racing heart or sweating
- Bad dreams
- Frightening thoughts

Reexperiencing symptoms may cause problems in a person’s everyday routine. The symptoms can start from the person’s own thoughts and feelings. Words, objects, or situations that are reminders of the event can also trigger reexperiencing symptoms.

Avoidance Symptoms

- Staying away from places, events, or objects that are reminders of the traumatic experience
- Avoiding thoughts or feelings related to the traumatic event

Things that remind a person of the traumatic event can trigger avoidance symptoms. These symptoms may cause a person to change her or his personal routine. For example, after a bad car accident, a person who usually drives may avoid driving or riding in a car.

Arousal and Reactivity Symptoms

- Being easily startled
- Feeling tense or “on edge”
- Having difficulty sleeping
- Having angry outbursts

Arousal symptoms are usually constant, instead of being triggered by things that remind one of the traumatic events. These symptoms can make the person feel stressed and angry. They may make it hard to do daily tasks, such as sleeping, eating, or concentrating.

Cognition and Mood Symptoms

- Trouble remembering key features of the traumatic event
- Negative thoughts about oneself or the world
- Distorted feelings like guilt or blame
- Loss of interest in enjoyable activities

Cognition and mood symptoms can begin or worsen after the traumatic event but are not due to injury or substance use. These symptoms can make the person feel alienated or detached from friends or family members.

It is natural to have some of these symptoms for a few weeks after a dangerous event. When the symptoms last more than a month, seriously affect one’s ability to function, and are not due to substance use, medical illness, or anything except the event itself, they might be PTSD. Some people with PTSD do not show any symptoms for weeks or months. PTSD is often accompanied by depression, substance abuse, or one or more of the other anxiety disorders.

Do Children React Differently than Adults?

Children and teens can have extreme reactions to trauma, but some of their symptoms may not be the same as adults. Symptoms are sometimes seen in very young children (less than 6 years old), these symptoms can include:

- Wetting the bed after having learned to use the toilet
- Forgetting how to or being unable to talk
- Acting out the scary event during playtime
- Being unusually clingy with a parent or other adult

Older children and teens are more likely to show symptoms similar to those seen in adults. They may also develop disruptive, disrespectful, or destructive behaviors. Older children and teens may feel guilty for not preventing injury or death. They may also have thoughts of revenge.

RISK FACTORS OF POSTTRAUMATIC STRESS DISORDER

Anyone can develop PTSD at any age. This includes war veterans, children, and people who have been through a physical or sexual assault, abuse, accident, disaster, or other serious events. According to the National Center for PTSD (NCP), about seven or eight out of every 100 people will experience PTSD at some point in their lives. Women are more likely to develop PTSD than men, and genes may make some people more likely to develop PTSD than others.

Not everyone with PTSD has been through a dangerous event. Some people develop PTSD after a friend or family member experiences danger or harm. The sudden, unexpected death of a loved one can also lead to PTSD.

Why Do Some People Develop PTSD and Other People Do Not?

It is important to remember that not everyone who lives through a dangerous event develops PTSD. In fact, most people will not develop the disorder.

Many factors play a part in whether a person will develop PTSD. Some examples are listed below. Risk factors make a person more likely to develop PTSD. Other factors, called “resilience factors,” can help reduce the risk of the disorder.

Some factors that increase the risk for PTSD include:

- Living through dangerous events and traumas
- Getting hurt
- Seeing another person hurt, or seeing a dead body
- Childhood trauma
- Feeling horror, helplessness, or extreme fear
- Having little or no social support after the event
- Dealing with extra stress after the event, such as loss of a loved one, pain and injury, or loss of a job or home
- Having a history of mental illness or substance abuse

Some factors that may promote recovery after trauma include:

- Seeking out support from other people, such as friends and family
- Finding a support group after a traumatic event
- Learning to feel good about one’s own actions in the face of danger
- Having a positive coping strategy, or a way of getting through the bad event and learning from it
- Being able to act and respond effectively despite feeling fear

Researchers are studying the importance of these and other risk and resilience factors, including genetics and neurobiology. With more research, someday it may be possible to predict who is likely to develop PTSD and to prevent it.

TREATMENTS AND THERAPIES OF POSTTRAUMATIC STRESS DISORDER

The main treatments for people with PTSD are medications, psychotherapy (“talk” therapy), or both. Everyone is different, and PTSD affects people differently, so a treatment that works for one person may not work for another. It is important for anyone with PTSD to be treated by a mental-health provider who is experienced with PTSD. Some people with PTSD may need to try different treatments to find what works for their symptoms.

If someone with PTSD is going through an ongoing trauma, such as being in an abusive relationship, both of the problems need to be addressed. Other ongoing problems can include panic disorder, depression, substance abuse, and feeling suicidal.

Medications

The most studied type of medication for treating PTSD is antidepressants, which may help control PTSD symptoms such as sadness, worry, anger, and feeling numb inside. Other medications may be helpful for treating specific PTSD symptoms, such as sleep problems and nightmares.

Doctors and patients can work together to find the best medication or medication combination, as well as the right dose. Check the U.S. Food and Drug Administration (FDA) website for the latest information on patient medication guides, warnings, or newly approved medications.

Psychotherapy

Psychotherapy (sometimes called “talk therapy”) involves talking with a mental-health professional to treat a mental illness. Psychotherapy can occur one-on-one or in a group. Talk therapy treatment for PTSD usually lasts 6 to 12 weeks, but it can last longer. Research shows that support from family and friends can be an important part of recovery.

Many types of psychotherapy can help people with PTSD. Some types target the symptoms of PTSD directly. Other therapies focus on social, family, or job-related problems. The doctor or therapist may combine different therapies depending on each person’s needs.

Effective psychotherapies tend to emphasize a few key components, including education about symptoms, teaching skills to help identify the triggers of symptoms, and skills to manage the symptoms. One helpful form of therapy is called “cognitive-behavioral therapy,” or “CBT.” CBT can include:

- **Exposure therapy.** This helps people face and control their fear. It gradually exposes them to the trauma they experienced in a safe way. It uses imagining, writing, or visiting the place where the event happened. The therapist uses these tools to help people with PTSD cope with their feelings.
- **Cognitive restructuring.** This helps people make sense of the bad memories. Sometimes people remember the event differently than how it happened. They may feel guilt or shame about something that is not their fault. The therapist helps people with PTSD look at what happened in a realistic way.

There are other types of treatment that can help as well. People with PTSD should talk about all treatment options with a therapist. Treatment should equip individuals with the skills to manage their symptoms and help them participate in activities that they enjoyed before developing PTSD.

HOW TALK THERAPIES HELP PEOPLE OVERCOME PTSD

Talk therapies teach people helpful ways to react to the frightening events that trigger their PTSD symptoms. Based on this general goal, different types of therapy may:

- Teach about trauma and its effects
- Use relaxation and anger control skills
- Provide tips for better sleep, diet, and exercise habits
- Help people identify and deal with guilt, shame, and other feelings about the event
- Focus on changing how people react to their PTSD symptoms. For example, therapy helps people face reminders of the trauma.

BEYOND TREATMENT: HOW CAN YOU HELP YOURSELF?

It may be very hard to take that first step to help yourself. It is important to realize that although it may take some time, with treatment, you can get better. If you are unsure where to go for help, ask your family doctor. You can also check the National Institute of Mental Health’s (NIMH) Help for Mental Illnesses page (www.nimh.nih.gov/health/find-help) or search online for “mental-health providers,” “social services,” “hotlines,” or “physicians” for phone numbers and addresses. An emergency room doctor can also provide temporary help and can tell you where and how to get further help.

To help yourself while in treatment:

- Talk with your doctor about treatment options
- Engage in mild physical activity or exercise to help reduce stress
- Set realistic goals for yourself
- Break up large tasks into small ones, set some priorities, and do what you can as you can
- Try to spendtime with other people, and confide in a trusted friend or relative. Tell others

about things that may trigger symptoms.

- Expect your symptoms to improve gradually, not immediately
- Identify and seek out comforting situations, places, and people

Caring for yourself and others is especially important when large numbers of people are exposed to traumatic events (such as natural disasters, accidents, and violent acts).

This chapter includes text excerpted from “Posttraumatic Stress Disorder,” National Institute of Mental Health (NIMH), May 2019.

Chapter 14 | **Psychotic Disorders**

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Section 14.1 | Psychosis

This section includes text excerpted from “Understanding Psychosis,” National Institute of Mental Health (NIMH), December 18, 2019. Reviewed August 2021.

WHAT IS PSYCHOSIS?

The word psychosis is used to describe conditions that affect the mind, where there has been some loss of contact with reality. When someone becomes ill in this way, it is called a “psychotic episode.” During a period of psychosis, a person’s thoughts and perceptions are disturbed, and the individual may have difficulty understanding what is real and what is not.

WHO DEVELOPS PSYCHOSIS

Psychosis can affect people from all walks of life. Psychosis often begins when a person is in her or his late teens to mid-twenties. There are about 100,000 new cases of psychosis each year in the U.S.

WHAT ARE THE SIGNS AND SYMPTOMS OF PSYCHOSIS?

Typically, a person will show changes in her or his behavior before psychosis develops. Behavioral warning signs for psychosis include:

- Sudden drop in grades or job performance
- New trouble thinking clearly or concentrating
- Suspiciousness, paranoid ideas, or uneasiness with others
- Withdrawing socially, spending a lot more time alone than usual
- Unusual, overly intense new ideas, strange feelings, or no feelings at all
- Decline in self-care or personal hygiene
- Difficulty telling reality from fantasy
- Confused speech or trouble communicating

Symptoms of psychosis include delusions (false beliefs) and hallucinations (seeing or hearing things that others do not see or hear). Other symptoms include incoherent or nonsense speech and behavior that is inappropriate for the situation. A person in a psychotic episode also may experience depression, anxiety, sleep problems, social withdrawal, lack of motivation, and difficulty functioning overall.

Someone experiencing any of the symptoms on this list should consult a mental-health professional.

WHAT CAUSES PSYCHOSIS

There is no one specific cause of psychosis. Psychosis may be a symptom of a mental illness, such as schizophrenia or bipolar disorder. However, a person may experience psychosis and never be diagnosed with schizophrenia or any other mental disorder. There are other causes, such as sleep deprivation, general medical conditions, certain prescription medications, and the misuse of alcohol or other drugs, such as marijuana. A mental illness, such as schizophrenia, is typically diagnosed by excluding all of these other causes of psychosis. To receive a thorough assessment and accurate diagnosis, visit a qualified health-care professional (such as a psychologist, psychiatrist, or social worker).

HOW IS PSYCHOSIS TREATED?

Studies have shown that it is common for a person to have psychotic symptoms for more than a year before receiving treatment. Reducing this duration of untreated psychosis is critical because early

treatment often means a better recovery. A qualified psychologist, psychiatrist, or social worker will be able to make a diagnosis and help develop a treatment plan.

People with psychosis may behave in confusing and unpredictable ways and may become threatening or violent. However, people with psychotic symptoms are more likely to harm themselves than someone else. If you notice these changes in behavior, and they begin to intensify or do not go away, it is important to seek help.

Research supports a variety of treatments for early psychosis, especially coordinated specialty care. In 2008, the National Institute of Mental Health (NIMH) launched the research initiative, Recovery After an Initial Schizophrenia Episode (RAISE) project. RAISE studied coordinated specialty care treatments and the best ways to intervene after people begin to experience psychotic symptoms and to help them return to a path toward productive, independent lives. Coordinated specialty care involves the following components:

- Individual or group psychotherapy is typically based on principles of cognitive behavior therapy. This therapy is tailored to each patient's needs and emphasizes resilience training, illness and wellness management, and building coping skills.
- Family support and education teach family members about psychosis, coping, communication, and problem-solving skills. Family members who are informed and involved are more prepared to help loved ones through the recovery process.
- Medication management (also called “pharmacotherapy”) helps reduce psychosis symptoms. Medication selection and dosing are tailored to patients with early psychosis and their individual needs. Like all medications, antipsychotic drugs have risks and benefits. Patients should talk with their health-care providers about side effects, medication costs, and dosage preferences (daily pill or monthly injection).
- Supported employment and education services help patients return to work or school and achieve their personal goals. Emphasis is on rapid placement in a work or school setting, combined with coaching and support, to ensure success.
- Case management helps patients with problem-solving. The case manager may offer solutions to address practical problems and coordinate social services across multiple areas of need.

Individuals with psychosis should be involved in their treatment planning. Their needs and goals should drive their treatment programs, which will help them stay engaged throughout the recovery process.

It is important to find a mental-health professional who is trained in psychosis treatment and who makes the patient feel comfortable.

Section 14.2 | Delusional Disorder

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WHAT IS DELUSIONAL DISORDER?

A delusion is a mistaken impression maintained by an individual that is contradictory to reality or plausible explanation. Persons with delusional disorder (DD) have untrue beliefs that persist for more than a month's duration. Some delusions that patients experience cannot be explained, but some of them could be realistic, lead to the disorder remaining undiagnosed. Delusional disorder, previously known as “paranoid disorder,” is classified under psychotic illnesses. People with delusional disorder perceive things differently and misinterpret experiences.

Delusional disorder differs from other psychotic disorders with respect to how people carry on with

their daily lives. People with more common psychotic disorders, such as schizophrenia, become so preoccupied with their delusions that it hampers their daily routine. Those with delusional disorder, on the other hand, function normally in society. They remain employed, perform daily tasks without hindrance, and do not act bizarrely. The incidence of delusional disorder in the general population is rare. The disorder occurs in middle to late adulthood and occurs more in women than men.

WHAT ARE THE SYMPTOMS AND SUBTYPES OF DELUSIONAL DISORDER?

The dominant or only symptom of delusional disorder is delusions. While delusions are prominent in other psychotic disorders such as schizophrenia and bipolar disorder, the absence of accompanying symptoms such as hallucinations, mood swings, disorganized thinking, and cognitive deficits are used to make the diagnosis of delusional disorder. Early signs of illness may include a basic mistrust with people, unwarranted jealousy of spouse, or preoccupation with loyalty in relation to friends and relatives. The person is also overly sensitive to harmless remarks or perceived slights and tends to hold a long-standing grudge toward the subject of their delusion despite evidence to the contrary.

Some of the recognized subtypes of delusional disorder are:

- **Erotomania.** Implausible belief held by the affected person that another person is in love her or him. The person believed to be in love with the delusional person can be a famous person or a total stranger. Those suffering from this type of delusional disorder will often try to establish contact with the object of their fixation through letters, telephone calls, and surveillance is seen. This may be tantamount to stalking and may have legal implications.
- **Jealous type.** Delusional belief that her or his spouse (or sexual partner) is unfaithful. Also known as “conjugal paranoia,” or “Othello syndrome,” the affected person justifies her or his conviction on the basis of false conclusions despite the lack of objective evidence. Physical violence may or may not accompany this subtype.
- **Grandiose type.** Also called “megalomania,” this type is characterized by exaggerated beliefs of grandeur and self-worth as well as extreme arrogance. The affected person believes she or he is omnipotent, famous, and powerful and the delusions typically have a religious, fictional, or supernatural content.
- **Persecutory.** Persistent conviction that she or he is being plotted against, maligned, or harassed with intent to cause harm. The delusional person may relentlessly seek legal recourse through courts and law enforcement agencies and may even resort to violence in retaliation for the perceived threat.
- **Somatic.** Characterized by intense preoccupation with imagined defects in physical appearance (body dysmorphic disorder) and bodily function (hypochondriasis), which focuses on imagined illnesses/disorders contrary to medical evidence. This type may also include delusional infestation (DI) in which the affected persons hold a rigid belief that they are infested with parasites or pathogens and patients may typically describe sensations of “crawling” and “biting” to substantiate their beliefs.

HOW IS DELUSIONAL DISORDER DIAGNOSED?

Delusional disorder is diagnosed on the basis of a thorough psychological assessment. A physical examination and diagnostic tests, including imaging tests and blood tests, are carried out to rule out other causes. Interviews with family members and friends to understand past history and behavioral symptoms are important tools that assist in diagnosis. Nonbizarre delusions persisting for more than a month and absence of symptoms related to schizophrenia and other psychotic disorders lead to confirmation of diagnosis. The doctor will also assess if the person will likely act on delusions.

WHAT CAUSES DELUSIONAL DISORDER

The causes and triggers for delusional disorder are not known in medical circles. But, the following factors are thought to play a role.

- **Genetics.** The disorder is seen in families that have a history of schizophrenia and delusional disorder suggesting a genetic link. The disorder might be inherited from parents to their children hereditarily.
- **Environmental or psychological.** There is evidence that suggests that the disorder may develop as a result of stress. Substance abuse such as alcoholism and drug abuse could lead to the disorder. Remaining in isolation is also a risk factor. The disorder has been identified in refugees particularly in people with low sight and hearing leading to the observation.
- **Biological.** Researchers are investigating anomalies in the brain that could be a contributing factor for the disorder. Defects in regions of the brain that control perception and thinking may be linked to the disorder.

WHAT IS THE TREATMENT OF DELUSIONAL DISORDER?

A combination of psychotherapy and medication is used to treat delusional disorder. Denial about delusions, poor insight, and refusal to seek help are deterrents to treatment. Establishing a good rapport between doctor and patient is crucial to successful treatment. Medications help in recovery to some extent. Medications commonly used for treatment include conventional antipsychotics (neuroleptics), atypical antipsychotics, tranquilizers, and antidepressants. Psychotherapy is also recommended and therapy types such as cognitive behavior therapy, family therapy, and individual counseling help the person manage stress and the impact of delusions in daily functioning.

WHAT ARE THE COMPLICATIONS THAT ARISE DUE TO DELUSIONAL DISORDER?

Delusions could lead to depression because of difficulties that arise out of such thinking. Persons who act on their delusions may become violent and get into legal difficulties. If the delusions are severe, then people could become alienated from family and friends.

WHAT IS THE OUTLOOK FOR RECOVERY?

The outlook for recovery depends on factors such as the type of delusional disorder, life circumstances, what support is available for the person, and her or his willingness to remain under treatment. Delusional disorder is a chronic condition with chances of complete recovery. Some patients experience periods that are free of incidents mixed with episodes of delusions. Most patients with delusional disorder do not seek help because of fear or embarrassment. If treatment is not sought, delusional disorder becomes a lifelong affliction.

IS DELUSIONAL DISORDER PREVENTABLE?

Prevention strategies do not exist currently for delusional disorder, but the effect of illness can be minimized with treatment, and the patient can lead a productive life in the company of family and friends.

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Section 14.3 | Factitious Disorders

"Factitious Disorders," © 2017 Omnigraphics. Reviewed August 2021.

Difficult to diagnose and treat, factitious disorder is a rare mental disorder in which an individual acts as though they are sick when in reality they mimicking or intentionally creating the symptoms of a disease or condition. Patients with factitious disorder may lie about symptoms, bring about symptoms by self-injury, needlessly undergoing painful diagnostic procedures, and tamper with the results of the medical tests.

Unlike those who lie about medical conditions for monetary gain or other compensation, the only goal of those with factitious disorder is to receive sympathy and special attention from family, friends, and the medical community. Factitious disorder is found to have associated with preexisting mental illnesses such as depression and anxiety as well as stressful living conditions.

Factitious disorder can be subdivided into two types. The first is referred to as, factitious disorder imposed on self (in the past this subtype was referred to as "Munchausen syndrome" after the 18th Century German figure who regularly exaggerated his exploits). The person affected will themselves mimic a mental or physical illness. For example, the person will appear confused, making absurd statements, and say they are hallucinating. They may also bring about physical symptoms such as stomach pains or seizures. The second type is factitious disorder imposed on others (previously referred to as "Munchausen" by proxy). In this manifestation, the person will impose false physical or psychological symptoms on another person. This is usually seen with a parent falsely presenting their child as sick, often putting the child at serious risk of harm as the result of unnecessary tests or medical procedures.

WHAT ARE THE SYMPTOMS OF FACTITIOUS DISORDERS?

The symptoms of factitious disorder are difficult to pick out as the person can go to great lengths to hide their deception. Warning signs usually involve mimicking or exaggerating sickness or injury as well as:

- Episodes of lying
- **Self-injury.** Individuals may inject themselves with harmful bacteria, milk, or feces to bring about symptoms or physically injure themselves by cutting or burning.
- Tampering with the results of diagnostic tests by such actions as manipulating medical instruments or contaminating urine samples with blood
- Using aliases in order to visit a range of medical facilities and doctors
- Persistent symptoms even after appropriate treatment
- Extensive and specialized knowledge of medical conditions, tests, and treatment procedures
- Repeated hospital stays
- Unwillingness to allow the healthcare professionals to talk to their family and friends
- Unwillingness to submit to psychiatric evaluation

WHAT ARE THE CAUSES OF FACTITIOUS DISORDER?

The cause of factitious disorder is unknown, but researchers have found a strong link to preexisting behavioral and psychological issues along with stressful living conditions.

There may be several possible risk factors associated with factitious disorder. Research suggests that a childhood trauma in the form of physical, verbal, or emotional abuse as well as neglect can be a major factor. This can lead to poor sense of self or a loss of identity. Loss of a loved one that leads to a

persistent sense of abandonment can also be a factor as well as past experiences of hospital stays that attracted significant attention from family and others. This condition can occasionally be seen in healthcare workers.

DIAGNOSIS OF FACTITIOUS DISORDERS

Diagnosing factitious disorder is challenging given the amount of misinformation provided by the patient. Medical professionals first must gather as much of an accurate medical history as possible despite the exaggerations, misdirection, and potential use of aliases during treatment. They must then also rule out any possible physical or alternate mental condition (such as psychosis), which requires a thorough review of medical tests, imagery, and lab work. Interviewing the patient and observing her or his behavior is also key to diagnosing the condition. The patient may overdramatize her or his symptoms, may present information that contradicts previous medical findings or the recollections of their caregivers, and may appear over eager to submit to painful or invasive tests. Medical professionals will then compare their findings to the criteria for factitious disorder as outlined in *Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition (DSM-5)*, published by the American Psychiatric Association (APA).

TREATMENT OF FACTITIOUS DISORDERS

No standard protocols or therapies are currently available for treatment of factitious disorders. However, it has been found that the affected person will respond better to a nonjudgmental approach. With this kind of approach, they may be more willing to be treated by a mental-health professional. Also, having a primary care physician, or other medical professional act as a gatekeeper who monitors all medical care of a patient, is the key to accomplishing the first goal of treatment, which is to end or reduce that person's misuse of the medical system.

Psychotherapy will help in coping with underlying issues including stress and depression. Medications for preexisting mental-health disorders may be used. If the disorder is found to be serious, extensive hospital stay and treatment may be required.

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Section 14.4 | Schizophrenia

This section includes text excerpted from "Schizophrenia," National Institute of Mental Health (NIMH), May 2020.

WHAT IS SCHIZOPHRENIA?

Schizophrenia is a serious mental illness that affects how a person thinks, feels, and behaves. People with schizophrenia may seem like they have lost touch with reality, which causes significant distress for the individual, their family members, and friends. If left untreated, the symptoms of schizophrenia can be persistent and disabling. However, effective treatments are available. When delivered in a timely, coordinated, and sustained manner, treatment can help affected individuals to engage in school or work, achieve independence, and enjoy personal relationships.

ONSET AND SYMPTOMS OF SCHIZOPHRENIA

Schizophrenia is typically diagnosed in the late teen years to the early thirties and tends to emerge earlier in males (late adolescence – early twenties) than females (early twenties – early thirties). A diagnosis of

schizophrenia often follows the first episode of psychosis, when individuals first display symptoms of schizophrenia. Gradual changes in thinking, mood, and social functioning often begin before the first episode of psychosis, usually starting in mid-adolescence. Schizophrenia can occur in younger children, but it is rare for it to occur before late adolescence.

The symptoms of schizophrenia generally fall into the following three categories:

Psychotic symptoms include altered perceptions (e.g., changes in vision, hearing, smell, touch, and taste), abnormal thinking, and odd behaviors. People with psychotic symptoms may lose a shared sense of reality and experience themselves and the world in a distorted way. Specifically, individuals typically experience:

- Hallucinations, such as hearing voices or seeing things that are not there
- Delusions, which are firmly held beliefs not supported by objective facts (e.g., paranoia – irrational fears that others are “out to get you” or believing that the television, radio, or Internet are broadcasting special messages that require some response)
- Thought disorder, which includes unusual thinking or disorganized speech

Negative symptoms include loss of motivation, disinterest or lack of enjoyment in daily activities, social withdrawal, difficulty showing emotions, and difficulty functioning normally. Specifically, individuals typically have:

- Reduced motivation and difficulty planning, beginning, and sustaining activities
- Diminished feelings of pleasure in everyday life
- “Flat affect,” or reduced expression of emotions via facial expression or voice tone
- Reduced speaking

Cognitive symptoms include problems in attention, concentration, and memory. For some individuals, the cognitive symptoms of schizophrenia are subtle, but for others, they are more prominent and interfere with activities like following conversations, learning new things, or remembering appointments. Specifically, individuals typically experience:

- Difficulty processing information to make decisions
- Problems using information immediately after learning it
- Trouble focusing or paying attention

RISK FACTORS OF SCHIZOPHRENIA

Several factors contribute to the risk of developing schizophrenia.

Genetics. Schizophrenia sometimes runs in families. However, it is important to know that just because someone in a family has schizophrenia, it does not mean that other members of the family will have it as well. Genetic studies strongly suggest that many different genes increase the risk of developing schizophrenia, but that no single gene causes the disorder by itself. It is not yet possible to use genetic information to predict who will develop schizophrenia.

Environment. Scientists think that interactions between genetic risk and aspects of an individual’s environment may play a role in the development of schizophrenia. Environmental factors that may be involved include living in poverty, stressful surroundings, and exposure to viruses or nutritional problems before birth.

Brain structure and function. Scientists think that differences in brain structure, function, and interactions among chemical messengers (called “neurotransmitters”) may contribute to the development of schizophrenia. For example, differences in the volumes of specific components of the brain, in the way regions of the brain are connected and work together, and in neurotransmitters, such as dopamine, are

found in people with schizophrenia. Differences in brain connections and brain circuits seen in people with schizophrenia may begin developing before birth. Changes to the brain that occur during puberty may trigger psychotic episodes in people who are vulnerable due to genetics, environmental exposures, or the types of brain differences mentioned above.

TREATMENTS AND THERAPIES OF SCHIZOPHRENIA

The causes of schizophrenia are complex and are not fully understood, so current treatments focus on managing symptoms and solving problems related to day to day functioning. Treatments include:

Antipsychotic Medications

Antipsychotic medications can help reduce the intensity and frequency of psychotic symptoms. They are usually taken daily in pill or liquid forms. Some antipsychotic medications are given as injections once or twice a month, which some individuals find to be more convenient than daily oral doses. Patients whose symptoms do not improve with standard antipsychotic medication typically receive clozapine. People treated with clozapine must undergo routine blood testing to detect a potentially dangerous side effect that occurs in 1–2 percent of patients.

Many people taking antipsychotic medications have side effects such as weight gain, dry mouth, restlessness, and drowsiness when they start taking these medications. Some of these side effects subside over time, but others may persist, which may cause some people to consider stopping their antipsychotic medication. Suddenly stopping medication can be dangerous and it can make schizophrenia symptoms worse. People should not stop taking antipsychotic medication without talking to a health-care provider first.

Shared decision making between doctors and patients is the recommended strategy for determining the best type of medication or medication combination and the right dose.

Psychosocial Treatments

Cognitive-behavioral therapy (CBT), behavioral skills training, supported employment, and cognitive remediation interventions may help address the negative and cognitive symptoms of schizophrenia. A combination of these therapies and antipsychotic medication is common. Psychosocial treatments can be helpful for teaching and improving coping skills to address the everyday challenges of schizophrenia. They can help people pursue their life goals, such as attending school, working, or forming relationships. Individuals who participate in regular psychosocial treatment are less likely to relapse or be hospitalized.

Family Education and Support

Educational programs for family members, significant others, and friends offer instruction about schizophrenia symptoms and treatments, and strategies for assisting the person with the illness. Increasing key supporters' understanding of psychotic symptoms, treatment options, and the course of recovery can lessen their distress, bolster coping and empowerment, and strengthen their capacity to offer effective assistance. Family-based services may be provided on an individual basis or through multi-family workshops and support groups.

Coordinated Specialty Care

Coordinated specialty care (CSC) is a general term used to describe recovery-oriented treatment programs for people with first episode psychosis, an early stage of schizophrenia. A team of health professionals and specialists deliver CSC, which includes psychotherapy, medication management, case management, employment and education support, and family education and support. The person with early psychosis and the team work together to make treatment decisions, involving family members as much as

possible. Compared to typical care for early psychosis, CSC is more effective at reducing symptoms, improving quality of life, and increasing involvement in work or school.

Assertive Community Treatment

Assertive community treatment (ACT) is designed especially for individuals with schizophrenia who are at risk for repeated hospitalizations or homelessness. The key elements of ACT include a multidisciplinary team, including a medication prescriber, a shared caseload among team members, direct service provision by team members, a high frequency of patient contact, low patient to staff ratios, and outreach to patients in the community. ACT reduces hospitalizations and homelessness among individuals with schizophrenia.

How Can You Help Someone You Know with Schizophrenia?

Caring for and supporting a loved one with schizophrenia can be very challenging. It can be difficult to know how to respond to someone who is experiencing psychosis.

Here Are Some Things You Can Do to Help Your Loved One:

- Help them get treatment and encourage them to stay in treatment.
- Remember that their beliefs or hallucinations seem very real to them.
- Tell them that you acknowledge that everyone has the right to see things their way.
- Be respectful, supportive, and kind without tolerating dangerous or inappropriate behavior.
- Check to see if there are any support groups in your area.

Some symptoms require immediate emergency care. If your loved one is thinking about harming themselves or others or attempting suicide, seek help right away:

- Call 911 for emergency services or go to the nearest emergency room.
- Call the National Suicide Prevention Lifeline (Lifeline) at 800-273-8255 or text the Crisis Text Line (text HELLO to 741741).

Section 14.5 | Schizoaffective Disorder

This section includes text excerpted from “Facts about Schizoaffective Disorder,” Mental Illness Research, Education and Clinical Centers (MIRECC), U.S. Department of Veterans Affairs (VA), January 31, 2001. Reviewed August 2021.

WHAT IS SCHIZOAFFECTIVE DISORDER?

Schizoaffective disorder is a major psychiatric disorder that is quite similar to schizophrenia. The disorder can affect all aspects of daily living, including work, social relationships, and self-care skills (such as grooming and hygiene). People with schizoaffective disorder can have a wide variety of different symptoms, including having unusual perceptual experiences (hallucinations) or beliefs others do not share (delusions), mood (such as marked depression), low motivation, inability to experience pleasure, and poor attention. The serious nature of the symptoms of schizoaffective disorder sometimes requires consumers to go to the hospital to get care. The experience of schizoaffective disorder can be described as similar to “dreaming when you are wide awake;” that is, it can be hard for the person with the disorder to distinguish between reality and fantasy.

HOW COMMON IS SCHIZOAFFECTIVE DISORDER?

About one in every two hundred people (1/2 percent) develops schizoaffective disorder at some time during her or his life.

Schizoaffective disorder, along with schizophrenia, is one of the most common serious psychiatric disorders. More hospital beds are occupied by persons with these disorders than any other psychiatric disorder.

However, as with other types of mental illness, individuals with schizoaffective disorder can engage in treatment and other mental-health recovery efforts that have the potential to dramatically improve the well being of the individual.

HOW IS THE DISORDER DIAGNOSED?

Schizoaffective disorder can only be diagnosed by a clinical interview. The purpose of the interview is to determine whether the person has experienced specific “symptoms” of the disorder, and whether these symptoms have been present long enough to merit the diagnosis. In addition to conducting the interview, the diagnostician must also check to make sure the person is not experiencing any physical problems that could cause symptoms similar to schizoaffective disorder, such as a brain tumor or alcohol or drug abuse.

Schizoaffective disorder cannot be diagnosed with a blood test, x-ray, CAT-scan, or any other laboratory test. An interview is necessary to establish the diagnosis.

CHARACTERISTIC SYMPTOMS OF SCHIZOAFFECTIVE DISORDER

The diagnosis of schizoaffective disorder requires that the person experience some decline in social functioning for at least a six-month period, such as problems with school or work, social relationships, or self-care. In addition, some other symptoms must be commonly present. The symptoms of schizoaffective disorder can be divided into five broad classes: positive symptoms, negative symptoms, symptoms of mania, symptoms of depression, and other symptoms. A person with schizoaffective disorder will usually have some (not all) of the symptoms described below.

POSITIVE SYMPTOMS OF SCHIZOAFFECTIVE DISORDER

Positive symptoms refer to thoughts, perceptions, and behaviors that are ordinarily absent in persons who are not diagnosed with schizophrenia or schizoaffective disorder, but are present in persons with schizoaffective disorder. These symptoms often vary over time in their severity, and may be absent for long periods in some persons.

Hallucinations. They are “false perceptions;” that is, hearing, seeing, feeling, or smelling things that are not actually there. The most common type of hallucinations is auditory hallucinations. Individuals sometimes report hearing voices talking to them or about them, often saying insulting things, such as calling them names. These voices are usually heard through the ears and sound like other human voices.

Delusions. They are “false beliefs;” that is, a belief which the person holds, but which others do not share. Some individuals have paranoid delusions, believing that they are not safe or others want to hurt them. Delusions of reference are common, in which the individual believes that something in the environment is referring to her or him when it is not (such as the television talking to the person). Delusions of control are beliefs that others can control one’s actions. Individuals may hold these beliefs strongly and cannot usually be “talked out” of them.

Thinking disturbances. This problem is reflected in a difficulty in communication. The individual talks in a manner that is difficult to follow. For example, the individual may jump from one topic to the next, stop in the middle of the sentence, make up new words, or simply be difficult to understand.

NEGATIVE SYMPTOMS OF SCHIZOAFFECTIVE DISORDER

Negative symptoms are the opposite of positive symptoms. They are the absence of thoughts, perceptions,

or behaviors that are ordinarily present in people who are not diagnosed with schizophrenia or schizoaffective disorder. These symptoms can often persist for a long period of time, though with effort on the individual's part they can often be improved. Many professionals think these symptoms reflect a sense of hopelessness about the future.

Blunted affect. The expressiveness of the individual's face, voice tone, and gestures is less. However, this does not mean that the person is not reacting to her or his environment or having feelings.

Apathy. The individual does not feel motivated to pursue goals and activities. The individual may feel lethargic or sleepy, and have trouble following through on even simple plans. Individuals with apathy often have little sense of purpose in their lives and have few interests.

Anhedonia. The individual experiences little or no pleasure from activities that she or he used to enjoy or that others enjoy. For example, the person may not enjoy watching a sunset, going to the movies, or a close relationship with another person.

Poverty of speech or content of speech. The individual says very little, or when she or he talks, there does not seem to be much information being conveyed. Sometimes conversing with the person with schizoaffective disorder can be very difficult.

Inattention. The individual has difficulty paying attention and is easily distracted. This can interfere with activities such as work, interacting with others, and personal-care skills.

SYMPTOMS OF MANIA

In general, the symptoms of mania involve an excess in behavioral activity, mood states (in particular, irritability or positive feelings), and self-esteem and confidence.

Euphoric or expansive mood. The individual's mood is abnormally elevated, such as extremely happy or excited (euphoria). The person may tend to talk more and with greater enthusiasm or emphasis on certain topics (expansiveness).

Irritability. The individual is easily angered or persistently irritable, especially when others seem to interfere with her or his plans or goals, however unrealistic they maybe.

Inflated self-esteem or grandiosity. The individual is extremely self-confident and may be unrealistic about her or his abilities (grandiosity). For example, the individual may believe she or he is a brilliant artist or inventor, a wealthy person, a shrewd businessperson, or a healer when she or he has no special competence in these areas.

Decreased need for sleep. Only a few hours of sleep are needed each night (such as less than four hours) for the individual to feel rested.

Talkativeness. The individual talks excessively and may be difficult to interrupt. The individual may jump quickly from one topic to another (called "flight of ideas"), making it hard for others to understand.

Racing thoughts. Thoughts come so rapidly that the individual finds it hard to keep up with them or express them.

Distractibility. The individual's attention is easily drawn to irrelevant stimuli, such as the sound of a car honking outside on the street.

Increased goal-directed activity. A great deal of time is spent pursuing specific goals, at work, school, or sexually. Often these behaviors put the person at risk.

Excessive involvement in pleasurable activities with high potential for negative consequences. Common problem areas include spending sprees, sexual indiscretions, increased substance abuse, or making foolish business investments.

Many of the same methods used to treat schizophrenia are also effective for schizoaffective disorder. Antipsychotic medications are an effective treatment for schizoaffective disorder for most, but not all,

persons with the disorder. These drugs are not a “cure” for the disorder, but they can reduce symptoms and prevent relapses among the majority of people with the disorder. Antidepressant medications and mood stabilizing medications (such as lithium) are occasionally used to treat affective symptoms (depressive or manic symptoms) in schizoaffective disorder. Other important treatments include social skills training, vocational rehabilitation and supported employment, peer support, and intensive case management. Family therapy helps reduce stress in the family and teaches family members how to monitor the disorder.

In addition, individual supportive counseling can help the person with the disorder learn to manage the disorder more successfully and obtain emotional support in coping with the distress resulting from the disorder. Individuals with schizoaffective disorder who work actively toward mental-health recovery can positively affect the course of their illness and improve the quality of their lives. Family support for the individual’s recovery efforts can lend meaningful benefits.

SYMPTOMS OF DEPRESSION

Depressive symptoms reflect the opposite end of the continuum of mood from manic symptoms, with a low mood and behavioral inactivity as the major features.

Depressed mood. Mood is low most of the time, according to the person or significant others.

Diminished interest or pleasure. The individual has few interests and gets little pleasure from anything, including activities previously found enjoyable.

Change in appetite and/or weight. Loss of appetite (and weight) when not dieting, or increased appetite (and weight gain) are evident.

Change in sleep pattern. The individual may have difficulty falling asleep, staying asleep, or wake early in the morning and not be able to get back to sleep. Alternatively, the person may sleep excessively (such as over twelve hours per night), spending much of the day in bed.

Change in activity level. Decreased activity level is reflected by slowness and lethargy, both in terms of the individual’s behavior and thought processes. Alternatively, the individual may feel agitated, “on edge,” and restless.

Fatigue or loss of energy. The individual experiences fatigue throughout the day or there is a chronic feeling of loss of energy.

Feelings of worthlessness, hopelessness, helplessness. Individuals may feel they are worthless as people, that there is no hope for improving their lives, or that there is no point in trying to improve their unhappy situation.

Inappropriate guilt. Feelings of guilt may be present about events that the individual did not even do, such as a catastrophe, a crime, or an illness.

Recurrent thoughts about death. The individual thinks about death a great deal and may contemplate (or even attempt) suicide.

Decreased concentration or ability to make decisions. Significant decreases in the ability to concentrate make it difficult for the individual to pay attention to others or complete simple tasks. The individual may be quite indecisive about even minor things.

OTHER SYMPTOMS OF SCHIZOAFFECTIVE DISORDER

Individuals with schizoaffective disorder are prone to alcohol or drug abuse. Some individuals may use alcohol and drugs excessively either because of their disturbing symptoms, to experience pleasure, or when socializing with others.

HOW IS SCHIZOAFFECTIVE DISORDER DISTINGUISHED FROM SCHIZOPHRENIA AND AFFECTIVE (MOOD) DISORDERS?

Many persons with a diagnosis of schizoaffective disorder have had, at a prior time, diagnoses of schizophrenia or bipolar disorder.

Frequently, this previous diagnosis is revised to schizoaffective disorder when it becomes clear, over time, that the person experiences symptoms of mania or depression much of the time, but on other occasions has experienced psychotic symptoms such as hallucinations or delusions even when her or his mood is stable.

WHAT IS THE COURSE OF SCHIZOAFFECTIVE DISORDER?

The disorder usually begins in late adolescence or early adulthood, often between the ages of sixteen and thirty. The severity of symptoms usually varies over time, at times requiring hospitalization for treatment. The disorder is often lifelong, although the symptoms tend to improve gradually over the person's life and many individuals who were diagnosed with the disorder when they were younger appear to have few or no symptoms from middle age on. With schizoaffective disorder, as with other major psychiatric illnesses, individuals can work to achieve their goals and live very full lives.

WHAT CAUSES SCHIZOAFFECTIVE DISORDER

The cause of schizoaffective disorder is not known, although many scientists believe it is a variant of the disorder of schizophrenia.

Schizoaffective disorder (and schizophrenia) may actually be several disorders. Current theories suggest that an imbalance in brain chemicals (specifically, dopamine) may be at the root of these two disorders. Vulnerability to developing schizoaffective disorder appears to be partly determined by genetic factors and partly by early environmental factors (such as subtle insults to the brain of the baby in the womb before and during birth).

HOW IS SCHIZOAFFECTIVE DISORDER TREATED?

Many of the same methods used to treat schizophrenia are also effective for schizoaffective disorder. Antipsychotic medications are an effective treatment for schizoaffective disorder for most, but not all, persons with the disorder. These drugs are not a "cure" for the disorder, but they can reduce symptoms and prevent relapses among the majority of people with the disorder. Antidepressant medications and mood stabilizing medications (such as lithium) are occasionally used to treat affective symptoms (depressive or manic symptoms) in schizoaffective disorder. Other important treatments include social skills training, vocational rehabilitation and supported employment, peer support, and intensive case management. Family therapy helps reduce stress in the family and teaches family members how to monitor the disorder. In addition, individual supportive counseling can help the person with the disorder learn to manage the disorder more successfully and obtain emotional support in coping with the distress resulting from the disorder. Individuals with schizoaffective disorder who work actively toward mental-health recovery can positively affect the course of their illness and improve the quality of their lives.

Family support for the individual's recovery efforts can lend meaningful benefits.

Chapter 15 | Personality Disorders

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Section 15.1 | Antisocial Personality Disorder

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Antisocial Personality Disorder,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), August 22, 2017. Reviewed August 2021; Text under the heading “Treatment for Antisocial Personality Disorder” is excerpted from “Adapting Dialectical Behavior Therapy for the Treatment of Criminal Offenders with Antisocial Personality Disorder (DBT-ASPD),” ClinicalTrials.gov, National Institutes of Health (NIH), February 26, 2021.

Antisocial personality disorder (ASPD) is a mental-health condition in which a person has a long-term pattern of manipulating, exploiting, or violating the rights of others. This behavior is often criminal.

CAUSES OF ANTISOCIAL PERSONALITY DISORDER

Cause of antisocial personality disorder is unknown. Genetic factors and environmental factors, such as child abuse, are believed to contribute to the development of this condition. People with an antisocial or alcoholic parent are at increased risk. Far more men than women are affected. The condition is common among people who are in prison.

Fire-setting and cruelty to animals during childhood are linked to the development of antisocial personality.

Some doctors believe that psychopathic personality (psychopathy) is the same disorder. Others believe that psychopathic personality is a similar, but more severe disorder.

SYMPTOMS OF ANTISOCIAL PERSONALITY DISORDER

A person with antisocial personality disorder may:

- Be able to act witty and charming
- Be good at flattery and manipulating other people’s emotions
- Break the law repeatedly
- Disregard the safety of self and others
- Have problems with substance abuse
- Lie, steal, and fight often
- Not show guilt or remorse
- Often be angry or arrogant

TREATMENT OF ANTISOCIAL PERSONALITY DISORDER

Antisocial personality disorder is among the most damaging and costly mental disorders, yet little research has sought to address the root causes of this disorder. Indeed, many clinicians consider ASPD to be “untreatable,” and have largely relegated the management of this challenging disorder to the criminal justice system, effectively relinquishing responsibility for understanding and treating ASPD. Although a number of interventions are utilized by the criminal justice system, these interventions have typically focused on specific problem behaviors, such as anger management and substance abuse. These interventions, along with the more broad-based approaches occasionally studied (e.g., criminal cognitions) focus primarily on cognitive processing, effectively ignoring core elements of ASPD such as impulsivity and emotion dysregulation. Recently, however, growing interest has centered on dialectical behavior therapy as a potential intervention approach, particularly given the emphasis on tangible behaviors and the acquisition of skills to address the core elements of APSD. The proposed study builds upon an innovative rehabilitative program developed by the U.S. District Court in New York.

Beginning in 2020, the Fordham Community Mental Health Clinic has provided a DBT-based intervention to participants in this rehabilitation program. This population is comprised of repeat criminal

offenders who are deemed at high risk for reoffending by the Probation Department, the vast majority of whom meet diagnostic criteria for ASPD. This intervention, which builds on the researcher team's past work treating offenders with a history of stalking and intimate partner violence, has the potential to advance the utility of DBT for treatment of this challenging population.

The present application proposes to advance this goal, by adapting DBT to target core symptoms of ASPD, including impulsivity, difficulties in emotional processing, and problem solving deficits. By adapting traditional DBT, this intervention hopes to demonstrate increased success in retaining and engaging this challenging population in treatment, decreasing the extent of problematic behaviors, and reducing the rates of violent and criminal reoffense. Most importantly, this application takes an experimental therapeutics approach, by identifying potential mediators of successful change in ASPD and quantifying the extent to which DBT impacts these traits and behaviors.

Although DBT is not expected to "cure" ASPD, even modest improvements in the treatability of this challenging population would translate into substantial benefits given the high social, economic and health care costs associated with this disorder. Given these goals, the present application seeks to:

- demonstrating the feasibility and acceptability of this intervention
- reduce problematic character traits and behaviors (e.g., decreased impulsivity, increased emotion recognition)
- reduce the rates of re-offending

Section 15.2 | **Borderline Personality Disorder**

This section includes text excerpted from "Borderline Personality Disorder," National Institute of Mental Health (NIMH), December 2017. Reviewed August 2021.

WHAT IS BORDERLINE PERSONALITY DISORDER?

Borderline personality disorder (BPD) is an illness marked by an ongoing pattern of varying moods, self-image, and behavior. These symptoms often result in impulsive actions and problems in relationships. People with borderline personality disorder may experience intense episodes of anger, depression, and anxiety that can last from a few hours to days.

SIGNS AND SYMPTOMS OF BORDERLINE PERSONALITY DISORDER

People with borderline personality disorder may experience mood swings and display uncertainty about how they see themselves and their role in the world. As a result, their interests and values can change quickly.

People with borderline personality disorder also tend to view things in extremes, such as all good or all bad. Their opinions of other people can also change quickly. An individual who is seen as a friend one day may be considered an enemy or traitor the next. These shifting feelings can lead to intense and unstable relationships.

Other signs or symptoms may include:

- Efforts to avoid real or imagined abandonment, such as rapidly initiating intimate (physical or emotional) relationships or cutting off communication with someone in anticipation of being abandoned
- A pattern of intense and unstable relationships with family, friends, and loved ones, often swinging from extreme closeness and love (idealization) to extreme dislike or anger (devaluation)
- Distorted and unstable self-image or sense of self

- Impulsive and often dangerous behaviors, such as spending sprees, unsafe sex, substance abuse, reckless driving, and binge eating. Please note: If these behaviors occur primarily during a period of elevated mood or energy, they may be signs of a mood disorder – not borderline personality disorder
- Self-harming behavior, such as cutting
- Recurring thoughts of suicidal behaviors or threats
- Intense and highly changeable moods, with each episode lasting from a few hours to a few days
- Chronic feelings of emptiness
- Inappropriate, intense anger or problems controlling anger
- Difficulty trusting, which is sometimes accompanied by irrational fear of other people's intentions
- Feelings of dissociation, such as feeling cut off from oneself, seeing oneself from outside one's body, or feelings of unreality

Not everyone with borderline personality disorder experiences every symptom. Some individuals experience only a few symptoms, while others have many. Symptoms can be triggered by seemingly ordinary events. For example, people with borderline personality disorder may become angry and distressed over minor separations from people to whom they feel close, such as traveling on business trips. The severity and frequency of symptoms and how long they last will vary depending on the individual and their illness.

RISK FACTORS OF BORDERLINE PERSONALITY DISORDER

The cause of borderline personality disorder is not yet clear, but research suggests that genetics, brain structure and function, and environmental, cultural, and social factors play a role, or may increase the risk for developing borderline personality disorder.

- **Family history.** People who have a close family member, such as a parent or sibling with the disorder may be at higher risk of developing borderline personality disorder.
- **Brain factors.** Studies show that people with borderline personality disorder can have structural and functional changes in the brain especially in the areas that control impulses and emotional regulation. But, is it not clear whether these changes are risk factors for the disorder, or caused by the disorder.
- **Environmental, cultural, and social factors.** Many people with borderline personality disorder report experiencing traumatic life events, such as abuse, abandonment, or adversity during childhood. Others may have been exposed to unstable, invalidating relationships, and hostile conflicts.

Although these factors may increase a person's risk, it does not mean that the person will develop borderline personality disorder. Likewise, there may be people without these risk factors who will develop borderline personality disorder in their lifetime.

TREATMENTS AND THERAPIES OF BORDERLINE PERSONALITY DISORDER

Borderline personality disorder has historically been viewed as difficult to treat. But, with newer, evidence-based treatment, many people with the disorder experience fewer or less severe symptoms, and an improved quality of life. It is important that people with borderline personality disorder receive evidence-based, specialized treatment from an appropriately trained provider. Other types of treatment, or treatment provided by a doctor or therapist who is not appropriately trained, may not benefit the person.

Many factors affect the length of time it takes for symptoms to improve once treatment begins, so it is important for people with borderline personality disorder and their loved ones to be patient and to receive appropriate support during treatment.

Tests and Diagnosis

A licensed mental-health professional – such as a psychiatrist, psychologist, or clinical social worker – experienced in diagnosing and treating mental disorders can diagnose borderline personality disorder by:

- Completing a thorough interview, including a discussion about symptoms
- Performing a careful and thorough medical exam, which can help rule out other possible causes of symptoms
- Asking about family medical histories, including any history of mental illness

Borderline personality disorder often occurs with other mental illnesses. Co-occurring disorders can make it harder to diagnose and treat borderline personality disorder, especially if symptoms of other illnesses overlap with the symptoms of borderline personality disorder. For example, a person with borderline personality disorder may be more likely to also experience symptoms of depression, bipolar disorder, anxiety disorders, substance-use disorders, or eating disorders.

Seek and Stick with Treatment of Borderline Personality Disorder

The National Institute of Mental Health (NIMH)-funded studies show that people with borderline personality disorder who do not receive adequate treatment are:

- More likely to develop other chronic medical or mental illnesses
- Less likely to make healthy lifestyle choices

Borderline personality disorder is also associated with a significantly higher rate of self-harm and suicidal behavior than the general public.

People with borderline personality disorder who are thinking of harming themselves or attempting suicide need help right away.

If you or someone you know is in crisis, call the toll-free National Suicide Prevention Lifeline (NSPL) at 800-273-8255, 24 hours a day, 7 days a week. The service is available to everyone. The deaf and hard of hearing can contact the Lifeline via TTY at 800-799-4889. All calls are free and confidential. Contact social media outlets directly if you are concerned about a friend's social media updates or dial 911 in an emergency.

Psychotherapy

Psychotherapy is the first-line treatment for people with borderline personality disorder. A therapist can provide one-on-one treatment between the therapist and patient, or treatment in a group setting. Therapist-led group sessions may help teach people with borderline personality disorder how to interact with others and how to effectively express themselves.

It is important that people in therapy get along with, and trust their therapist. The very nature of borderline personality disorder can make it difficult for people with the disorder to maintain a comfortable and trusting bond with their therapist.

Two examples of psychotherapies used to treat borderline personality disorder include:

- **Dialectical behavior therapy (DBT).** This type of therapy was developed for individuals with borderline personality disorder. DBT uses concepts of mindfulness and acceptance or being aware of and attentive to the current situation and emotional state. DBT also teaches skills that can help:

- Control intense emotions
- Reduce self-destructive behaviors
- Improve relationships
- **Cognitive-behavioral therapy (CBT).** This type of therapy can help people with borderline personality disorder identify and change core beliefs and behaviors that underlie inaccurate perceptions of themselves and others, and problems interacting with others. CBT may help reduce a range of mood and anxiety symptoms and reduce the number of suicidal or self-harming behaviors.

Medications

Because the benefits are unclear, medications are not typically used as the primary treatment for borderline personality disorder. However, in some cases, a psychiatrist may recommend medications to treat specific symptoms such as:

- Mood swings
- Depression
- Other co-occurring mental disorders

Treatment with medications may require care from more than one medical professional.

Certain medications can cause different side effects in different people. Talk to your doctor about what to expect from a particular medication.

Other Elements of Care

Some people with borderline personality disorder experience severe symptoms and need intensive, often inpatient, care. Others may use some outpatient treatments, but never need hospitalization or emergency care.

Therapy for Caregivers and Family Members

Families and caregivers of people with borderline personality disorder may also benefit from therapy. Having a relative or loved one with the disorder can be stressful, and family members or caregivers may unintentionally act in ways that can worsen their loved one's symptoms.

Some borderline personality disorder therapies include family members, caregivers, or loved ones in treatment sessions. This type of therapy helps by:

- Allowing the relative or loved one develop skills to better understand and support a person with borderline personality disorder
- Focusing on the needs of family members to help them understand the obstacles and strategies for caring for someone with borderline personality disorder. Although more research is needed to determine the effectiveness of family therapy in borderline personality disorder, studies on other mental disorders suggest that including family members can help in a person's treatment.

Tips for Family and Caregivers

To help a friend or relative with the disorder:

- Offer emotional support, understanding, patience, and encouragement – change can be difficult and frightening to people with borderline personality disorder, but it is possible for them to get better over time
- Learn about mental disorders, including borderline personality disorder, so you can understand what the person with the disorder is experiencing
- Encourage your loved one who is in treatment for borderline personality disorder to ask about family therapy

- Seek counseling for yourself from a therapist. It should not be the same therapist that your loved one with borderline personality disorder is seeing.

Section 15.3 | Histrionic Personality Disorder

“Histrionic Personality Disorder,” © 2017 Omnigraphics. Reviewed August 2021.

WHAT IS HISTRIONIC PERSONALITY DISORDER?

The term histrionic means “theatrical” or “dramatic.” People with histrionic personality disorder have a compelling desire to be the center of attention at all times. To gain that attention, histrionics act in an extremely self-centered way. For example, they may try to dominate conversations by interrupting others, behaving dramatically, and inappropriately. Or, they may dress provocatively and act seductively in inappropriate situations to gain the attention they seek. However, patients who suffer from the disorder possess a distorted image of themselves and lack a true feeling of self-worth, needing to derive their self-esteem from the approval of from others.

WHAT CAUSES HISTRIONIC PERSONALITY DISORDER

The definite cause of histrionic personality disorder remains unknown. However, a variety of hereditary and learned factors are believed to play a role. The disorder runs in families which is suggestive of a genetic link, though a child could simply be repeating the behavior of a parent. Inconsistent parenting that leads to confusion in the child about acceptable behavior is another possible factor.

WHAT ARE THE SYMPTOMS OF HISTRIONIC PERSONALITY DISORDER?

The following symptoms are seen in people with histrionic personality disorder:

- Feeling uncomfortable if they are not the center of attention
- Self-centeredness to the point of being rash with others
- Rapid change in emotional states
- Behaving dramatically and exhibiting exaggerated emotions and expressions
- Giving excessive importance to physical appearance
- Dressing provocatively and looking seductive
- Shifting blame to others for failure or disappointment
- Sensitivity to disapproval or criticism
- Acting rashly without thinking rationally
- Approaches relationships in a shallow and fake manner
- Dislike towards routine, often starting projects and leaving them incomplete or skipping them all together
- Seeks approval and reassurance of others
- Being gullible and easily influenced by others
- Easily frustrated and seeks instant gratification

HOW IS HISTRIONIC PERSONALITY DISORDER DIAGNOSED?

Once doctors identify the symptoms, they carry out a physical examination and review the patient’s complete medical history. Laboratory tests or imaging tests may also be done to rule out any possible physical causes. The patient will then be referred to a psychiatrist or psychologist who will diagnose the disorder based on a psychological evaluation. The patient’s behavior, overall appearance, and psychological profile are considered during diagnosis. Patients suffering from histrionic personality

disorder often also suffer from depression or anxiety, leading them to seek out professional help.

HOW IS HISTRIONIC PERSONALITY DISORDER TREATED?

Talk therapy, otherwise known as “psychotherapy,” is the preferred treatment for histrionic personality disorder. The goal of talk therapy is to help patients recognize the motivations behind their thinking and behavior and to, in turn, approach the individuals around them in a positive and productive manner. However, treating patients with the disorder can be challenging since they often believe that they do not need treatment and can despise routine. In the case of depression that co-occurs with the disorder, antidepressants are prescribed, but generally not for extended durations.

WHAT COMPLICATIONS EXIST FOR HISTRIONIC PERSONALITY DISORDER?

The disorder will often affect the patient’s social and romantic relationships. Patients with histrionic personality disorder are also at a higher risk of suffering from depression compared to the general population.

CAN HISTRIONIC PERSONALITY DISORDER BE PREVENTED?

Though the disorder cannot be prevented, people who are prone to the condition can be equipped with techniques to deal with situations in a more constructive manner.

WHAT IS THE OUTLOOK FOR THE DISORDER?

Most people with histrionic personality disorder lead productive lives and integrate with society in the long run. However, people with severe symptoms are likely to face significant problems in day-to-day life without ongoing treatment.

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Section 15.4 | Narcissistic Personality Disorder

“Narcissistic Personality Disorder,” © 2021 Omnigraphics. Reviewed August 2021.

WHAT IS NARCISSISTIC PERSONALITY DISORDER?

The term “narcissism” is widely used in our social media, celebrity-driven age to describe someone who appears excessively egoistic or full of themselves. In psychological terms, however, narcissism implies more than just self-love.

A pattern of self-centered, arrogant thinking and conduct, a lack of empathy and respect for others, and an obsessive need for praise, characterizes the narcissistic personality disorder (NPD). People with NPD are frequently referred to as arrogant, demanding, egotistical, pompous, and manipulative by others. The narcissist’s manner of thinking and acting shows itself in every aspect of her or his life, from work and friendships to family and romantic relationships.

SYMPTOMS OF NARCISSISTIC PERSONALITY DISORDER

Though the signs and symptoms of NPD vary from person to person, a few distinguishing features that are

noticeable to others are:

- Frequently craving for more attention and admiration
- Feeling extremely superior than others
- Undermining other's values and achievements
- Exaggerating about their achievements and/or talents
- Fantasizing about money, power, success, or beauty
- Expecting special favors and treatments wherever they go
- Inability to accept others opinions and ideas
- Inability to understand others feelings and sentiments
- Belittling people and monopolizing conversations
- Taking advantage of people to achieve their targets or goals
- Feeling jealous about others
- Frequently thinking others are jealous of them
- Behaving arrogantly, rudely, or boastfully to others
- Thinking and behaving as though they are always right

PREVALENCE OF NARCISSISTIC PERSONALITY DISORDER

Men are more likely to have NPD than women, and this usually develops in adolescence or early adulthood. Though some children might exhibit narcissistic characteristics, this may be due to their age and does not necessarily indicate that they will develop NPD.

According to the National Institute of Mental Health (NIMH), 9.1 percent of adults in the United States suffer from at least one type of personality disorder each year, with as many as 6.2 percent of Americans suffering from NPD.

CAUSES OF NARCISSISTIC PERSONALITY DISORDER

Some early life events are associated with alterations in the development of NPD, such as:

- Excessive admiration or excessive criticism in parent-child relationships that is responsive to the child's experience
- Inherited traits through genetics
- Cultural influences and/or differences
- Over expectation of results from family members

COMPLICATIONS OF NARCISSISTIC PERSONALITY DISORDER

NPD can cause various complications and issues in a person's life, which can then directly affect their health condition. Some of the complications that can emerge as a result of NPD are:

- Problems in relationships
- Workplace or school issues
- Anxiety and depression
- Problems with physical health
- Misuse of drugs or alcohol
- Suicidal ideas or actions

TREATMENTS FOR NARCISSISTIC PERSONALITY DISORDER

Talk therapy, often known as "psychotherapy," is the most common form of treatment for NPD. If NPD symptoms are present alongside depression or another mental health issue, the other condition may be treated with appropriate medication. Talk therapy can help a person improve their interpersonal

connections and make them more fun, intimate, and fulfilling. Positive contact with others can considerably improve a variety of aspects of one's life.

As personality traits are difficult to change, counseling may take several years before one can see results. You may begin to consider treatment as a waste of time and be inclined to stop. It is critical, though, to stick with the treatment plan.

The lifestyle changes listed below may be beneficial as you progress through therapy.

- Alcohol, narcotics, and other substances that cause undesirable behavior should be avoided.
- To improve your mood, it is recommended to exercise at least three times per week.
- Reduce tension and anxiety by practicing relaxation techniques, such as yoga and meditation.

MANAGING AND COPING WITH A PERSON WHO HAS NARCISSISTIC PERSONALITY DISORDER

Even when their behavior is causing them problems, people with NPD are adamant about not changing it and have a tendency to place blame on others. Furthermore, they are highly sensitive and respond negatively to even minor critiques or arguments which they see as personal attacks.

People who are in a relationship with someone who suffers from NPD may find it difficult to cope with their loved one's behavior. It is frequently easier for the individuals in the narcissist's life to merely comply with their demands in order to avoid the coldness and rages. However, if you or someone you love suffers from NPD, there are certain things you can do to help them understand and live with their symptoms.

- **Develop the ability to recognize narcissistic conduct.** People with NPD are more likely to engage in abusive behaviors which manipulate the feelings and actions of others. The first step toward dealing with these behaviors more effectively is learning to recognize them.
- **Set clear limits for yourself.** Allowing the other person to be angry, abusive, or extreme toward you is not a good idea. Set boundaries and be willing to stick to them, even if it means breaking up with your partner.
- **Talk to other people.** When abusive behavior has become normalized within your relationship, it can be difficult to notice them. You can learn to recognize when the person with NPD has crossed a line by having family members, friends, or a therapist assist you in better understanding the status of your relationship.

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Section 15.5 | Obsessive-Compulsive Personality Disorder

"Obsessive-Compulsive Personality Disorder," © 2021 Omnigraphics. Reviewed August 2021.

WHAT IS OBSESSIVE-COMPULSIVE PERSONALITY DISORDER?

Obsessive-compulsive personality disorder (OCPD) is a personality disorder defined by extreme perfectionism, rigid control, and an overwhelming need for order. It can sometimes be confused with

obsessive-compulsive disorder (OCD), which is an anxiety disorder but is a separate condition. People with OCPD have a righteous sense of thinking they are always right and have an obsessive need to stay in charge at the cost of flexibility and being open to new experiences. Some characteristics of people with OCPD are:

- Inability to express their feelings
- Face social isolation
- Experience difficulty in forming meaningful relationships with others
- They are often angry and indignant
- Can suffer from anxiety as a result of depression

SYMPTOMS OF OBSESSIVE-COMPULSIVE PERSONALITY DISORDER

People with OCPD believe that their way of doing things is always right and that there is nothing wrong with the way they think or act. This can make working with people with OCPD extremely difficult.

Symptoms of OCPD include:

- Restrained or restricted emotions
- Rigid and inflexible to rules
- Extreme attention to detail
- Perfectionism to the point where it interferes with finishing a task
- Unable to give up control
- Extremely frugal with money or lack of generosity
- Hoarding behaviors
- Fixation with list-making
- Strict adherence to personal moral and ethics
- Difficulty assigning tasks to others

CAUSES OF OBSESSIVE-COMPULSIVE PERSONALITY DISORDER

The exact cause for OCPD has not been identified. However, there are a few theories that may explain the possibility of the condition. OCPD may develop in children:

- Those who had controlling and overprotective parents or caregivers.
- Those who had unavailable parents or caregivers and hence were unable to form secure attachments.
- Those who were harshly punished in early childhood developed a coping mechanism to become the “perfectly obedient” child.

A combination of genetic factors may also play a role in the development of OCPD.

DIAGNOSING OBSESSIVE-COMPULSIVE PERSONALITY DISORDER

There are no medical tests to diagnose OCPD. In order to make a diagnosis, the doctor will ask questions about a person’s life and look for personality traits that align with OCPD described in the *Diagnostic and Statistical Manual of Mental Disorders (DSM–5)*. The doctor may even speak with family members and close associates regarding the person’s daily interactions.

TREATMENTS OF OBSESSIVE-COMPULSIVE PERSONALITY DISORDER

Treatments for OCPD include:

- Cognitive-behavioral therapy (CBT) and psychodynamic therapy involving regular sessions with a mental health professional who helps the person identify rigid and negative behaviors

and provide insight into ways to build interpersonal relationships.

- Medications such as selective serotonin reuptake inhibitor (SSRI) that can help lift mood and decrease anxiety, breaking the obsessive-compulsive cycle.
- Relaxation exercises such as deep breathing, meditation, and yoga can help reduce the sense of urgency and stress that leads to OCPD behaviors.

People with OCPD often do not recognize a problem with their behavior and may take convincing to seek help. However, with treatment, a person with OCPD can learn to recognize their symptoms and find ways to cope with their condition.

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Section 15.6 | Paranoia

"Paranoia," © 2021 Omnigraphics. Reviewed August 2021.

WHAT IS PARANOIA?

Paranoia is generally defined as an abnormal thinking pattern involving a general distrust or suspicion of individuals. It varies in intensity from slight feelings of uneasiness around people to a crippling and distressing pattern of thought, which can indicate issues with the patient's mental health. Paranoia is more pronounced in psychotic disorders and is usually noticed as a symptom of more serious mental health disorders such as paranoid personality disorder (PPD), bipolar disorder (BD), or schizophrenia. Often paranoia can lead to delusions where irrational fears become factual to the individual despite being shown evidence of the contrary. This condition often leads to delusional disorder.

Paranoid personality disorder (PPD) causes individuals to have intrusive thoughts that make them overly alert regarding their surroundings and display behavior patterns such as outbursts of anger and blame-shifting.

Paranoid disorder is more commonly observed in men than women and affects about 4.4 percent of the U.S. population. Most cases of paranoia begin in early adulthood.

The onset of paranoia seems to have various factors, such as predisposition to mental illnesses or the presence of specific triggers as opposed to a single risk factor. Contributors with the highest potential to induce paranoia in at-risk individuals include:

- Drug and alcohol abuse or withdrawal
- Insomnia
- Changing medications without medical advice
- Intense stress, trauma from physical abuse or a drastic life event
- Lack of social interaction
- Family history of mental illness or paranoia
- Unresolved childhood abuse
- Exposure to certain toxins or chemicals present in pesticides

- Medical conditions such as brain tumors, Alzheimer disease (AD), and Parkinson disease (PD)

In individuals affected by paranoia, the symptoms often show as:

- Constant unfounded suspicions that someone around them is trying to exploit, deceive, or harm them.
- Worrying about the loyalty of family and friends
- Refusing to share personal information for fear of it being misused
- Holding grudges against others for an extended period
- Misinterpret actions as those mediated against them or their reputation
- Unfounded thoughts of spousal infidelity
- Being highly sensitive

CONDITIONS ASSOCIATED WITH PARANOIA

Paranoia is observed as a symptom of conditions such as:

- Dementia
- Stroke
- Epilepsy

Paranoia can be related to:

- Brain toxicity
- Viral infections affecting the brain

DIAGNOSIS AND TREATMENT OF PARANOIA

Paranoia is diagnosed with the help of a physical examination and a review of the patient's medical history. Psychiatric evaluation is recommended for severe cases.

Treatment for paranoia depends on the severity of symptoms. The most common treatment includes a combination of medication and psychotherapy or either one of them.

- **Medication.** Paranoia symptoms associated with schizophrenia or bipolar disorder (BD) are treated with antipsychotic medications. Other medications include antianxiety drugs, antidepressants, and mood stabilizers.
- **Psychotherapy.** Cognitive-behavioral therapy (CBT) is the recommended option to help people with paranoia develop communication skills and cope with the condition. In addition, therapy can help patients build trust, manage and express emotions efficiently, and improve self-esteem.

Paranoia treatments are met with challenges such as identifying the condition and accepting help through treatment. Distrust is another hurdle for patients to overcome as they may find it difficult to trust their loved ones or their therapist.

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Chapter 16 | **Eating and Body Image Disorders**

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Section 16.1 | Eating Disorders: An Overview

This section includes text excerpted from "Eating Disorders," MedlinePlus, National Institutes of Health (NIH), May 13, 2020.

WHAT ARE EATING DISORDERS?

Eating disorders are serious mental-health disorders. They involve severe problems with your thoughts about food and your eating behaviors. You may eat much less or much more than you need.

Eating disorders are medical conditions; they are not a lifestyle choice. They affect your body's ability to get proper nutrition. This can lead to health issues, such as heart and kidney problems, or sometimes even death. But, there are treatments that can help.

TYPES OF EATING DISORDERS

Common types of eating disorders include

- **Binge eating.** It is out-of-control eating. People with binge-eating disorders (BEDs) keep eating even after they are full. They often eat until they feel very uncomfortable. Afterward, they usually have feelings of guilt, shame, and distress. Eating too much too often can lead to weight gain and obesity. BED is the most common eating disorder in the United States.
- **Bulimia nervosa.** People with bulimia nervosa (BN) also have periods of binge eating. But, afterward, they purge, by making themselves throw up or using laxatives. They may also over-exercise or fast. People with BN may be slightly underweight, normal weight, or overweight.
- **Anorexia nervosa.** People with anorexia nervosa (AN) avoid food, severely restrict food, or eat very small quantities of only certain foods. They may see themselves as overweight, even when they are dangerously underweight. AN is the least common of the three eating disorders, but it is often the most serious. It has the highest death rate of any mental disorder.

WHAT CAUSES EATING DISORDERS

The exact cause of eating disorders is unknown. Researchers believe that eating disorders are caused by a complex interaction of factors. These include genetic, biological, behavioral, psychological, and social factors.

WHO IS AT RISK FOR EATING DISORDERS?

Anyone can develop an eating disorder, but they are more common in women. Eating disorders frequently appear during the teen years or young adulthood. But, people can also develop them during childhood or later in life.

SYMPTOMS OF EATING DISORDERS

The symptoms of eating disorders vary, depending on the disorder.

The symptoms of binge-eating include:

- Eating unusually large amounts of food in a specific amount of time, such as a two hour period
- Eating even when you are full or not hungry
- Eating fast during binge episodes
- Eating until you are uncomfortably full
- Eating alone or in secret to avoid embarrassment
- Feeling distressed, ashamed, or guilty about your eating
- Frequently dieting, possibly without weight loss

The symptoms of BN include the same symptoms as binge-eating, plus trying to get rid of the food or weight after binging by:

- Purging, making yourself throw up, or using laxatives or enemas to speed up the movement of food through your body
- Doing intensive and excessive exercise
- Fasting

Over time, BN can cause health problems such as:

- Chronically inflamed and sore throat
- Swollen salivary glands in the neck and jaw area
- Worn tooth enamel and increasingly sensitive and decaying teeth. This is caused by the exposure to stomach acid every time you throw up.
- Gastroesophageal reflux disease (GERD) (acid reflux) and other gastrointestinal (GI) problems
- Severe dehydration from purging
- Electrolyte imbalance, which could be too low or too high levels of sodium, calcium, potassium, and other minerals. This can lead to a stroke or heart attack.

The symptoms of AN include:

- Eating very little, to the point of starving yourself
- Intensive and excessive exercise
- Extreme thinness
- Intense fear of gaining weight
- Distorted body image – seeing yourself as overweight even when you are severely underweight

Over time, AN can cause health problems such as:

- Thinning of the bones (osteopenia or osteoporosis)
- Mild anemia
- Muscle wasting and weakness
- Thin, brittle hair and nails
- Dry, blotchy, or yellowish skin
- Growth of fine hair all over the body
- Severe constipation
- Low blood pressure
- Slowed breathing and pulse
- Feeling cold all the time because of a drop in internal body temperature
- Feeling faint, dizzy, or weak
- Feeling tired all the time
- Infertility
- Damage to the structure and function of the heart
- Brain damage
- Multiorgan failure

Anorexia nervosa can be fatal. Some people with this disorder die of complications from starvation, and others die of suicide.

Some people with eating disorders may also have other mental disorders (such as depression or anxiety) or problems with substance use.

DIAGNOSIS OF EATING DISORDERS

Because eating disorders can be so serious, it is important to seek help if you or a loved one thinks that you might have a problem. Your health-care provider may use many tools to make a diagnosis:

- A medical history, which includes asking about your symptoms. It is important to be honest about your eating and exercise behaviors so your provider can help you.
- A physical exam
- Blood or urine tests to rule out other possible causes of your symptoms
- Other tests to see whether you have any other health problems caused by the eating disorder. These can include kidney function tests and an electrocardiogram (EKG or ECG).

TREATMENT OPTIONS OF EATING DISORDERS

Treatment plans for eating disorders are tailored to individual needs. You will likely have a team of providers helping you, including doctors, nutritionists, nurses, and therapists. The treatments may include:

- **Individual, group, and/or family psychotherapy.** Individual therapy may include cognitive-behavioral approaches, which help you to identify and change negative and unhelpful thoughts. It also helps you build coping skills and change behavioral patterns.
- Medical care and monitoring, including care for the complications that eating disorders can cause
- **Nutrition counseling.** Doctors, nurses, and counselors will help you eat healthy to reach and maintain a healthy weight.
- Medicines, such as antidepressants, antipsychotics, or mood stabilizers, may help treat some eating disorders. The medicines can also help with the depression and anxiety symptoms that often go along with eating disorders.

Some people with serious eating disorders may need to be in a hospital or in a residential treatment program. Residential treatment programs combine housing and treatment services.

Section 16.2 | Anorexia Nervosa and Bulimia Nervosa

This section contains text excerpted from the following sources: Text beginning with the heading “What Is Anorexia Nervosa?” is excerpted from “Anorexia Nervosa,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), August 22, 2017. Reviewed August 2021; Text beginning with the heading “What Is Bulimia Nervosa?” is excerpted from “Bulimia,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), August 22, 2017. Reviewed August 2021.

WHAT IS ANOREXIA NERVOSA?

Anorexia nervosa (AN) is an eating disorder that makes people lose more weight than is considered healthy for their age and height.

Persons with this disorder may have an intense fear of weight gain, even when they are underweight. They may diet or exercise too much, or use other methods to lose weight.

CAUSES OF ANOREXIA NERVOSA

The exact causes of AN are not known. Many factors probably are involved. Genes and hormones may play a role. Social attitudes that promote very thin body types may also be involved.

Family conflicts are no longer thought to contribute to this or other eating disorders.

Risk factors for anorexia include:

- Being more worried about, or paying more attention to, weight and shape
- Having an anxiety disorder as a child

- Having a negative self-image
- Having eating problems during infancy or early childhood
- Having certain social or cultural ideas about health and beauty
- Trying to be perfect or overly focused on rules

Anorexia usually begins during the teen years or young adulthood. It is more common in females, but may also be seen in males. The disorder is seen mainly in white women who are high academic achievers and who have a goal-oriented family or personality.

SYMPTOMS OF ANOREXIA NERVOSA

To be diagnosed with anorexia, a person must:

- Have an intense fear of gaining weight or becoming fat, even when she or he is underweight
- Refuse to keep weight at what is considered normal for her or his age and height (15 percent or more below the normal weight)
- Have a body image that is very distorted, be very focused on body weight or shape, and refuse to admit the seriousness of weight loss
- Have not had a period for three or more cycles (in women)

People with anorexia may severely limit the amount of food they eat, or eat and then make themselves throw up. Other behaviors include:

- Cutting food into small pieces or moving them around the plate instead of eating
- Exercising all the time, even when the weather is bad, they are hurt, or their schedule is busy
- Going to the bathroom right after meals
- Refusing to eat around other people
- Using pills to make themselves urinate (water pills or diuretics), have a bowel movement (enemas and laxatives), or decrease their appetite (diet pills)

Other symptoms of anorexia may include:

- Blotchy or yellow skin that is dry and covered with fine hair
- Confused or slow thinking, along with poor memory or judgment
- Depression
- Dry mouth
- Extreme sensitivity to cold (wearing several layers of clothing to stay warm)
- Loss of bone strength
- Wasting away of muscle and loss of body fat

WHAT IS BULIMIA NERVOSA?

Bulimia nervosa (BN) is an illness in which a person binges on food or has regular episodes of overeating and feels a loss of control. The person then uses different methods – such as vomiting or abusing laxatives – to prevent weight gain.

Many (but, not all) people with bulimia also have AN.

CAUSES OF BULIMIA NERVOSA

Many more women than men have bulimia. The disorder is most common in adolescent girls and young women. The affected person is usually aware that her or his eating pattern is abnormal and may feel fear or guilt with the binge-purge episodes.

The exact cause of bulimia is unknown. Genetic, psychological, trauma, family, society, or cultural

factors may play a role. Bulimia is likely due to more than one factor.

SYMPTOMS OF BULIMIA NERVOSA

In bulimia, eating binges may occur as often as several times a day for many months.

People with bulimia often eat large amounts of high-calorie foods, usually in secret. People can feel a lack of control over their eating during these episodes.

Binges lead to self-disgust, which causes purging to prevent weight gain. Purging may include:

- Forcing yourself to vomit
- Excessive exercise
- Using laxatives, enemas, or diuretics (water pills)

Purging often brings a sense of relief.

People with bulimia are often at a normal weight, but they may see themselves as being overweight. Because the person's weight is often normal, other people may not notice this eating disorder.

Symptoms that other people can see include:

- Compulsive exercise
- Suddenly eating large amounts of food or buying large amounts of food that disappear right away
- Regularly going to the bathroom right after meals
- Throwing away packages of laxatives, diet pills, emetics (drugs that cause vomiting), or diuretics

Section 16.3 | Binge-Eating Disorder

This section includes text excerpted from "Binge Eating Disorder," National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), May 2021.

WHAT IS BINGE-EATING DISORDER?

Binge eating is when you eat a large amount of food in a short amount of time and feel you cannot control what or how much you are eating. If you binge eat regularly – at least once a week for three months – you may have a binge-eating disorder (BED).

If you have BED, you may be very upset by your binge eating. You also may feel ashamed and try to hide your problem. Even your close friends and family members may not know you binge eat.

How Is Binge-Eating Disorder Different from Bulimia Nervosa?

People who have bulimia nervosa (BN) routinely try to prevent weight gain after binge eating by vomiting, using laxatives or diuretics, fasting, or exercising excessively. People with BED may occasionally try these strategies to avoid weight gain, but it is not a regular part of their binge-eating behavior.

How Common Is Binge-Eating Disorder?

Binge-eating disorder is the most common eating disorder in the United States, and it affects people of all racial and ethnic groups. About 1.25 percent of adult women and 0.42 percent of adult men have BED. About 1.6 percent of teens 13 to 18 years of age are affected. A much larger percentage of teens and adults have episodes of binge eating or loss-of-control eating – which is the feeling that you cannot control your eating, regardless of how much food you actually eat – but, at a rate that is not frequent enough to meet the criteria for BED.

The average age at which BED first occurs is 25 years. Nearly two-thirds of people who meet the criteria for BED experience binge-eating episodes over the span of one year or longer.

Who Is More Likely to Develop Binge-Eating Disorder?

Binge-eating disorder can occur in people of average body weight, but it is more common in people who have obesity, particularly severe obesity. However, it is important to note that most people with obesity do not have BED.

Binge-eating disorder is more common in younger and middle-aged people. However, older people can be affected, too.

Binge-eating disorder is common among people with type 1 and type 2 diabetes. The distress of having diabetes, which requires a constant focus on weight and food control, maybe the reason for this link. In some people, BED contributes to the development of type 2 diabetes, both through excessive weight gain and increased risk of metabolic abnormalities. BED can also make it harder for people with diabetes to control their blood glucose, also known as “blood sugar.”

For some people, painful childhood experiences – such as family problems and critical comments about your shape, weight, or eating habits – are linked to developing BED.

Binge-eating disorder runs in families, and researchers have identified a genetic component as well.

What Other Health Problems Can You Have with Binge-Eating Disorder?

Binge-eating disorder may lead to weight gain and health problems related to obesity. Overweight and obesity are linked to many health problems, including type 2 diabetes, heart disease, and certain types of cancer. People with BED may also have mental-health problems such as depression, anxiety, or suicidal thoughts. Some people with BED also have sleep disorders, problems with their digestive system, or joint and muscle pain. More than half of people with BED report it caused them problems in social functioning, for example, it interferes with their normal daily activities.

SYMPTOMS AND CAUSES OF BINGE-EATING DISORDER

What Are the Symptoms of Binge-Eating Disorder?

If you have BED, you may:

- Eat a large amount of food in a short amount of time; for example, within two hours
- Feel you lack control over your eating; for example, you cannot stop eating or control what or how much you are eating

You also may:

- Eat more quickly than usual during binge episodes
- Eat until you feel uncomfortably full
- Eat large amounts of food even when you are not hungry
- Eat alone because you are embarrassed about the amount of food you eat
- Feel disgusted, depressed, or guilty after overeating

If you think that you or someone close to you may have BED, share your concerns with a health-care professional, who can connect you to helpful sources of care.

What Causes Binge-Eating Disorder

Like other eating disorders, BED results from a mix of factors related to your genes, your thoughts and feelings – particularly about your weight and shape – as well as cultural and social issues and your environment. BED also has been linked to depression and anxiety.

For some people, dieting in unhealthy ways – such as skipping meals, not eating enough food, or avoiding certain kinds of food – may contribute to binge eating.

DIAGNOSIS AND TREATMENT OF BINGE-EATING DISORDER

How Do Healthcare Professionals Diagnose Binge-Eating Disorder?

Most of us overeat from time to time. Some of us often feel we have eaten more than we should have. Eating a lot of food does not necessarily mean you have BED.

To determine whether you have BED, talk with a mental-health specialist who focuses on eating disorders. The specialist will talk with you about your symptoms and eating patterns and will help you find the best treatment options if you are diagnosed with BED.

How Do Healthcare Professionals Treat Binge-Eating Disorder?

Treatment may include therapy to help you change your eating habits, thoughts, and feelings that have contributed to binge eating as well as other psychological symptoms. Types of therapy that have been shown to help people with BED are called “psychotherapies” and include cognitive-behavioral therapy (CBT), interpersonal psychotherapy (IPT), and dialectical behavior therapy (DBT).

Your psychiatrist or other health-care professional may also prescribe medicine to help you with your binge eating or to treat other medical or mental-health problems.

Should You Try to Lose Weight If You Have Binge-Eating Disorder?

Losing weight may help prevent or reduce some of the health problems related to carrying excess weight. Binge eating may make it hard to lose weight and keep it off.

If you have BED and are overweight, a weight-loss program that helps you develop a structured eating plan and address problem thoughts, particularly about eating and weight, may be helpful. Some people with BED require treatment for their binge eating before entering a weight management program. However, some people with BED do just as well as people who do not binge eat in behavioral treatment programs.

Talk with your health-care professional about whether you should try to manage your binge eating before entering a weight management program. A licensed nutrition professional, such as a registered dietitian trained in disordered eating can help you adopt healthier eating patterns.

Section 16.4 | Body Dysmorphic Disorder

This section includes text excerpted from “Body Dysmorphic Disorder,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), August 30, 2018.

We all sometimes worry about how we look, but body dysmorphic disorder (BDD) is a serious illness in which a person is overly worried about minor or imaginary physical flaws. These perceived flaws are usually not apparent to anyone else or are seen as minor. A person with BDD may feel so anxious about these physical flaws that she or he avoids social situations and relationships. She or he may also try to fix perceived flaws with cosmetic surgery.

WHAT IS BODY DYSMORPHIC DISORDER?

Body dysmorphic disorder is a serious illness in which a person is overly worried about their appearance or about minor or imaginary physical flaws. Most of us worry about our appearance sometimes or are unhappy with some part of the way we look, but these worries do not usually affect our daily lives, such as whether we go to work or school. People with BDD check their appearance in a mirror constantly, try

to cover up their perceived flaw, or worry about it for at least an hour a day, and that worry interferes with their life in some way.

Women with BDD may worry about any part of their body, such as acne or another skin problem, a scar, the size and shape of their nose, their breast size, or their body shape.

SYMPTOMS OF BODY DYSMORPHIC DISORDER

The symptoms of BDD include:

- Being preoccupied with minor or imaginary physical flaws, which usually cannot be seen by others
- Having a strong belief that you have a defect in your appearance that makes you ugly or deformed
- Having a lot of anxiety and stress about the perceived flaw and spending a lot of time focusing on it
- Frequently picking at skin
- Excessively checking your appearance in a mirror and grooming yourself
- Hiding the perceived imperfection
- Constantly comparing appearance with others to the point that it becomes your biggest focus or worry
- Constantly seeking reassurance from others about how you look and not believing them when they compliment your appearance
- Getting cosmetic surgery, but not being happy with the outcome many times

WHO GETS BODY DYSMORPHIC DISORDER

One in every 50 people may have BDD. The condition is more common in women and usually starts in the teen years. People with BDD often have other mental-health conditions, especially eating disorders, depression, and anxiety.

WHAT CAUSES BODY DYSMORPHIC DISORDER

Researchers are not sure exactly what causes BDD, but certain factors probably play a role:

- **Brain differences.** Physical changes in the brain's shape or how it works may play a role in causing BDD.
- **Family history.** Some studies show that BDD is more common in people whose mother, father, or siblings also have BDD or obsessive-compulsive disorder (OCD).
- **Childhood experiences.** Situations or events that happened in your childhood may make you more likely to develop BDD. For example, people who are teased about their bodies, whose families focused on the child's worth only through physical appearance, or who were abused during childhood may be more likely to develop BDD.

WHO IS AT RISK FOR BODY DYSMORPHIC DISORDER?

Certain things seem to increase the risk of developing or triggering body dysmorphic disorder, including:

- A mother, father, or sibling with BDD or OCD
- Negative life experiences, such as being teased, bullied, or abused
- Another mental-health condition, such as depression or an anxiety disorder

HOW IS BODY DYSMORPHIC DISORDER TREATED?

Your doctor may treat BDD with therapy and medicines.

- **Cognitive-behavioral therapy (CBT).** This type of therapy may involve putting yourself in social situations while forcing yourself not to check or cover up your “flaws.” Your therapist may also ask you to change your behaviors or environment at home by removing mirrors, taking less time with your beauty routine, or not using makeup.
- **Medicines.** Certain antidepressants can help with obsessive and compulsive thoughts and behaviors.

Getting cosmetic surgery can make BDD worse. People with BDD are often not happy with the outcome of the surgery and continue to obsess over imaginary defects.

Chapter 17 | Addictions

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Section 17.1 | Biology of Addiction

This section includes text excerpted from “Biology of Addiction,” NIH News in Health, National Institutes of Health (NIH), October 2015. Reviewed August 2021.

People with addiction lose control over their actions. They crave and seek out drugs, alcohol, or other substances no matter what the cost – even at the risk of damaging friendships, hurting family, or losing jobs. What is it about addiction that makes people behave in such destructive ways? And why is it so hard to quit?

The NIH-funded scientists are working to learn more about the biology of addiction. They have shown that addiction is a long-lasting and complex brain disease, and that current treatments can help people control their addictions. But, even for those who have successfully quit, there is always a risk of the addiction returning, which is called “relapse.”

The biological basis of addiction helps to explain why people need much more than good intentions or willpower to break their addictions.

“A common misperception is that addiction is a choice or moral problem, and all you have to do is stop. But, nothing could be further from the truth,” says Dr. George Koob, director of NIH’s National Institute on Alcohol Abuse and Alcoholism (NIAAA). “The brain actually changes with addiction, and it takes a good deal of work to get it back to its normal state. The more drugs or alcohol you have taken, the more disruptive it is to the brain.”

Researchers have found that much of addiction’s power lies in its ability to hijack and even destroy key brain regions that are meant to help us survive.

A healthy brain rewards healthy behaviors – such as exercising, eating, or bonding with loved ones. It does this by switching on brain circuits that make you feel wonderful, which then motivates you to repeat those behaviors. In contrast, when you are in danger, a healthy brain pushes your body to react quickly with fear or alarm, so you will get out of harm’s way. If you are tempted by something questionable – like eating ice cream before dinner or buying things you cannot afford – the front regions of your brain can help you decide if the consequences are worth the actions.

But, when you are becoming addicted to a substance, that normal hardwiring of helpful brain processes can begin to work against you. Drugs or alcohol can hijack the pleasure/reward circuits in your brain and hook you into wanting more and more. Addiction can also send your emotional danger-sensing circuits into overdrive, making you feel anxious and stressed when you are not using the drugs or alcohol. At this stage, people often use drugs or alcohol to keep from feeling bad rather than for their pleasurable effects.

To add to that, repeated use of drugs can damage the essential decision-making center at the front of the brain. This area, known as the “prefrontal cortex,” is the very region that should help you recognize the harms of using addictive substances.

“Brain imaging studies of people addicted to drugs or alcohol show decreased activity in this frontal cortex,” says Dr. Nora Volkow, director of NIH’s National Institute on Drug Abuse (NIDA). “When the frontal cortex is not working properly, people cannot make the decision to stop taking the drug – even if they realize the price of taking that drug may be extremely high, and they might lose custody of their children or end up in jail. Nonetheless, they take it.”

Scientists do not yet understand why some people become addicted while others do not. Addiction tends to run in families, and certain types of genes have been linked to different forms of addiction. But, not all members of an affected family are necessarily prone to addiction. “As with heart disease or

diabetes, there is no one gene that makes you vulnerable,” Koob says.

Other factors can also raise your chances of addiction. “Growing up with an alcoholic; being abused as a child; being exposed to extraordinary stress – all of these social factors can contribute to the risk for alcohol addiction or drug abuse,” Koob says. “And with drugs or underage drinking, the earlier you start, the greater the likelihood of having alcohol-use disorder or addiction later in life.”

Teens are especially vulnerable to possible addiction because their brains are not yet fully developed – particularly the frontal regions that help with impulse control and assessing risk. Pleasure circuits in adolescent brains also operate in overdrive, making drug and alcohol use even more rewarding and enticing.

NIH is launching a new nationwide study to learn more about how teen brains are altered by alcohol, tobacco, marijuana, and other drugs. Researchers will use brain scans and other tools to assess more than 10,000 youth over a 10-year span. The study will track the links between substance use and brain changes, academic achievement, IQ, thinking skills, and mental health over time.

Although there is much still to learn, we do know that prevention is critical to reducing the harms of addiction. “Childhood and adolescence are times when parents can get involved and teach their kids about a healthy lifestyle and activities that can protect against the use of drugs,” Volkow says. “Physical activity is important, as well as getting engaged in work, science projects, art, or social networks that do not promote use of drugs.”

To treat addiction, scientists have identified several medications and behavioral therapies – especially when used in combination – that can help people stop using specific substances and prevent relapse. Unfortunately, no medications are yet available to treat addiction to stimulants such as cocaine or methamphetamine, but behavioral therapies can help.

“Treatment depends to a large extent on the severity of addiction and the individual person,” Koob adds. “Some people can stop cigarette smoking and alcohol-use disorders on their own. More severe cases might require months or even years of treatment and follow-up, with real efforts by the individual and usually complete abstinence from the substance afterward.”

NIH-funded researchers are also evaluating experimental therapies that might enhance the effectiveness of established treatments. Mindfulness meditation and magnetic stimulation of the brain are being assessed for their ability to strengthen brain circuits that have been harmed by addiction. Scientists are also examining the potential of vaccines against nicotine, cocaine, and other drugs, which might prevent the drug from entering the brain.

“Addiction is a devastating disease, with a relatively high death rate and serious social consequences,” Volkow says. “We are exploring multiple strategies so individuals will eventually have more treatment options, which will increase their chances of success to help them stop taking the drug.”

Section 17.2 | Mental Health and Substance-Use Disorders

This section includes text excerpted from “Mental Health and Substance Use Disorders,” MentalHealth.gov, U.S. Department of Health and Human Services (HHS), March 22, 2019.

Mental-health problems and substance-use disorders sometimes occur together. This is because:

- Certain illegal drugs can cause people with an addiction to experience one or more symptoms of a mental-health problem
- Mental-health problems can sometimes lead to alcohol or drug use, as some people with a mental-health problem may misuse these substances as a form of self-medication
- Mental and substance-use disorders share some underlying causes, including changes in brain

composition, genetic vulnerabilities, and early exposure to stress or trauma

More than one in four adults living with serious mental-health problems also has a substance use problem. Substance use problems occur more frequently with certain mental-health problems, including:

- Depression
- Anxiety disorders
- Schizophrenia
- Personality disorders

SUBSTANCE-USE DISORDERS

Substance-use disorders can refer to substance use or substance dependence. Symptoms of substance-use disorders may include:

- Behavioral changes, such as:
 - Drop in attendance and performance at work or school
 - Frequently getting into trouble (fights, accidents, illegal activities)
 - Using substances in physically hazardous situations such as while driving or operating a machine
 - Engaging in secretive or suspicious behaviors
 - Changes in appetite or sleep patterns
 - Unexplained change in personality or attitude
 - Sudden mood swings, irritability, or angry outbursts
 - Periods of unusual hyperactivity, agitation, or giddiness
 - Lacking of motivation
 - Appearing fearful, anxious, or paranoid, with no reason
- Physical changes, such as:
 - Bloodshot eyes and abnormally sized pupils
 - Sudden weight loss or weight gain
 - Deterioration of physical appearance
 - Unusual smells on breath, body, or clothing
 - Tremors, slurred speech, or impaired coordination
- Social changes, such as:
 - Sudden change in friends, favorite hangouts, and hobbies
 - Legal problems related to substance use
 - Unexplained need for money or financial problems
 - Using substances even though it causes problems in relationships

RECOVERING FROM MENTAL-HEALTH PROBLEMS AND SUBSTANCE USE

Someone with a mental-health problem and substance-use disorder must treat both issues. Treatment for both mental-health problems and substance-use disorders may include rehabilitation, medications, support groups, and talk therapy.

Section 17.3 | Alcoholism and Mental Health

This section includes text excerpted from “Alcohol Use Disorder, Substance Use Disorder, and Addiction,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), December 26, 2018.

Using drugs illegally and drinking too much alcohol can affect your mental health, physical health, and

relationships. Some people who misuse alcohol or drugs become addicted. Addiction is a disease of the brain, but it can be treated. Women may have a harder time quitting certain substances. Women may also need help with resources for child care or elder care when trying to get treatment for alcohol or substance-use disorders.

WHAT IS ADDICTION?

Addiction is a disease that is based in the brain. It is long lasting and can come back again and again. People with addictions use illegal drugs or misuse prescription drugs, alcohol, or tobacco, even though doing so can cause problems in their lives.

Drug or alcohol use changes the way the brain works over time. This can affect a person's self-control and ability to make healthy decisions. At the same time, drugs and alcohol cause the brain to create intense cravings, similar to the need for food every day. Most people need treatment and support to stop misusing drugs or alcohol.

WHAT CAUSES ALCOHOL-USE DISORDER, SUBSTANCE-USE DISORDER, OR ADDICTION

Whether you become addicted to alcohol or other substances can depend on your environment and genetics.

- Your environment, including whether you had friends or family who misused drugs or alcohol, can affect your risk of becoming addicted. Children who are abused are more likely to have problems with alcohol, drugs, or tobacco as adults.
- Once you start misusing drugs or alcohol, your genetics can play a role in how quickly you become addicted. The chemicals in drugs and alcohol also change the brain and make a person more likely to use them again.

WHAT IS ALCOHOLISM OR ALCOHOL-USE DISORDER?

Alcoholism is also called "alcohol-use disorder." Alcohol use disorder is a medical diagnosis from a doctor. Alcohol use disorder is a condition in which a person cannot control how much alcohol she drinks. The condition also causes distress or harm in your life.

Alcohol use disorder is chronic, or lifelong, and it can get worse over time and be life threatening. It is a condition that happens in the brain.

HOW IS ALCOHOL-USE DISORDER DIAGNOSED?

If you can answer yes to at least two of the following questions, you may have an alcohol-use disorder. The more questions you answer yes to, the more serious your alcohol-use disorder may be.

In the past 12 months, have you:

- Ended up drinking more or longer than you meant to?
- Wanted to cut down on or stop drinking or tried to but found you could not?
- Spent a lot of time drinking, being sick from drinking, or experiencing other side effects from drinking?
- Wanted to drink so badly you could not think of anything else?
- Had trouble at home, work, or school because of drinking or being sick from drinking?
- Continued to drink even though it caused problems with friends or family?
- Cut back on activities or hobbies that you liked in order to spend time drinking?
- Gotten into a dangerous situation as a direct result of your drinking (such as driving while drunk or having unsafe sex)?

- Kept drinking despite feeling that it was making you depressed or anxious?
- Had a memory blackout?
- Had to drink a lot more to get the same effect?
- Found that when you were not drinking, you had withdrawal symptoms, like shakiness, trouble sleeping, or nausea?

If you can answer “yes” to at least two of these questions, talk to your doctor, nurse, or a mental-health professional as soon as possible. You may have an alcohol-use disorder.

It is possible to misuse alcohol but not have alcohol-use disorder, such as by occasional binge drinking. Binge drinking is also harmful to your health. Alcohol use disorders can also be mild, moderate, or severe.

HOW COMMON IS ALCOHOL-USE DISORDER AMONG WOMEN?

No one factor can predict whether a woman will have trouble with alcohol. Women who are or have been abused are more likely to develop an alcohol-use disorder.

- About 16 million people 21 or older in the United States have used alcohol heavily in the last month, including about 5 million women. For women, this means drinking 4 or more drinks at the same time, or within a couple hours, on 5 or more days in the last month.
- Alcohol use can start early in life. In one survey, more than 1 in 5 girls and teens ages 12 to 20 said they would had a drink in the past month.
- Lesbians and bisexual women (especially young women) are at higher risk for drug abuse, heavy drinking, and binge drinking than other women are.
- Among women who drink, 13 percent have more than 7 drinks per week. According to a recent survey, binge drinking is also on the rise in older women. Drinking 4 or more drinks on any given day or drinking more than 7 drinks in a week raises a woman’s risk of developing alcohol-use disorder.

HOW DOES ALCOHOL ABUSE OR MISUSE AFFECT WOMEN?

Men are more likely than women to misuse alcohol and have alcohol-use disorder, but women are more likely to experience harmful health effects from alcohol. Women absorb more alcohol pound for pound than men, and it takes longer for women’s bodies to digest alcohol.

Women who drink while pregnant also put their babies at risk for fetal alcohol spectrum disorder (FASD), which can cause serious problems for the baby during and after pregnancy. FASD can cause physical, mental, and behavioral disabilities. There is no amount of alcohol that has been proven safe to drink during pregnancy.

Women who misuse alcohol are more at risk of:

- **Alcoholic liver disease.** Women are more likely than men to develop liver inflammation (alcoholic hepatitis) and to die from cirrhosis (chronic liver disease).
- **Brain disease.** Alcoholism can cause diseases of the brain, such as dementia and memory loss, by changing how your cells work or by damaging brain cells.
- **Cancer.** Alcohol can cause several different types of cancer, including breast cancer. The more alcohol you drink, the higher your risk of a cancer caused by alcohol. Just one drink a day can increase your risk of breast cancer by 5 percent before menopause and 9 percent after menopause.
- **Heart disease.** Long-term, heavy drinking is a leading cause of heart disease.
- **Osteoporosis.** Long-term, heavy drinking, especially during adolescence or young adulthood,

greatly weakens bones, increasing the risk of a broken bone later in life.

If you think you have a problem with alcohol, get help now.

WHAT IS SUBSTANCE-USE DISORDER?

Substance-use disorder (sometimes called “substance abuse”) happens when a person’s use of certain drugs or other substances, including alcohol and tobacco, causes health problems or problems at work, school, or home.

Women who misuse alcohol or drugs are more likely to experience harmful effects of substance abuse, including overdose, and may also get addicted to drugs and alcohol more quickly than men.

HOW COMMON IS PRESCRIPTION DRUG ABUSE AMONG WOMEN?

Nearly 27 million U.S. women (about 13 percent) have used illegal drugs or misused prescription drugs in the past year.

Women often abuse prescription drugs for different reasons than men do. Two common reasons women misuse prescription drugs are to lose weight and to fight exhaustion. Women also report higher rates of chronic pain and are more likely to be prescribed pain medicine than men are.

Prescription drug misuse among women is on the rise. According to the Centers for Disease Control and Prevention (CDC):

- From 1999 to 2015, deaths from prescription painkiller overdoses increased more than twice as fast among women as among men.
- Each day, about 18 women die of prescription drug overdose.
- For every woman who dies of a prescription painkiller overdose, 30 go to the emergency department for painkiller misuse or abuse.

If you or someone you know misuses prescription drugs, get help right away.

WHO IS AT RISK FOR ALCOHOL-USE DISORDER OR SUBSTANCE-USE DISORDER?

A woman is more likely to misuse alcohol or drugs if she experiences:

- Parents and siblings with alcohol or drug problems
- A partner who drinks too much or misuses drugs
- Needing more and more of a drug or alcohol to get the same high
- A history of depression
- A history of childhood physical or sexual abuse

HOW CAN YOU TELL IF YOU HAVE A PROBLEM WITH ALCOHOL OR DRUGS?

Answering the following questions can help you find out whether you or someone close to you has a problem with drinking or drugs.

- Have you ever felt that you drink too much and should cut down?
- Have you ever felt bad or guilty about your drinking?
- Have you ever had a drink as soon as you woke up to steady your nerves or to get rid of a hangover?
- Have you ever used a drug for nonmedical reasons?
- Has using drugs or alcohol created problems for you at home or at work?
- Does your family or friends complain about your drug or alcohol use?
- Have you gotten in fights or broken the law because you were on drugs or drunk?

- Do you continue to use drugs or alcohol even though you know it is harmful?

One “yes” answer suggests a possible problem. If you responded yes to more than one question, it is very likely that you have a problem. Talk to a doctor, nurse, or mental-health professional as soon as possible. You may need to talk to a psychiatrist, psychologist, or substance abuse counselor. Your doctor may also want to test your blood or urine to help design a treatment program for you.

HOW IS ALCOHOL-USE DISORDER TREATED?

Treatment for an alcohol-use disorder depends on how severe it is. Talk to your doctor or nurse about how much you drink. Your doctor or nurse can help find the ways alcohol negatively affects your life and can help you make a plan to stop.

Treatment for alcohol-use disorder can include counseling, behavior therapy, and medicine. Some people may need to stay at a treatment center (including sleeping there). Many people also attend support groups, such as Alcoholics Anonymous, to talk to others and get support from people who have had similar problems in the past.

After treatment, some people stop drinking and stay sober. Others have periods of being sober, but then start drinking again and may need treatment again. You can get better with treatment and support.

HOW ARE SUBSTANCE-USE DISORDER AND ADDICTION TREATED?

Treatment for substance-use disorder and addiction are often the same. Treatments usually include:

- Medicine and behavior therapy, used alone or together
- Detoxification treatment, which tries to wean you off the substance as quickly and safely as possible while dealing with withdrawal symptoms
- Help from a social worker, caseworker, or other professional to help you change any life circumstances, such as unemployment, that may affect your recovery

Severe substance-use disorder and addiction usually – but, not always – require staying (and sleeping) at a treatment center.

Some people have a substance-or alcohol-use disorder or addiction in addition to another mental-health condition (such as depression and anxiety). This is common and is often called a “co-occurring disorder.” Your doctor, nurse, or therapist may recommend treating both disorders at the same time. Tell your doctor, nurse, or a mental-health professional about all the symptoms you are experiencing so they can create the best treatment plan for you.

HOW IS TREATMENT FOR WOMEN DIFFERENT FROM TREATMENT FOR MEN?

Although women usually use drugs less often and in smaller amounts than men do, by the time women get treatment, they often have worse symptoms. This is because drugs and alcohol affect women and men differently. Women are more likely to become addicted to drugs or alcohol with smaller amounts of those substances.

Women may also have a harder time quitting certain substances, especially tobacco products. Women’s bodies process the chemicals in tobacco differently from men’s. Women are not as likely to be successful at quitting tobacco by using a nicotine patch or gum.

Women may also face unique barriers to getting treatment for drug and alcohol problems. Women may be pregnant or breastfeeding and unwilling to tell someone that they are addicted, because they fear losing custody of their child. Women may be more likely to face additional barriers to treatment, such as needing child care or elder care.

Section 17.4 | Comorbidity: Addiction and Other Mental Disorders

This section includes text excerpted from “Comorbidity: Substance Use Disorders and Other Mental Illnesses DrugFacts,” National Institute on Drug Abuse (NIDA), August 2018.

WHAT IS COMORBIDITY?

Comorbidity describes two or more disorders or illnesses occurring in the same person. They can occur at the same time or one after the other. Comorbidity also implies interactions between the illnesses that can worsen the course of both.

IS DRUG ADDICTION A MENTAL ILLNESS?

Yes. Addiction changes the brain in fundamental ways, changing a person’s normal needs and desires and replacing them with new priorities connected with seeking and using the drug. This results in compulsive behaviors that weaken the ability to control impulses, despite the negative consequences, and are similar to hallmarks of other mental illnesses.

HOW COMMON ARE COMORBID SUBSTANCE-USE DISORDERS AND OTHER MENTAL ILLNESSES?

Many people who have a substance-use disorder also develop other mental illnesses, just as many people who are diagnosed with mental illness are often diagnosed with a substance-use disorder. For example, about half of people who experience a mental illness will also experience a substance-use disorder at some point in their lives and vice versa. Few studies have been done on comorbidity in children, but those that have been conducted suggest that youth with substance-use disorders also have high rates of co-occurring mental illness, such as depression and anxiety.

WHY DO THESE DISORDERS OFTEN CO-OCCUR?

Although substance-use disorders commonly occur with other mental illnesses, this does not mean that one caused the other, even if one appeared first. In fact, establishing which came first or why can be difficult. However, research suggests three possibilities for this common co-occurrence:

- **Common risk factors can contribute to both mental illness and substance-use disorders.** Research suggests that there are many genes that can contribute to the risk of developing both a substance-use disorder and a mental illness. For example, some people have a specific gene that can make them at increased risk of mental illness as an adult, if they frequently used marijuana as a child. A gene can also influence how a person responds to a drug – whether or not using the drug makes them feel good. Environmental factors, such as stress or trauma, can cause genetic changes that are passed down through generations and may contribute to the development of mental illnesses or a substance-use disorder.
- **Mental illnesses can contribute to drug use and substance-use disorders.** Some mental-health conditions have been identified as risk factors for developing a substance-use disorder. For example, some research suggests that people with mental illness may use drugs or alcohol as a form of self-medication. Although some drugs may help with mental illness symptoms, sometimes this can also make the symptoms worse. Additionally, when a person develops a mental illness, brain changes may enhance the rewarding effects of substances, predisposing the person to continue using the substance.
- **Substance use and addiction can contribute to the development of mental illness.** Substance use may change the brain in ways that make a person more likely to develop a mental illness.

HOW ARE THESE COMORBID CONDITIONS DIAGNOSED AND TREATED?

The high rate of comorbidity between substance-use disorders and other mental illnesses calls for a comprehensive approach that identifies and evaluates both. Accordingly, anyone seeking help for either substance use, misuse, or addiction or another mental disorder should be evaluated for both and treated accordingly.

Several behavioral therapies have shown promise for treating comorbid conditions. These approaches can be tailored to patients according to age, the specific drug misused, and other factors. They can be used alone or in combinations with medications. Some effective behavioral therapies for treating comorbid conditions include:

- Cognitive-behavioral therapy (CBT) helps to change harmful beliefs and behaviors.
- Dialectical behavioral therapy (DBT) was designed specifically to reduce self-harm behaviors including suicide attempts, thoughts, or urges; cutting; and drug use.
- Assertive community treatment (ACT) emphasizes outreach to the community and an individualized approach to treatment.
- Therapeutic communities (TC) are a common form of long-term residential treatment that focus on the “resocialization” of the person.
- Contingency management (CM) gives vouchers or rewards to people who practice healthy behaviors.

Effective medications exist for treating opioid, alcohol, and nicotine addiction and for alleviating the symptoms of many other mental disorders, yet most have not been well studied in comorbid populations. Some medications may benefit multiple problems. For example, bupropion is approved for treating both depression (Wellbutrin[®]) and nicotine dependence (Zyban[®]). More research is needed, however, to better understand how these medications work, particularly when combined in patients with comorbidities.

Chapter 18 | **Impulse Control Disorders**

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Section 18.1 | What Are Impulse Control Disorders?

“Impulse Control Disorder,” © 2017 Omnigraphics. Reviewed August 2021.

Impulse control disorders (ICDs) are a group of disorders in which a person is unable to resist the impulse to do something negative even though it has harmful consequences. Research indicated that of those American diagnosed with a mental-health disorder, 10 percent of them suffer from impulse control disorder (ICD).

People with ICD experience a regular, overwhelming desire to engage in a negative behavior and progressive lack of control. Performing the negative behavior will provide them a sense of relief or pleasure.

Impulse control disorders are seen more in males than in females and they generally coexist with an underlying mental-health disorder like substance abuse. It can be challenging to identify individuals with ICD as they may not seek help.

The medical community classifies the following disorders under impulse control disorders:

- **Intermittent explosive disorder (IED).** This disorder is characterized by uncontrolled fits of extreme anger and violence. People with this disorder usually allow their negative behavior to grow out of control, and, in the long run, their actions result in legal or financial issues, disrupt interpersonal relationships, and potentially result in problems at work or school.
- **Kleptomania.** It is characterized by an irresistible compulsion to steal. Those who suffer from the disorder do not steal because they desire an object or seek financial gain. Their only motivation is to satisfy their desire to steal. Following an episode the person will feel intense guilt and shame.
- **Pyromania.** Pyromaniacs have irresistible urges to set fires. Again, the person does this out of mental compulsion with no other intention.
- **Conduct disorder.** A disorder that involves an individual displaying repetitive and persistent behaviors that violate social norms and the rights of others.

Other disorders include:

- **Exhibitionism.** Compulsive need to expose one’s genitals to an unsuspecting stranger.
- **Pathological gambling.** Uncontrollable addiction to gambling.
- **Trichotillomania.** Individuals with this disorder compulsively twist and pull their hair, often resulting in bald spots.

CAUSES OF IMPULSE CONTROL DISORDERS

The exact cause of impulse control disorder is, however, medical professionals generally agree that a combination of various factors, including biological, environmental, psychological, and even cultural or societal factors, may play a role in causing this disorder.

Recent research has also indicated that these disorders may be caused by a neurotransmitter imbalance in the brain as well as hormonal imbalances, such as elevated testosterone levels, that can result in aggressive behaviors.

Other risk factors, including stressful living conditions, childhood trauma or neglect, and mitigating environmental factors, may also influence the disorder’s onset. Medical disorders such as seizures may cause trauma to the brain resulting in impulse control disorder.

Preexisting mental-health disorders such as substance abuse can alter the brain’s chemistry and thereby

increase the risk of impulse control disorders.

HOW ARE IMPULSE CONTROL DISORDERS TREATED?

Since a combination of factors cause impulse control disorders, treatment also typically involves a combination of methods and usually involves medication, psychotherapy and behavioral modification therapy.

- Cognitive-behavioral therapy will encourage the individual to identify negative behavioral patterns and the negative consequences associated with those behaviors.
- Behavioral modification therapy will teach new coping mechanisms and techniques on how to avoid situations leading to impulsive behaviors. Cognitive-behavioral therapy has been widely used and it is found to be an effective one.
- Exposure therapy places the individual in the situations leading to impulsive behaviors while working with her or him to exercise self-control. This helps the person to gradually build tolerance to the situation gradually and respond appropriately.
- Other complimentary methods, such as mindfulness techniques, yoga or meditation, hypnotism, and herbal remedies, can also be beneficial in helping people learn how to improve willpower and control emotions when faced with stressors.
- Although no drugs are specially approved in the treatment of impulse control disorder, some medications have proven effective in some cases. Selective serotonin reuptake inhibitors (SSRIs) are antidepressant medications that have shown effectiveness in treating impulse control disorders.

Before starting a medication to treat an impulse control disorder, patient should be screened for drug and alcohol addiction. This will help avoid unnecessary complications and ensure safe care for the individual. If an individual is addicted, she or he should undergo a detox program before starting medication for impulse control disorder.

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Section 18.2 | Self-Harm

This section includes text excerpted from "Self-Harm," MedlinePlus, National Institutes of Health (NIH), February 26, 2016. Reviewed August 2021.

WHAT IS SELF-HARM?

Self-harm, or self-injury, is when a person hurts her or his own body on purpose. The injuries may be minor, but sometimes they can be severe. They may leave permanent scars or cause serious health problems. Some examples are:

- Cutting yourself (such as using a razor blade, knife, or other sharp object to cut your skin)
- Punching yourself or punching things (like a wall)
- Burning yourself with cigarettes, matches, or candles
- Pulling out your hair
- Poking objects through body openings

- Breaking your bones or bruising yourself

Self-harm is not a mental disorder. It is a behavior – an unhealthy way to cope with strong feelings. However, some of the people who harm themselves do have a mental disorder.

People who harm themselves are usually not trying to kill themselves. But, they are at higher risk of attempting suicide if they do not get help.

WHY DO PEOPLE HARM THEMSELVES?

There are different reasons why people harm themselves. Often, they have trouble coping and dealing with their feelings. They harm themselves to try to:

- Make themselves feel something, when they feel empty or numb inside
- Block upsetting memories
- Show that they need help
- Release strong feelings that overwhelm them, such as anger, loneliness, or hopelessness
- Punish themselves
- Feel a sense of control

WHO IS AT RISK FOR SELF-HARM?

There are people of all ages who harm themselves, but it usually starts in the teen or early adult years. Self-harm is more common in people who

- Were abused or went through a trauma as children
- Have mental disorders, such as
 - Depression
 - Eating disorders
 - Posttraumatic stress disorder
 - Certain personality disorders
- Misuse drugs or alcohol
- Have friends who self-harm
- Have low self-esteem

WHAT ARE THE SIGNS OF SELF-HARM?

Signs that someone may be hurting themselves include

- Having frequent cuts, bruises, or scars
- Wearing long sleeves or pants even in hot weather
- Making excuses about injuries
- Having sharp objects around for no clear reason

HOW CAN YOU HELP SOMEONE WHO SELF-HARMS?

If someone you know is self-harming, it is important not to be judgmental. Let that person know that you want to help. If the person is a child or teenager, ask her or him to talk to a trusted adult. If she or he would not do that, talk to a trusted adult yourself. If the person who is self-harming is an adult, suggest mental-health counseling.

WHAT ARE THE TREATMENTS OF SELF-HARM?

There are no medicines to treat self-harming behaviors. But, there are medicines to treat any mental disorders that the person may have, such as anxiety and depression. Treating the mental disorder may

weaken the urge to self-harm.

Mental-health counseling or therapy can also help by teaching the person

- Problem-solving skills
- New ways to cope with strong emotions
- Better relationship skills
- Ways to strengthen self-esteem

If the problem is severe, the person may need more intensive treatment in a psychiatric hospital or a mental health day program.

Section 18.3 | Problem Gambling

This section includes text excerpted from “When the Stakes Turn Toxic,” NIH News in Health, National Institutes of Health (NIH), May 2011. Reviewed August 2021.

Anyone who’s bought a lottery ticket or played bingo has gambled. Gambling is any game of chance in which money changes hands. It is common in most cultures around the world. Many people enjoy gambling as recreation without causing harm to themselves or others. Yet some people cannot control their impulse to gamble, even when it takes a terrible toll on their lives.

For these gamblers and their families, researchers have been making progress in several areas. Scientists are learning why people have problems with gambling: how common it is, what goes on inside the gambler’s brain, who is at risk and what kinds of treatment can help.

Problem gambling is defined by some researchers as gambling that causes harm to the gambler or someone else, in spite of a desire to stop. Between 2 and 4 percent of Americans struggle with this condition. Problem gambling can progress to a recognized psychiatric diagnosis called “pathological gambling.”

Pathological gambling may affect from 0.4 to 2 percent of Americans. “Pathological gambling comes with a constellation of problems that contribute to chaos,” says Dr. Donald Black of the University of Iowa. “It is associated with worse physical health, excessive smoking, excessive drinking, not exercising, not seeing primary care doctors and worse dental care. It also fuels depression, family dysfunction, crime, bankruptcy and suicide.”

Together, pathological and problem gambling may affect up to 5 percent of Americans. That number may rise, though. Laws in many states are creating more options for legal gambling, and internet gambling is becoming more common.

Still, gambling is often done in family settings, condoned or encouraged by parents. And the younger you start, the more likely you are to get into trouble later on. From 3 to 8 percent of adolescents have a problem with gambling.

Dr. John Welte of the University of Buffalo has found that, across the lifespan, gambling problems are even more common than alcohol dependence. They are also much more common in males, in young people, and in people who live in relatively poor neighborhoods. “That is not true of the prevalence of alcoholism,” says Welte. “Alcoholism is much more democratic. So think about motives for gambling. People are hoping that winning will improve their lot. That makes them more vulnerable to developing a gambling problem.”

In a study of mostly African-American inner-city youth, Dr. Silvia Martins of Johns Hopkins University has found that about 15 percent have some form of problem gambling. Most at-risk were adolescents and young adults who began showing symptoms of depression at age 12. They were highly impulsive, although

not hyperactive or aggressive. As the African-American boys developed into their teens and early adulthood, gambling appeared to be a separate risk factor for early fatherhood and criminal arrest.

“We are following up with these inner-city kids every single year as they enter adulthood,” says Martins.

But, why is gambling irresistible to some folks and not others? Using advanced imaging techniques, Dr. Alexander Neumeister of Mount Sinai School of Medicine looked at the brains of people with gambling problems and alcohol problems. He measured the number of special receptors involved in regulating impulse control and other factors.

“A key feature of addiction is impaired impulse control,” says Neumeister. “Abnormal function of the forebrain leads to reduced tolerance to waiting.” The resulting impatience may cause people to act without considering the consequences. “Our imaging clearly points toward the importance of impaired forebrain function in addiction.”

Pinpointing areas in the brain’s reward center, Neumeister’s team found that people with alcohol addiction and gambling problems show different functioning of these special receptors compared to healthy people. The differences were related to the severity of addiction. Other researchers are trying to develop drugs that could treat the affected areas.

Talk therapy can also help. Dr. Nancy Petry at the University of Connecticut Health Center works with pathological gamblers and people seeking treatment for drug use disorders. Gambling problems arise in about 10 to 20 percent of substance abusers. Petry compared the use of different types of talk therapy, including very brief interventions and cognitive-behavioral therapy (CBT). CBT teaches people how to think differently about problems and then act on that knowledge.

“We found very brief interventions and CBT were effective in reducing gambling and gambling-related problems,” Petry says. “There was a significant improvement relative to usual care or standard forms of treatment like Gamblers Anonymous [a 12-step program].”

Anybody can have a gambling problem, and no one should feel ashamed or be afraid to seek treatment. “Pathological gambling is a medical disorder, not a sin or a vice,” says Dr. Carlos Blanco of Columbia University and the New York State Psychiatric Institute. “There is no stereotype. The main predictor of outcome is really motivation.”

In other words, what counts most is a strong drive or desire to take action. Blanco offers gamblers motivational interviewing, which helps them explore their mixed feelings about trying to quit gambling. This primes them to be ready and willing to begin CBT. Using both therapies together can be very effective.

If you have concerns about your gambling, ask for help. Your health provider can work with you to find the treatment that is best for you.

Chapter 19 | Premenstrual Dysphoric Disorder

WHAT IS PREMENSTRUAL DYSPHORIC DISORDER?

Premenstrual dysphoric disorder (PMDD) is a health problem that is similar to premenstrual syndrome (PMS), but is more serious. PMDD causes severe irritability, depression, or anxiety in the week or two before your period starts. Symptoms usually go away two to three days after your period starts. You may need medicine or other treatment to help with your symptoms.

WHO GETS PREMENSTRUAL DYSPHORIC DISORDER

PMDD affects up to 5 percent of women of childbearing age. Many women with PMDD may also have anxiety or depression.

SYMPTOMS OF PREMENSTRUAL DYSPHORIC DISORDER

Symptoms of PMDD include:

- Lasting irritability or anger that may affect other people
- Feelings of sadness or despair, or even thoughts of suicide
- Feelings of tension or anxiety
- Panic attacks
- Mood swings or crying often
- Lack of interest in daily activities and relationships
- Trouble thinking or focusing
- Tiredness or low energy
- Food cravings or binge eating
- Trouble sleeping
- Feeling out of control
- Physical symptoms, such as cramps, bloating, breast tenderness, headaches, and joint or muscle pain

WHAT CAUSES PREMENSTRUAL DYSPHORIC DISORDER

Researchers do not know for sure what causes PMDD or PMS. Hormonal changes throughout the menstrual cycle may play a role. A brain chemical called “serotonin” may also play a role in PMDD. Serotonin levels change throughout the menstrual cycle. Some women may be more sensitive to these changes.

DIAGNOSIS OF PREMENSTRUAL DYSPHORIC DISORDER

Your doctor will talk to you about your health history and do a physical examination. You will need to keep a calendar or diary of your symptoms to help your doctor diagnose PMDD.

You must have five or more PMDD symptoms, including one mood-related symptom, to be diagnosed with PMDD.

TREATMENT FOR PREMENSTRUAL DYSPHORIC DISORDER

Treatments for PMDD include:

- Antidepressants called “selective serotonin reuptake inhibitors” (SSRIs). SSRIs change serotonin levels in the brain. The U.S. Food and Drug Administration (FDA) approved three

SSRIs to treat PMDD:

- Sertraline
- Fluoxetine
- Paroxetine HCl
- Birth control pills. The FDA has approved a birth control pill containing drospirenone and ethinyl estradiol, to treat PMDD.
- Over-the-counter (OTC) pain relievers may help relieve physical symptoms, such as cramps, joint pain, headaches, backaches, and breast tenderness. These include:
 - Ibuprofen
 - Naproxen
 - Aspirin
- Stress management, such as relaxation techniques and spending time on activities you enjoy

Making healthy changes, such as eating a healthy combination of foods across the food groups, cutting back on salty and sugary foods, and getting more physical activity, may also help relieve some PMDD symptoms. But, PMDD can be serious enough that some women should go to a doctor or nurse to discuss treatment options. And, if you are thinking of hurting yourself or others, call 911 right away.

This chapter includes text excerpted from "Premenstrual Dysphoric Disorder (PMDD)," Office on Women's Health (OWH), U.S. Department of Health and Human Services (HHS), March 16, 2018.

Chapter 20 | Reproductive Health and Mental Health

Hormones can affect a woman's emotions and moods in different ways throughout her lifetime. Sometimes the impact on mood can affect a woman's quality of life. This is true for most women. But, women with a mental-health condition may have other symptoms related to their menstrual cycles or menopause. Throughout all these stages, you can learn ways to help your mental and reproductive health.

HOW DOES YOUR MENTAL-HEALTH CONDITION AFFECT YOUR MENSTRUAL CYCLE?

Throughout your monthly menstrual cycle, levels of certain hormones rise and fall. These hormone levels can affect how you think and feel mentally and physically.

Mental-health conditions can cause period problems or make some period problems worse:

- **Premenstrual syndrome (PMS).** Most women have some symptoms of PMS in the week or 2 before their period. PMS can cause bloating, headaches, and moodiness. Women with depression or anxiety disorders may experience worse symptoms of PMS. Also, many women seeking treatment for PMS have depression or anxiety. Symptoms of these mental-health conditions are similar to symptoms of PMS and may get worse before or during your period. Talk to your doctor or nurse about ways to relieve PMS symptoms.
- **Premenstrual dysphoric disorder (PMDD).** PMDD is a condition similar to PMS, but with more severe symptoms, including severe depression, irritability, and tension. Symptoms of PMDD can be so difficult to manage that your daily life is disrupted. PMDD is more common in women with anxiety or depression. Talk to your doctor about ways to help if you experience worse symptoms of depression or anxiety around your period.
- **Irregular periods.** Studies show that women with anxiety disorder or substance use disorder are more likely to have shorter menstrual cycles (shorter than 24 days). Irregular cycles are also linked to eating disorders and depression. Women with bipolar disorder are also twice as likely to have irregular periods.

HOW DO MENTAL-HEALTH CONDITIONS AFFECT PREGNANCY?

Changing hormones during pregnancy can cause mental-health conditions that have been treated in the past to come back (this is called a “relapse”). Women with mental-health conditions are also at higher risk of problems during pregnancy.

- **Depression.** It is the most common mental-health condition during pregnancy. How long symptoms last and how often they happen are different for each woman. Women who are depressed during pregnancy have a greater risk of depression after giving birth, called “postpartum depression.” If you take medicine for depression, stopping your medicine when you become pregnant can cause your depression to come back.
- **Eating disorders.** Women with eating disorders may experience relapses during pregnancy, which can cause miscarriage, premature birth (birth before 37 weeks of pregnancy), and low birth weight.
- **Bipolar disorder.** Women may experience relief from symptoms of bipolar disorder during pregnancy. But, they are at very high risk of a relapse of symptoms in the weeks after pregnancy.

Women with anxiety disorders and obsessive-compulsive disorder (OCD) are more likely to have a

relapse during and after pregnancy.

Talk to your doctor or nurse about your mental-health condition and your symptoms. Do not stop any prescribed medicines without first talking to your doctor or nurse. Not using medicine that you need may hurt you or your baby.

WILL YOUR MENTAL-HEALTH CONDITION AFFECT YOUR CHANCES OF GETTING PREGNANT?

Maybe. Certain mental-health conditions can make it harder to get pregnant:

- Eating disorders can affect your menstrual cycle. The extreme weight loss that happens with anorexia can cause you to miss your menstrual periods. If you have bulimia, your menstrual cycle may be irregular, or your period may stop for several months. Both of these period problems can affect whether you ovulate. Not ovulating regularly can make it harder to get pregnant. Also, the longer you have an eating disorder, the higher the risk that you will face some type of problem getting pregnant.
- Depression, anxiety, and stress can also affect the hormones that control ovulation. This could make it difficult for a woman to become pregnant.

If you are having problems getting pregnant, the stress, worry, or sadness can make your mental-health condition worse. Talk to your doctor or nurse about your feelings. Treatment for your mental-health condition helps both you and your chances of having a baby. During pregnancy, it can also lower your baby's chances of developing depression or other mental-health conditions later in life.

CAN YOU CONTINUE TO TAKE YOUR MEDICINE IF YOU ARE TRYING TO GET PREGNANT?

Maybe. Some medicines, such as antidepressants, may make it more difficult for you to get pregnant. Also, some medicines may not be safe to take during pregnancy or when trying to get pregnant. Talk to your doctor or nurse about other treatments for mental-health conditions, such as depression, that do not involve medicine.

Women who are already taking an antidepressant and who are trying to get pregnant should talk to their doctor or nurse about the benefits and risks of stopping the medicine. Some women who have been diagnosed with severe depression may need to keep taking their prescribed medicine during pregnancy. If you are unsure whether to take your medicine, talk to your doctor or nurse.

Talk therapy is one way to help women with depression. This type of therapy has no risks for women who are trying to get pregnant. During talk therapy, you work with a mental-health professional to explore why you are depressed and train yourself to replace negative thoughts with positive ones. Certain mental-healthcare professionals specialize in depression related to infertility.

Regular physical activity is another safe and healthy option for most women who are trying to get pregnant. Exercise can help with symptoms such as depression, difficulty concentrating, and fatigue.

IS YOUR MEDICINE SAFE TO TAKE DURING PREGNANCY OR BREASTFEEDING?

It depends on the medicine. Some medicines can be taken safely during pregnancy or while you are breastfeeding, but others are not safe. Your doctor or nurse can help you decide. It is best to discuss these medicines with your doctor or nurse before you ever become pregnant.

HOW DOES THE TIME BEFORE MENOPAUSE (PERIMENOPAUSE) AFFECT YOUR MENTAL HEALTH?

As you approach menopause, certain levels of hormones in your body begin to change. This initial transition to menopause when you still get a period is called “perimenopause.” During perimenopause, some women begin to feel symptoms such as intense heat and sweating (“hot flashes”), trouble sleeping, and changing moods.

As you get closer to menopause, you may notice other symptoms, such as pain during sex, urinary problems, and irregular periods. These changes can be stressful on you and your relationships and cause you to feel more extreme emotions.

Women with mental-health conditions may experience more symptoms of menopause or go through perimenopause differently than women who do not have mental-health conditions.

- Women with depression are more likely to go through perimenopause earlier than other women. Studies show that women with depression have lower levels of estrogen.
- Bipolar disorder symptoms may get worse during perimenopause.
- Insomnia affects up to half of women going through menopause. Insomnia may be more common in women with anxiety or depression.
- Menopause can cause a relapse of obsessive-compulsive disorder (OCD) or a change in symptoms.

WHAT STEPS CAN YOU TAKE TO STAY MENTALLY HEALTHY THROUGHOUT LIFE?

Steps you can take to support good mental-health include the following:

- **Get enough sleep.** Good sleep helps you stay in good mental health. If pregnancy or your menopause symptoms, such as hot flashes, are keeping you awake at night, talk to a doctor or nurse about treatments that can help.
- **Get enough physical activity.** Exercise may help prevent or treat some mental-health conditions. Researchers know that physical activity or exercise can help many people with mental-health conditions, including depression, anxiety, schizophrenia, bipolar disorder, posttraumatic stress disorder (PTSD), eating disorders, and substance abuse. Exercise alone does not usually treat or cure mental-health conditions, but combined with other treatments like therapy or medicine, it can make your symptoms less severe.
- **Choose healthy foods most of the time.** Getting the right nutrients, including enough fiber, and staying hydrated can help you feel better physically and can boost your mood.
- **Take your medicines.** If you take medicines for a mental-health condition, do not stop without first talking to your doctor or nurse. Once you go through menopause, medicines may work differently for you. They may not be as effective or may have different or worse side effects. Talk to your doctor or nurse about whether you need to switch medicines.
- **Keep a support network.** Whether you talk to friends, family, or a therapist, stay in good communication with people who know you well. Ask for help if you need it.
- **Stay involved as you get older.** Retirement can be a positive opportunity for change, but it can also be stressful. You may miss going to work each day. Having a chronic disease such as diabetes or heart disease may change how much you see friends and family. Find opportunities for volunteering, social activities such as golf or community gardening, or even part-time work to stay connected to others and your community.

Chapter 21 | Postpartum Depression and Postpartum Psychosis

Your body and mind go through many changes during and after pregnancy. If you feel empty, emotionless, or sad all or most of the time for longer than 2 weeks during or after pregnancy, reach out for help. If you feel like you do not love or care for your baby, you might have postpartum depression. Treatment for depression, such as therapy or medicine, works and will help you and your baby be as healthy as possible in the future.

WHAT IS POSTPARTUM DEPRESSION?

“Postpartum” means the time after childbirth. Most women get the “baby blues,” or feel sad or empty, within a few days of giving birth. For many women, the baby blues go away in three to five days. If your baby blues do not go away or you feel sad, hopeless, or empty for longer than two weeks, you may have postpartum depression. Feeling hopeless or empty after childbirth is not a regular or expected part of being a mother.

Postpartum depression is a serious mental illness that involves the brain and affects your behavior and physical health. If you have depression, then sad, flat, or empty feelings do not go away and can interfere with your day-to-day life. You might feel unconnected to your baby, as if you are not the baby’s mother, or you might not love or care for the baby. These feelings can be mild to severe.

Mothers can also experience anxiety disorders during or after pregnancy.

HOW COMMON IS POSTPARTUM DEPRESSION?

Depression is a common problem after pregnancy. One in nine new mothers has postpartum depression.

HOW DO YOU KNOW IF YOU HAVE POSTPARTUM DEPRESSION?

Some normal changes after pregnancy can cause symptoms similar to those of depression. Many mothers feel overwhelmed when a new baby comes home. But, if you have any of the following symptoms of depression for more than two weeks, call your doctor, nurse, or midwife:

- Feeling restless or moody
- Feeling sad, hopeless, or overwhelmed
- Crying a lot
- Having thoughts of hurting the baby
- Having thoughts of hurting yourself
- Not having any interest in the baby, not feeling connected to the baby, or feeling as if your baby is someone else’s baby
- Having no energy or motivation
- Eating too little or too much
- Sleeping too little or too much
- Having trouble focusing or making decisions
- Having memory problems
- Feeling worthless, guilty, or like a bad mother
- Losing interest or pleasure in activities you used to enjoy
- Withdrawing from friends and family

- Having headaches, aches and pains, or stomach problems that do not go away

Some women do not tell anyone about their symptoms. New mothers may feel embarrassed, ashamed, or guilty about feeling depressed when they are supposed to be happy. They may also worry they will be seen as bad mothers. Any woman can become depressed during pregnancy or after having a baby. It does not mean you are a bad mom. You and your baby do not have to suffer. There is help. Your doctor can help you figure out whether your symptoms are caused by depression or something else.

WHAT CAUSES POSTPARTUM DEPRESSION

Hormonal changes may trigger symptoms of postpartum depression. When you are pregnant, levels of the female hormones estrogen and progesterone are the highest they will ever be. In the first 24 hours after childbirth, hormone levels quickly drop back to normal, prepregnancy levels. Researchers think this sudden change in hormone levels may lead to depression. This is similar to hormone changes before a woman's period, but involves much more extreme swings in hormone levels.

Levels of thyroid hormones may also drop after giving birth. The thyroid is a small gland in the neck that helps regulate how your body uses and stores energy from food. Low levels of thyroid hormones can cause symptoms of depression. A simple blood test can tell whether this condition is causing your symptoms. If so, your doctor can prescribe thyroid medicine.

Other feelings may contribute to postpartum depression. Many new mothers say they feel:

- Tired after labor and delivery
- Tired from a lack of sleep or broken sleep
- Overwhelmed with a new baby
- Doubts about their ability to be a good mother
- Stress from changes in work and home routines
- An unrealistic need to be a perfect mom
- Grief about loss of who they were before having the baby
- Less attractive
- A lack of free time

These feelings are common among new mothers. But, postpartum depression is a serious health condition and can be treated. Postpartum depression is not a regular or expected part of being a new mother.

ARE SOME WOMEN MORE AT RISK OF POSTPARTUM DEPRESSION?

Yes. You may be more at risk of postpartum depression if you:

- Have a personal history of depression or bipolar disorder
- Have a family history of depression or bipolar disorder
- Do not have support from family and friends
- Were depressed during pregnancy
- Had problems with a previous pregnancy or birth
- Have relationship or money problems
- Are younger than 20
- Have alcoholism, use illegal drugs, or have some other problem with drugs
- Have a baby with special needs
- Have difficulty breastfeeding
- Had an unplanned or unwanted pregnancy

The U.S. Preventive Services Task Force (USPSTF) recommends that doctors look for and ask about symptoms of depression during and after pregnancy, regardless of a woman’s risk of depression.

DIFFERENCE BETWEEN “BABY BLUES” AND POSTPARTUM DEPRESSION

Many women have the baby blues in the days after childbirth. If you have the baby blues, you may:

- Have mood swings
- Feel sad, anxious, or overwhelmed
- Have crying spells
- Lose your appetite
- Have trouble sleeping

The baby blues usually go away in three to five days after they start. The symptoms of postpartum depression last longer and are more severe. Postpartum depression usually begins within the first month after childbirth, but it can begin during pregnancy or for up to a year after birth.

Postpartum depression needs to be treated by a doctor or nurse.

WHAT IS POSTPARTUM PSYCHOSIS?

Postpartum psychosis is rare. It happens in up to four new mothers out of every 1,000 births. It usually begins in the first two weeks after childbirth. It is a medical emergency. Women who have bipolar disorder or another mental-health condition called “schizoaffective disorder” have a higher risk of postpartum psychosis. Symptoms may include:

- Seeing or hearing things that are not there
- Feeling confused most of the time
- Having rapid mood swings within several minutes (e.g., crying hysterically, then laughing a lot, followed by extreme sadness)
- Trying to hurt yourself or your baby
- Paranoia (thinking that others are focused on harming you)
- Restlessness or agitation
- Behaving recklessly or in a way that is not normal for you

WHAT SHOULD YOU DO IF YOU HAVE SYMPTOMS OF POSTPARTUM DEPRESSION?

Call your doctor, nurse, midwife, or pediatrician if:

- Your baby blues do not go away after two weeks
- Symptoms of depression get more and more intense
- Symptoms of depression begin within one year of delivery and last more than two weeks
- It is difficult to work or get things done at home
- You cannot care for yourself or your baby (e.g., eating, sleeping, bathing)
- You have thoughts about hurting yourself or your baby

Ask your partner or a loved one to call for you if necessary. Your doctor, nurse, or midwife can ask you questions to test for depression. They can also refer you to a mental-health professional for help and treatment.

WHAT CAN YOU DO AT HOME TO FEEL BETTER WHILE SEEING A DOCTOR FOR POSTPARTUM DEPRESSION?

Here are some ways to begin feeling better or getting more rest, in addition to talking to a health-care

professional:

- Rest as much as you can. Sleep when the baby is sleeping.
- Do not try to do too much or to do everything by yourself. Ask your partner, family, and friends for help.
- Make time to go out, visit friends, or spend time alone with your partner.
- Talk about your feelings with your partner, supportive family members, and friends.
- Talk with other mothers so that you can learn from their experiences.
- Join a support group. Ask your doctor or nurse about groups in your area.
- Do not make any major life changes right after giving birth. More major life changes in addition to a new baby can cause unneeded stress. Sometimes big changes cannot be avoided. When that happens, try to arrange support and help in your new situation ahead of time.

It can also help to have a partner, a friend, or another caregiver who can help take care of the baby while you are depressed. If you are feeling depressed during pregnancy or after having a baby, do not suffer alone. Tell a loved one and call your doctor right away.

HOW IS POSTPARTUM DEPRESSION TREATED?

The common types of treatment for postpartum depression are:

- **Therapy.** During therapy, you talk to a therapist, psychologist, or social worker to learn strategies to change how depression makes you think, feel, and act.
- **Medicine.** There are different types of medicines for postpartum depression. All of them must be prescribed by your doctor or nurse. The most common type is antidepressants. Antidepressants can help relieve symptoms of depression and some can be taken while you are breastfeeding. Antidepressants may take several weeks to start working.
 - The U.S. Food and Drug Administration (FDA) has also approved a medicine called “brexanolone” to treat postpartum depression in adult women. Brexanolone is given by a doctor or nurse through an IV for two and a half days (60 hours). Because of the risk of side effects, this medicine can only be given in a clinic or office while you are under the care of a doctor or nurse. Brexanolone may not be safe to take while pregnant or breastfeeding.
 - Another type of medicine called “esketamine” can treat depression and is given as a nasal (nose) spray in a doctor’s office or clinic. Esketamine can hurt an unborn baby. You should not take esketamine if you are pregnant or breastfeeding.
- **Electroconvulsive therapy (ECT).** This can be used in extreme cases to treat postpartum depression.

These treatments can be used alone or together. Talk with your doctor or nurse about the benefits and risks of taking medicine to treat depression when you are pregnant or breastfeeding.

Having depression can affect your baby. Getting treatment is important for you and your baby. Taking medicines for depression or going to therapy does not make you a bad mother or a failure. Getting help is a sign of strength.

WHAT CAN HAPPEN IF POSTPARTUM DEPRESSION IS NOT TREATED?

Untreated postpartum depression can affect your ability to parent. You may:

- Not have enough energy
- Have trouble focusing on the baby’s needs and your own needs
- Feel moody

- Not be able to care for your baby
- Have a higher risk of attempting suicide

Feeling like a bad mother can make depression worse. It is important to reach out for help if you feel depressed.

Researchers believe postpartum depression in a mother can affect her child throughout childhood, causing:

- Delays in language development and problems learning
- Problems with mother-child bonding
- Behavior problems
- More crying or agitation
- Shorter height and higher risk of obesity in preschoolers
- Problems dealing with stress and adjusting to school and other social situations

This chapter includes text excerpted from “Postpartum Depression,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), May 14, 2019.

Chapter 22 | Dissociation and Dissociative Disorders

WHAT ARE DISSOCIATION AND DISSOCIATIVE DISORDERS?

Dissociation occurs when a person feels disconnected from themselves (their thoughts), others, and the world. It is a mental process and usually occurs after a traumatic incident. It often resolves without any treatment; however, in some cases, people may develop dissociative disorders that require treatment. Dissociative disorders include the following:

- **Dissociative amnesia.** Also known as “psychogenic amnesia,” dissociative amnesia is more severe than normal forgetfulness. It is when a person is unable to recall memories and information about themselves or others from the time they experienced the traumatic event. This episode of memory loss may occur for a few hours, days, months, a year, or more. Dissociative amnesia can be further classified into four categories:
 - **Generalized amnesia.** It is characterized by difficulty remembering details of one’s entire life.
 - **Localized amnesia.** Characterized by difficulty remembering details of the traumatic event.
 - **Selective amnesia.** It is characterized by having incomplete memories of the traumatic event.
 - **Systematized amnesia.** It is characterized by loss of a particular and specific memory (e.g., having no recollection of a friend or family member)
- **Dissociative fugue.** It is also known as “psychogenic fugue” and is characterized by a sudden loss of identity and any memory of the past. A person in a fugue state may forge a new identity and travel kilometers without knowing it. This may last for days or months. It is often confusing for the person when they come out of this fugue state and discover the new life they have created for themselves.
- **Depersonalization/derealization disorder (DPDR).** This is characterized by a sense of emotional detachment from one’s thoughts and feelings. People with DPDR may feel they are observing their own life as an outsider or like watching a movie (depersonalization). They may also feel detached from others, and the world around them may seem dreamlike or unreal (derealization). They may experience time being sped up or slowed down, and they may not be able to identify themselves in the mirror.
- **Dissociative identity disorder (DID).** Previously known as “multiple personality disorder,” it is characterized by the prevalence of two or more personality states within a person. A person may feel that two or more people live inside their heads, with each identity influencing their behavior. Each of the multiple identities may have a different body language, name, personal history, voice, and gender. Under stressful circumstances, a person may switch identities. People with dissociative identity disorder almost always have dissociative amnesia as well.

SYMPTOMS OF DISSOCIATIVE DISORDERS

Based on the type and severity of the disorder, signs and symptoms may vary. Some of the symptoms may include the following:

- Feeling emotionally disconnected from themselves
- Unable to remember personal information, certain events, or time periods

- Flashbacks of traumatic events
- Inability to deal with intense emotions
- Sudden and unexpected mood swings
- Having a distorted sense of reality as if the world around you is unreal (derealization)
- Feeling disconnected from the world around you
- May suffer from identity confusion (multiple identities)
- Presence of other mental health conditions (depression or anxiety)
- May feel little or no physical pain

CAUSES OF DISSOCIATIVE DISORDERS

The exact causes of dissociative disorders are unclear, but many mental-health professionals believe that these result from chronic trauma during childhood. For instance, long-term physical, sexual, or emotional abuse or living in a volatile or frightening home environment may cause a child to feel disconnected from reality. A child may mentally remove themselves from the stressful environment as a coping mechanism. Being a crime victim, experiencing military combat, being in an accident or a natural disaster can also trigger dissociation disorders. Drug use may also cause dissociative disorders.

COMPLICATIONS OF DISSOCIATIVE DISORDERS

Without treatment, people with dissociative disorders are at risk for the following complications:

- Eating disorders
- Severe depression
- Sexual problems
- Anxiety
- Self-harm or suicidal behaviors
- Insomnia
- Substance-use disorder
- Difficulty maintaining interpersonal relationships

DIAGNOSING DISSOCIATIVE DISORDERS

A doctor will assess the symptoms, review medical history, conduct a physical exam, and run tests to identify other underlying medical conditions. They may also refer the person to a mental-health professional. The doctor may use one of the following assessments to make a diagnosis:

- Structured Clinical Interview for Dissociation
- Dissociative Experiences Scale (DES)
- Clinician-Administered PTSD Scale (CAPS)

TREATING DISSOCIATIVE DISORDERS

A combination of medication and therapy is used to treat dissociative disorders. These may include:

- Psychotherapy
- Hypnotherapy
- Stress management
- Psychiatric drugs
- Antidepressants
- Phasic trauma treatment to stop destructive behavior
- Eye-movement desensitization and reprocessing

COPING WITH DISSOCIATIVE DISORDERS

Some strategies to help cope with dissociative disorders are:

- Eat a healthy, well-balanced diet
- Get adequate sleep
- Engage in regular physical activity
- Identify triggers
- Learn relaxation techniques to cope with stress

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“Dissociation and Dissociative Disorders,” © 2021 Omnigraphics. Reviewed August 2021.

Chapter 23 | Mania and Hypomania

Mania is defined as a mood disorder that is characterized by euphoria or irritability and is a primary symptom of bipolar disorder. A less severe version of mania is known as hypomania, which lasts for a shorter period. Bipolar disorder is often associated with mania and hypomania. It affects around 2.8 percent of people in the United States. The onset of the disease occurs during the teenage years and is usually diagnosed between the ages of 18–29. Some conditions that cause mania and hypomania include schizoaffective disorder, seasonal affective disorder, or postpartum psychosis. According to the American Psychiatric Association (APA), mania usually occurs as a result of bipolar I disorder, and hypomania is caused as a result of either bipolar I or bipolar II disorder.

CAUSES AND SYMPTOMS OF MANIA

The causative effect is not clearly known, however, traumatic incidents and genetic factors are known to induce bipolar disorders. The defining characteristic of bipolar I disorder is manic episodes, which are typical mood disturbances that are comparable to sudden outbursts of energy. Mania can cause a euphoric state, which affects the physical and mental state of a person, often making them feel increasingly energized. This may last for a week or more and sometimes lead to hospitalization and periods of depression, similar to the symptoms of bipolar I disorder. Some common symptoms of mania are:

- Racing thoughts
- Rapid speech
- Restlessness
- Exaggerated ideas
- Risky behavior
- Irritability

Severe symptoms include:

- Delusion
- Paranoia
- Hallucinations

CAUSES AND SYMPTOMS OF HYPOMANIA

Hypomania is a milder form of mania, that is characteristic of bipolar II and cyclothymic disorder, that lasts for at least four days. It also causes a rise in energy similar to mania, but not as significant. Other triggers for hypomania include:

- Drug or alcohol use
- Depression
- Increased stress
- Side effects of certain medications
- Changes in sleep patterns

Symptoms include restlessness, sleep problems, loss of concentration, and risky behavior. The more severe symptoms of mania are not present during a hypomanic episode, but it does cause a noticeable change in behavior, and the symptoms of hypomania vary with each person. The following are some of the usual indications:

- Inappropriate or flamboyant behavior
- Hypersexuality
- Inconsistent speaking pattern
- Reduced sleep
- Unusual hostility or excitement

DIAGNOSIS OF MANIA AND HYPOMANIA

Mania and hypomania have several similarities that make them difficult to differentiate. However, an accurate diagnosis can be made based on the longevity and severity of the symptoms. If the symptoms are extreme or last longer than a week, the doctor will diagnose it as mania. For a hypomania diagnosis, the patient exhibits at least three common symptoms for more than four days.

TREATMENT OF MANIA AND HYPOMANIA

Mania and hypomania cannot be cured, but the symptoms can be managed with the help of medication and therapy. Consistent intake of prescribed medications can help prevent episodes of depression and mania. Medicines that are helpful in managing the symptoms include:

- Mood stabilizers (lithium, antiseizure medicines)
- Atypical antipsychotics
- Antidepressants
- Sleep medications

Medication should not be stopped without consulting a physician, or it could lead to worse manic episodes as well as severe withdrawal symptoms. Research shows that psychotherapy or talk therapy can help support, guide, and educate patients to cope with their depressive episodes. It can also help with the long-term management of manic and hypomanic episodes.

Reference

1. Purse, Marcia. "What Is Hypomania," VeryWell Mind, July 10, 2020.
2. "Understanding the Difference between Mania and Hypomania," NorthStar Transitions, May 8, 2021.
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Chapter 24 | Childhood Mental Disorders

Being mentally healthy during childhood means reaching developmental and emotional milestones and learning healthy social skills and how to cope when there are problems. Mentally healthy children have a positive quality of life and can function well at home, in school, and in their communities.

Mental disorders among children are described as serious changes in the way children typically learn, behave, or handle their emotions, which cause distress and problems getting through the day. Many children occasionally experience fears and worries or display disruptive behaviors. If symptoms are serious and persistent and interfere with school, home, or play activities, the child may be diagnosed with a mental disorder.

Mental health is not simply the absence of a mental disorder. Children who do not have a mental disorder might differ in how well they are doing, and children who have the same diagnosed mental disorder might differ in their strengths and weaknesses in how they are developing and coping, and in their quality of life. Mental health as a continuum and the identification of specific mental disorders are both ways to understand how well children are doing.

WHAT ARE COMMON CHILDHOOD MENTAL DISORDERS?

Among the more common mental disorders that can be diagnosed in childhood are attention deficit hyperactivity disorder (ADHD), anxiety (fears or worries), and behavior disorders.

Other childhood disorders and concerns that affect how children learn, behave, or handle their emotions can include learning and developmental disabilities, autism, and risk factors such as substance use and self-harm.

WHAT ARE THE SYMPTOMS OF CHILDHOOD MENTAL DISORDERS?

Symptoms of mental disorders change over time as a child grows, and may include difficulties with how a child plays, learns, speaks, and acts, or how the child handles their emotions. Symptoms often start in early childhood, although some disorders may develop during the teenage years. The diagnosis is often made in the school years and sometimes earlier; however, some children with a mental disorder may not be recognized or diagnosed as having one.

CAN CHILDHOOD MENTAL DISORDERS BE TREATED?

Childhood mental disorders can be treated and managed. There are many treatment options based on the best and most current medical evidence. Parents and doctors should work closely with everyone involved in the child's treatment – teachers, coaches, therapists, and other family members. Taking advantage of all the resources available will help parents, health professionals, and educators guide the child towards success. Early diagnosis and appropriate services for children and their families can make a difference in the lives of children with mental disorders.

WHO IS AFFECTED?

Childhood mental disorders affect many children and families. Boys and girls of all ages and ethnic/racial backgrounds and living in all regions of the United States experience mental disorders. Based on the National Research Council and Institute of Medicine report, which gathered findings from previous studies, it is estimated that in 2007, 13–20 percent of children living in the United States (up to 1 out of 5 children) experienced a mental disorder in a given year, costing individuals, families, and society an

estimated \$247 billion per year.

WHAT IS THE IMPACT OF MENTAL DISORDERS IN CHILDREN?

Mental health is important to overall health. Mental disorders are chronic health conditions – conditions that last a long time and often do not go away completely – that can continue through the lifespan. Without early diagnosis and treatment, children with mental disorders can have problems at home, in school, and in forming friendships. Mental disorders can also interfere with a child’s healthy development, causing problems that can continue into adulthood.

PUBLIC HEALTH INCLUDES MENTAL HEALTH

Supporting children’s mental health also includes making sure children meet developmental milestones, understanding what to do when there is a concern, supporting positive parenting strategies, and improving access to care.

WHAT YOU CAN DO

Parents. You know your child best. Talk to your child’s health-care professional if you have concerns about the way your child behaves at home, in school, or with friends.

Youth. It is just as important to take care of your mental health as it is to take care of your physical health. If you are angry, worried or sad, do not be afraid to talk about your feelings and reach out to a trusted friend or adult.

Healthcare professionals. Early diagnosis and appropriate treatment based on updated guidelines are very important. There are resources available to help diagnose and treat children’s mental disorders.

Teachers/school administrators. Early identification is important so that children can get the help they need. Work with families and healthcare professionals if you have concerns about the mental health of a child in your school.

This chapter includes text excerpted from “What Is Children’s Mental Health?” Centers for Disease Control and Prevention (CDC), March 22, 2021.

Chapter 25 | Mental Healthcare for Children and Teens

MENTAL HEALTH IN CHILDHOOD

Raising a child can be challenging. Even under the best circumstances, their behaviors and emotions can change frequently and rapidly. All children are sad, anxious, irritable, or aggressive at times, or they occasionally find it challenging to sit still, pay attention, or interact with others. In most cases, these are just typical developmental phases. However, such behaviors may indicate a more serious problem in some children.

Mental disorders can begin in childhood. Examples include anxiety disorders, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), depression and other mood disorders, eating disorders, and posttraumatic stress disorder (PTSD). Without treatment, these mental-health conditions can prevent children from reaching their full potential. Many adults who seek mental-health treatment reflect on the impact of mental disorders on their childhood and wish they had received help sooner.

WHEN TO SEEK HELP

How can you tell the difference between challenging behaviors and emotions that are a normal part of growing up and those that are cause for concern? In general, consider seeking help if your child's behavior persists for a few weeks or longer; causes distress for your child or your family; or interferes with your child's functioning at school, at home, or with friends. If your child's behavior is unsafe, or if your child talks about wanting to hurt themselves or someone else, seek help immediately.

Young children may benefit from an evaluation and treatment if they:

- Have frequent tantrums or are intensely irritable much of the time
- Often talk about fears or worries
- Complain about frequent stomachaches or headaches with no known medical cause
- Are in constant motion and cannot sit quietly (except when they are watching videos or playing video games)
- Sleep too much or too little, have frequent nightmares, or seem sleepy during the day
- Are not interested in playing with other children or have difficulty making friends
- Struggle academically or have experienced a recent decline in grades
- Repeat actions or check things many times out of fear that something bad may happen

Older children and adolescents may benefit from an evaluation and treatment if they:

- Have lost interest in things that they used to enjoy
- Have low energy
- Sleep too much or too little or seem sleepy throughout the day
- Are spending more and more time alone and avoid social activities with friends or family
- Diet or exercise excessively, or fear gaining weight
- Engage in self-harm behaviors (such as cutting or burning their skin)
- Smoke, drink, or use drugs
- Engage in risky or destructive behavior alone or with friends
- Have thoughts of suicide

- Have periods of highly elevated energy and activity and require much less sleep than usual
- Say that they think someone is trying to control their mind or that they hear things that other people cannot hear

FIRST STEPS FOR PARENTS

If you are concerned about your child's mental health, you can start by talking with others who frequently interact with your child. For example, ask their teacher about your child's behavior in school, at daycare, or on the playground.

You can talk with your child's pediatrician or healthcare provider and describe the child's behavior, as well as what you have observed and learned from talking with others. You also can ask the healthcare provider for a referral to a mental-health professional who has experience and expertise in treating children.

CHOOSING A MENTAL-HEALTH PROFESSIONAL

When looking for a mental-health professional for your child, you may want to begin by asking your child's pediatrician for a referral. If you need help identifying a provider in your area, you can call the Substance Abuse and Mental Health Services Administration (SAMHSA) Treatment Referral Helpline at toll-free: 800-662-HELP (800-662-4357). You also can search SAMHSA's online Behavioral Health Treatment Services Locator at the website: (findtreatment.samhsa.gov), which lists facilities and programs that provide mental-health services. It is especially important to look for a mental-health professional with training and experience treating children, particularly your child's specific problems.

Asking questions and providing information to your child's healthcare provider can improve your child's care. Talking with the healthcare provider builds trust and leads to better results, quality, safety, and satisfaction. Here are some questions you can ask when meeting with prospective treatment providers:

- Do you use treatment approaches that are supported by research?
- Do you involve parents in the treatment? If so, how are parents involved?
- Will there be "homework" between sessions?
- How will progress be evaluated?
- How soon can we expect to see progress?
- How long should treatment last?

ASSESSING YOUR CHILD'S BEHAVIOR

An evaluation by a mental-health professional can help clarify problems underlying your child's behavior and provide reassurance or recommendations for the next steps. An evaluation offers an opportunity to learn about your child's strengths and weaknesses and to determine which interventions might be most helpful.

A comprehensive evaluation of a child's mental health includes the following:

- An interview with the parents to discuss the child's developmental history, temperament, relationships with friends and family, medical history, interests, abilities, and any prior treatment. It is important for the mental-health professional to get a picture of the child's current situation – for example, a recent change in schools, an illness in the family, or another change that affects the child's daily life.
- Information gathering from the child's school, such as standardized tests and reports on behavior, capabilities, and difficulties.
- If needed, an interview with the child and the mental-health professional's testing and

behavioral observations.

TREATMENT OPTIONS

The mental-health professional will review the evaluation results to help determine if a child's behavior is related to changes or stresses at home or school or if it is the result of a disorder for which they would recommend treatment. Treatment recommendations may include:

- **Psychotherapy (“talk therapy”).** There are many different approaches to psychotherapy, including structured psychotherapies directed at specific conditions. Effective psychotherapy for children always includes:
 - Parent involvement in the treatment
 - Teaching the child skills to practice at home or school (between-session “homework assignments”)
 - Measures of progress (such as rating scales and improvements on “homework assignments”) that are tracked over time.
- **Medications.** As with adults, the type of medicines used for children depends on the diagnosis and may include antidepressants, stimulants, mood stabilizers, or other medications. Medications are often used in combination with psychotherapy. If multiple healthcare providers or specialists are involved, treatment information should be shared and coordinated to achieve the best results.
- **Family counseling.** Including family members in treatment can help them to understand how a child's challenges may affect relationships with parents and siblings.
- **Support for parents.** Individual or group sessions for parents that include training and the opportunity to talk with other parents can provide new strategies for supporting a child and managing difficult behavior in a positive way. The therapist also can coach parents on how to communicate and work with schools on accommodations.

WORKING WITH THE SCHOOL

Children who have behavioral or emotional challenges that interfere with success in school may benefit from plans or accommodations provided under laws that prevent discrimination against children with disabilities. Your child's healthcare providers can help you communicate with the school.

A first step may be to ask the school whether accommodations such as an individualized education program may be appropriate for your child. Accommodations might include measures such as providing a child with a tape recorder for taking notes, allowing more time for tests, or adjusting seating in the classroom to reduce distraction. There are many sources of information on what schools can and, in some cases, must provide for children who would benefit from accommodations and how parents can request evaluation and services for their child:

- There are Parent Training and Information Centers (PTIs) and Community Parent Resource Centers (CPRCs) located throughout the United States. The Center for Parent Information and Resources (CPIR) lists centers in each state.
- The U.S. Department of Education (ED) has detailed information on laws that establish mechanisms for providing children with accommodations tailored to their individual needs and aimed at helping them succeed in school. The Department also has a website on the Individuals with Disabilities Education Act at (sites.ed.gov/idea), and its Office for Civil Rights has information on other federal laws that prohibit discrimination based on disability in public programs, such as schools.

TEEN MENTAL HEALTH

Being a teenager is hard. You are under stress to be liked, do well in school, get along with your family, and make big decisions. You cannot avoid most of these pressures, and worrying about them is normal. But, feeling very sad, hopeless or worthless could be warning signs of a mental-health problem.

Mental-health problems are real, painful, and sometimes severe. You might need help if you have the signs mentioned above, or if you

- Often feel very angry or very worried
- Feel grief for a long time after a loss or death
- Think your mind is controlled or out of control
- Use alcohol or drugs
- Exercise, diet and/or binge-eat obsessively
- Hurt other people or destroy property
- Do reckless things that could harm you or others
- Feel depressed (sad and hopeless)

Mental-health problems can be treated.

This chapter contains text excerpted from the following sources: Text beginning with the heading “Mental Health in Childhood” is excerpted from “Children and Mental Health: Is This Just a Stage?” National Institute of Mental Health (NIMH), 2021; Text under the heading “Teen Mental Health” is excerpted from “Teen Mental Health,” MedlinePlus, National Institutes of Health (NIH), March 26, 2015. Reviewed August 2021.

Chapter 26 | Anxiety, Depression, and Children's Mental Health

Many children have fears and worries, and may feel sad and hopeless from time to time. Strong fears may appear at different times during development. For example, toddlers are often very distressed about being away from their parents, even if they are safe and cared for. Although fears and worries are typical in children, persistent or extreme forms of fear and sadness could be due to anxiety or depression. Because the symptoms primarily involve thoughts and feelings, they are sometimes called “internalizing disorders.”

ANXIETY

When a child does not outgrow the fears and worries that are typical in young children, or when there are so many fears and worries that they interfere with school, home, or play activities, the child may be diagnosed with an anxiety disorder. Examples of different types of anxiety disorders include

- Being very afraid when away from parents (separation anxiety)
- Having extreme fear about a specific thing or situation, such as dogs, insects, or going to the doctor (phobias)
- Being very afraid of school and other places where there are people (social anxiety)
- Being very worried about the future and about bad things happening (general anxiety)
- Having repeated episodes of sudden, unexpected, intense fear that come with symptoms such as heart pounding, having trouble breathing, or feeling dizzy, shaky, or sweaty (panic disorder)

Anxiety may present as fear or worry, but can also make children irritable and angry. Anxiety symptoms can also include trouble sleeping, as well as physical symptoms such as fatigue, headaches, or stomachaches. Some anxious children keep their worries to themselves and, thus, the symptoms can be missed.

DEPRESSION

Occasionally being sad or feeling hopeless is a part of every child's life. However, some children feel sad or uninterested in things that they used to enjoy, or feel helpless or hopeless in situations they are able to change. When children feel persistent sadness and hopelessness, they may be diagnosed with depression.

Examples of behaviors often seen in children with depression include

- Feeling sad, hopeless, or irritable a lot of the time
- Not wanting to do or enjoy doing fun things
- Showing changes in eating patterns – eating a lot more or a lot less than usual
- Showing changes in sleep patterns – sleeping a lot more or a lot less than normal
- Showing changes in energy – being tired and sluggish or tense and restless a lot of the time
- Having a hard time paying attention
- Feeling worthless, useless, or guilty
- Showing self-injury and self-destructive behavior

Extreme depression can lead a child to think about suicide or plan for suicide. For youth ages 10–24 years, suicide is among the leading causes of death.

Some children may not talk about their helpless and hopeless thoughts, and may not appear sad. Depression might also cause a child to make trouble or act unmotivated, causing others not to notice that the child is depressed or to incorrectly label the child as a trouble-maker or lazy.

TREATMENT FOR ANXIETY AND DEPRESSION

The first step to treatment is to talk with a health-care provider such as your child's primary-care provider, or a mental-health specialist, about getting an evaluation. The American Academy of Child and Adolescent Psychiatry (AACAP) recommends that health-care providers routinely screen children for behavioral and mental-health concerns. Some of the signs and symptoms of anxiety or depression in children could be caused by other conditions, such as trauma. Specific symptoms like having a hard time focusing could be a sign of attention deficit hyperactivity disorder (ADHD). It is important to get a careful evaluation to get the best diagnosis and treatment. Consultation with a health provider can help determine if medication should be part of the treatment. A mental-health professional can develop a therapy plan that works best for the child and family. Behavior therapy includes child therapy, family therapy, or a combination of both. The school can also be included in the treatment plan. For very young children, involving parents in treatment is key. Cognitive-behavioral therapy is one form of therapy that is used to treat anxiety or depression, particularly in older children. It helps the child change negative thoughts into more positive, effective ways of thinking, leading to more effective behavior. Behavior therapy for anxiety may involve helping children cope with and manage anxiety symptoms while gradually exposing them to their fears so as to help them learn that bad things do not occur.

Treatments can also include a variety of ways to help the child feel less stressed and be healthier such as nutritious food, physical activity, sufficient sleep, predictable routines, and social support.

Get Help Finding Treatment

Here are tools to find a healthcare provider familiar with treatment options:

- Psychologist Locator (locator.apa.org), a service of the American Psychological Association (APA) Practice Organization.
- Child and Adolescent Psychiatrist Finder (www.aacap.org/AACAP/Families_and_Youth/Resources/CAP_Finder.aspx), a research tool by the American Academy of Child and Adolescent Psychiatry (AACAP).
- Find a Cognitive Behavioral Therapist (services.abct.org/i4a/memberDirectory/index.cfm?directory_id=3&pageID=3282), a search tool by the Association for Behavioral and Cognitive Therapies (ABCT).
- If you need help finding treatment facilities, visit MentalHealth.gov (www.mentalhealth.gov).

PREVENTION OF ANXIETY AND DEPRESSION

It is not known exactly why some children develop anxiety or depression. Many factors may play a role, including biology and temperament. But, it is also known that some children are more likely to develop anxiety or depression when they experience trauma or stress, when they are maltreated, when they are bullied or rejected by other children, or when their own parents have anxiety or depression.

Although these factors appear to increase the risk for anxiety or depression, there are ways to decrease the chance that children experience them.

MANAGING SYMPTOMS: STAYING HEALTHY

Being healthy is important for all children and can be especially important for children with depression or anxiety. In addition to getting the right treatment, leading a healthy lifestyle can play a role in managing

symptoms of depression or anxiety. Here are some healthy behaviors that may help:

- Having a healthy eating plan centered on fruits, vegetables, whole grains, legumes (e.g., beans, peas, and lentils), lean protein sources, and nuts and seeds
- Participating in physical activity for at least 60 minutes each day
- Getting the recommended amount of sleep each night based on age
- Practicing mindfulness or relaxation techniques

This chapter includes text excerpted from “Anxiety and Depression in Children,” Centers for Disease Control and Prevention (CDC), March 22, 2021.

Chapter 27 | Attention Deficit Hyperactivity Disorder

WHAT IS ATTENTION DEFICIT HYPERACTIVITY DISORDER?

Attention deficit hyperactivity disorder (ADHD) is one of the most common neurodevelopmental disorders of childhood. It is usually first diagnosed in childhood and often lasts into adulthood. Children with ADHD may have trouble paying attention, controlling impulsive behaviors (may act without thinking about what the result will be), or be overly active.

SIGNS AND SYMPTOMS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

It is normal for children to have trouble focusing and behaving at one time or another. However, children with ADHD do not just grow out of these behaviors. The symptoms continue, can be severe, and can cause difficulty at school, at home, or with friends.

A child with ADHD might:

- daydream a lot
- forget or lose things a lot
- squirm or fidget
- talk too much
- make careless mistakes or take unnecessary risks
- have a hard time resisting temptation
- have trouble taking turns
- have difficulty getting along with others

TYPES OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

There are three different types of ADHD, depending on which types of symptoms are strongest in the individual:

- **Predominantly inattentive presentation.** It is hard for the individual to organize or finish a task, to pay attention to details, or to follow instructions or conversations. The person is easily distracted or forgets details of daily routines.
- **Predominantly hyperactive-impulsive presentation.** The person fidgets and talks a lot. It is hard to sit still for long (e.g., for a meal or while doing homework). Smaller children may run, jump or climb constantly. The individual feels restless and has trouble with impulsivity. Someone who is impulsive may interrupt others a lot, grab things from people, or speak at inappropriate times. It is hard for the person to wait their turn or listen to directions. A person with impulsiveness may have more accidents and injuries than others.
- **Combined presentation.** Symptoms of the above two types are equally present in the person.

Because symptoms can change over time, the presentation may change over time as well.

CAUSES OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

Scientists are studying cause(s) and risk factors in an effort to find better ways to manage and reduce the chances of a person having ADHD. The cause(s) and risk factors for ADHD are unknown, but research shows that genetics plays an important role. Recent studies of twins link genes with ADHD.

In addition to genetics, scientists are studying other possible causes and risk factors including:

- Brain injury
- Exposure to environmental (e.g., lead) during pregnancy or at a young age
- Alcohol and tobacco use during pregnancy
- Premature delivery
- Low birth weight

Research does not support the popularly held views that ADHD is caused by eating too much sugar, watching too much television, parenting, or social and environmental factors such as poverty or family chaos. Of course, many things, including these, might make symptoms worse, especially in certain people. But, the evidence is not strong enough to conclude that they are the main causes of ADHD.

DIAGNOSIS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

Deciding if a child has ADHD is a process with several steps. There is no single test to diagnose ADHD, and many other problems, such as anxiety, depression, sleep problems, and certain types of learning disabilities, can have similar symptoms. One step of the process involves having a medical exam, including hearing and vision tests, to rule out other problems with symptoms like ADHD. Diagnosing ADHD usually includes a checklist for rating ADHD symptoms and taking a history of the child from parents, teachers, and sometimes, the child.

Healthcare providers use the guidelines in the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, to help diagnose ADHD. This diagnostic standard helps ensure that people are appropriately diagnosed and treated for ADHD. Using the same standard across communities can also help determine how many children have ADHD, and how public health is impacted by this condition.

DSM-5 Criteria for ADHD

People with ADHD show a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development:

- **Inattention.** Six or more symptoms of inattention for children up to age 16 years, or five or more for adolescents age 17 years and older and adults; symptoms of inattention have been present for at least 6 months, and they are inappropriate for developmental level:
 - Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or with other activities
 - Often has trouble holding attention on tasks or play activities
 - Often does not seem to listen when spoken to directly
 - Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., loses focus, side-tracked)
 - Often has trouble organizing tasks and activities
 - Often avoids, dislikes, or is reluctant to do tasks that require mental effort over a long period of time (such as schoolwork or homework)
 - Often loses things necessary for tasks and activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones)
 - Is often easily distracted
 - Is often forgetful in daily activities
- **Hyperactivity and impulsivity.** Six or more symptoms of hyperactivity-impulsivity for children up to age 16 years, or five or more for adolescents age 17 years and older and adults; symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is

disruptive and inappropriate for the person's developmental level:

- Often fidgets with or taps hands or feet, or squirms in seat
- Often leaves seat in situations when remaining seated is expected
- Often runs about or climbs in situations where it is not appropriate (adolescents or adults may be limited to feeling restless)
- Often unable to play or take part in leisure activities quietly
- Is often "on the go" acting as if "driven by a motor"
- Often talks excessively
- Often blurts out an answer before a question has been completed
- Often has trouble waiting their turn
- Often interrupts or intrudes on others (e.g., butts into conversations or games)

In addition, the following conditions must be met:

- Several inattentive or hyperactive-impulsive symptoms were present before age 12 years
- Several symptoms are present in two or more settings, (such as at home, school or work; with friends or relatives; in other activities)
- There is clear evidence that the symptoms interfere with, or reduce the quality of, social, school, or work functioning
- The symptoms are not better explained by another mental disorder (such as a mood disorder, anxiety disorder, dissociative disorder, or a personality disorder). The symptoms do not happen only during the course of schizophrenia or another psychotic disorder.

Based on the types of symptoms, three kinds (presentations) of ADHD can occur:

- **Combined presentation.** If enough symptoms of both criteria inattention and hyperactivity-impulsivity were present for the past 6 months
- **Predominantly inattentive presentation.** If enough symptoms of inattention, but not hyperactivity-impulsivity, were present for the past six months
- **Predominantly hyperactive-impulsive presentation.** If enough symptoms of hyperactivity-impulsivity, but not inattention, were present for the past six months

Because symptoms can change over time, the presentation may change over time as well.

Diagnosing ADHD in Adults

ADHD often lasts into adulthood. To diagnose ADHD in adults and adolescents age 17 years or older, only 5 symptoms are needed instead of the 6 needed for younger children. Symptoms might look different at older ages. For example, in adults, hyperactivity may appear as extreme restlessness or wearing others out with their activity.

TREATMENTS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

In most cases, ADHD is best treated with a combination of behavior therapy (CBT) and medication. For preschool-aged children (4–5 years of age) with ADHD, behavior therapy, particularly training for parents, is recommended as the first line of treatment before medication is tried. What works best can depend on the child and family. Good treatment plans will include close monitoring, follow-ups, and making changes, if needed, along the way.

Types of treatment for ADHD include:

- Behavior therapy, including training for parents
- Medications

Behavior Therapy, including Training for Parents

ADHD affects not only a child's ability to pay attention or sit still at school, it also affects relationships with family and other children. Children with ADHD often show behaviors that can be very disruptive to others. Behavior therapy is a treatment option that can help reduce these behaviors; it is often helpful to start behavior therapy as soon as a diagnosis is made.

The goals of behavior therapy are to learn or strengthen positive behaviors and eliminate unwanted or problem behaviors. Behavior therapy for ADHD can include:

- Parent training in behavior management
- Behavior therapy with children
- Behavioral interventions in the classroom

These approaches can also be used together. For children who attend early childhood programs, it is usually most effective if parents and educators work together to help the child.

CHILDREN YOUNGER THAN 6 YEARS OF AGE

For young children with ADHD, behavior therapy is an important first step before trying medication because:

- Parent training in behavior management gives parents the skills and strategies to help their child
- Parent training in behavior management has been shown to work as well as medication for ADHD in young children
- Young children have more side effects from ADHD medications than older children
- The long-term effects of ADHD medications on young children have not been well-studied

SCHOOL-AGE CHILDREN AND ADOLESCENTS

For children ages 6 years and older, AAP recommends combining medication treatment with behavior therapy. Several types of behavior therapies are effective, including:

- Parent training in behavior management
- Behavioral interventions in the classroom
- Peer interventions that focus on behavior
- Organizational skills training

These approaches are often most effective if they are used together, depending on the needs of the individual child and the family.

Medications

Medication can help children manage their ADHD symptoms in their everyday life and can help them control the behaviors that cause difficulties with family, friends, and at school.

Several different types of medications are FDA-approved to treat ADHD in children as young as 6 years of age:

- Stimulants are the best-known and most widely used ADHD medications. Between 70-80 percent of children with ADHD have fewer ADHD symptoms when taking these fast-acting medications.
- Nonstimulants were approved for the treatment of ADHD in 2003. They do not work as quickly as stimulants, but their effect can last up to 24 hours.

Medications can affect children differently and can have side effects such as decreased appetite or sleep problems. One child may respond well to one medication, but not to another.

Healthcare providers who prescribe medication may need to try different medications and doses. The

AAP recommends that healthcare providers observe and adjust the dose of medication to find the right balance between benefits and side effects. It is important for parents to work with their child’s healthcare providers to find the medication that works best for their child.

MANAGING SYMPTOMS: STAYING HEALTHY

Being healthy is important for all children and can be especially important for children with ADHD. In addition to behavioral therapy and medication, having a healthy lifestyle can make it easier for your child to deal with ADHD symptoms. Here are some healthy behaviors that may help:

- Developing healthy eating habits such as eating plenty of fruits, vegetables, and whole grains and choosing lean protein sources
- Participating in daily physical activity based on age
- Limiting the amount of daily screen time from TVs, computers, phones, and other electronics
- Getting the recommended amount of sleep each night based on age

This chapter includes text excerpted from “What Is ADHD?” National Center on Birth Defects and Developmental Disabilities (NCBDDD), Centers for Disease Control and Prevention (CDC), January 26, 2021.

Chapter 28 | Obsessive-Compulsive Disorder among Children

WHAT IS OBSESSIVE-COMPULSIVE DISORDER?

Many children occasionally have thoughts that bother them, and they might feel like they have to do something about those thoughts, even if their actions do not actually make sense. For example, they might worry about having bad luck if they do not wear a favorite piece of clothing. For some children, the thoughts and the urges to perform certain actions persist, even if they try to ignore them or make them go away. Children may have an obsessive-compulsive disorder (OCD) when unwanted thoughts, and the behaviors they feel they must do because of the thoughts, happen frequently, take up a lot of time (more than an hour a day), interfere with their activities, or make them very upset. The thoughts are called “obsessions.” The behaviors are called “compulsions.”

SYMPTOMS OF OBSESSIVE-COMPULSIVE DISORDER

Having OCD means having obsessions, compulsions, or both.

Examples of obsessive or compulsive behaviors include:

- Having unwanted thoughts, impulses, or images that occur over and over and which cause anxiety or distress
- Having to think about or say something over and over (e.g., counting, or repeating words over and over silently or out loud)
- Having to do something over and over (e.g., handwashing, placing things in a specific order, or checking the same things over and over, like whether a door is locked)
- Having to do something over and over according to certain rules that must be followed exactly in order to make an obsession go away

Children do these behaviors because they have the feeling that the behaviors will prevent bad things from happening or will make them feel better. However, the behavior is not typically connected to actual danger of something bad happening, or the behavior is extreme, such as washing hands multiple times per hour.

A common myth is that OCD means being really neat and orderly. Sometimes, OCD behaviors may involve cleaning, but many times someone with OCD is too focused on one thing that must be done over and over, rather than on being organized. Obsessions and compulsions can also change over time.

TREATMENT FOR OBSESSIVE-COMPULSIVE DISORDER

The first step to treatment is to talk with a health-care provider to arrange an evaluation. A comprehensive evaluation by a mental-health professional will determine if the anxiety or distress involves memories of a traumatic event that actually happened, or if the fears are based on other thoughts or beliefs. The mental-health professional should also determine whether someone with OCD has a current or past tic disorder. Anxiety or depression and disruptive behaviors may also occur with OCD.

Treatments can include behavior therapy and medication. Behavior therapy, specifically cognitive-behavioral therapy (CBT), helps the child change negative thoughts into more positive, effective ways of thinking, leading to more effective behavior. Behavior therapy for OCD can involve gradually exposing children to their fears in a safe setting; this helps them learn that bad things do not really occur when they

do not do the behavior, which eventually decreases their anxiety. Behavior therapy alone can be effective, but some children are treated with a combination of behavior therapy and medication. Families and schools can help children manage stress by being part of the therapy process and learning how to respond supportively without accidentally making obsessions or compulsions more likely to happen again.

PREVENTION OF OBSESSIVE-COMPULSIVE DISORDER

It is not known exactly why some children develop OCD. There is likely to be a biological and neurological component, and some children with OCD also have Tourette syndrome or other tic disorders. There are some studies that suggest that health problems during pregnancy and birth may make OCD more likely, which is one of many important reasons to support the health of women during pregnancy.

This chapter includes text excerpted from “Obsessive-Compulsive Disorder in Children,” Centers for Disease Control and Prevention (CDC), March 22, 2021.

Chapter 29 | Behavior Disorder in Children

Children sometimes argue, are aggressive, or act angry or defiant around adults. A behavior disorder may be diagnosed when these disruptive behaviors are uncommon for the child's age at the time, persist over time, or are severe. Because disruptive behavior disorders (DBDs) involve acting out and showing unwanted behavior towards others they are sometimes called "externalizing disorders."

OPPOSITIONAL DEFIANT DISORDER

When children act out persistently so that it causes serious problems at home, in school, or with peers, they may be diagnosed with oppositional defiant disorder (ODD). ODD usually starts before 8 years of age, but no later than by about 12 years of age. Children with ODD are more likely to act oppositional or defiant around people they know well, such as family members, a regular care provider, or a teacher. Children with ODD show these behaviors more often than other children their age.

Examples of ODD behaviors include:

- Often being angry or losing one's temper
- Often arguing with adults or refusing to comply with adults' rules or requests
- Often resentful or spiteful
- Deliberately annoying others or becoming annoyed with others
- Often blaming other people for one's own mistakes or misbehavior

CONDUCT DISORDER

Conduct disorder (CD) is diagnosed when children show an ongoing pattern of aggression toward others, and serious violations of rules and social norms at home, in school, and with peers. These rule violations may involve breaking the law and result in arrest. Children with CD are more likely to get injured and may have difficulties getting along with peers.

Examples of CD behaviors include:

- Breaking serious rules, such as running away, staying out at night when told not to, or skipping school
- Being aggressive in a way that causes harm, such as bullying, fighting, or being cruel to animals
- Lying, stealing, or damaging other people's property on purpose

TREATMENT FOR DISRUPTIVE BEHAVIOR DISORDERS

Starting treatment early is important. Treatment is most effective if it fits the needs of the specific child and family. The first step to treatment is to talk with a healthcare provider. A comprehensive evaluation by a mental-health professional may be needed to get the right diagnosis. Some of the signs of behavior problems, such as not following rules in school, could be related to learning problems which may need additional intervention. For younger children, the treatment with the strongest evidence is behavior therapy training for parents, where a therapist helps the parent learn effective ways to strengthen the parent-child relationship and respond to the child's behavior. For school-age children and teens, an often-used effective treatment is a combination of training and therapy that includes the child, the family, and the school.

MANAGING SYMPTOMS: STAYING HEALTHY

Being healthy is important for all children and can be especially important for children with behavior or

conduct problems. In addition to behavioral therapy and medication, practicing certain healthy lifestyle behaviors may reduce challenging and disruptive behaviors your child might experience. Here are some healthy behaviors that may help:

- Engaging in regular physical activity, including aerobic and vigorous exercise
- Eating a healthful diet centered on fruits, vegetables, whole grains, legumes (e.g., beans, peas, and lentils), lean protein sources, and nuts and seeds
- Getting the recommended amount of sleep each night based on age
- Strengthening relationships with family members

PREVENTION OF DISRUPTIVE BEHAVIOR DISORDERS

It is not known exactly why some children develop DBDs. Many factors may play a role, including biological and social factors. It is known that children are at greater risk when they are exposed to other types of violence and criminal behavior, when they experience maltreatment or harsh or inconsistent parenting, or when their parents have mental-health conditions such as substance-use disorders, depression, or attention deficit hyperactivity disorder (ADHD). The quality of early childhood care also can impact whether a child develops behavior problems.

Although these factors appear to increase the risk for disruptive behavior disorders, there are ways to decrease the chance that children experience them. Learn about public-health approaches to prevent these risks:

- Positive parenting strategies for young children
- Positive parenting tips
- Child maltreatment prevention
- Youth violence prevention
- Bullying prevention
- Mental health in adults
- Finding high quality child care

This chapter includes text excerpted from "Behavior or Conduct Problems in Children," Centers for Disease Control and Prevention (CDC), March 22, 2021.

Chapter 30 | Autism Spectrum Disorder

WHAT IS AUTISM SPECTRUM DISORDER?

Autism spectrum disorder (ASD) is a developmental disability that can cause significant social, communication and behavioral challenges. There is often nothing about how people with ASD look that sets them apart from other people, but people with ASD may communicate, interact, behave, and learn in ways that are different from most other people. The learning, thinking, and problem-solving abilities of people with ASD can range from gifted to severely challenged. Some people with ASD need a lot of help in their daily lives; others need less.

A diagnosis of ASD now includes several conditions that used to be diagnosed separately: autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome. These conditions are now all called “autism spectrum disorder.”

SIGNS AND SYMPTOMS OF AUTISM SPECTRUM DISORDER

People with ASD often have problems with social, emotional, and communication skills. They might repeat certain behaviors and might not want change in their daily activities. Many people with ASD also have different ways of learning, paying attention, or reacting to things. Signs of ASD begin during early childhood and typically last throughout a person’s life.

Children or adults with ASD might:

- Not point at objects to show interest (e.g., not point at an airplane flying over)
- Not look at objects when another person points at them
- Have trouble relating to others or not have an interest in other people at all
- Avoid eye contact and want to be alone
- Have trouble understanding other people’s feelings or talking about their own feelings
- Prefer not to be held or cuddled, or might cuddle only when they want to
- Appear to be unaware when people talk to them, but respond to other sounds
- Be very interested in people, but not know how to talk, play, or relate to them
- Repeat or echo words or phrases said to them, or repeat words or phrases in place of normal language
- Have trouble expressing their needs using typical words or motions
- Not play “pretend” games (e.g., not pretend to “feed” a doll)
- Repeat actions over and over again
- Have trouble adapting when a routine changes
- Have unusual reactions to the way things smell, taste, look, feel, or sound
- Lose skills they once had (e.g., stop saying words they were using)

CAUSES AND RISK FACTORS OF AUTISM SPECTRUM DISORDER

We do not know all of the causes of ASD. However, we have learned that there are likely many causes for multiple types of ASD. There may be many different factors that make a child more likely to have an ASD, including environmental, biologic and genetic factors.

- Most scientists agree that genes are one of the risk factors that can make a person more likely to develop ASD.
- Children who have a sibling with ASD are at a higher risk of also having ASD.
- Individuals with certain genetic or chromosomal conditions, such as fragile X syndrome or

tuberous sclerosis, can have a greater chance of having ASD.

- When taken during pregnancy, the prescription drugs valproic acid and thalidomide have been linked with a higher risk of ASD.
- There is some evidence that the critical period for developing ASD occurs before, during, and immediately after birth.
- Children born to older parents are at greater risk for having ASD.

Autism spectrum disorder continues to be an important public-health concern. Like the many families living with ASD, The Centers for Disease Control and Prevention (CDC) wants to find out what causes the disorder. Understanding the factors that make a person more likely to develop ASD will help us learn more about the causes. CDC are currently working on one of the largest U.S. studies to date, called “Study to Explore Early Development” (SEED). SEED is looking at many possible risk factors for ASD, including genetic, environmental, pregnancy, and behavioral factors.

DIAGNOSIS OF AUTISM SPECTRUM DISORDER

Diagnosing ASD can be difficult since there is no medical test, like a blood test, to diagnose the disorders. Doctors look at the child’s behavior and development to make a diagnosis.

Autism spectrum disorder can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable. However, many children do not receive a final diagnosis until much older. This delay means that children with ASD might not get the early help they need.

TREATMENT OF AUTISM SPECTRUM DISORDER

There is currently no cure for ASD. However, research shows that early intervention treatment services can improve a child’s development. Early intervention services help children from birth to 3 years old (36 months) learn important skills. Services can include therapy to help the child talk, walk, and interact with others. Therefore, it is important to talk to your child’s doctor as soon as possible if you think your child has ASD or other developmental problem.

Even if your child has not been diagnosed with an ASD, she or he may be eligible for early intervention treatment services. The Individuals with Disabilities Education Act (IDEA) says that children under the age of 3 years (36 months) who are at risk of having developmental delays may be eligible for services. These services are provided through an early intervention system in your state. Through this system, you can ask for an evaluation.

In addition, treatment for particular symptoms, such as speech therapy for language delays, often does not need to wait for a formal ASD diagnosis.

WHO IS AFFECTED BY AUTISM SPECTRUM DISORDER?

Autism spectrum disorder occurs in all racial, ethnic, and socioeconomic groups, but is about 4 times more common among boys than among girls.

For over a decade, CDC’s Autism and Developmental Disabilities Monitoring (ADDM) Network has been estimating the number of children with ASD in the United States. We have learned a lot about how many U.S. children have ASD. It will be important to use the same methods to track how the number of children with ASD is changing over time in order to learn more about the disorder.

IF YOU ARE CONCERNED

If you think your child might have ASD or you think there could be a problem with the way your child

plays, learns, speaks, or acts, contact your child's doctor, and share your concerns.

If you or the doctor is still concerned, ask the doctor for a referral to a specialist who can do a more in-depth evaluation of your child. Specialists who can do a more in-depth evaluation and make a diagnosis include:

- Developmental pediatricians (doctors who have special training in child development and children with special needs)
- Child neurologists (doctors who work on the brain, spine, and nerves)
- Child psychologists or psychiatrists (doctors who know about the human mind)

At the same time, call your state's public early childhood system to request a free evaluation to find out if your child qualifies for intervention services. This is sometimes called a "Child Find" evaluation. You do not need to wait for a doctor's referral or a medical diagnosis to make this call.

Where to call for a free evaluation from the state depends on your child's age:

- If your child is not yet 3 years old, contact your local early intervention system.
 - You can find the right contact information for your state by calling the Early Childhood Technical Assistance Center (ECTA) at 919-962-2001.
 - Or visit the ECTA website (ectacenter.org).
- If your child is 3 years old or older, contact your local public school system.
 - Even if your child is not yet old enough for kindergarten or enrolled in a public school, call your local elementary school or board of education and ask to speak with someone who can help you have your child evaluated.
 - If you are not sure who to contact, call the Early Childhood Technical Assistance Center (ECTA) at 919-962-2001.
 - Or visit the ECTA website.

Research shows that early intervention services can greatly improve a child's development. In order to make sure your child reaches her or his full potential, it is very important to get help for an ASD as soon as possible.

ECONOMIC COSTS

- The total costs per year for children with ASD in the United States were estimated to be between \$11.5 billion – \$60.9 billion (\$2011). This significant economic burden represents a variety of direct and in-direct costs, from medical care to special education to lost parental productivity.
- Children and adolescents with ASD had average medical expenditures that exceeded those without ASD by \$4,110–\$6,200 per year. On average, medical expenditures for children and adolescents with ASD were 4.1–6.2 times greater than for those without ASD. Differences in median expenditures ranged from \$2,240 to \$3,360 per year with median expenditures 8.4–9.5 times greater.
- In 2005, the average annual medical costs for Medicaid-enrolled children with ASD were \$10,709 per child, which was about six times higher than costs for children without ASD (\$1,812).
- In addition to medical costs, intensive behavioral interventions for children with ASD cost \$40,000 to \$60,000 per child per year.

VACCINE SAFETY

Some people have had concerns that ASD might be linked to the vaccines children receive, but studies have shown that there is no link between receiving vaccines and developing ASD.

This chapter includes text excerpted from "What Is Autism Spectrum Disorder?" National Center on Birth Defects and Developmental Disabilities (NCBDDD), Centers for Disease Control and Prevention (CDC), March 25, 2020.

Chapter 31 | Bipolar Disorder in Children and Teens

Does your child go through extreme changes in mood and behavior? Does your child get much more excited or much more irritable than other kids? Do you notice that your child goes through cycles of extreme highs and lows more often than other children? Do these mood changes affect how your child acts at school or at home?

Some children and teens with these symptoms may have bipolar disorder, a brain disorder that causes unusual shifts in mood, energy, activity levels, and day-to-day functioning. With treatment, children and teens with bipolar disorder can get better over time.

WHAT IS BIPOLAR DISORDER?

Bipolar disorder is a mental disorder that causes people to experience noticeable, sometimes extreme, changes in mood and behavior. Sometimes children with bipolar disorder feel very happy or “up” and are much more energetic and active than usual. This is called a “manic episode.” Sometimes children with bipolar disorder feel very sad or “down” and are much less active than usual. This is called a “depressive episode.”

Bipolar disorder, which used to be called “manic-depressive illness” or “manic depression,” is not the same as the normal ups and downs every child goes through. The mood changes in bipolar disorder are more extreme, often unprovoked, and accompanied by changes in sleep, energy level, and the ability to think clearly. Bipolar symptoms can make it hard for young people to perform well in school or to get along with friends and family members. Some children and teens with bipolar disorder may try to hurt themselves or attempt suicide.

Most people are diagnosed with bipolar disorder in adolescence or adulthood, but the symptoms can appear earlier in childhood. Bipolar disorder is often episodic, but it usually lasts a lifetime.

Signs and symptoms of bipolar disorder may overlap with symptoms of other disorders that are common in young people, such as attention deficit hyperactivity disorder (ADHD), conduct problems, major depression, and anxiety disorders. Diagnosing bipolar disorder can be complicated and requires a careful and thorough evaluation by a trained, experienced mental-health professional.

With treatment, children and teens with bipolar disorder can manage their symptoms and lead successful lives.

WHAT CAUSES BIPOLAR DISORDER

The exact causes of bipolar disorder are unknown, but several factors may contribute to the illness.

For example, researchers are beginning to uncover genetic mechanisms that are linked to bipolar disorder and other mental disorders. Research shows that people’s chance of having bipolar disorder is higher if they have a close family member with the illness, which may be because they have the same genetic variations. However, just because one family member has bipolar disorder, it does not mean that other members of the family will have it. Many genes are involved in the disorder, and no single gene causes it.

Research also suggests that adversity, trauma, and stressful life events may increase the chances of developing bipolar disorder in people with a genetic risk of having the illness.

Some research studies have found differences in brain structure and function between people who have

bipolar disorder and those who do not. Researchers are studying the disorder to learn more about its causes and effective treatments.

WHAT ARE THE SYMPTOMS OF BIPOLAR DISORDER?

Mood episodes in bipolar disorder include intense emotions along with significant changes in sleep habits, activity levels, thoughts, or behaviors. A person with bipolar disorder may have manic episodes, depressive episodes, or “mixed” episodes. A mixed episode has both manic and depressive symptoms. These mood episodes cause symptoms that often last for several days or weeks. During an episode, the symptoms last every day for most of the day.

These mood and activity changes are very different from the child’s usual behavior and from the behavior of healthy children and teens.

Children and teens having a manic episode may:

- Show intense happiness or silliness for long periods of time
- Have a very short temper or seem extremely irritable
- Talk fast about a lot of different things
- Have trouble sleeping but not feel tired
- Have trouble staying focused, and experience racing thoughts
- Seem overly interested or involved in pleasurable but risky activities
- Do risky or reckless things that show poor judgment

Children and teens having a depressive episode may:

- Feel frequent and unprovoked sadness
- Show increased irritability, anger, or hostility
- Complain a lot about pain, such as stomachaches and headaches
- Have a noticeable increase in amount of sleep
- Have difficulty concentrating
- Feel hopeless and worthless
- Have difficulty communicating or maintaining relationships
- Eat too much or too little
- Have little energy and no interest in activities they usually enjoy
- Think about death, or have thoughts of suicide

CAN CHILDREN AND TEENS WITH BIPOLAR DISORDER HAVE OTHER PROBLEMS?

Young people with bipolar disorder can have several problems at the same time. These include:

- **Misuse of alcohol and drugs.** Young people with bipolar disorder are at risk of misusing alcohol or drugs.
- **Attention deficit hyperactivity disorder (ADHD).** Children and teens who have both bipolar disorder and ADHD may have trouble staying focused.
- **Anxiety disorders.** Children and teens with bipolar disorder also may have an anxiety disorder.

Sometimes extreme behaviors go along with mood episodes. During manic episodes, young people with bipolar disorder may take extreme risks that they would not usually take or that could cause them harm or injury. During depressive episodes, some young people with bipolar disorder may think about running away from home or have thoughts of suicide.

HOW IS BIPOLAR DISORDER DIAGNOSED?

A healthcare provider will ask questions about your child's mood, sleeping patterns, energy levels, and behavior. There are no blood tests or brain scans that can diagnose bipolar disorder. However, the healthcare provider may use tests to see if something other than bipolar disorder is causing your child's symptoms. Sometimes healthcare providers need to know about medical conditions in the family, such as depression or substance use.

Other disorders have symptoms like those of bipolar disorder, including ADHD, disruptive mood regulation disorder, oppositional defiant disorder, conduct disorder, and anxiety disorders. It also can be challenging to distinguish bipolar disorder from depression that occurs without mania, which is referred to as "major depression." A healthcare provider who specializes in working with children and teens can make a careful and complete evaluation of your child's symptoms to provide the right diagnosis.

HOW IS BIPOLAR DISORDER TREATED?

Children and teens can work with their healthcare provider to develop a treatment plan that will help them manage their symptoms and improve their quality of life. It is important to follow the treatment plan, even when your child is not currently experiencing a mood episode. Steady, dependable treatment works better than treatment that starts and stops.

Treatment options include:

- **Medication.** Several types of medication can help treat symptoms of bipolar disorder. Children respond to medications in different ways, so the right type of medication depends on the child. This means children may need to try different types of medication to see which one works best for them. Some children may need more than one type of medication because their symptoms are complex. Children should take the fewest number of medications and the smallest doses possible to help their symptoms. A good way to remember this is "start low, go slow." Medications can cause side effects. Always tell your child's healthcare provider about any problems with side effects. Do not stop giving your child medication without speaking to a healthcare provider. Stopping medication suddenly can be dangerous and can make bipolar symptoms worse.
- **Psychosocial therapy.** Different kinds of psychosocial therapy can help children and their families manage the symptoms of bipolar disorder. Therapies that are based on scientific research – including cognitive-behavioral approaches and family-focused therapy – can provide support, education, and guidance to youth and their families. These therapies teach skills that can help people manage bipolar disorder, including skills for maintaining routines, enhancing emotion regulation, and improving social interactions.

WHAT CAN CHILDREN AND TEENS EXPECT FROM TREATMENT?

With treatment, children and teens with bipolar disorder can get better over time. Treatment is more effective when healthcare providers, parents, and young people work together.

Sometimes a child's symptoms may change, or disappear and then come back. When this happens, your child's healthcare provider may recommend changes to the treatment plan. Treatment can take time, but sticking with the treatment plan can help young people manage their symptoms and reduce the likelihood of future episodes.

Your child's healthcare provider may recommend keeping a daily life chart or mood chart to track your child's moods, behaviors, and sleep patterns. This may make it easier to track the illness and see whether treatment is working.

HOW CAN I HELP MY CHILD OR TEEN?

Help begins with the right diagnosis and treatment. Talk to your family healthcare provider about any symptoms you notice.

If your child has bipolar disorder, here are some basic things you can do:

- Be patient.
- Encourage your child to talk, and listen to your child carefully.
- Pay attention to your child's moods, and be alert to any major changes.
- Understand triggers, and learn strategies for managing intense emotions and irritability.
- Help your child have fun.
- Remember that treatment takes time: sticking with the treatment plan can help your child get better and stay better.
- Help your child understand that treatment can make life better.

HOW DOES BIPOLAR DISORDER AFFECT CAREGIVERS AND FAMILIES?

Caring for a child or teenager with bipolar disorder can be stressful for parents and families. Coping with a child's mood episodes and other problems – such as short tempers and risky behaviors – can challenge any caregiver.

It is important that caregivers take care of themselves, too. Find someone you can talk to or consult your healthcare provider about support groups. Finding support and strategies for managing stress can help you and your child.

This chapter includes text excerpted from "Bipolar Disorder in Children and Teens," National Institute of Mental Health (NIMH), 2020.

Chapter 32 | Language and Speech Disorders

Children are born ready to learn a language, but they need to learn the language or languages that their family and environment use. Learning a language takes time, and children vary in how quickly they master milestones in language and speech development. Typically developing children may have trouble with some sounds, words, and sentences while they are learning. However, most children can use language easily around 5 years of age.

HELPING CHILDREN LEARN LANGUAGE

Parents and caregivers are the most important teachers during a child's early years. Children learn language by listening to others speak and by practicing. Even young babies notice when others repeat and respond to the noises and sounds they make. Children's language and brain skills get stronger if they hear many different words. Parents can help their child learn in many different ways, such as:

- Responding to the first sounds, gurgles, and gestures a baby makes
- Repeating what the child says and adding to it
- Talking about the things that a child sees
- Asking questions and listening to the answers
- Looking at or reading books
- Telling stories
- Singing songs and sharing rhymes

This can happen both during playtime and during daily routines.

Parents can also observe the following:

- How their child hears and talks and compare it with typical milestones for communication skills
- How their child reacts to sounds and have their hearing tested if they have concerns

WHAT TO DO IF THERE ARE CONCERNS

Some children struggle with understanding and speaking and they need help. They may not master the language milestones at the same time as other children, and it may be a sign of a language or speech delay or disorder.

Language development has different parts, and children might have problems with one or more of the following:

- Understanding what others say (receptive language). This could be due to:
 - Not hearing the words (hearing loss)
 - Not understanding the meaning of the words
- Communicating thoughts using language (expressive language). This could be due to:
 - Not knowing the words to use
 - Not knowing how to put words together
 - Knowing the words to use, but not being able to express them

Language and speech disorders can exist together or by themselves. Examples of problems with language and speech development include the following:

- Speech disorders
 - Difficulty with forming specific words or sounds correctly

- Difficulty with making words or sentences flow smoothly, like stuttering or stammering
- Language delay – the ability to understand and speak develops more slowly than is typical
- Language disorders
 - Aphasia (difficulty understanding or speaking parts of language due to a brain injury or how the brain works).
 - Auditory processing disorder (difficulty understanding the meaning of the sounds that the ear sends to the brain)

Language or speech disorders can occur with other learning disorders that affect reading and writing. Children with language disorders may feel frustrated that they cannot understand others or make themselves understood, and they may act out, act helpless, or withdraw. Language or speech disorders can also be present with emotional or behavioral disorders, such as attention deficit hyperactivity disorder (ADHD) or anxiety. Children with developmental disabilities including autism spectrum disorder may also have difficulties with speech and language. The combination of challenges can make it particularly hard for a child to succeed in school. Properly diagnosing a child's disorder is crucial so that each child can get the right kind of help.

DETECTING PROBLEMS WITH LANGUAGE OR SPEECH

If a child has a problem with language or speech development, talk to a health-care provider about an evaluation. An important first step is to find out if the child may have a hearing loss. Hearing loss may be difficult to notice particularly if a child has hearing loss only in one ear or has partial hearing loss, which means they can hear some sounds but not others.

A language development specialist like a speech-language pathologist will conduct a careful assessment to determine what type of problem with language or speech the child may have.

Overall, learning more than one language does not cause language disorders, but children may not follow exactly the same developmental milestones as those who learn only one language. Developing the ability to understand and speak in two languages depends on how much practice the child has using both languages, and the kind of practice. If a child who is learning more than one language has difficulty with language development, careful assessment by a specialist who understands development of skills in more than one language may be needed.

TREATMENT FOR LANGUAGE OR SPEECH DISORDERS AND DELAYS

Children with language problems often need extra help and special instruction. Speech-language pathologists can work directly with children and their parents, caregivers, and teachers.

Having a language or speech delay or disorder can qualify a child for early intervention (for children up to 3 years of age) and special education services (for children aged 3 years and older). Schools can do their own testing for language or speech disorders to see if a child needs intervention. An evaluation by a health-care professional is needed if there are other concerns about the child's hearing, behavior, or emotions. Parents, health-care providers, and the school can work together to find the right referrals and treatment.

Chapter 33 | Learning Disorders

Many children may struggle in school with some topics or skills from time to time. When children try hard and still struggle with a specific set of skills over time, it could be a sign of a learning disorder. Having a learning disorder means that a child has difficulty in one or more areas of learning, even when overall intelligence or motivation is not affected.

Some of the symptoms of learning disorders are:

- Difficulty telling right from left
- Reversing letters, words, or numbers, after first or second grade
- Difficulties recognizing patterns or sorting items by size or shape
- Difficulty understanding and following instructions or staying organized
- Difficulty remembering what was just said or what was just read
- Lacking coordination when moving around
- Difficulty doing tasks with the hands, like writing, cutting, or drawing
- Difficulty understanding the concept of time

Examples of learning disorders include:

- Dyslexia – difficulty with reading
- Dyscalculia – difficulty with math
- Dysgraphia – difficulty with writing

Children with learning disorders may feel frustrated that they cannot master a subject despite trying hard, and may act out, act helpless, or withdraw. Learning disorders can also be present with emotional or behavioral disorders, such as attention deficit hyperactivity disorder (ADHD), or anxiety. The combination of problems can make it particularly hard for a child to succeed in school. Properly diagnosing each disorder is crucial, so that the child can get the right kind of help for each.

TREATMENT FOR LEARNING DISORDERS

Children with learning disorders often need extra help and instruction that are specialized for them. Having a learning disorder can qualify a child for special education services in school. Schools usually do their own testing for learning disorders to see if a child needs intervention. An evaluation by a health-care professional is needed if there are other concerns about the child's behavior or emotions. Parents, health-care providers, and the school can work together to find the right referrals and treatment.

WHAT EVERY PARENT SHOULD KNOW

Children with specific learning disabilities are eligible for special education services or accommodations at school under the Individuals with Disabilities in Education Act (IDEA) and an anti-discrimination law known as "Section 504." The U.S. Department of Education (ED) issued a 'Dear Colleague' letter providing clarification to both parents and practitioners about ensuring a high-quality education for children with specific learning disabilities, including children with dyslexia, dyscalculia, and dysgraphia.

ROLE OF HEALTHCARE PROVIDERS

Healthcare providers can play an important part in collaborating with schools to help a child with

learning disorders or other disabilities get the special services they need. The American Academy of Pediatrics (AAP) has created a report that describes the roles that health-care providers can have in helping children with disabilities, including learning disorders:

- Identifying children in need of early intervention or special education services
- Sharing relevant information with early intervention or school personnel
- Meeting with early intervention or school personnel and parents or guardians
- Using early intervention or school information in medical diagnostic or treatment plans
- Working within an early intervention, school, or school-based health clinic
- Working at an administrative level to improve school functioning around children with special needs

This chapter includes text excerpted from “Learning Disorders in Children,” National Center on Birth Defects and Developmental Disabilities (NCBDDD), Centers for Disease Control and Prevention (CDC), February 22, 2021.

Chapter 34 | Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections

WHAT IS PANDAS?

PANDAS is short for pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections. A child may be diagnosed with PANDAS when:

- Obsessive-compulsive disorder (OCD), tic disorder, or both suddenly appear following a streptococcal (strep) infection, such as strep throat or scarlet fever.
- The symptoms of OCD or tic symptoms suddenly become worse following a strep infection.

The symptoms are usually dramatic, happen “overnight and out of the blue,” and can include motor or vocal tics or both and obsessions, compulsions, or both. In addition to these symptoms, children may become moody or irritable, experience anxiety attacks, or show concerns about separating from parents or loved ones.

WHAT CAUSES PANDAS

Strep bacteria are very ancient organisms that survive in the human host by hiding from the immune system as long as possible. They hide themselves by putting molecules on their cell wall so that they look nearly identical to molecules found on the child’s heart, joints, skin, and brain tissues. This hiding is called “molecular mimicry” and allows the strep bacteria to evade detection for a long time.

However, the molecules on the strep bacteria are eventually recognized as foreign to the body and the child’s immune system reacts to the molecules by producing antibodies. Because of the molecular mimicry by the bacteria, the immune system reacts not only to the strep molecules, but also to the human host molecules that were mimicked; antibodies “attack” the mimicked molecules in the child’s own tissues. These antibodies that react to both the molecules on the strep bacteria and to similar molecules found on other parts of the body are an example of “cross-reactive” antibodies.

Studies at the National Institute of Mental Health (NIMH) and elsewhere have shown that some cross-reactive antibodies target the brain – causing OCD, tics, and the other neuropsychiatric symptoms of PANDAS.

COULD AN ADULT DEVELOP PANDAS?

PANDAS is considered a pediatric disorder and typically first appears in childhood from age 3 to puberty. Reactions to strep infections are rare after age 12, but researchers recognize that PANDAS could occur, though rarely, among adolescents. It is unlikely that someone would experience these poststrep neuropsychiatric symptoms for the first time as an adult, but it has not been fully studied.

It is possible that adolescents and adults may have immune-mediated OCD, but this is not known.

SIGNS AND SYMPTOMS OF PANDAS

How Is PANDAS Diagnosed?

The diagnosis of PANDAS is a clinical diagnosis, which means that there are no lab tests that can diagnose PANDAS. Instead, health-care providers use diagnostic criteria for the diagnosis of PANDAS.

At the present time, the clinical features of the illness are the only means of determining whether a child might have PANDAS.

The diagnostic criteria are:

- Presence of OCD, a tic disorder, or both
- Pediatric onset of symptoms (i.e., age 3 to puberty)
- Episodic course of symptom severity
- Association with group A beta-hemolytic strep infection, such as a positive throat culture for strep or history of scarlet fever
- Association with neurological abnormalities, such as physical hyperactivity or unusual, jerky movements that are not in the child's control
- Very abrupt onset or worsening of symptoms

If the symptoms have been present for more than a week, blood tests may be done to document a preceding strep infection.

Are There Any Other Symptoms Associated with PANDAS Episodes?

Yes. Children with PANDAS often experience one or more of the following symptoms in conjunction with their OCD or tic disorder:

- Symptoms of attention deficit hyperactivity disorder (ADHD), such as hyperactivity, inattention, or fidgeting
- Separation anxiety (e.g., child is “clingy” and has difficulty separating from her or his caregivers; e.g., the child may not want to be in a different room in the house from her or his parents)
- Mood changes, such as irritability, sadness, or emotional lability (i.e., tendency to laugh or cry unexpectedly at what might seem the wrong moment)
- Trouble sleeping
- Nighttime bed-wetting, frequent daytime urination, or both
- Changes in motor skills, such as changes in handwriting
- Joint pains

What Is an Episodic Course of Symptoms?

Children with PANDAS seem to have dramatic ups and downs in the severity of their OCD and tics. OCD or tics that are almost always present at a relatively consistent level do not represent an episodic course. Many children with OCD or tics have good days and bad days, or even good weeks and bad weeks.

However, children with PANDAS have a very sudden onset or worsening of their symptoms, followed by a slow, gradual improvement. If children with PANDAS get another strep infection, their symptoms suddenly worsen again. The increased symptom severity usually persists for at least several weeks, but may last for several months or longer.

My Child Has Had Strep Throat before, and He Has Tics, OCD, or Both. Does That Mean He Has PANDAS?

No. Many children have OCD, tics, or both, and almost all school-aged children get strep throat at some point. In fact, the average grade-school student will have two or three strep throat infections each year.

PANDAS is considered as a diagnosis when there is a very close relationship between the abrupt onset or worsening of OCD, tics, or both, and a strep infection. If strep is found in conjunction with two or three episodes of OCD, tics, or both, then the child may have PANDAS.

What Does an Elevated Antistrep Antibody Titer Mean? Is This Bad for Your Child?

The antistrep antibody titer (i.e., the number of molecules in blood that indicate a previous infection) is a test that determines whether the child has had a previous strep infection.

An elevated antistrep titer means the child has had a strep infection sometime within the past few months, and her or his body created antibodies to fight the strep bacteria.

Some children create lots of antibodies and have very high titers (up to 2,000), while others have more modest elevations. The height of the titer elevation does not matter, and elevated titers are not necessarily bad for your child. The test measures a normal, healthy response – the production of antibodies to fight off an infection. The antibodies stay in the body for some time after the infection is gone, but the amount of time that the antibodies persist varies greatly between individuals. Some children have “positive” antibody titers for many months after a single infection.

When Is a Strep Titer Considered to Be Abnormal, or “Elevated”?

The lab at the National Institutes of Health (NIH) considers strep titers between 0 and 400 to be normal. Other labs set the upper limit at 150 or 200. Because each lab measures titers in different ways, it is important to know the range used by the lab where the test was done – just ask where the lab draws the line between negative or positive titers.

What If Your Child’s Doctor Does Not Understand or Does Not Want to Consider PANDAS?

Contact the International OCD Foundation or the PANDAS Physicians Network to find a doctor who may be knowledgeable about PANDAS.

TREATMENT FOR PANDAS

What Are the Treatment Options of Children with PANDAS?

TREATMENT WITH ANTIBIOTICS

The best treatment for acute episodes of PANDAS is to treat the strep infection causing the symptoms, if it is still present, with antibiotics.

- A throat culture should be done to document the presence of strep bacteria in the throat.
- If the throat culture is positive, a single course of antibiotics usually will get rid of the strep infection and allow the PANDAS symptoms to subside.

If a properly obtained throat culture is negative, the clinician should make sure that the child does not have an occult (hidden) strep infection, such as a sinus infection (often caused by strep bacteria) or strep bacteria infecting the anus, vagina, or urethral opening of the penis. Although the latter infections are rare, they have been reported to trigger PANDAS symptoms in some patients and can be particularly problematic because they will linger for longer periods of time and continue to provoke the production of cross-reactive antibodies.

The strep bacteria can be harder to eradicate in the sinuses and other sites, so the course of antibiotic treatment may need to be longer than that used for strep throat.

How Can You Manage Neuropsychiatric Symptoms of PANDAS?

Children with PANDAS-related obsessive-compulsive symptoms will benefit from standard medications; behavioral therapies, such as cognitive-behavioral therapy (CBT); or both. OCD symptoms are treated best with a combination of CBT and a selective serotonin reuptake inhibitor (SSRI) medication, and tics respond to a variety of medications.

Children with PANDAS appear to be unusually sensitive to the side effects of SSRIs and other medications, so it is important to “start low and go slow” when using these medications. In other words, clinicians should prescribe a very small starting dose of the medication and increase it slowly enough that

the child experiences as few side effects as possible. If PANDAS symptoms worsen, the SSRI dosage should be decreased promptly. However, SSRIs and other medications should not be stopped abruptly, as that also could cause difficulties.

What about Treating PANDAS with Plasma Exchange or Immunoglobulin?

Plasma exchange or immunoglobulin (IVIG) may be a consideration for acutely and severely affected children with PANDAS. Research suggests that both active treatments can improve global functioning, depression, emotional ups and downs, and obsessive-compulsive symptoms. However, there may be side effects associated with the treatments, including nausea, vomiting, headaches, and dizziness.

In addition, there is a risk of infection with any invasive procedure, such as these. Thus, the treatments should be reserved for severely ill patients and administered by a qualified team of health-care professionals.

Should an Elevated Strep Titer Be Treated with Antibiotics?

No. Elevated titers indicate that a patient has had a past strep exposure, but the titers cannot tell you precisely when the strep infection occurred. Children may have “positive” titers for many months after one infection. Because these elevated titers are merely a marker of a prior infection and not proof of an ongoing infection, it is not appropriate to give antibiotics for elevated titers. Antibiotics are recommended only when a child has a positive rapid strep test or positive strep throat culture.

Can Penicillin Be Used to Treat PANDAS or Prevent Future PANDAS Symptom Exacerbations?

Penicillin does not specifically treat the symptoms of PANDAS. Penicillin and other antibiotics treat the sore throat caused by the strep by getting rid of the bacteria. In PANDAS, research suggests that it is the antibodies produced by the body in response to the strep infection that may cause PANDAS symptoms, not the bacteria itself.

Researchers at NIMH have been investigating the use of antibiotics as a form of prophylaxis to prevent future problems. However, there is not enough evidence to recommend the long-term use of antibiotics at this time.

Your Child Has PANDAS. Should Their Tonsils Be Removed?

Current research does not suggest that tonsillectomies for children with PANDAS are helpful. If a tonsillectomy is recommended because of frequent episodes of tonsillitis, it would be useful to discuss the pros and cons of the procedure with your child’s health-care provider because of the role that the tonsils play in fighting strep infections.

Chapter 35 | Posttraumatic Stress Disorder in Children

WHAT IS POSTTRAUMATIC STRESS DISORDER?

All children may experience very stressful events that affect how they think and feel. Most of the time, children recover quickly and well. However, sometimes children who experience severe stress, such as from an injury, from the death or threatened death of a close family member or friend, or from violence, will be affected long-term. The child could experience this trauma directly or could witness it happening to someone else. When children develop long term symptoms (longer than one month) from such stress, which are upsetting or interfere with their relationships and activities, they may be diagnosed with post-traumatic stress disorder (PTSD).

Examples of PTSD symptoms include

- Reliving the event over and over in thought or in play
- Nightmares and sleep problems
- Becoming very upset when something causes memories of the event
- Lack of positive emotions
- Intense ongoing fear or sadness
- Irritability and angry outbursts
- Constantly looking for possible threats, being easily startled
- Acting helpless, hopeless or withdrawn
- Denying that the event happened or feeling numb
- Avoiding places or people associated with the event

Because children who have experienced traumatic stress may seem restless, fidgety, or have trouble paying attention and staying organized, the symptoms of traumatic stress can be confused with symptoms of attention deficit hyperactivity disorder (ADHD).

Examples of events that could cause PTSD include:

- Physical, sexual, or emotional maltreatment
- Being a victim or witness to violence or crime
- Serious illness or death of a close family member or friend
- Natural or human-made disasters
- Severe car accidents

TREATMENT OF POSTTRAUMATIC STRESS DISORDER

The first step to treatment is to talk with a health-care provider to arrange an evaluation. For a PTSD diagnosis, a specific event must have triggered the symptoms. Because the event was distressing, children may not want to talk about the event, so a health provider who is highly skilled in talking with children and families may be needed. Once the diagnosis is made, the first step is to make the child feel safe by getting support from parents, friends, and school, and by minimizing the chance of another traumatic event to the extent possible. Psychotherapy in which the child can speak, draw, play, or write about the stressful event can be done with the child, the family, or a group. Behavior therapy, specifically cognitive-behavioral therapy, helps children learn to change thoughts and feelings by first changing behavior in order to reduce the fear or worry. Medication may also be used to decrease symptoms.

PREVENTION OF POSTTRAUMATIC STRESS DISORDER

It is not known exactly why some children develop PTSD after experiencing stressful and traumatic events, and others do not. Many factors may play a role, including biology and temperament. But preventing risks for trauma, like maltreatment, violence, or injuries, or lessening the impact of unavoidable disasters on children, can help protect a child from PTSD.

Learn about public-health approaches to prevent these risks:

- Protect the ones you love: Childhood injury prevention
- Bullying prevention
- Child maltreatment prevention
- Youth violence prevention
- Caring for children in a disaster

This chapter includes text excerpted from "Post-traumatic Stress Disorder in Children," Centers for Disease Control and Prevention (CDC), March 22, 2021.

Chapter 36 | Helping Children and Teens Cope with Violence and Disaster

Each year, children and adolescents experience disasters and other traumatic events. Parents, rescue workers, and members of the larger community can help children start the process of recovery and overcome these experiences.

WHAT IS TRAUMA?

When people think of trauma, they often focus on physical injuries. However, people also can experience psychological trauma after witnessing or experiencing distressing events.

Trauma can be caused by natural disasters such as hurricanes, earthquakes, and floods. It also can be caused by acts of violence – such as terrorist attacks and mass shootings – as well as motor vehicle and other accidents.

Reactions to trauma can be immediate or delayed. Responses may differ in severity and can include a wide range of behaviors and responses, sometimes influenced by culture.

Factors that may make people more sensitive to trauma include:

- Having direct involvement in the trauma, especially as a victim
- Having severe or prolonged exposure to the event
- Having a personal history of prior trauma
- Having a family or personal history of mental illness or severe behavioral problems
- Having limited social support or a lack of caring family and friends
- Having ongoing life stressors such as moving to a new home or new school

COMMON RESPONSES TO TRAUMA AMONG CHILDREN

Children age five and younger may:

- Cling to parents or caregivers
- Cry and be tearful
- Have tantrums and be irritable
- Complain of physical problems such as stomachaches or headaches
- Suddenly return to behaviors such as bed-wetting and thumb-sucking
- Show increased fearfulness (e.g., of the dark, monsters, or being alone)
- Incorporate aspects of the traumatic event into imaginary play

Children age six to 11 may:

- Have problems in school
- Isolate themselves from family and friends
- Have nightmares, refuse to go to bed, or experience other sleep problems
- Become irritable, angry, or disruptive
- Be unable to concentrate
- Complain of physical problems such as stomachaches and headaches
- Develop unfounded fears
- Lose interest in fun activities

Adolescents age 12 to 17 may:

- Have nightmares or other sleep problems
- Avoid reminders of the event
- Use or abuse drugs, alcohol, or tobacco
- Be disruptive or disrespectful or behave destructively
- Complain of physical problems such as stomachaches and headaches
- Become isolated from friends and family
- Be angry or resentful
- Lose interest in fun activities

In addition, children and adolescents may feel guilty for not preventing injury or deaths. They also may have thoughts of revenge.

Many of these are normal and expected early responses, which for most people will lessen with time. If they last for more than a month, contact a licensed mental-health professional.

IF YOU OR SOMEONE YOU KNOW IS IN CRISIS AND NEEDS IMMEDIATE HELP

Some symptoms require immediate emergency care. If you or someone you know is thinking about harming themselves or attempting suicide, seek help right away:

- Call your doctor.
- Call 911 for emergency services or go to the nearest emergency room.
- Call the National Suicide Prevention Lifeline, a 24-hour toll-free hotline, at 800-273-TALK (800-273-8255). The deaf and hard of hearing can contact the Lifeline via TTY at 800-799-4889. The Lifeline is available 24 hours a day, seven days a week.
- Contact social media outlets directly if you are concerned about a person's social media updates or dial 911 in an emergency.

Take any comments about suicide or wishing to die seriously – even those said by children and adolescents. Even if you do not believe your family member or friend will attempt suicide, the person is in distress and can benefit from your help in finding treatment.

Disaster Distress Helpline

The Substance Abuse and Mental Health Services Administration's Disaster Distress Helpline (SAMHSA DDH) provides crisis counseling (24 hours a day, 365 days a year) for those experiencing emotional distress due to natural or human-made disasters. This service is provided in more than 100 languages and is confidential. To contact the helpline:

- Call or text 800-985-5990.
 - Spanish speakers can call 800-985-5990 and press 2 for 24/7 bilingual support.
 - The deaf and hard of hearing can contact the Helpline via TTY at 800-846-8517.

HELP IN THE FIRST DAYS AND WEEKS

After a disaster or other traumatic event, there are steps people can take to help adult trauma survivors cope, making it easier for them to provide better care for children and adolescents. These include creating safe conditions, remaining calm, being friendly, and connecting with others. Being sensitive to people under stress and respecting their decisions is important.

When possible, help people:

- Get food.
- Find a safe place to live.
- Get help from a doctor or nurse.

- Connect with loved ones or friends.
- Find information on where to get help.

Do not:

- Force people to tell their stories.
- Probe for personal details.
- Say things like “everything will be OK” or “at least you survived.”
- Say what you think people should feel or how people should have acted.
- Say people suffered because they deserved it.
- Be negative about available help.
- Make promises that you cannot keep, such as “you will go home soon”

WHAT CAN PARENTS DO TO HELP CHILDREN AND ADOLESCENTS?

After a traumatic event, parents and family members should identify and address their own feelings – this can allow them to help others. Explain to children what happened and let them know that:

- You love them.
- The event was not their fault.
- You will do your best to take care of them.
- It is okay for them to feel upset.

Do:

- Allow children to be sad or cry.
- Let children talk, write, or draw pictures about the event and their feelings.
- Limit viewing of repetitive news reports about traumatic events. Young children may not understand that news coverage is about one event and not multiple similar events.
- Give extra attention to children who have trouble sleeping. Let them sleep with a light on or let them sleep in your room (for a short time).
- Try to keep your usual routines (or create new routines), such as reading bedtime stories, eating dinner together, or playing games.
- Help children feel in control when possible by letting them make decisions for themselves, such as choosing meals or picking out clothes.
- Contact a health professional if, after a month in a safe environment, children are not able to perform their usual routines.
- Contact a health-care provider if new behavioral or emotional problems develop, particularly if these symptoms occur for more than a few weeks:
 - Flashbacks (flashbacks are the mind reliving the event)
 - A racing heart and sweating
 - Being easily startled
 - Being emotionally numb
 - Being very sad or depressed

Do not:

- Expect children to be brave or tough
- Make children discuss the event before they are ready
- Get angry if children show strong emotions
- Get upset if they begin bed-wetting, acting out, or thumb-sucking

Children's reactions to trauma are strongly influenced by adults' responses to trauma. Parents can help children by being supportive, by remaining as calm as possible, and by reducing other stressors, such as:

- Frequent moves or changes in place of residence
- Long periods away from family and friends
- Pressures to perform well in school
- Fighting within the family

When monitoring healing, remember:

- Healing takes time
- Do not ignore severe reactions
- Pay attention to sudden changes in behaviors, speech, language use, or strong emotions

WHAT CAN RESCUE WORKERS DO TO HELP?

During and after a traumatic experience, rescue workers can help by:

- Identifying children, adolescents, and families in need of urgent and immediate medical or mental-health services
- Staying with and helping to calm children and adolescents in acute distress. Signs of acute distress include trembling, rambling, becoming mute, or exhibiting erratic behavior.
- Protecting children and adolescents from physical danger, exposure to additional traumatic sights and sounds, and onlookers and the media
- Kindly, but firmly directing children and adolescents away from the event site
- Connecting – and keeping – children and adolescents with family and friends

Rescue workers can reduce survivors' fear and anxiety by using compassionate communication. When communicating with survivors, rescue workers should:

- Clearly identify themselves and their role in disaster response
- Communicate calmly, slowly, and with empathy
- Be factual, avoid answering questions outside their area of expertise, and avoid speculation
- Acknowledge and be tolerant of strong emotions and behaviors

WHAT CAN COMMUNITY MEMBERS DO AFTER A TRAUMATIC EVENT?

After a traumatic event, community members should identify and address their own feelings as this may allow them to help others more effectively.

Community members can help children and adolescents by:

- Offering their buildings and institutions as gathering places to promote support
- Helping families identify mental-health professionals who can counsel children
- Helping children develop coping skills, problem-solving skills, and ways to deal with fear
- Holding parent meetings to discuss the event, their child's response, and how parents can help their child
- Being sensitive to different cultural responses to trauma and stress

Chapter 37 | Mental-Health Issues among Older Adults

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Section 37.1 | Mental Health and Aging

This section includes text excerpted from “Older Adults and Mental Health,” National Institute of Mental Health (NIMH), March 2018.

It is just as important for an older person with symptoms of depression to seek treatment as it is for someone younger. The impact of depression on health in older adults can be severe: much research has reported that depression is associated with worse health in people with conditions such as heart disease, diabetes, and stroke. Depression can complicate the treatment of these conditions, including making it more difficult for someone to care for her- or himself and to seek treatment when needed. In older adults, depression may be disregarded as frailty, or it may be viewed as an inevitable result of life changes, chronic illness, and disability. Recognizing the signs and seeing a health practitioner is the first step to getting treatment, which can make a real difference in someone’s quality of life (QOL).

WARNING SIGNS

- Noticeable changes in mood, energy level, or appetite
- Feeling flat or having trouble feeling positive emotions
- Difficulty sleeping or sleeping too much
- Difficulty concentrating, feeling restless, or on edge
- Increased worry or feeling stressed
- Anger, irritability or aggressiveness
- Ongoing headaches, digestive issues, or pain
- A need for alcohol or drugs
- Sadness or hopelessness
- Suicidal thoughts
- Feeling flat or having trouble feeling positive emotions
- Engaging in high-risk activities
- Obsessive thinking or compulsive behavior
- Thoughts or behaviors that interfere with work, family, or social life
- Unusual thinking or behaviors that concern other people

Section 37.2 | Alzheimer Disease among Older Adults

This section includes text excerpted from “Alzheimer’s Disease and Related Dementias,” Centers for Disease Control and Prevention (CDC), October 26, 2020.

WHAT IS ALZHEIMER DISEASE?

- Alzheimer disease (AD) is the most common type of dementia.
- It is a progressive disease beginning with mild memory loss and possibly leading to loss of the ability to carry on a conversation and respond to the environment.
- Alzheimer disease involves parts of the brain that control thought, memory, and language.
- It can seriously affect a person’s ability to carry out daily activities.

WHO HAS ALZHEIMER DISEASE?

- In 2020, as many as 5.8 million Americans were living with Alzheimer disease.
- Younger people may get Alzheimer disease, but it is less common.
- The number of people living with the disease doubles every 5 years beyond age 65.

- This number is projected to nearly triple to 14 million people by 2060.
- Symptoms of the disease can first appear after age 60, and the risk increases with age.

WHAT IS KNOWN ABOUT ALZHEIMER DISEASE?

Scientists do not yet fully understand what causes Alzheimer disease. There likely is not a single cause, but rather several factors that can affect each person differently.

- Age is the best known risk factor for Alzheimer disease.
- Family history – researchers believe that genetics may play a role in developing Alzheimer disease. However, genes do not equal destiny. A healthy lifestyle may help reduce your risk of developing Alzheimer disease. Two large, long term studies indicate that adequate physical activity, a nutritious diet, limited alcohol consumption, and not smoking may help people.
- Changes in the brain can begin years before the first symptoms appear.
- Researchers are studying whether education, diet, and environment play a role in developing Alzheimer disease.
- There is growing scientific evidence that healthy behaviors, which have been shown to prevent cancer, diabetes, and heart disease, may also reduce risk for subjective cognitive decline.

WARNING SIGNS OF ALZHEIMER DISEASE

Alzheimer disease is not a normal part of aging. Memory problems are typically one of the first warning signs of Alzheimer disease and related dementias.

In addition to memory problems, someone with symptoms of Alzheimer disease may experience one or more of the following:

- Memory loss that disrupts daily life, such as getting lost in a familiar place or repeating questions
- Trouble handling money and paying bills
- Difficulty completing familiar tasks at home, at work or at leisure
- Decreased or poor judgment
- Misplacing things and being unable to retrace steps to find them
- Changes in mood, personality, or behavior

Even if you or someone you know has several or even most of these signs, it does not mean it is Alzheimer disease.

WHAT TO DO IF YOU SUSPECT ALZHEIMER DISEASE

Getting checked by your health-care provider can help determine if the symptoms you are experiencing are related to Alzheimer disease, or a more treatable conditions such as a vitamin deficiency or a side effect from medication. Early and accurate diagnosis also provides opportunities for you and your family to consider financial planning, develop advance directives, enroll in clinical trials, and anticipate care needs.

HOW IS ALZHEIMER DISEASE TREATED?

Medical management can improve quality of life for individuals living with Alzheimer disease and for their caregivers. There is currently no known cure for Alzheimer disease. Treatment addresses several areas:

- Helping people maintain brain health
- Managing behavioral symptoms

- Slowing or delaying symptoms of the disease

WHAT IS THE BURDEN OF ALZHEIMER DISEASE IN THE UNITED STATES?

- Alzheimer disease is one of the top 10 leading causes of death in the United States.
- The 6th leading cause of death among U.S. adults.
- The 5th leading cause of death among adults aged 65 years or older.

In 2020, an estimated 5.8 million Americans aged 65 years or older had Alzheimer disease. This number is projected to nearly triple to 14 million people by 2060.

In 2010, the costs of treating Alzheimer disease were projected to fall between \$159 and \$215 billion. By 2040, these costs are projected to jump to between \$379 and more than \$500 billion annually.

Death rates for Alzheimer disease are increasing, unlike heart disease and cancer death rates that are on the decline. Dementia, including Alzheimer disease, has been shown to be under-reported in death certificates and therefore the proportion of older people who die from Alzheimer may be considerably higher.

Section 37.3 | Depression in Late Life

This section includes text excerpted from “Depression and Older Adults,” National Institute on Aging (NIA), National Institutes of Health (NIH), July 7, 2021.

WHAT IS DEPRESSION?

Depression is a serious mood disorder. It can affect the way you feel, act, and think. Depression is a common problem among older adults, but clinical depression is not a normal part of aging. In fact, studies show that most older adults feel satisfied with their lives, despite having more illnesses or physical problems than younger people. However, if you have experienced depression as a younger person, you may be more likely to have depression as an older adult.

Depression is serious, and treatments are available to help. For most people, depression gets better with treatment. Counseling, medicine, or other forms of treatment can help. You do not need to suffer – help and treatment options are available. Talk with your doctor if you think you might have depression.

There are several types of depression that older adults may experience:

- **Major depressive disorder.** Includes symptoms lasting at least two weeks that interfere with a person’s ability to perform daily tasks
- **Persistent depressive disorder (dysthymia).** A depressed mood that lasts more than two years, but the person may still be able to perform daily tasks, unlike someone with Major Depressive Disorder
- **Substance/medication-induced depressive disorder.** Depression related to the use of substances, such as alcohol or pain medication
- **Depressive disorder due to a medical condition.** Depression related to a separate illness, like heart disease or multiple sclerosis.

Other forms of depression include psychotic depression, postmenopausal depression, and seasonal affective disorder.

RISK FACTORS OF DEPRESSION

There are many things that may be risk factors of depression. For some people, changes in the brain can

affect mood and result in depression. Others may experience depression after a major life event, like a medical diagnosis or a loved one's death. Sometimes, those under a lot of stress – especially people who care for loved ones with a serious illness or disability – can feel depressed. Others may become depressed for no clear reason.

Research has shown that these factors are related to the risk of depression, but do not necessarily cause depression:

- Medical conditions, such as stroke or cancer
- Genes – people who have a family history of depression may be at higher risk
- Stress, including caregiver stress
- Sleep problems
- Social isolation and loneliness
- Lack of exercise or physical activity
- Functional limitations that make engaging in activities of daily living difficult
- Addiction and/or alcoholism – included in substance-induced depressive disorder

SIGNS AND SYMPTOMS OF DEPRESSION

How do you know if you or your loved one may have depression? Does depression look different as you age? Depression in older adults may be difficult to recognize because older people may have different symptoms than younger people. For some older adults with depression, sadness is not their main symptom. They could instead be feeling more of a numbness or a lack of interest in activities. They may not be as willing to talk about their feelings.

The following is a list of common symptoms. Still, because people experience depression differently, there may be symptoms that are not on this list.

- Persistent sad, anxious, or “empty” mood
- Feelings of hopelessness, guilt, worthlessness, or helplessness
- Irritability, restlessness, or having trouble sitting still
- Loss of interest in once pleasurable activities, including sex
- Decreased energy or fatigue
- Moving or talking more slowly
- Difficulty concentrating, remembering, or making decisions
- Difficulty sleeping, waking up too early in the morning, or oversleeping
- Eating more or less than usual, usually with unplanned weight gain or loss
- Thoughts of death or suicide, or suicide attempts

If you have several of these signs and symptoms and they last for more than two weeks, talk with your doctor. These could be signs of depression or another health condition. Do not ignore the warning signs. If left untreated, serious depression may lead to death by suicide.

If you are a health-care provider of an older person, ask how they are feeling during their visits. Research has shown that intervening during primary care visits is highly effective in reducing suicide later in life. If you are a family member or friend, watch for clues. Listen carefully if someone of any age says they feel depressed, sad, or empty for long periods of time. That person may really be asking for help.

SUPPORTING FRIENDS AND FAMILY WITH DEPRESSION

Depression is a medical condition that requires treatment from a doctor. While family and friends can help by offering support in finding treatment, they cannot treat a person's depression.

As a friend or family member of a person with depression, here are a few things you can do:

- Encourage the person to seek medical treatment and stick with the treatment plan the doctor prescribes.
- Help set up medical appointments or accompany the person to the doctor's office or a support group.
- Participate in activities the person likes to do.
- Ask if the person wants to go for a walk or a bike ride. Physical activity can be great for boosting mood.

HOW IS DEPRESSION TREATED

Depression, even severe depression, can be treated. It is important to seek treatment as soon as you begin noticing signs. If you think you may have depression, start by making an appointment to see your doctor or health-care provider.

Certain medications or medical conditions can sometimes cause the same symptoms as depression. A doctor can rule out these possibilities through a physical exam, learning about your health and personal history, and lab tests. If a doctor finds there is no medical condition that is causing the depression, she or he may suggest a psychological evaluation and refer you to a mental-health professional such as a psychologist to perform this test. This evaluation will help determine a diagnosis and a treatment plan.

Common forms of treatment for depression include:

- Psychotherapy, counseling, or “talk therapy” that can help a person identify and change troubling emotions, thoughts, and behavior. It may be done with a psychologist, licensed clinical social worker (LCSW), psychiatrist, or other licensed mental-healthcare professional. Examples of approaches specific to the treatment of depression include cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT).
- Medications for depression that may balance hormones that affect mood, such as serotonin. There are many different types of commonly used antidepressant medications. Selective serotonin reuptake inhibitors (SSRIs) are antidepressants commonly prescribed to older adults. A psychiatrist, mental-health nurse practitioner, or primary care physician can prescribe and help monitor medications and potential side effects.
- Electroconvulsive therapy (ECT), during which electrodes are placed on a person's head to enable a safe, mild electric current to pass through the brain. This type of therapy is usually considered only if a person's illness has not improved with other treatments.

Treatment, particularly a combination of psychotherapy and medications, has been shown to be effective for older adults. However, not all medications or therapies will be right for everyone. Treatment choices differ for each person, and sometimes multiple treatments must be tried in order to find one that works. It is important to tell your doctor if your current treatment plan is not working and to keep trying to find something that does.

Some people may try complementary health approaches, like yoga, to improve well-being and cope with stress. However, there is little evidence to suggest that these approaches, on their own, can successfully treat depression. While they can be used in combination with other treatments prescribed by a person's doctor, they should not replace medical treatment. Talk with your doctor about what treatment(s) might be good to try.

Do not avoid getting help because you do not know how much treatment will cost. Treatment for depression is usually covered by private insurance and Medicare. Also, some community mentalhealth centers may offer treatment based on a person's ability to pay.

PREVENTING DEPRESSION

Many people wonder if depression can be prevented and how they may be able to lower their risk of depression. Although most cases of depression cannot be prevented, healthy lifestyle changes can have long-term benefits to your mental health.

Here are a few steps you can take:

- Be physically active and eat a healthy, balanced diet. This may help avoid illnesses that can bring on disability or depression. Some diets – including the low-sodium DASH diet – have been shown to reduce risk of depression.
- Get 7–9 hours of sleep each night.
- Stay in touch with friends and family.
- Participate in activities you enjoy.
- Let friends, family, and your physician know when you are experiencing symptoms of depression.

Section 37.4 | Dementia

This section includes text excerpted from “What Is Dementia?” Centers for Disease Control and Prevention (CDC), April 5, 2019.

WHAT IS DEMENTIA?

Dementia is not a specific disease, but is rather a general term for the impaired ability to remember, think, or make decisions that interferes with doing everyday activities. Alzheimer disease is the most common type of dementia. Though dementia mostly affects older adults, it is not a part of normal aging.

HOW COMMON IS DEMENTIA?

Of those at least 65 years of age, there is an estimated 5.0 million adults with dementia in 2014 and projected to be nearly 14 million by 2060.

IS NOT A DEMENTIA PART OF NORMAL AGING?

No, many older adults live their entire lives without developing dementia. Normal aging may include weakening muscles and bones, stiffening of arteries and vessels, and some age-related memory changes that may show as:

- Occasionally misplacing car keys
- Struggling to find a word, but remembering it later
- Forgetting the name of an acquaintance
- Forgetting the most recent events

Normally, knowledge and experiences built over years, old memories, and language would stay intact.

SIGNS AND SYMPTOMS OF DEMENTIA

Because dementia is a general term, its symptoms can vary widely from person to person. People with dementia have problems with:

- Memory
- Attention
- Communication
- Reasoning, judgment, and problem solving
- Visual perception beyond typical age-related changes in vision

Signs that may point to dementia include:

- Getting lost in a familiar neighborhood
- Using unusual words to refer to familiar objects
- Forgetting the name of a close family member or friend
- Forgetting old memories
- Not being able to complete tasks independently

WHAT INCREASES THE RISK FOR DEMENTIA?

- **Age.** The strongest known risk factor for dementia is increasing age, with most cases affecting those of 65 years and older
- **Family history.** Those who have parents or siblings with dementia are more likely to develop dementia themselves.
- **Race/ethnicity.** Older African Americans are twice more likely to have dementia than whites. Hispanics are 1.5 times more likely to have dementia than whites.
- **Poor heart health.** High blood pressure, high cholesterol, and smoking increase the risk of dementia if not treated properly.
- **Traumatic brain injury.** Head injuries can increase the risk of dementia, especially if they are severe or occur repeatedly.

DIAGNOSIS OF DEMENTIA

A health-care provider can perform tests on attention, memory, problem-solving and other cognitive abilities to see if there is cause for concern. A physical exam, blood tests, and brain scans such as computed tomography (CT) or magnetic resonance imaging (MRI) can help determine an underlying cause.

TYPES OF DEMENTIA

- **Alzheimer disease.** This is the most common cause of dementia, accounting for 60 to 80 percent of cases. It is caused by specific changes in the brain. The trademark symptom is trouble remembering recent events, such as a conversation that occurred minutes or hours ago, while difficulty remembering more distant memories occurs later in the disease. Other concerns such as difficulty with walking or talking or personality changes also come later. Family history is the most important risk factor. Having a first-degree relative with Alzheimer disease increases the risk of developing it by 10 to 30 percent.
- **Vascular dementia.** About 10 percent of dementia cases are linked to strokes or other issues with blood flow to the brain. Diabetes, high blood pressure and high cholesterol are also risk factors. Symptoms vary depending on the area and size of the brain impacted. The disease progresses in a step-wise fashion, meaning symptoms will suddenly get worse as the individual gets more strokes or mini-strokes.
- **Lewy body dementia.** In addition to more typical symptoms like memory loss, people with this form of dementia may have movement or balance problems like stiffness or trembling. Many people also experience changes in alertness including daytime sleepiness, confusion or staring spells. They may also have trouble sleeping at night or may experience visual hallucinations (seeing people, objects or shapes that are not actually there).
- **Fronto-temporal dementia.** This type of dementia most often leads to changes in personality and behavior because of the part of the brain it affects. People with this condition may embarrass themselves or behave inappropriately. For instance, a previously cautious person may make offensive comments and neglect responsibilities at home or work. There may also be problems

with language skills like speaking or understanding.

- **Mixed dementia.** Sometimes more than one type of dementia is present in the brain at the same time, especially in people aged 80 and older. For example, a person may have Alzheimer disease and vascular dementia. It is not always obvious that a person has mixed dementia since the symptoms of one type of dementia may be most prominent or may overlap with symptoms of another type. Disease progression may be faster than with one kind of dementia.
- **Reversible causes.** People who have dementia may have a reversible underlying cause such as side effect of medication, increased pressure in the brain, vitamin deficiency, and thyroid hormone imbalance. Medical providers should screen for reversible causes in patients who are concerning for dementia.

TREATMENT OF DEMENTIA

Treatment of dementia depends on the underlying cause. Neurodegenerative dementias, like Alzheimer disease, have no cure, though there are medications that can help protect the brain or manage symptoms such as anxiety or behavior changes. Research to develop more treatment options is ongoing.

Leading a healthy lifestyle, including regular exercise, healthy eating, and maintaining social contacts, decreases chances of developing chronic diseases and may reduce number of people with dementia.

WHAT TO DO IF A LOVED ONE IS SUSPICIOUS OF HAVING DEMENTIA?

- **Discuss with loved one.** Talk about seeing a medical provider about the observed changes soon. Talk about the issue of driving and always carrying an ID.
- **Medical assessment.** Be with a provider that you are comfortable with. Ask about the Medicare Annual Wellness exam.
- **Family meeting.** Start planning, and gather documents like the Healthcare Directive, Durable Power of Attorney for Healthcare, and Estate Plan.

Chapter 38 | Lesbian, Gay, Bisexual, and Transsexual Mental-Health Issues

Chapter Contents

[Section 38.1—Mental Health and Gay and Bisexual Men](#)

[Section 38.2—Substance-Use Disorders and Lesbian, Gay, Bisexual, and Transsexual](#)

Section 38.1 | Mental Health and Gay and Bisexual Men

This section includes text excerpted from “Gay and Bisexual Men’s Health – Mental Health,” Centers for Disease Control and Prevention (CDC), February 29, 2016. Reviewed August 2021.

The majority of gay and bisexual men have and maintain good mental health, even though research has shown that they are at greater risk for mental-health problems. Like everyone else, the majority of gay and bisexual men are able to cope successfully if connected to the right resources.

However, ongoing homophobia, stigma (negative and usually unfair beliefs), and discrimination (unfairly treating a person or group of people) can have negative effects on your health. Research also shows that, compared to other men, gay and bisexual men have higher chances of having:

- Major depression
- Bipolar disorder
- Generalized anxiety disorder

Gay and bisexual men may also face other health threats that usually happen along with mental-health problems. These include more use of illegal drugs and a greater risk for suicide. Gay and bisexual men are more likely than other men to have tried to commit suicide as well as to have succeeded at suicide. Human immunodeficiency virus (HIV) is another issue that has had a huge impact on the mental health of gay and bisexual men. It affects men who are living with HIV; those who are at high risk, but HIV negative; and loved ones of those living with, or who have died from HIV.

REVEALING SEXUAL ORIENTATION

Keeping your sexual orientation hidden from others (being “in the closet”) and fear of having your sexual orientation disclosed (being “outed”) can add to the stress of being gay or bisexual. In general, research has shown that gay and bisexual men who are open about their sexual orientation with others have better health outcomes than gay and bisexual men who do not. However, being “out” in some settings and to people who react negatively can add to the stress experienced by gay and bisexual men, and can lead to poorer mental health and discrimination.

KEYS TO MAINTAINING GOOD MENTAL HEALTH

Having a supportive group of friends and family members is often key to successfully dealing with the stress of day-to-day life and maintaining good mental health. If you are unable to get social support from your friends and families, you can try finding support by becoming involved in community, social, athletic, religious, and other groups. Mental-health counseling and support groups that are sensitive to the needs of gay and bisexual men can be especially useful if you are coming to terms with your sexual orientation or are experiencing depression, anxiety, or other mental-health problems.

While many gay, bisexual, and other men who have sex with men may not seek care from a mental-health provider because of a fear of discrimination or homophobia, it is important to keep this as an option and to find a provider that is trustworthy and compatible. The HIV Treatment Works Campaign also has helpful resources (www.cdc.gov/hiv/basics/livingwithhiv/mental-health.html) to address common issues and questions.

Section 38.2 | Substance-Use Disorders and Lesbian, Gay, Bisexual, and Transsexual

SUBSTANCE USE

Lesbian, gay, bisexual, and transgender (LGBT) youth may be more likely to use substances to cope with bias and stress and may be more likely to experience increased rates of depression and anxiety than their non-LGBT peers. Challenges such as family rejection of, or anticipated reaction to, one’s LGBT identity are also associated with substance use. For example, one study found that youth who experienced a moderate level of family rejection were 1.5 times more likely to use illegal substances than those who experienced little to no rejection; youth experiencing high levels of family rejection were 3.5 times more likely to use these substances. Also, youth who have run away from home have higher rates of alcohol and illicit drug use.

Additionally, an analysis of more than 18 studies between 1994 and 2006 examining the use of tobacco, alcohol, and illicit drugs (e.g., methamphetamines, marijuana) found that lesbian, gay, and bisexual youth had higher rates of usage for all these substances than their heterosexual peers. Lesbian and bisexual girls were 9.7 times more likely than heterosexual girls to smoke cigarettes, and a quarter of young gay men reported regular binge drinking.

Transgender youth have a high risk for developing substance dependency issues. Transgender people have higher rates of usage for some drugs and may have higher rates of methamphetamine, injectable drug, and tobacco usage. Additionally, transgender youth face more barriers to accessing behavioral healthcare. These barriers include experiencing physical/verbal abuse by other clients and staff; being required to wear clothing based on their sex rather than their identified gender; and being required to shower/sleep in areas based on their sex rather than their identified gender. Providers with culturally and linguistically competent practices can help improve the quality of care for transgender youth and address these barriers.

Reducing the rates of bias, discrimination, and victimization that LGBT youth experience can help reduce substance use. A related strategy includes creating safe spaces for LGBT youth in drug-free environments such as community centers. Also, accepting/positive family behaviors toward LGBT youth during adolescence can protect against not only suicide and depression, but also substance use.

SUBSTANCE USE AND SUDS IN LGBTQ

People who identify as lesbian, gay, bisexual, transgender, or questioning (LGBTQ) often face social stigma, discrimination, and other challenges not encountered by people who identify as heterosexual. They also face a greater risk of harassment and violence. As a result of these and other stressors, sexual minorities are at increased risk for various behavioral health issues.

Many federally-funded surveys have only recently started to ask about sexual orientation and gender identification in their data collections. Surveys thus far have found that sexual minorities have higher rates of substance misuse and substance-use disorders (SUDs) than people who identify as heterosexual. Therefore, it is not yet possible to establish long-term trends about substance use and SUD prevalence in LGBTQ populations.

SUBSTANCE USE AND MISUSE

Data from the 2018 National Survey on Drug Use and Health (NSDUH), suggests that substance-use patterns reported by sexual minority adults (in this survey, sexual minority adults includes individuals who describe themselves as lesbian, gay, or bisexual) are higher compared to those reported by heterosexual adults. More than a third (37.6 percent) of sexual minority adults 18 and older reported past

year marijuana use, compared to 16.2 percent reported by the overall adult population. In 2019, opioid use (including misuse of prescription opioids or heroin use) was also higher with 9 percent of sexual minority adults aged 18 or older reporting use compared to 3.8 percent among the overall adult population. Additionally, 9 percent of sexual minority adults aged 26 or older reported past year misuse of prescription opioids – an increase from the 6.4 percent who reported misuse in 2017. However, there was a significant decline in past year prescription opioid misuse among sexual minority adults aged 18–25 with 8.3 percent reporting use in 2018.

The NSDUH survey also shows that since 2015, there were no significant changes in reported alcohol-use disorder among sexual minority young adults (ages 18–25), with 12.4 percent reporting a disorder, compared to 10.1 percent in the overall population.

VAPING AND TOBACCO PRODUCTS

A recent review on the use of tobacco products by LGBT individuals show elevated rates of smoking and ever e-cigarette use compared to their heterosexual counterparts. Among LGB adults, bisexual women report greater use of ever trying e-cigarettes compared to heterosexual women and greater dual use of tobacco cigarettes and e-cigarettes compared to both lesbian and heterosexual women. Bisexual men were more likely to report ever or current e-cigarette use, compared to heterosexual men. Taken together, these findings suggest that targeted health messages may be needed.

SUBSTANCE-USE DISORDERS AND COMORBIDITIES

Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) individuals often enter treatment with more severe SUDs. Some common SUD treatment modalities have been shown to be effective for gay or bisexual men, including motivational interviewing, social support therapy, contingency management, and cognitive-behavioral therapy (CBT).

Addiction treatment programs offering specialized groups for gay and bisexual men showed better outcomes for those clients compared to gay and bisexual men in nonspecialized programs; but, in one study, only 7.4 percent of programs offered specialized services for LGBT patients. Research is limited on rates of SUD among transgender populations, although research shows that transgender individuals are more likely to seek SUD treatment than the nontransgender population. Research suggests that treatment should address unique factors in these patients' lives that may include homophobia/transphobia, family problems, violence, and social isolation.

Sexual minorities with SUDs are more likely to have additional (comorbid or co-occurring) psychiatric disorders. For example, gay and bisexual men and lesbian and bisexual women report greater odds of frequent mental distress and depression than their heterosexual counterparts. Transgender children and adolescents have higher levels of depression, suicidality, self-harm, and eating disorders than their non-transgender counterparts. Thus, it is particularly important that LGBT people in SUD treatment be screened for other psychiatric problems (as well as vice versa), and all identifiable conditions should be treated concurrently.

LGBTQ people are also at increased risks for human immunodeficiency virus (HIV) due to both intravenous drug use and risky sexual behaviors. HIV infection is particularly prevalent among gay and bisexual men (men who have sex with men, or MSM) and transgender women who have sex with men. SUD treatment can also help prevent HIV transmission among those at high risk. For example, addiction treatment is associated not only with reduced drug use, but also with less risky sexual behavior among MSM, and those with HIV report improvements in viral load.

Chapter 39 | Victims of Trauma and Disaster

Chapter Contents

[Section 39.1—Abuse, Trauma, and Mental Health](#)

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Section 39.1 | Abuse, Trauma, and Mental Health

This section includes text excerpted from “Abuse, Trauma, and Mental Health,” Office on Women’s Health (OWH), U.S. Department of Health and Human Services (HHS), August 28, 2018.

Abuse, whether physical, emotional, verbal, or sexual, can have long-term effects on your mental health. Trauma can affect how you feel about yourself and how you relate to others. Women who have gone through abuse or other trauma have a higher risk of developing a mental-health condition, such as depression, anxiety, or posttraumatic stress disorder (PTSD). Trauma and abuse are never your fault. You can get help to heal the physical, mental, and emotional scars of trauma and abuse.

HOW ARE ABUSE AND TRAUMA RELATED TO MENTAL HEALTH?

Trauma can happen after you experience an event or events that hurt you physically or emotionally. Trauma can have lasting effects on your mental, physical, and emotional health. Experiencing abuse or other trauma puts people at risk of developing mental health conditions, such as:

- Anxiety disorders
- Depression
- Posttraumatic stress disorder
- Misusing alcohol or drugs
- Borderline personality disorder (BPD)

Abuse may have happened during childhood or as an adult. It can be emotional, verbal, physical, or sexual. Trauma can include dangerous, frightening, or extremely stressful situations or events, such as sexual assault, war, an accident or natural disaster, the sudden or violent death of a close loved one, or a serious physical health problem.

The long-term effects of abuse or trauma can include:

- Severe anxiety, stress, or fear
- Abuse of alcohol or drugs
- Depression
- Eating disorders
- Self-injury
- Suicide

HOW CAN BEING IN THE MILITARY AFFECT YOUR MENTAL HEALTH?

If you were or are in the military, you may have experienced or witnessed a life-threatening event. You may have been on missions that exposed you to traumatic combat-related experiences, such as incoming fire, explosive devices, or dead bodies. Other military experiences, such as military sexual trauma, can also affect mental health.

About 1 in 4 veterans of the wars in Iraq and Afghanistan have been diagnosed with a mental-health condition, such as PTSD, depression, and anxiety. Left untreated, mental-health issues can cause long-term problems for you, your family, and your community. Reach out to someone for help if you are experiencing the signs of a mental-health condition.

WHAT IS MILITARY SEXUAL TRAUMA?

Military sexual trauma (MST) is a term used by the U.S. Department of Veterans Affairs (VA) to describe

sexual assault or repeated, threatening sexual harassment that happens while the victim is in the military. MST can happen to both men and women, but female service members are at higher risk of MST. MST can also lead to depression, PTSD, and substance abuse. Studies show that 1 in 4 or 5 women in the military experience MST.

Military sexual trauma can happen during war, peace, or training. It can happen between people of the same sex or different sexes. If you have experienced MST, you may feel fear, shame, anger, embarrassment, or guilt. You may have trouble trusting people. You may even have physical symptoms such as headaches, diarrhea, chronic fatigue, or gynecological problems.

When you are actively serving, it can be difficult to report or talk about MST. The U.S. Department of Defense (DoD) has two ways for you to report assault if you are on active duty:

- **Restricted reporting.** This lets you confidentially report the assault to someone and get medical treatment and counseling, but it would not trigger an actual investigation. This is intended to make it easier to report an assault and to give you time to heal mentally and physically. You can decide later if you want the military to begin a criminal investigation.
- **Unrestricted reporting.** This means that you will still receive medical treatment and counseling, but the assault will be reported through your chain of command. It will trigger an investigation.

If you have been assaulted or are unsure about what to do, you can call a confidential helpline that works specifically with the DoD community: the Safe Helpline. Call 877-995-5247, or visit [safehelpline.org](https://www.safehelpline.org).

If you have experienced MST, you can also contact your nearest VA facility to speak with the MST coordinator. VA facilities have health-care providers who are trained to treat the effects of MST. Many have specialized outpatient mental-health services focusing on sexual trauma.

HOW DO YOU KNOW IF YOUR MENTAL HEALTH IS AFFECTED BY PAST ABUSE OR TRAUMA?

It can be difficult to tell whether or how much your mental health is affected by past abuse or trauma. Sometimes the symptoms of trauma or abuse do not start to affect your life for many months or years after the event took place. If you have any of the following symptoms, talk to your doctor or nurse or reach out for help:

- Anxiety
- Trouble sleeping
- Anger
- Depression
- Changes in mood or appetite
- Abusing drugs or alcohol

WHAT SHOULD YOU DO IF YOU HAVE BEEN ABUSED OR TRAUMATIZED?

The sooner you can get professional help for abuse or trauma, the sooner you can begin to get better. If you have been physically hurt, visit a hospital or doctor right away. You may also need to call the police. The doctor and the police can help document what has happened to you. This documentation may be important later if you decide to press charges against someone who attacked you.

If you are experiencing changes in how you think, feel, or behave, that are interfering with your ability to work or live your life normally, reach out to a mental-health professional. Find a mental-health professional near you ([findtreatment.samhsa.gov/](https://www.findtreatment.samhsa.gov/)). A mental-health professional can help make sense of

any symptoms you may be having that are related to your abuse or trauma. The professional can help you find the best kinds of treatment to help manage symptoms of the abuse or trauma.

If you are in immediate danger, call 911.

You can also call helplines to talk about what happened to you or get guidance about what to do:

- National Domestic Violence Hotline (www.thehotline.org)
 - Phone Number: 800-799-SAFE (800-799-7233)
- National Sexual Assault Hotline (Rape, Abuse & Incest National Network (RAINN)) (www.rainn.org)
 - Phone Number: 800-656-HOPE (800-656-4673)
- Safe Helpline (for members of the military) (www.safehelpline.org)
 - Phone Number: 877-995-5247

Abuse or trauma you have suffered is not your fault. You can get better with treatment.

HOW ARE ABUSE AND TRAUMA TREATED?

Symptoms caused by abuse or trauma can usually be treated with different types of talk therapy, medicine, or both. Therapy with a professional counselor can help you work through your feelings and learn healthy ways to cope. Medicines might include antidepressants or anti-anxiety medicine.

Today, complementary mind and body therapies, such as mindfulness and yoga, may be offered along with traditional treatments such as medicines and therapy.

Section 39.2 | Coping with Traumatic Events

This section includes text excerpted from "Coping with Traumatic Events," National Institute of Mental Health (NIMH), January 2020.

A traumatic event is a shocking, scary, or dangerous experience that can affect someone emotionally and physically. Experiences such as natural disasters (hurricanes, earthquakes, and floods), acts of violence (such as assault, abuse, terrorist attacks, and mass shootings), as well as car crashes, and other accidents can all be traumatic. Researchers are investigating the factors that help people cope or that increase their risk for other physical or mental-health problems following a traumatic event.

WARNING SIGNS OF TRAUMA

Responses to trauma can be immediate or delayed, brief or prolonged. Most people have intense responses immediately following, and often for several weeks or months after a traumatic event. These responses can include:

- Feeling anxious, sad, or angry
- Trouble concentrating and sleeping
- Continually thinking about what happened

For most people, these are normal and expected responses and generally lessen with time.

In some cases, these responses continue for a longer period of time and interfere with everyday life. If they are interfering with daily life or are not getting better over time, it is important to seek professional help. Some signs that an individual may need help include:

- Worrying a lot or feeling very anxious, sad, or fearful
- Crying often
- Having trouble thinking clearly

- Having frightening thoughts or flashbacks, reliving the experience
- Feeling angry, resentful, or irritable
- Having nightmares or difficulty sleeping
- Avoiding places or people that bring back disturbing memories and responses.
- Becoming isolated from family and friends

Children and teens can have different reactions to trauma than those of adults. Symptoms sometimes seen in very young children (less than six years of age) can include:

- Wetting the bed after having learned to use the toilet
- Forgetting how to or being unable to talk
- Acting out the scary event during playtime
- Being unusually clingy with a parent or other adult

Older children and teens are more likely to show symptoms similar to those seen in adults. They may also develop disruptive, disrespectful, or destructive behaviors. Older children and teens may feel guilty for not preventing injury or deaths. They may also have thoughts of revenge.

Physical responses to trauma may also mean that an individual needs help. Physical symptoms may include:

- Headaches
- Stomach pain and digestive issues
- Feeling tired
- Racing heart and sweating
- Being very jumpy and easily startled

Individuals who have a mental-health condition or who have had traumatic experiences in the past, who face ongoing stress, or who lack support from friends and family may be more likely to develop more severe symptoms and need additional help. Some people turn to alcohol or other drugs to cope with their symptoms. Although substance use may seem to relieve symptoms temporarily, it can also lead to new problems and get in the way of recovery.

WAYS TO COPE WITH TRAUMA

Healthy ways of coping in this time period include:

- Avoiding alcohol and other drugs
- Spending time with loved ones and trusted friends who are supportive
- Trying to maintain normal routines for meals, exercise, and sleep

In general, staying active is a good way to cope with stressful feelings.

Section 39.3 | Disaster Survivors and Mental Health

This section includes text excerpted from “Disaster Behavioral Health,” Office of the Assistant Secretary for Preparedness and Response (ASPR), U.S. Department of Health and Human Services (HHS), 2016. Reviewed August 2021.

Disaster behavioral health is the provision of mental health, substance abuse, and stress management services to disaster survivors and responders.

BEHAVIORAL HEALTH CONCERNS AFFECTING SURVIVORS AND RESPONDERS

Following an emergency event, it is common for individuals and families in and around the affected region to experience distress and anxiety about safety, health, and recovery. Previous exposure to large scale events, such as a severe hurricane or flood, may place residents and responders who experience a new disaster at greater risk for adverse stress reactions. People may display symptoms and reactions such as:

- Emotional symptoms such as irritability or excessive sadness
- Cognitive dysfunction such as difficulty making decisions or following directions
- Physical symptoms such as headache, stomach pain, or difficulty breathing
- Behavioral reactions such as consuming more alcohol or interpersonal conflict
- Failure to adhere to needed physical or psychiatric medication needs

Other factors that can influence how people respond to disaster include:

- Residents of disaster-affected areas may be displaced, living in temporary emergency shelters, and separated from their usual support systems
- Circumstances may make it difficult to learn the status of recovery efforts or to find out the condition of friends, family members, and communities
- The exposure of disaster responders and volunteers to widespread destruction, the injury or death of others, or to hazardous materials may result in distress or a need for support

THE NEED FOR DISASTER BEHAVIORAL HEALTH CAPABILITIES

Natural disasters, terrorist attacks, and other emergencies of the last several years, as well as the growing research on the impacts of these events, have highlighted the need for behavioral health capabilities:

- Research shows a link between exposure to trauma and the onset of other health-care needs immediately following an emergency event, and often for many years after.
- Studies correlate trauma with later cardiovascular, musculoskeletal, and neurological illness, as well as psychiatric diagnoses such as posttraumatic stress disorder (PTSD), anxiety, depression, and substance abuse disorders.
- Costs associated with the treatment of those problems also increase.

DISASTER BEHAVIORAL HEALTH RESPONSE:

Behavioral health professionals trained in disaster response often work in shelters, medical and psychiatric facilities, or may engage in outreach and educational activities in communities to facilitate the resiliency and recovery of survivors and responders by:

- Providing psycho-education and information on physical and environmental hazards
- Engaging in supportive listening
- Screening individuals who are at greater risk for longer-term adverse reactions
- Ensuring referral to appropriate medical, psychological, or tangible services

Chapter 40 | Mental-Health Issues among Minority and Immigrant Populations

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[Section 40.5—Mental Health and Hispanics](#)

Section 40.1 | Mental Health and Minority Populations

This section includes text excerpted from “Minorities and Mental Health: Moving beyond Stigma,” National Institute on Minority Health and Health Disparities (NIMHD), July 13, 2017. Reviewed August 2021.

Demographic trends in the United States have continued to change rapidly. Projections indicate that within the next 30 years, the majority of the United States will be non-White. Among the racial and ethnic groups that will make up the majority, there is significant heterogeneity, making healthcare delivery even more challenging.

Mental illness is one of the most prevalent health problems in the United States and one of the most taxing on the healthcare system. In addition, mental illness carries the highest disease burden among all diseases, with devastating effects on daily functioning; personal, social, and occupational impairment; and premature death if left untreated. One in 10 children and one in five adults are affected by mental illness.

Mental illness does not discriminate. It occurs in all racial, ethnic, and socioeconomic groups and is the leading cause of disability in the United States. However, two thirds of individuals with a diagnosable mental-health disorder do not seek treatment. Most ethnic minorities have similar prevalence rates of mental-health issues to those of whites, but they have less access to mental-health services, are less likely to seek and receive needed care, and, when they do receive it, are more likely to get poorer-quality care. This combination of disparities leads to racial and ethnic minorities having a higher proportion of unmet mental-healthcare needs compared with majority populations.

In 1999, health disparities in mental health were highlighted in the Surgeon General’s report on mental health. Dr. David Satcher, former U.S. Surgeon General, called on all Americans to educate themselves and challenge the stigma, attitudes, fear, and misunderstanding that remain barriers to truly addressing mental illness. In 2008, in an effort to sustain dialogue on mental health in minority populations, the U.S. House of Representatives established July as National Minority Mental Health Awareness Month.

Brother, You are on My Mind, created as a partnership between Omega Psi Phi Fraternity, Inc., and the National Institute on Minority Health and Health Disparities (NIMHD), is an example of an initiative designed to increase awareness about mental health among African-American men. The focus of the initiative is on starting a conversation to dispel the myths associated with mental-health problems and assert the importance of seeking treatment. Expectations that men be “tough,” coupled with poor access to mental health services, leave men of color who struggle with mental illness especially susceptible to substance abuse, homelessness, incarceration, and homicide.

Particularly for populations of color, existing stigmas and the lack of discussion on mental health are major barriers to individuals seeking proper treatment. It is important to remember that mental health is fundamental to overall health and well-being at every stage of life. NIMHD is committed to envisioning an America in which all populations have an equal opportunity to live long, healthy, and productive lives. Therefore, we must continue to encourage discussion, awareness, and research about mental health.

Section 40.2 | Mental Health and African Americans

This section includes text excerpted from “Mental and Behavioral Health – African Americans,” Office of Minority Health (OMH), U.S. Department of Health and Human Services (HHS), May 18, 2021.

- In 2019, suicide was the second leading cause of death for Blacks or African Americans, ages 15 to 24.1

- The death rate from suicide for Black or African American men was four times greater than for African American women, in 2018.
- The overall suicide rate for Black or African Americans was 60 percent lower than that of the non-Hispanic white population, in 2018.
- Black females, grades 9–12, were 60 percent more likely to attempt suicide in 2019, as compared to non-Hispanic white females of the same age.
- Poverty level affects mental-health status. Black or African Americans living below the poverty level, as compared to those over twice the poverty level, are twice as likely to report serious psychological distress.
- A report from the U.S. Surgeon General found that from 1980–1995, the suicide rate among African Americans ages 10 to 14 increased 233 percentage, as compared to 120 percent of non-Hispanic whites.

MENTAL-HEALTH STATUS

Table 40.1. Serious Psychological Distress in the Past Year among Adults 18 Years of Age and Over, Percentage, 2019

Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
11.9	12.7	0.9

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed.)

Table 40.2. Serious Psychological Distress in the Past 30 Days among Adults 18 Years of Age and Over, Percentage of Poverty Level, 2015–2016

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Below 100%	7.6	12.1	0.6
100% – less than 200%	3.9	7.6	0.5
200% – less than 400%	2.8	3.1	0.9

(Source: Centers for Disease Control and Prevention (CDC), 2018. Health United States, 2019.)

Table 40.3. Percentage of Population with Feelings of Sadness, Hopelessness, Worthlessness, or That Everything Is an Effort, All or Most of the Time, among Persons 18 Years of Age and Over, 2018

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Sadness	4.2	2.6	1.6
Hopelessness	1.8	2.2	0.8
Worthlessness	1.8	2.3	0.7
Everything is an effort	11	6.6	1.7

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey

(NHIS): 2018.)

Table 40.4. Percentage of Population with Serious Psychological Distress among Persons 18 Years of Age and Over, 2018

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Men	2.5	2.8	0.9
Women	4.7	4.8	1
Total	3.7	3.8	1

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

DEATH RATES

Table 40.5. Age-Adjusted Death Rates for Suicide, by Sex, Race and Hispanic Origin, 2018

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Male	12.2	28.6	0.4
Female	2.9	8	0.4
Total	7.3	18.1	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Vital Statistics Report (NVSR), Vol. 69, No. 13.)

Table 40.6. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Men

	Non-Hispanic Black Men	Non-Hispanic White Men	Non-Hispanic Black Men/Non-Hispanic White Men Ratio
15–24 years	17.3	27.3	0.6
25–44 years	19.5	35.8	0.5
45–64 years	11.6	39.5	0.3
65 years and over	8.9	38.2	0.2
All ages	12.2	28.6	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

Table 40.7. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Women

	Non-Hispanic Black Women	Non-Hispanic White Women	Non-Hispanic Black Women/Non-Hispanic White Women Ratio
15–24 years	4.2	6.7	0.6
25–44 years	4.5	10.4	0.4
45–64 years	3.1	13	0.2
65 years and over	1.3	6.3	0.4
All ages	2.9	8	0.4

ADOLESCENTS

Table 40.8. Death Rates for Suicide: Ages 15–19, 2019

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Male	11.6	18.3	0.6
Female	3.4	5.7	0.6
Total	7.6	12.2	0.6

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Center for Injury Prevention and Control (NCIPC). Web-based Injury Statistics Query and Reporting System (WISQARS).)

Table 40.9. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Seriously Considered Suicide

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Men	10.7	13.8	0.8
Women	23.7	24.3	1
Total	16.9	19.1	0.9

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

Table 40.10. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Attempted Suicide

	Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
Men	8.5	6.4	1.3
Women	15.2	9.4	1.6
Total	11.8	7.9	1.5

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

ACCESS TO HEALTHCARE

Table 40.11. Percentage of Adults Age 18 and Over Who Received Mental-Health Services in the Past Year, 2019

Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
9.8	19.8	0.5

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.12. Percentage of Adults Age 18 and Over Who Received Prescription Medications for Mental-Health Services, 2019

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Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
6.5	16.6	0.4

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.13. Percentage of Adults Age 18 and Over with Past Year Major Depressive Episode Who Received Treatment for the Depression, 2019

Non-Hispanic Black	Non-Hispanic White	Non-Hispanic Black/Non-Hispanic White Ratio
59.6	70.2	0.8

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Section 40.3 | Mental Health and American Indians/Alaska Natives

This section includes text excerpted from “Mental and Behavioral Health – American Indians/Alaska Natives,” Office of Minority Health (OMH), U.S. Department of Health and Human Services (HHS), May 19, 2021.

- In 2019, suicide was the second leading cause of death for American Indian/Alaska Natives between the ages of 10 and 34.
- American-Indian/Alaska-Natives are 60 percent more likely to experience the feeling that everything is an effort, all or most of the time, as compared to non-Hispanic whites.
- The overall death rate from suicide for American-Indian/Alaska-Native adults is about 20 percent higher as compared to the non-Hispanic white population.
- In 2019, adolescent American-Indian/Alaska-Native females, ages 15-19, had a death rate that was five times higher than non-Hispanic white females in the same age group.
- In 2018, American-Indian/Alaska-Native males, ages 15-24, had a death rate that was twice that of non-Hispanic white males in the same age group.
- Violent deaths, unintentional injuries, homicide, and suicide, account for 75 percent of all mortality in the second decade of life for American Indian/Alaska Natives.

MENTAL HEALTH STATUS

Table 40.14. Serious Psychological Distress in the Past Year among Adults 18 Years of Age and Over, Percentage, 2019

American Indian/Alaska Native*	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
11.6	12.7	0.9

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.15. Percentage of Population with Feelings of Sadness, Hopelessness, Worthlessness, or That Everything Is an Effort, All or Most of the Time, among Persons 18 Years of Age and Over, 2018

	American		American Indian/Alaska Native/Non-Hispanic
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	Indian/Alaska Native	Non-Hispanic White	White Ratio
Sadness	--	2.6	--
Hopelessness	--	2.2	--
Worthlessness	3.4	2.3	1.5
Everything is an effort	10.5	6.6	1.6

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

Table 40.16. Percentage of Population with Serious Psychological Distress among Persons 18 Years of Age and Over, 2018

	American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
Total	4.5	3.8	1.2

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

DEATH RATES

Table 40.17. Age-Adjusted Death Rates for Suicide, by Sex, Race and Hispanic Origin, 2018

	American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
Male	33.6	28.6	1.2
Female	11.1	8	1.4
Total	22.3	18.1	1.2

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Vital Statistics Report (NVSR), Vol. 69, No. 13.)

Table 40.18. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Men

	American Indian/Alaska Native Men	Non-Hispanic White Men	American Indian/Alaska Native Men/Non-Hispanic White Men Ratio
15–24 years	60.7	27.3	2.3
25–44 years	60.2	35.8	1.7
45–64 years	24.5	39.5	0.6
65 years and over	--	38.2	--
All ages	33.6	28.6	1.2

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

Table 40.19. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Women

	American		American Indian/Alaska Native Women/Non-
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	Indian/Alaska Native Women	Non-Hispanic White Women	Hispanic White Women Ratio
15–24 years	17.4	6.7	2.6
25–44 years	18.6	10.4	1.8
45–64 years	7.8	13	0.6
65 years and over	--	6.3	--
All ages	11.1	8	1.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

ADOLESCENTS

Table 40.20. Death Rates for Suicide: Ages 15–19, 2019

	American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
Male	49.1	18.3	2.7
Female	29.7	5.7	5.2
Total	39.5	12.2	3.2

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Center for Injury Prevention and Control (NCIPC). Web Based Injury Statistics Query and Reporting System (WISQARS).)

Table 40.21. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Seriously Considered Suicide

	American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
Men	--	13.8	--
Women	--	24.3	--
Total	34.9	19.1	1.8

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

Table 40.22. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Attempted Suicide

	American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
Men	--	4.6	--
Women	--	7.3	--
Total	--	6.1	--

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

ACCESS TO HEALTHCARE

Table 40.23. Percentage of Adults Age 18 and Over Who Received Mental-Health Services in the Past Year, 2019

American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
13.9	19.8	0.7

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.24. Percentage of Adults Age 18 and Over Who Received Prescription Medications for Mental-Health Services, 2019

American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
11.1	16.6	0.7

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.25. Percentage of Adults Age 18 and Over with Past Year Major Depressive Episode Who Received Treatment for the Depression, 2019

American Indian/Alaska Native	Non-Hispanic White	American Indian/Alaska Native/Non-Hispanic White Ratio
--	70.2	--

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Section 40.4 | Mental Health and Asian Americans

This section includes text excerpted from “Mental and Behavioral Health – Asian Americans,” Office of Minority Health (OMH), U.S. Department of Health and Human Services (HHS), May 19, 2021.

- Suicide was the leading cause of death for Asian/Pacific Islanders, ages 15 to 24, in 2019.
- Asian-American males, in grades 9–12, were 30 percent more likely to consider attempting suicide as compared to non-Hispanic white male students, in 2019.
- In 2018, Asians were 60 percent less likely to have received mental-health treatment as compared to non-Hispanic whites.
- Southeast Asian refugees are at risk for posttraumatic stress disorder (PTSD) associated with trauma experienced before and after immigration to the U.S. One study found that 70 percent of Southeast Asian refugees receiving mental healthcare were diagnosed with PTSD.
- The overall suicide rate for Asians is less than half that of the non-Hispanic white population.

MENTAL HEALTH STATUS

Table 40.26. Serious Psychological Distress in the Past Year among Adults 18 Years of Age and Over, Percentage, 2019

Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
9	12.7	0.6

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.27. Percentage of Population with Feelings of Sadness, Hopelessness, Worthlessness, or That Everything Is an Effort, All of the Time, among Persons 18 Years of Age and Over, 2018

	Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
Sadness	1.6	2.6	0.7
Hopelessness	1.4	2.2	0.6
Worthlessness	1.9	2.3	0.4
Everything is an effort	6.7	6.6	0.7

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

Table 40.28. Percentage of Population with Serious Psychological Distress among Persons 18 Years of Age and Over, 2018

Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
2.1	3.8	0

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

Table 40.29. Age-Adjusted Percentage Distributions of Adults 18 Years of Age and Over, with Serious Psychological Distress, Most or All of the Time, 2004–2006

Population	Serious Distress	Ratio/All Population	Asian Ratio/Whites
All Whites	2.9	-	-
All Asians	1.9	-	1.7
Chinese	1.6	0.8	0.6
Filipino	2.5	1.3	0.9
Asian Indian	1.4	0.7	0.5
Japanese	1.1	0.6	0.4
Vietnamese	2.5	1.3	0.9
Korean	1.3	0.7	0.4
Other Asian & NHOPI	2.6	1.4	0.9

(Source: Centers for Disease Control and Prevention (CDC), 2008. Health Characteristics of the Asian Adult Population: United States, 2004–2006.)

DEATH RATES

Table 40.30. Age-Adjusted Death Rates for Suicide, by Sex, Race and Hispanic Origin, 2018

	Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
Male	10	28.6	0.4
Female	3.8	8	0.5
Total	6.7	18.1	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Vital Statistics Report (NVSR), Vol. 69, No. 13.)

Table 40.31. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Men

	Asian Men	Non-Hispanic White Men	Asian Men/Non-Hispanic White Men Ratio
15–24 years	15.5	27.3	0.6
25–44 years	10.5	35.8	0.5
45–64 years	12.3	39.5	0.4
65 years and over	13.7	38.2	0.3
All ages	10	28.6	0.3

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

Table 40.32. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Women

	Asian Women	Non-Hispanic White Women	Asian Women/Non-Hispanic White Women Ratio
15–24 years	6.9	6.7	1
25–44 years	4.2	10.4	0.4
45–64 years	4.8	13	0.3
65 years and over	3.6	6.3	0.8
All ages	3.8	8	0.5

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

ADOLESCENTS

Table 40.33. Death Rates for Suicide: Ages 15–19, 2019

	Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
Male	14.3	18.3	0.5
Female	3.8	5.7	0.9
Total	9.1	12.2	0.6

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Center for Injury Prevention and Control (NCIPC). Web-based Injury Statistics Query and Reporting System (WISQARS).)

Table 40.34. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Seriously Considered Suicide

	Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
Men	17.3	13.8	1.3
Women	22	24.3	0.8
Total	19.7	19.1	1

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

Table 40.35. Suicidal Ideation among Students in Grades 9–12, 2019 Percentage of Students Who Attempted Suicide

			Asian/Non-Hispanic
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	Asian	Non-Hispanic White	White Ratio
Men	7.1	6.4	0.6
Women	8.4	9.4	1.2
Total	7.7	7.9	0.9

(Source: Centers for Disease Control and Prevention (CDC), 2019. High School Youth Risk Behavior Survey (YRBS) Data.)

ACCESS TO HEALTHCARE

Table 40.36. Percentage of Adults Age 18 and Over Who Received Mental-Health Services in the Past Year, 2019

Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
7	19.8	0.3

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.37. Percentage of Adults Age 18 and Over Who Received Prescription Medications for Mental-Health Services, 2019

Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
4.8	16.6	0.2

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.38. Percentage of Adults Age 18 and Over with Past Year Major Depressive Episode Who Received Treatment for the Depression, 2019

Asian	Non-Hispanic White	Asian/Non-Hispanic White Ratio
51.7	70.2	0.6

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Section 40.5 | Mental Health and Hispanics

This section includes text excerpted from “Mental and Behavioral Health – Hispanics,” Office of Minority Health (OMH), U.S. Department of Health and Human Services (HHS), May 20, 2021.

- The death rate from suicide for Hispanic men was four times the rate for Hispanic women, in 2018.
- However, the suicide rate for Hispanics is less than half that of the non-Hispanic white population.
- In 2019, suicide was the second leading cause of death for Hispanics, ages 15 to 34.
- Suicide attempts for Hispanic girls, grades 9-12, were 30 percent higher than for non-Hispanic white girls in the same age group, in 2019.
- In 2018, Hispanics were 50 percent less likely to have received mental-health treatment as compared to non-Hispanic whites.
- Poverty level affects mental-health status. Hispanics living below the poverty level, as compared to Hispanics over twice the poverty level, are twice as likely to report serious psychological distress.

MENTAL HEALTH STATUS

Table 40.39. Serious Psychological Distress in the Past Year among Adults 18 Years of Age and Over, Percentage, 2019

Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
12.2	12.7	1

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.40. Serious Psychological Distress in the Past 30 Days among Adults 18 Years of Age and Over, Percentage of Poverty Level, 2015–2016

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Below 100%	6.8	12.1	0.6
100% – less than 200%	4.1	7.6	0.5
200% – less than 400%	2.6	3.1	0.8

(Source: Centers for Disease Control and Prevention (CDC), 2018. Health United States, 2019.)

Table 40.41. Percentage of Population with Feelings of Sadness, Hopelessness, Worthlessness, or That Everything Is an Effort, All or Most of the Time, among Persons 18 Years of Age and Over, 2018

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Sadness	4.2	2.6	1.6
Hopelessness	3.4	2.2	1.5
Worthlessness	2.6	2.3	1.1
Everything is an effort	7.5	6.6	1.1

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

Table 40.42. Percentage of Population with Serious Psychological Distress among Persons 18 Years of Age and Over, 2018

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Men	3.5	2.8	1.3
Women	5.5	4.8	1.1
Total	4.6	3.8	1.1

(Source: Centers for Disease Control and Prevention (CDC), 2021. Summary Health Statistics: National Health Interview Survey (NHIS): 2018.)

DEATH RATES

Table 40.43. Age-Adjusted Death Rates for Suicide, by Sex, Race and Hispanic Origin, 2018

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	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Male	12.1	28.6	0.4
Female	2.8	8	0.4
Total	7.4	18.1	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Vital Statistics Report (NVSR), Vol. 69, No. 13.)

Table 40.44. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Men

	Hispanic Men	Non-Hispanic White Men	Hispanic/Non-Hispanic White Ratio
15–24 years	16.2	27.3	0.6
25–44 years	15.8	35.8	0.4
45–64 years	14	39.5	0.4
65 years and over	15	38.2	0.4
All ages	12.1	28.6	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

Table 40.45. Death Rates for Suicide, Age, Race and Hispanic Origin, 2018: Women

	Hispanic Women	Non-Hispanic White Women	Hispanic/Non-Hispanic White Ratio
15–24 years	4.1	6.7	0.6
25–44 years	4.4	10.4	0.4
45–64 years	3.2	13	0.2
65 years and over	1.6	6.3	0.3
All ages	2.8	8	0.4

(Source: Centers for Disease Control and Prevention (CDC), 2021. Health United States, 2019.)

ADOLESCENTS

Table 40.46. Death Rates for Suicide: Ages 15–19, 2019

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Male	11.6	18.3	0.6
Female	3.6	5.7	0.6
Total	7.6	12.2	0.6

(Source: Centers for Disease Control and Prevention (CDC), 2021. National Center for Injury Prevention and Control (NCIPC). Web-based Injury Statistics Query and Reporting System (WISQARS).)

Table 40.47. Suicidal Ideation among Students in Grades 9–12, 2018 Percentage of Students Who Seriously Considered Suicide

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Men	11.4	13.8	0.8
Women	22.7	24.3	0.8
Total	17.2	19.1	0.9

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

Table 40.48. Suicidal Ideation among Students in Grades 9–12, 2018 Percentage of Students Who Attempted Suicide

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Men	5.5	6.4	0.9
Women	11.9	9.4	1.3
Total	8.9	7.9	1.1

(Source: Centers for Disease Control and Prevention (CDC), 2021. High School Youth Risk Behavior Survey (YRBS) Data.)

ACCESS TO HEALTHCARE

Table 40.49. Percentage of Adults Age 18 and Over Who Received Mental-Health Services in the Past Year, 2019

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Total	9.7	19.8	0.5

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.50. Percentage of Adults Age 18 and Over Who Received Prescription Medications for Mental-Health Services, 2019

	Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
Total	7.3	16.6	0.4

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Table 40.51. Percentage of Adults Age 18 and Over with Past Year Major Depressive Episode Who Received Treatment for the Depression, 2019

Hispanic	Non-Hispanic White	Hispanic/Non-Hispanic White Ratio
58	70.2	0.8

(Source: Substance Abuse and Mental Health Services Administration (SAMHSA), 2020. Results from the 2019 National Survey on Drug Use and Health (NSDUH): Mental Health Detailed Tables.)

Chapter 41 | Recognizing a Mental-Health Emergency

If you or someone you know has a mental illness, is struggling emotionally, or has concerns about their mental health, there are ways to get help. Use the below resources to find help for you, a friend, or a family member.

GET IMMEDIATE HELP IN A CRISIS

Call 911 if you or someone you know is in immediate danger or go to the nearest emergency room.

National Suicide Prevention Lifeline

Call 800-273-8255

Use Lifeline Chat (suicidepreventionlifeline.org/chat) on the web.

The Lifeline is a free, confidential crisis service that is available to everyone 24 hours a day, seven days a week. The Lifeline connects people to the nearest crisis center in the Lifeline national network. These centers provide crisis counseling and mental-health referrals.

Crisis Text Line

Text “HELLO” to 741741

The Crisis Text hotline is available 24 hours a day, seven days a week throughout the U.S. The Crisis Text Line serves anyone, in any type of crisis, connecting them with a crisis counselor who can provide support and information.

Veterans Crisis Line

Call 800-273-8255 and press 1 or text to 838255

Use Veterans Crisis Chat on the web

The Veterans Crisis Line is a free, confidential resource that connects veterans 24 hours a day, seven days a week with a trained responder. The service is available to all veterans, even if they are not registered with the VA or enrolled in VA healthcare.

Disaster Distress Helpline

Call or text 800-985-5990

The disaster distress helpline provides immediate crisis counseling for people who are experiencing emotional distress related to any natural or human-caused disaster. The helpline is free, multilingual, confidential, and available 24 hours a day, seven days a week.

Contact social media outlets directly if you are concerned about a friend’s social media updates or dial 911 in an emergency.

FIND A HEALTHCARE PROVIDER OR TREATMENT

Treatment for mental illnesses usually consists of therapy, medication, or a combination of the two. Treatment can be given in person or through a phone or computer (telemental health). It can sometimes be difficult to know where to start when looking for mental healthcare, but there are many ways to find a provider who will meet your needs.

Primary care provider. Your primary care practitioner can be an important resource, providing initial

mental-health screenings and referrals to mental-health specialists. If you have an appointment with your primary care provider, consider bringing up your mental-health concerns and asking for help.

Federal resources. Some federal agencies offer resources for identifying health-care providers and help in finding low-cost health services. These include:

- **Substance Abuse and Mental Health Services Administration (SAMHSA).** For general information on mental health and to locate treatment services in your area, call the SAMHSA Treatment Referral Helpline at 800-662-4357. SAMHSA also has a Behavioral Health Treatment Locator (findtreatment.samhsa.gov) on its website that can be searched by location.
- **Health Resources and Services Administration (HRSA).** HRSA works to improve access to healthcare. The HRSA website has information on finding affordable healthcare, including health centers that offer care on a sliding fee scale.
- **Centers for Medicare & Medicaid Services (CMS).** CMS has information on its website about benefits and eligibility for mental-health programs and how to enroll.
- **The U.S. National Library of Medicine (NLM) MedlinePlus.** NLM's website has directories and lists of organizations that can help in identifying a health practitioner.

National agencies and advocacy and professional organizations. Advocacy and professional organizations can be a good source of information when looking for a mental-health provider. They often have information on finding a mental-health professional on their website, and some have practitioner locators on their websites. Examples include, but are not limited to:

- Anxiety and Depression Association of America (adaa.org)
- Depression and Bipolar Support Alliance (www.dbsalliance.org)
- Mental Health America (www.mhanational.org)
- National Alliance on Mental Illness (www.nami.org)

State and county agencies. The website of your state or county government may have information about health services in your area. You may be able to find this information by visiting their websites and searching for the health services department.

Insurance companies. If you have health insurance, a representative of your insurance company will know which local providers are covered by your insurance plan. The websites of many health insurance companies have searchable databases that allow you to find a participating practitioner in your area.

University, college, or medical schools. Your local college, university, or medical school may offer treatment options. To find these, try searching on the website of local university health centers for their psychiatry, psychology, counseling, or social work departments.

Help for service members and their families. Current and former service members may face different mental-health issues than the general public. For resources for both service members and veterans, please visit the MentalHealth.gov page [Help for Service Members and Their Families](#) page or the U.S. Department of Veteran Affairs' mental health page.

DECIDING IF A PROVIDER IS RIGHT FOR YOU

Once you find a potential provider it can be helpful to prepare a list of questions to help you decide if they are a good fit for you. Examples of questions you might want to ask a potential provider include:

- What experience do you have treating someone with my issue?
- How do you usually treat someone with my issue?
- How long do you expect treatment to last?
- Do you accept my insurance?

- What are your fees?

Treatment works best when you have a good relationship with your mental-health provider. If you are not comfortable or are feeling like the treatment is not helping, talk with your provider, or consider finding a different provider or another type of treatment. If you are a child or adolescent, consider speaking with your doctor or another trusted adult. Do not stop current treatment without talking to your doctor.

This chapter includes text excerpted from “Help for Mental Illnesses,” National Institute of Mental Health (NIMH), August 2019.

Chapter 42 | Recovery Is Possible

Recovery from mental-health issues varies from person to person depending on their condition and symptoms. For some people, recovery would mean just getting rid of symptoms, whereas for others it may imply that they must effectively manage their mental illness in order to live a meaningful life.

Under any situation, when you are recovering from a period of mental-health concern, the most important thing to keep in mind is that you are the main person responsible for the recovery. Even if other people can provide you with assistance in the form of encouragement, recommendations, and even affection, it is ultimately up to you to improve your situation.

The decision to better one's life is the first step on the road to recovery. A mental condition can have a variety of consequences on our lives, such as:

- Affect our daily activities
- Cause a negative impact on relations
- Losing our jobs and financial stability

REACHING OUT

Isolating oneself (not talking to or spending time with people) may be appealing, but is not beneficial. Most individuals require a supportive person in the form of a friend, family member, or caregiver to just talk to.

People finding it difficult to share their concerns with a known person can join a support group on the Internet and can participate in a charity or cause once they have gained some confidence. The best method to boost one's own self-esteem is to do things with others for others.

KEEPING CHECK OF YOUR PHYSICAL SELF

If a person is feeling uneasy, emotionally vulnerable, or reexperiencing symptoms of a mental illness, their healthcare provider should be contacted immediately. Thyroid difficulties, heart problems, and even vitamin shortages can cause symptoms similar to mental illnesses. Making sure that you are physically fit before concluding you have a psychological problem is also important.

Recovering from a mental-health condition requires having a healthy body. Nutritional and healthy food should be on the diet, with caffeine and sugar being avoided. Sufficient sleep is essential to get the mind functioning properly. People can also indulge in walking or any form of exercise that they enjoy.

REALIZING THAT YOU ARE NOT ALONE

Life can sometimes dish out more stress than a person can handle. Approximately 20 percent of Americans report having symptoms of mental illness at some point in their lives. When a person's coping skills are not up to par, it might be difficult for them to cope up.

Mental illness, in any event, is not something to be embarrassed about. Despite the fact that there might be individuals in your life who will not understand or blame you, the majority of individuals will wish to support you.

UNDERSTANDING THE VALUE OF PRESCRIBED MEDICATION

Make sure you understand what your medication is for and take only the medicine you have been prescribed, in the correct dosage, at the specified time. Keep in mind whether you should take your medicine with meals or on an empty stomach. Ask your doctor if you should avoid any food items, over-

the-counter (OTC) drugs, or supplements. Also, avoid alcohol and recreational drugs at all costs.

INCLUDING THERAPY

Most mental disorders are treated with a mix of medication and therapy. Regular therapy sessions can help you in determining how to best assist yourself. In order for therapy to be useful, you must dive in and express your thoughts and feelings, as well as be willing to consider your therapist's ideas and suggestions seriously.

Recovery and improvement of one's life depend on certain categories, such as:

Purpose. To participate in daily activities that are meaningful to a person, such as work or school, volunteering, or providing for their family.

Social connection. To build supportive connections and social networks in a community.

Health. To make informed, healthy decisions that will benefit their physical and mental well-being.

Home. Having a secure and safe place.

While there is no specific definition of recovery for persons with mental illnesses, there are guiding concepts that emphasize hope and a firm belief that, despite significant symptoms, people with mental illnesses can restore a meaningful life.

References

1. "Recovery Is Possible," U.S. Department of Health and Human Services (HSS), March 14, 2019.
2. Hartwell-Walker, Marie. "6 Ways to Recover Your Mental Health," Psych Central, February 18, 2017.
3. "Recovery Is a Journey," Mental Health America (MHA), December 3, 2010.

Chapter 43 | Mental-Healthcare Services

Chapter Contents

[Section 43.1—Types of Mental-Health Professionals](#)

[Section 43.2—Psychotherapies](#)

Section 43.1 | Types of Mental-Health Professionals

This section includes text excerpted from “Finding a Mental Health Provider for Children and Families in Your Early Head Start/Head Start Program,” Early Childhood Learning and Knowledge Center (ECLKC), 2017. Reviewed August 2021.

WHAT EDUCATION, SKILLS, AND ATTRIBUTES SHOULD A MENTAL-HEALTH PROVIDER HAVE?

Mental-health providers should have the licensure, education, experience, and attributes that support high-quality services.

Education

Typically, a mental-health provider has a minimum of a master’s degree in a human services field with licensure or certification from an accredited state board. Common types of mental-health professionals include marriage and family therapists, social workers, psychiatrists, and psychologists. [Table 43.1](#) describes the level of education and licensure each type of mental-health provider requires.

Experience

Services for children and families are likely to be more successful when a mental-health provider is experienced in treating the specific challenges the family is facing. Often, a mental-health provider has a special area of focus, such as depression, childhood trauma, or substance use.

Experienced providers have seen the problems faced repeatedly by children and families, which can broaden their view and give them added insight. Important to early child and family work is the mental-health providers’ experience with and ability to:

- Conduct and interpret mental-health screening and
- Assessments for very young children
- Facilitate a family-centered approach to services
- Use evidence-based practices

Table 43.1. Common Types of Mental-Health Providers and Level of Education

Marriage and family therapist	Marriage and family therapists (MFTs) have a master’s degree and clinical experience in marriage and family therapy.
Social worker	Licensed clinical social workers (LCSW/LICSW) have a master’s in social work (MSW) along with additional clinical training.
Psychiatrist	A psychiatrist is a physician (MD or DO) who specializes in mental health. Because they are medical doctors, psychiatrists can prescribe medication.
Psychologist	Psychologists have a doctoral degree in psychology (PhD or PsyD) and are licensed in clinical psychology.
Counselor	Licensed professional counselors (LPCs) or licensed mental-health counselors (LMHC) have a master’s degree in counseling.

- Have knowledge of and sensitivity to the first language of families
- Use treatment methods that reflect the culture specific values and treatment needs of clients

Attributes

Mental-health providers are typically required to have training in ethical conduct covering topics such as tolerance, integrity, boundaries, and self-awareness. Yet, a mental-health professional's "way of being" can greatly affect the success of a child and family's experience with therapeutic work.

Important attributes to look for in any mental-health provider include:

- Strong communication skills with the ability to listen and engage in shared decision-making.
- A strength-based perspective that supports a family's sense of hope.
- Flexibility to adjust one's schedule and expectations to the needs of the family.
- Dependability – showing up on time and regularly.
- Open-mindedness – accepting where families are in the process.

APPROACH/ORIENTATION

Another important component to consider when looking for mental-health providers is their approach to mental-health work (often referred to as their "orientation"). Mental-health providers have very different approaches to their work based on their training and experience. Some therapists adopt a particular approach to their work that may be informed by a specific theoretical perspective and others use a more eclectic approach – drawing from multiple theories and orientations. Some therapists might provide their clients with guidance on how to change specific behaviors that are problematic while others may focus more on the quality of the relationships that a parent or child has with other family members. Knowing what a family expects or is most comfortable with before a referral can assist program staff in linking a family to the right mental-health provider. For example, one family may prefer a therapist with a more behavioral approach who might suggest specific strategies. Another family may be more comfortable with a therapist who spends more time listening, reflecting, and asking questions about their relationships.

Section 43.2 | Psychotherapies

This section includes text excerpted from "Psychotherapies," National Institute of Mental Health (NIMH), June 2021.

Psychotherapy (sometimes called "talk therapy") is a term for a variety of treatment techniques that aim to help a person identify and change troubling emotions, thoughts, and behavior. Most psychotherapy takes place with a licensed, trained mental-health professional and a patient meeting one-on-one or with other patients in a group setting.

You might seek out psychotherapy for different reasons including:

- You might be dealing with severe or long-term stress from a job or family situation, the loss of a loved one, or relationship or family issues.
- You might have symptoms with no physical explanation: changes in sleep or appetite, low energy, a lack of interest or pleasure in activities that you once enjoyed, persistent irritability, worry, or a sense of discouragement or hopelessness that would not go away.
- A healthcare provider may suspect or have diagnosed depression, anxiety, bipolar disorder, posttraumatic stress disorder (PTSD), or other conditions or symptoms that may be interfering with your life, and recommended psychotherapy as a first treatment or to go along with medication.
- You may be seeking treatment for a family member or child who has been diagnosed with a condition affecting mental-health and for whom a healthcare provider has recommended treatment.

An exam by a healthcare provider can ensure there is nothing in you or your loved one's overall health that would explain symptoms. This step is important because sometimes symptoms like a change in mood or trouble concentrating can be due to medical conditions.

PSYCHOTHERAPIES AND OTHER TREATMENT OPTIONS

Psychotherapy can be an alternative to medication or can be used with other treatment options, such as medications. Choosing the right treatment plan should be based on a person's individual needs and medical situation and under a mental-health professional's care.

Even when medications relieve symptoms, psychotherapy and other interventions can help a person address specific issues. These might include self-defeating ways of thinking, fears, problems interacting with other people, or dealing with situations at home, school, or work.

ELEMENTS OF PSYCHOTHERAPY

A variety of different types of psychotherapies and interventions have been shown to be effective for specific disorders. For example, the treatment approach for someone who has obsessive-compulsive disorder is different for someone who has bipolar disorder. Therapists may use one primary approach or incorporate other elements depending on their training, the condition being treated, and the needs of the person receiving treatment.

Elements of psychotherapies may include:

- Helping a person become aware of ways of thinking that may be automatic, but are inaccurate and harmful (e.g., someone who has a low opinion of their abilities). The therapist helps the person find ways to question these thoughts, understand how they affect emotions and behavior, and change self-defeating patterns. This approach is central to a type of psychotherapy called “cognitive-behavioral therapy” (CBT).
- Identifying ways to cope with stress and developing specific problem-solving strategies.
- Examining a person's interactions with others and offering guidance with social and communication skills.
- Mindfulness and relaxation techniques, such as meditation and breathing exercises.
- Exposure therapy for people with anxiety disorders. In exposure therapy, a type of CBT, a person spends brief periods in a supportive environment, learning to tolerate the distress caused by certain items, ideas, or imagined scenes cause. Over time, the fear associated with these things may dissipate.
- Tracking emotions and behaviors to raise awareness and the impact of each on the other.
- Supportive counseling to help a person explore troubling issues and provide emotional support.
- Creating a safety plan to help someone who has thoughts of self-harm or suicide recognize warning signs and use coping strategies such as contacting friends, family, or emergency personnel.

Note that there are many different types of psychotherapy. Other therapies are often variations on an established approach, such as CBT. There is no formal approval process for psychotherapies like there is for the use of medications from the U.S. Food and Drug Administration (FDA).

However, for many therapies, research involving large numbers of patients has provided evidence that treatment is effective for specific disorders.

WHAT TO CONSIDER WHEN LOOKING FOR A THERAPIST

Therapists have different professional backgrounds and specialties. There are resources that can help you

find out about the different credentials of therapists and resources for locating therapists.

The approach a therapist uses depends on the condition being treated and the training and experience of the therapist. Also, therapists may combine and adapt elements of different approaches.

Once you have identified one or more possible therapists, a preliminary conversation with a therapist can help you understand how treatment will proceed and whether you feel comfortable with the therapist. Rapport and trust are important. Discussions in therapy are deeply personal, and it is important that you feel comfortable with the therapist and have confidence in their expertise. These preliminary conversations may happen in person, by phone, or virtually. Consider trying to get answers to the following questions:

- What are the credentials and experience of the therapist? Do they have a specialty?
- What approach will the therapist take to help you? Do they practice a particular type of therapy? What is the rationale for the therapy and its evidence base?
- Does the therapist have experience in diagnosing and treating the age group (e.g., a child) and the specific condition for which treatment is being sought? If a child is the patient, how will parents be involved in treatment?
- What are the goals of therapy? Does the therapist recommend a specific timeframe or number of sessions? How will progress be assessed, and what happens if you (or the therapist) feel you are not starting to feel better?
- Are medications an option? Is this therapist able to prescribe medications?
- Are the meetings confidential? How is confidentiality assured? Are there limits to confidentiality?

Chapter 44 | Mental-Health Medications

Chapter Contents

[Section 44.1—Mental-Health Medications: An Overview](#)

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Section 44.1 | Mental-Health Medications: An Overview

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

Medications can play a role in treating several mental disorders and conditions. Treatment may also include psychotherapy (also called “talk therapy”) and brain stimulation therapies (less common). In some cases, psychotherapy alone may be the best treatment option. Choosing the right treatment plan should be based on a person’s individual needs and medical situation, and under a mental-health professional’s care.

The National Institute of Mental Health (NIMH), a federal research agency, does not provide medical advice or referrals. Resources that may help you find treatment services in your area are listed on the NIMH’s Help for Mental Illnesses webpage.

The NIMH also does not endorse or recommend any particular drug, herb, or supplement. Results from NIMH-supported clinical research trials that examine the effectiveness of treatments, including medications, are reported in the medical literature. This health topic webpage is intended to provide basic information about mental-health medications. It is not a complete source for all medications available and should not be used as a guide for making medical decisions.

UNDERSTANDING YOUR MEDICATIONS

If you are prescribed a medication, be sure that you:

- Tell the doctor about all medications and vitamin supplements you are already taking.
- Remind your doctor about any allergies and any problems you have had with medicines.
- Understand how to take the medicine before you start using it and take your medicine as instructed.
- Do not take medicines prescribed for another person or give yours to someone else.
- Call your doctor right away if you have any problems with your medicine or if you are worried that it might be doing more harm than good. Your doctor may be able to adjust the dose or change your prescription to a different one that may work better for you.
- Report serious side effects to the U.S. Food and Drug Administration (FDA) MedWatch Adverse Event Reporting program online at www.fda.gov/Safety/MedWatch or by phone [800-332-1088]. You or your doctor may send a report.

Section 44.2 | Antidepressants

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

WHAT ARE ANTIDEPRESSANTS?

Antidepressants are medications commonly used to treat depression. Antidepressants are also used for other health conditions, such as anxiety, pain, and insomnia. Although antidepressants are not U.S. Food and Drug Administration (FDA)-approved specifically to treat attention deficit hyperactivity disorder (ADHD), antidepressants are sometimes used to treat ADHD in adults.

The most popular types of antidepressants are called “selective serotonin reuptake inhibitors” (SSRIs). Examples of SSRIs include:

- Fluoxetine

- Citalopram
- Sertraline
- Paroxetine
- Escitalopram

Other types of antidepressants are serotonin and norepinephrine reuptake inhibitors (SNRIs). SNRIs are similar to SSRIs and include venlafaxine and duloxetine.

Another antidepressant that is commonly used is bupropion. Bupropion is a third type of antidepressant which works differently than either SSRIs or SNRIs. Bupropion is also used to treat seasonal affective disorder and to help people stop smoking.

SSRIs, SNRIs, and bupropion are popular because they do not cause as many side effects as older classes of antidepressants, and seem to help a broader group of depressive and anxiety disorders. Older antidepressant medications include tricyclics, tetracyclics, and monoamine oxidase inhibitors (MAOIs). For some people, tricyclics, tetracyclics, or MAOIs may be the best medications.

HOW DO PEOPLE RESPOND TO ANTIDEPRESSANTS?

According to a research review by the Agency for Healthcare Research and Quality (AHRQ), all antidepressant medications work about as well as each other to improve symptoms of depression and to keep depression symptoms from coming back. For reasons not yet well understood, some people respond better to some antidepressant medications than to others.

Therefore, it is important to know that some people may not feel better with the first medicine they try and may need to try several medicines to find the one that works for them. Others may find that a medicine helped for a while, but their symptoms came back. It is important to carefully follow your doctor's directions for taking your medicine at an adequate dose and over an extended period of time (often 4 to 6 weeks) for it to work.

Once a person begins taking antidepressants, it is important to not stop taking them without the help of a doctor. Sometimes people taking antidepressants feel better and stop taking the medication too soon, and the depression may return. When it is time to stop the medication, the doctor will help the person slowly and safely decrease the dose. It is important to give the body time to adjust to the change. People do not get addicted (or "hooked") on these medications, but stopping them abruptly may also cause withdrawal symptoms.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF ANTIDEPRESSANTS?

Some antidepressants may cause more side effects than others. You may need to try several different antidepressant medications before finding the one that improves your symptoms and that causes side effects that you can manage.

The most common side effects listed by the FDA include:

- Nausea and vomiting
- Weight gain
- Diarrhea
- Sleepiness
- Sexual problems

Call your doctor right away if you have any of the following symptoms, especially if they are new, worsening, or worry you:

- Thoughts about suicide or dying

- Attempts to commit suicide
- New or worsening depression
- New or worsening anxiety
- Feeling very agitated or restless
- Panic attacks
- Trouble sleeping (insomnia)
- New or worsening irritability
- Acting aggressively, being angry, or violent
- Acting on dangerous impulses
- An extreme increase in activity and talking (mania)
- Other unusual changes in behavior or mood

Combining the newer SSRI or SNRI antidepressants with one of the commonly-used “triptan” medications used to treat migraine headaches could cause a life-threatening illness called “serotonin syndrome.” A person with serotonin syndrome may be agitated, have hallucinations (see or hear things that are not real), have a high temperature, or have unusual blood pressure changes. Serotonin syndrome is usually associated with the older antidepressants called “MAOIs,” but it can happen with the newer antidepressants as well, if they are mixed with the wrong medications.

Section 44.3 | **Antianxiety Medications**

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

WHAT ARE ANTIANXIETY MEDICATIONS?

Antianxiety medications help reduce the symptoms of anxiety, such as panic attacks, or extreme fear and worry. The most common antianxiety medications are called “benzodiazepines.” Benzodiazepines can treat generalized anxiety disorder. In the case of panic disorder or social phobia (social anxiety disorder), benzodiazepines are usually second-line treatments, behind SSRIs or other antidepressants.

Benzodiazepines used to treat anxiety disorders include:

- Clonazepam
- Alprazolam
- Lorazepam

Short half-life (or short-acting) benzodiazepines (such as Lorazepam) and beta-blockers are used to treat the short-term symptoms of anxiety. Beta-blockers help manage physical symptoms of anxiety, such as trembling, rapid heartbeat, and sweating that people with phobias (an overwhelming and unreasonable fear of an object or situation, such as public speaking) experience in difficult situations. Taking these medications for a short period of time can help the person keep physical symptoms under control and can be used “as needed” to reduce acute anxiety.

Buspirone (which is unrelated to the benzodiazepines) is sometimes used for the long-term treatment of chronic anxiety. In contrast to the benzodiazepines, buspirone must be taken every day for a few weeks to reach its full effect. It is not useful on an “as-needed” basis.

HOW DO PEOPLE RESPOND TO ANTIANXIETY MEDICATIONS?

Antianxiety medications such as benzodiazepines are effective in relieving anxiety and take effect more

quickly than the antidepressant medications (or buspirone) often prescribed for anxiety. However, people can build up a tolerance to benzodiazepines if they are taken over a long period of time and may need higher and higher doses to get the same effect. Some people may even become dependent on them. To avoid these problems, doctors usually prescribe benzodiazepines for short periods, a practice that is especially helpful for older adults, people who have substance abuse problems and people who become dependent on medication easily. If people suddenly stop taking benzodiazepines, they may have withdrawal symptoms or their anxiety may return. Therefore, benzodiazepines should be tapered off slowly.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF ANTIANXIETY MEDICATIONS?

Like other medications, antianxiety medications may cause side effects. Some of these side effects and risks are serious. The most common side effects for benzodiazepines are drowsiness and dizziness. Other possible side effects include:

- Nausea
- Blurred vision
- Headache
- Confusion
- Tiredness
- Nightmares

Tell your doctor if any of these symptoms are severe or do not go away:

- Drowsiness
- Dizziness
- Unsteadiness
- Problems with coordination
- Difficulty thinking or remembering
- Increased saliva
- Muscle or joint pain
- Frequent urination
- Blurred vision
- Changes in sex drive or ability

If you experience any of the symptoms below, call your doctor immediately:

- Rash
- Hives
- Swelling of the eyes, face, lips, tongue, or throat
- Difficulty breathing or swallowing
- Hoarseness
- Seizures
- Yellowing of the skin or eyes
- Depression
- Difficulty speaking
- Yellowing of the skin or eyes
- Thoughts of suicide or harming yourself
- Difficulty breathing

Common side effects of beta-blockers include:

- Fatigue
- Cold hands
- Dizziness or light-headedness
- Weakness

Beta-blockers generally are not recommended for people with asthma or diabetes because they may worsen symptoms related to both.

Possible side effects from buspirone include:

- Dizziness
- Headaches
- Nausea
- Nervousness
- Lightheadedness
- Excitement
- Trouble sleeping

Antianxiety medications may cause other side effects that are not included in the lists above.

Section 44.4 | Stimulants

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

WHAT ARE STIMULANTS?

As the name suggests, stimulants increase alertness, attention, and energy, as well as elevate blood pressure, heart rate, and respiration. Stimulant medications are often prescribed to treat children, adolescents, or adults diagnosed with ADHD.

Stimulants used to treat ADHD include:

- Methylphenidate
- Amphetamine
- Dextroamphetamine
- Lisdexamfetamine dimesylate

Note: In 2002, the U.S. Food and Drug Administration (FDA) approved the nonstimulant medication atomoxetine for use as a treatment for ADHD. Two other nonstimulant antihypertensive medications, clonidine and guanfacine, are also approved for treatment of ADHD in children and adolescents. One of these nonstimulant medications is often tried first in a young person with ADHD, and if response is insufficient, then a stimulant is prescribed.

Stimulants are also prescribed to treat other health conditions, including narcolepsy, and occasionally depression (especially in older or chronically medically ill people and in those who have not responded to other treatments).

HOW DO PEOPLE RESPOND TO STIMULANTS?

Prescription stimulants have a calming and “focusing” effect on individuals with ADHD. Stimulant medications are safe when given under a doctor’s supervision. Some children taking them may feel slightly different or “funny.”

Some parents worry that stimulant medications may lead to drug abuse or dependence, but there is little

evidence of this when they are used properly as prescribed. Additionally, research shows that teens with ADHD who took stimulant medications were less likely to abuse drugs than those who did not take stimulant medications.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF STIMULANTS?

Stimulants may cause side effects. Most side effects are minor and disappear when dosage levels are lowered. The most common side effects include:

- Difficulty falling asleep or staying asleep
- Loss of appetite
- Stomach pain
- Headache

Less common side effects include:

- Motor tics or verbal tics (sudden, repetitive movements or sounds)
- Personality changes, such as appearing “flat” or without emotion

Call your doctor right away if you have any of these symptoms, especially if they are new, become worse, or worry you.

Stimulants may cause other side effects that are not included in the list above.

Section 44.5 | Antipsychotics

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

WHAT ARE ANTIPSYCHOTICS?

Antipsychotic medicines are primarily used to manage psychosis. The word “psychosis” is used to describe conditions that affect the mind, and in which there has been some loss of contact with reality, often including delusions (false, fixed beliefs) or hallucinations (hearing or seeing things that are not really there). It can be a symptom of a physical condition such as drug abuse or a mental disorder such as schizophrenia, bipolar disorder, or very severe depression (also known as “psychotic depression”).

Antipsychotic medications are often used in combination with other medications to treat delirium, dementia, and mental-health conditions, including:

- Attention deficit hyperactivity disorder (ADHD)
- Severe depression
- Eating disorders
- Posttraumatic stress disorder (PTSD)
- Obsessive-compulsive disorder (OCD)
- Generalized anxiety disorder (GAD)

Antipsychotic medicines do not cure these conditions. They are used to help relieve symptoms and improve quality of life.

Older or first-generation antipsychotic medications are also called “conventional typical antipsychotics” or “neuroleptics.” Some of the common typical antipsychotics include:

- Chlorpromazine
- Haloperidol
- Perphenazine

- Fluphenazine

Newer or second generation medications are also called “atypical antipsychotics.” Some of the common atypical antipsychotics include:

- Risperidone
- Olanzapine
- Quetiapine
- Ziprasidone
- Aripiprazole
- Paliperidone
- Lurasidone

According to a 2013 research review by the Agency for Healthcare Research and Quality, typical and atypical antipsychotics both work to treat symptoms of schizophrenia and the manic phase of bipolar disorder.

Several atypical antipsychotics have a “broader spectrum” of action than the older medications, and are used for treating bipolar depression or depression that has not responded to an antidepressant medication alone.

HOW DO PEOPLE RESPOND TO ANTIPSYCHOTICS?

Certain symptoms, such as feeling agitated and having hallucinations, usually go away within days of starting an antipsychotic medication. Symptoms like delusions usually go away within a few weeks, but the full effects of the medication may not be seen for up to six weeks. Every patient responds differently, so it may take several trials of different antipsychotic medications to find the one that works best.

Some people may have a relapse – meaning their symptoms come back or get worse. Usually, relapses happen when people stop taking their medication, or when they only take it sometimes. Some people stop taking the medication because they feel better or they may feel that they do not need it anymore, but no one should stop taking an antipsychotic medication without talking to her or his doctor. When a doctor says it is okay to stop taking a medication, it should be gradually tapered off – never stopped suddenly. Many people must stay on an antipsychotic continuously for months or years in order to stay well; treatment should be personalized for each individual.

WHAT ARE THE POSSIBLE SIDE EFFECTS OF ANTIPSYCHOTICS?

Antipsychotics have many side effects (or adverse events) and risks. The FDA lists the following side effects of antipsychotic medicines:

- Drowsiness
- Dizziness
- Restlessness
- Weight gain (the risk is higher with some atypical antipsychotic medicines)
- Dry mouth
- Constipation
- Nausea
- Vomiting
- Blurred vision
- Low blood pressure
- Uncontrollable movements, such as tics and tremors (the risk is higher with typical

antipsychotic medicines)

- Seizures
- A low number of white blood cells, which fight infections

A person taking an atypical antipsychotic medication should have her or his weight, glucose levels, and lipid levels monitored regularly by a doctor.

Typical antipsychotic medications can also cause additional side effects related to physical movement, such as:

- Rigidity
- Persistent muscle spasms
- Tremors
- Restlessness

Long-term use of typical antipsychotic medications may lead to a condition called “tardive dyskinesia” (TD). TD causes muscle movements, commonly around the mouth, that a person cannot control. TD can range from mild to severe, and in some people, the problem cannot be cured. Sometimes people with TD recover partially or fully after they stop taking typical antipsychotic medication. People who think that they might have TD should check with their doctor before stopping their medication. TD rarely occurs while taking atypical antipsychotics.

Section 44.6 | **Mood Stabilizers**

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

WHAT ARE MOOD STABILIZERS?

Mood stabilizers are used primarily to treat bipolar disorder, mood swings associated with other mental disorders, and in some cases, to augment the effect of other medications used to treat depression. Lithium, which is an effective mood stabilizer, is approved for the treatment of mania and the maintenance treatment of bipolar disorder. A number of cohort studies describe antisuicide benefits of lithium for individuals on long-term maintenance. Mood stabilizers work by decreasing abnormal activity in the brain and are also sometimes used to treat:

- Depression (usually along with an antidepressant)
- Schizoaffective disorder
- Disorders of impulse control
- Certain mental illnesses in children

Anticonvulsant medications are also used as mood stabilizers. They were originally developed to treat seizures, but they were found to help control unstable moods as well. One anticonvulsant commonly used as a mood stabilizer is valproic acid (also called “divalproex sodium”). For some people, especially those with “mixed” symptoms of mania and depression or those with rapid-cycling bipolar disorder, valproic acid may work better than lithium. Other anticonvulsants used as mood stabilizers include:

- Carbamazepine
- Lamotrigine
- Oxcarbazepine

WHAT ARE THE POSSIBLE SIDE EFFECTS OF MOOD STABILIZERS?

Mood stabilizers can cause several side effects, and some of them may become serious, especially at excessively high blood levels. These side effects include:

- Itching, rash
- Excessive thirst
- Frequent urination
- Tremor (shakiness) of the hands
- Nausea and vomiting
- Slurred speech
- Fast, slow, irregular, or pounding heartbeat
- Blackouts
- Changes in vision
- Seizures
- Hallucinations (seeing things or hearing voices that do not exist)
- Loss of coordination
- Swelling of the eyes, face, lips, tongue, throat, hands, feet, ankles, or lower legs.

If a person with bipolar disorder is being treated with lithium, she or he should visit the doctor regularly to check the lithium levels her or his blood, and make sure the kidneys and the thyroid are working normally.

Lithium is eliminated from the body through the kidney, so the dose may need to be lowered in older people with reduced kidney function. Also, loss of water from the body, such as through sweating or diarrhea, can cause the lithium level to rise, requiring a temporary lowering of the daily dose. Although kidney functions are checked periodically during lithium treatment, actual damage of the kidney is uncommon in people whose blood levels of lithium have stayed within the therapeutic range.

Some possible side effects linked anticonvulsants (such as valproic acid) include:

- Drowsiness
- Dizziness
- Headache
- Diarrhea
- Constipation
- Changes in appetite
- Weight changes
- Back pain
- Agitation
- Mood swings
- Abnormal thinking
- Uncontrollable shaking of a part of the body
- Loss of coordination
- Uncontrollable movements of the eyes
- Blurred or double vision
- Ringing in the ears
- Hair loss

These medications may also:

- Cause damage to the liver or pancreas, so people taking it should see their doctors regularly
- Increase testosterone (a male hormone) levels in teenage girls and lead to a condition called “polycystic ovarian syndrome” (a disease that can affect fertility and make the menstrual cycle

become irregular)

Medications for common adult health problems, such as diabetes, high blood pressure, anxiety, and depression may interact badly with anticonvulsants. In this case, a doctor can offer other medication options.

Section 44.7 | **Special Groups: Children, Older Adults, and Pregnant Women**

This section includes text excerpted from “Mental Health Medications,” National Institute of Mental Health (NIMH), October 2016. Reviewed August 2021.

CHILDREN AND ADOLESCENTS

Many medications used to treat children and adolescents with mental illness are safe and effective. However, some medications have not been studied or approved for use with children or adolescents.

Still, a doctor can give a young person the U.S. Food and Drug Administration (FDA)-approved medication on an “off-label” basis. This means that the doctor prescribes the medication to help the patient even though the medicine is not approved for the specific mental disorder that is being treated or for use by patients under a certain age. Remember:

- It is important to watch children and adolescents who take these medications on an “off-label” basis.
- Children may have different reactions and side effects than adults.
- Some medications have current FDA warnings about potentially dangerous side effects for younger patients.

In addition to medications, other treatments for children and adolescents should be considered, either to be tried first, with medication added later if necessary, or to be provided along with medication. Psychotherapy, family therapy, educational courses, and behavior management techniques can help everyone involved cope with disorders that affect a child’s mental health.

OLDER ADULTS

People over 65 have to be careful when taking medications, especially when they are taking many different drugs. Older adults have a higher risk for experiencing bad drug interactions, missing doses, or overdosing.

Older adults also tend to be more sensitive to medications. Even healthy older people react to medications differently than younger people because older people’s bodies process and eliminate medications more slowly. Therefore, lower or less frequent doses may be needed for older adults. Before starting a medication, older people and their family members should talk carefully with a physician about whether a medication can affect alertness, memory, or coordination, and how to help ensure that prescribed medications do not increase the risk of falls.

Sometimes memory problems affect older people who take medications for mental disorders. An older adult may forget her or his regular dose and take too much or not enough. A good way to keep track of medicine is to use a seven-day pill box, which can be bought at any pharmacy. At the beginning of each week, older adults and their caregivers fill the box so that it is easy to remember what medicine to take. Many pharmacies also have pill boxes with sections for medications that must be taken more than once a day.

WOMEN WHO ARE PREGNANT OR WHO MAY BECOME PREGNANT

The research on the use of psychiatric medications during pregnancy is limited. The risks are different depending on which medication is taken, and at what point during the pregnancy the medication is taken. Decisions on treatments for all conditions during pregnancy should be based on each woman's needs and circumstances, and based on a careful weighing of the likely benefits and risks of all available options, including psychotherapy (or "watchful waiting" during part or all of the pregnancy), medication, or a combination of the two. While no medication is considered perfectly safe for all women at all stages of pregnancy, this must be balanced for each woman against the fact that untreated serious mental disorders themselves can pose a risk to a pregnant woman and her developing fetus. Medications should be selected based on available scientific research, and they should be taken at the lowest possible dose. Pregnant women should have a medical professional who will watch them closely throughout their pregnancy and after delivery.

Most women should avoid certain medications during pregnancy. For example:

- Mood stabilizers are known to cause birth defects. Benzodiazepines and lithium have been shown to cause "floppy baby syndrome," in which a baby is drowsy and limp, and cannot breathe or feed well. Benzodiazepines may cause birth defects or other infant problems, especially if taken during the first trimester.
- According to research, taking antipsychotic medications during pregnancy can lead to birth defects, especially if they are taken during the first trimester and in combination with other drugs, but the risks vary widely and depend on the type of antipsychotic taken. The conventional antipsychotic haloperidol has been studied more than others, and has been found not to cause birth defects. Research on the newer atypical antipsychotics is ongoing.

Antidepressants, especially SSRIs, are considered to be safe during pregnancy. However, antidepressant medications do cross the placental barrier and may reach the fetus. Birth defects or other problems are possible, but they are very rare. The effects of antidepressants on childhood development remain under study.

Studies have also found that fetuses exposed to SSRIs during the third trimester may be born with "withdrawal" symptoms such as breathing problems, jitteriness, irritability, trouble feeding, or hypoglycemia (low blood sugar). Most studies have found that these symptoms in babies are generally mild and short-lived, and no deaths have been reported. Risks from the use of antidepressants need to be balanced with the risks of stopping medication; if a mother is too depressed to care for herself and her child, both may be at risk for problems.

In 2004, the FDA issued a warning against the use of certain antidepressants in the late third trimester. The warning said that doctors may want to gradually taper pregnant women off antidepressants in the third trimester so that the baby is not affected. After a woman delivers, she should consult with her doctor to decide whether to return to a full dose during the period when she is most vulnerable to postpartum depression.

After the baby is born, women and their doctors should watch for postpartum depression, especially if a mother stopped taking her medication during pregnancy. In addition, women who nurse while taking psychiatric medications should know that a small amount of the medication passes into the breast milk. However, the medication may or may not affect the baby depending on the medication and when it is taken. Women taking psychiatric medications and who intend to breastfeed should discuss the potential risks and benefits with their doctors.

Chapter 45 | Brain Stimulation Therapies

Brain stimulation therapies can play a role in treating certain mental disorders. Brain stimulation therapies involve activating or inhibiting the brain directly with electricity. The electricity can be given directly by electrodes implanted in the brain, or noninvasively through electrodes placed on the scalp. The electricity can also be induced by using magnetic fields applied to the head. While these types of therapies are less frequently used than medication and psychotherapies, they hold promise for treating certain mental disorders that do not respond to other treatments.

Electroconvulsive therapy is the best-studied brain stimulation therapy and has the longest history of use. Other stimulation therapies discussed here are newer, and in some cases still experimental methods. These include:

- Vagus nerve stimulation (VNS)
- Repetitive transcranial magnetic stimulation (rTMS)
- Magnetic seizure therapy (MST)
- Deep brain stimulation (DBS)

A treatment plan may also include medication and psychotherapy. Choosing the right treatment plan should be based on a person's individual needs and medical situation, and under a doctor's care.



Figure 45.1. Electroconvulsive Therapy

ELECTROCONVULSIVE THERAPY

Electroconvulsive therapy (ECT) uses an electric current to treat serious mental disorders. This type of therapy is usually considered only if a patient's illness has not improved after other treatments (such as antidepressant medication or psychotherapy) are tried, or in cases where rapid response is needed (e.g., as in the case of suicide risk and catatonia).

Electroconvulsive Therapy: Why It Is Done

Electroconvulsive therapy is most often used to treat severe, treatment-resistant depression (TRD), but it

may also be medically indicated in other mental disorders, such as bipolar disorder or schizophrenia. It also may be used in life-threatening circumstances, such as when a patient is unable to move or respond to the outside world (e.g., catatonia), is suicidal, or is malnourished as a result of severe depression.

Electroconvulsive therapy can be effective in reducing the chances of relapse when patients undergo follow-up treatments. Two major advantages of ECT over medication are that ECT begins to work quicker, often starting within the first week, and older individuals respond especially quickly.

Electroconvulsive Therapy: How It Works

Before ECT is administered, a person is sedated with general anesthesia and given a medication called a “muscle relaxant” to prevent movement during the procedure. An anesthesiologist monitors breathing, heart rate and blood pressure during the entire procedure, which is conducted by a trained medical team, including physicians and nurses. During the procedure:

- Electrodes are placed at precise locations on the head.
- Through the electrodes, an electric current passes through the brain, causing a seizure that lasts generally less than one minute. Because the patient is under anesthesia and has taken a muscle relaxant, it is not painful and the patient cannot feel the electrical impulses.
- Five to ten minutes after the procedure ends, the patient awakens. She or he may feel groggy at first as the anesthesia wears off. But, after about an hour, the patient usually is alert and can resume normal activities.

A typical course of ECT is administered about three times a week until the patient’s depression improves (usually within 6 to 12 treatments). After that, maintenance ECT treatment is sometimes needed to reduce the chances that symptoms will return. ECT maintenance treatment varies depending on the needs of the individual, and may range from one session per week to one session every few months. Frequently, a person who undergoes ECT also takes antidepressant medication or a mood-stabilizing medication.

Electroconvulsive Therapy Side Effects

The most common side effects associated with ECT include:

- Headache
- Upset stomach
- Muscle aches
- Memory loss

Some people may experience memory problems, especially of memories around the time of the treatment. Sometimes the

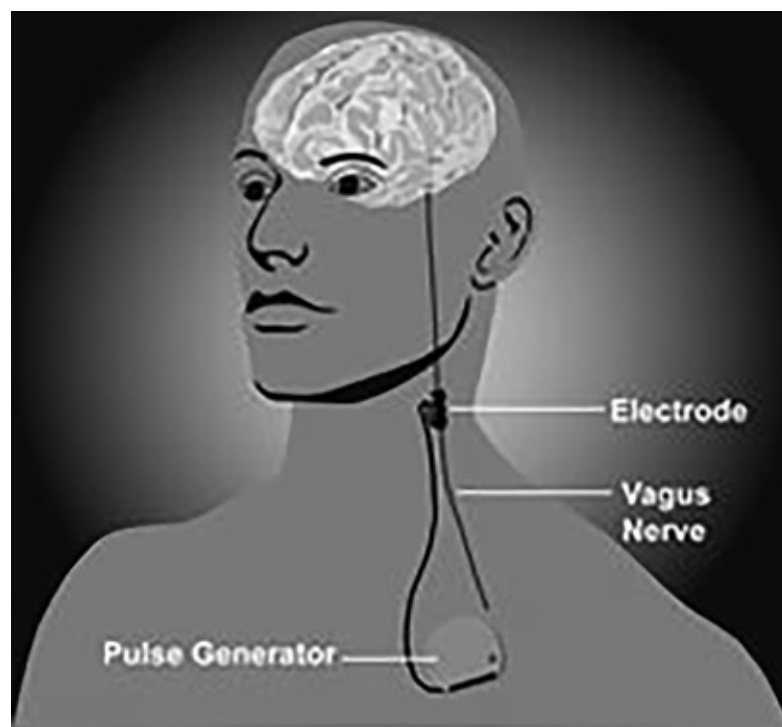


Figure 45.2. Vagus Nerve Stimulation

memory problems are more severe, but usually they improve over the days and weeks following the end of an ECT course.

Research has found that memory problems seem to be more associated with the traditional type of ECT called “bilateral ECT,” in which the electrodes are placed on both sides of the head.

In unilateral ECT, the electrodes are placed on just one side of the head – typically the right side because it is opposite the brain’s learning and memory areas. Unilateral ECT has been found to be less likely to cause memory problems and therefore is preferred by many doctors, patients and families.

VAGUS NERVE STIMULATION

Vagus nerve stimulation works through a device implanted under the skin that sends electrical pulses through the left vagus nerve, half of a prominent pair of nerves that run from the brainstem through the neck and down to each side of the chest and abdomen. The vagus nerves carry messages from the brain to the body’s major organs (e.g., heart, lungs, and intestines) and to areas of the brain that control mood, sleep, and other functions.

Vagus Nerve Stimulation Why It Is Done

Vagus nerve stimulation was originally developed as a treatment for epilepsy. However, scientists noticed that it also had favorable effects on mood, especially depressive symptoms. Using brain scans, scientists found that the device affected areas of the brain that are involved in mood regulation. The pulses appeared to alter the levels of certain neurotransmitters (brain chemicals) associated with mood, including serotonin, norepinephrine, GABA, and glutamate.

In 2005, the U.S. Food and Drug Administration (FDA) approved VNS for use in treating TRD in certain circumstances:

- If the patient is 18 years of age or over
- If the illness has lasted two years or more
- If it is severe or recurrent

- If the depression has not eased after trying at least four other treatments

According to the FDA, it is not intended to be a first-line treatment, even for patients with severe depression. And, despite FDA approval, VNS remains an infrequently used because results of early studies testing its effectiveness for major depression were mixed. But, a newer study, which pooled together findings from only controlled clinical trials, found that 32 percent of depressed people responded to VSN and 14 percent had a full remission of symptoms after being treated for nearly 2 years.

Vagus Nerve Stimulation: How It Works

A device called a “pulse generator,” about the size of a stopwatch is surgically implanted in the upper left side of the chest. Connected to the pulse generator is an electrical lead wire, which is connected from the generator to the left vagus nerve.

Typically, 30-second electrical pulses are sent about every five minutes from the generator to the vagus nerve. The duration and frequency of the pulses may vary depending on how the generator is programmed. The vagus nerve, in turn, delivers those signals to the brain. The pulse generator, which operates continuously, is powered by a battery that lasts around 10 years, after which it must be replaced. Normally, people do not feel pain or any other sensations as the device operates.

The device also can be temporarily deactivated by placing a magnet over the chest where the pulse generator is implanted. A person may want to deactivate it if side effects become intolerable, or before engaging in strenuous activity or exercise because it may interfere with breathing. The device reactivates when the magnet is removed.

Vagus nerve stimulation treatment is intended to reduce symptoms of depression. It may be several months before the patient notices any benefits and not all patients will respond to VNS. It is important to remember that VNS is intended to be given along with other traditional therapies, such as medications, and patients should not expect to discontinue these other treatments, even with the device in place.

Vagus Nerve Stimulation: Side Effects

Vagus nerve stimulation is not without risk. There may be complications such as infection from the implant surgery, or the device may come loose, move around or malfunction, which may require additional surgery to correct. Some patients have no improvement in symptoms and some actually get worse.

Other potential side effects include:

- Voice changes or hoarseness
- Cough or sore throat
- Neck pain
- Discomfort or tingling in the area where the device is implanted
- Breathing problems, especially during exercise
- Difficulty swallowing

Long-term side effects are unknown.

REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION

Repetitive transcranial magnetic stimulation (rTMS) uses a magnet to activate the brain. First developed in 1985, rTMS has been

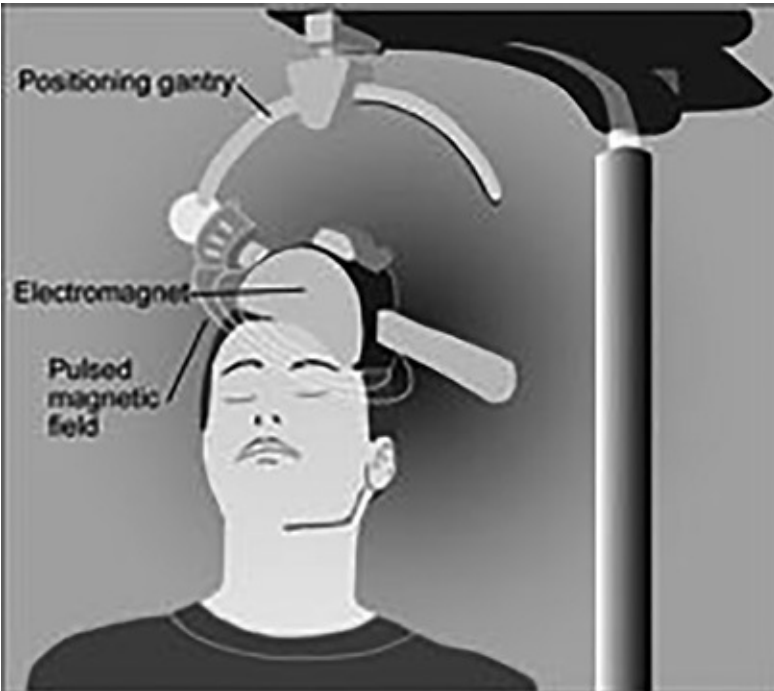


Figure 45.3. Repetitive Transcranial Magnetic Stimulation

studied as a treatment for depression, psychosis, anxiety, and other disorders.

Unlike ECT, in which electrical stimulation is more generalized, rTMS can be targeted to a specific site in the brain. Scientists believe that focusing on a specific site in the brain reduces the chance for the types of side effects associated with ECT. But, opinions vary as to what site is best.

Repetitive Transcranial Magnetic Stimulation: Why It Is Done

In 2008, rTMS was approved for use by the FDA as a treatment for major depression for patients who do not respond to at least one antidepressant medication in the current episode. It is also used in other countries as a treatment for depression in patients who have not responded to medications and who might otherwise be considered for ECT.

The evidence supporting rTMS for depression was mixed until the first large clinical trial, funded by the National Institute of Mental Health (NIMH), was published in 2010. The trial found that 14 percent achieved remission with rTMS compared to 5 percent with an inactive (sham) treatment. After the trial ended, patients could enter a second phase in which everyone, including those who previously received the sham treatment, was given rTMS. Remission rates during the second phase climbed to nearly 30 - percent. A sham treatment is like a placebo, but instead of being an inactive pill, it is an inactive procedure that mimics real rTMS.

Repetitive Transcranial Magnetic Stimulation: How It Works

A typical rTMS session lasts 30 to 60 minutes and does not require anesthesia.

During the procedure:

- An electromagnetic coil is held against the forehead near an area of the brain that is thought to be involved in mood regulation.
- Then, short electromagnetic pulses are administered through the coil. The magnetic pulses easily pass through the skull, and causes small electrical currents that stimulate nerve cells in the targeted brain region.

Because this type of pulse generally does not reach further than two inches into the brain, scientists can select which parts of the brain will be affected and which will not be. The magnetic field is about the same strength as that of a magnetic resonance imaging (MRI) scan. Generally, the person feels a slight knocking or tapping on the head as the pulses are administered.

Not all scientists agree on the best way to position the magnet on the patient's head or give the electromagnetic pulses. They also do not yet know if rTMS works best when given as a single treatment or combined with medication and/or psychotherapy. More research is underway to determine the safest and most effective uses of rTMS.

Repetitive Transcranial Magnetic Stimulation: Side Effects

Sometimes a person may have discomfort at the site on the head where the magnet is placed. The muscles of the scalp, jaw, or face may contract or tingle during the procedure. Mild headaches or brief lightheadedness may result. It is also possible that the procedure could cause a seizure, although documented incidences of this are uncommon. Two large-scale studies on the safety of rTMS found that most side effects, such as headaches or scalp discomfort, were mild or moderate, and no seizures occurred. Because the treatment is relatively new, however, long-term side effects are unknown.

MAGNETIC SEIZURE THERAPY

Magnetic Seizure Therapy: How It Works

Magnetic seizure therapy (MST) borrows certain aspects from both ECT and rTMS. Like rTMS, MST uses magnetic pulses instead of electricity to stimulate a precise target in the brain. However, unlike rTMS, MST aims to induce a seizure like ECT. So the pulses are given at a higher frequency than that used in rTMS. Therefore, like ECT, the patient must be anesthetized and given a muscle relaxant to prevent movement. The goal of MST is to retain the effectiveness of ECT while reducing its cognitive side effects.

Magnetic seizure therapy is in the early stages of testing for mental disorders, but initial results are promising. A recent review article that examined the evidence from eight clinical studies found that MST triggered remission from major depression or bipolar disorder in 30–40 percent of individuals.

Magnetic Seizure Therapy: Side Effects

Like ECT, MST carries the risk of side effects that can be caused by anesthesia exposure and the induction of a seizure. Studies in both animals and humans have found that MST produces:

- Fewer memory side effects
- Shorter seizures
- Allows for a shorter recovery time than ECT

DEEP BRAIN STIMULATION

Deep brain stimulation (DBS) was first developed as a treatment for Parkinson disease (PD) to reduce tremor, stiffness, walking problems and uncontrollable movements. In DBS, a pair of electrodes is implanted in the brain and controlled by a generator that is

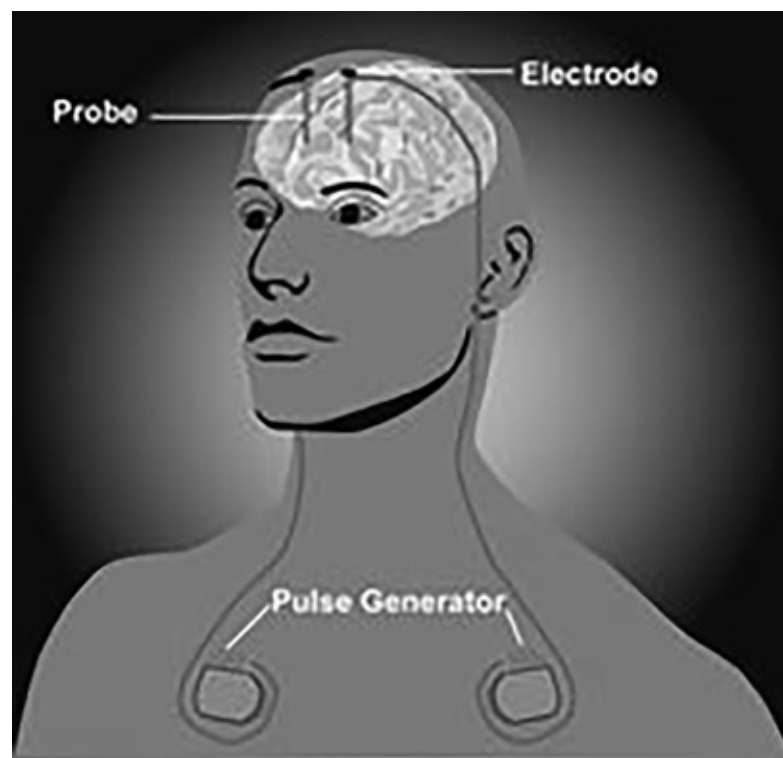


Figure 45.4. Deep Brain Stimulation

implanted in the chest. Stimulation is continuous and its frequency and level are customized to the individual.

Deep brain stimulation has been studied as a treatment for depression or obsessive-compulsive disorder (OCD). Currently, there is a Humanitarian Device Exemption for the use of DBS to treat OCD, but its use in depression remains only on an experimental basis. A review of all 22 published studies testing DBS for depression found that only three of them were of high quality because they not only had a treatment group, but also a control group which did not receive DBS. The review found that across the studies, 40–50 percent of people showed receiving DBS greater than 50 percent improvement.

Deep Brain Stimulation: How It Works

Deep brain stimulation requires brain surgery. The head is shaved and then attached with screws to a sturdy frame that prevents the head from moving during the surgery. Scans of the head and brain using MRI are taken. The surgeon uses these images as guides during the surgery. Patients are awake during the procedure to provide the surgeon with feedback, but they feel no pain because the head is numbed with a local anesthetic and the brain itself does not register pain.

Once ready for surgery, two holes are drilled into the head. From there, the surgeon threads a slender tube down into the brain to place electrodes on each side of a specific area of the brain. In the case of depression, the first area of the brain targeted by DBS is called “Area 25,” or the subgenual cingulate cortex. This area has been found to be overactive in depression and other mood disorders. But, later research targeted several other areas of the brain affected by depression. So DBS is now targeting several areas of the brain for treating depression. In the case of OCD, the electrodes are placed in an area of the brain (the ventral capsule/ventral striatum) believed to be associated with the disorder.

After the electrodes are implanted and the patient provides feedback about their placement, the patient is put under general anesthesia. The electrodes are then attached to wires that are run inside the body from the head down to the chest, where a pair of battery-operated generators are implanted. From here, electrical pulses are continuously delivered over the wires to the electrodes in the brain. Although it is

unclear exactly how the device works to reduce depression or OCD, scientists believe that the pulses help to “reset” the area of the brain that is malfunctioning so that it works normally again.

Deep Brain Stimulation Side Effects

Deep brain stimulation carries risks associated with any type of brain surgery. For example, the procedure may lead to:

- Bleeding in the brain or stroke
- Infection
- Disorientation or confusion
- Unwanted mood changes
- Movement disorders
- Lightheadedness
- Trouble sleeping

Because the procedure is still being studied, other side effects not yet identified may be possible. Long-term benefits and side effects are unknown.

This chapter includes text excerpted from “Brain Stimulation Therapies,” National Institute of Mental Health (NIMH), June 2016. Reviewed August 2021.

Chapter 46 | Complementary and Alternative Medicine for Mental Healthcare

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Section 46.1 | Anxiety and Complementary Health Approaches

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Anxiety and Complementary Health Approaches,” National Center for Complementary and Integrative Health (NCCIH), August 2020; Text under the heading “Mind and Body Approaches” is excerpted from “Anxiety and Complementary Health Approaches: What the Science Says,” National Center for Complementary and Integrative Health (NCCIH), August 2020.

Researchers are studying a variety of complementary health approaches to see whether they might be helpful for occasional anxiety or anxiety disorders. There is some evidence that mindfulness and other forms of meditation, music, relaxation techniques, and melatonin may be efficacious for anxiety, especially anxiety associated with medical procedures or chronic medical problems. However, there is not enough evidence on other complementary health approaches for anxiety to draw definitive conclusions about their efficacy.

This section provides a summary of current research on several complementary health approaches for anxiety, including mind and body practices and natural products.

MIND AND BODY APPROACHES

Acupuncture

Although some studies of acupuncture for anxiety have had positive outcomes, in general, many of the studies on acupuncture for anxiety have been of poor methodological quality or not of statistical significance. In addition, because the research is extremely variable (e.g., number and variety of acupuncture points, frequency of sessions, and duration of treatment), it is difficult to draw firm conclusions about potential benefits.

WHAT DOES THE RESEARCH SHOW?

- A 2012 review of 32 studies of acupuncture for anxiety found that although there have been some positive outcomes, the generally poor methodological quality, combined with the wide range of outcome measures used, number and variety of points, frequency of sessions, and duration of treatment makes drawing firm conclusions difficult.
- A 2014 meta-analysis of 14 studies involving 1,034 participants on the efficacy of acupuncture in reducing preoperative anxiety found that acupuncture has a statistically significant effect relative to placebo or non-treatment controls, but the sample size was small. The meta-analysis supports the possibility that acupuncture is superior to placebo for preoperative anxiety.

SAFETY

Acupuncture is generally considered safe when performed by an experienced practitioner using sterile needles. Reports of serious adverse events related to acupuncture are rare, but include infections and punctured organs.

Massage Therapy

In some studies massage therapy helped to reduce anxiety for people with cancer or other comorbid medical conditions; however, other studies did not find a statistically significant beneficial effect. Little research has been done on massage for anxiety disorders, and results have been conflicting.

WHAT DOES THE RESEARCH SHOW?

- A 2016 Cochrane review of 19 studies involving more than 1,200 participants found some evidence that massage might help with pain and anxiety in cancer patients, but the quality of the evidence was very low (because most studies were small and some may have been biased), and

findings were not consistent.

- A 2014 systematic review and meta-analysis of 18 randomized controlled trials involving 950 women with breast cancer did not find any significant effect of massage on anxiety.
- A 2013 randomized controlled trial of 60 cancer patients examined massage therapy for perioperative pain and anxiety in placement of vascular access devices and found that both massage therapy and structured attention proved beneficial for alleviating preoperative anxiety in these patients.
- A 2012 randomized trial involving 152 cardiac surgery patients found that massage therapy significantly reduced the pain, anxiety, and muscular tension and improved relaxation after cardiac surgery.
- Findings from a 2012 randomized controlled trial of 120 primiparous women with term pregnancy suggest that massage is an effective alternative intervention, decreasing pain and anxiety during labor.

SAFETY

Massage therapy appears to have few risks if it is used appropriately and provided by a trained massage professional.

Mindfulness Meditation

Meditation therapy is commonly used and has been shown to be of small to modest benefit for people with anxiety-related symptoms. There is some evidence that transcendental meditation may have a beneficial effect on anxiety. However, there is a lack of studies with adequate statistical power in patients with clinically diagnosed anxiety disorders, which makes it difficult to draw firm conclusions about its efficacy for anxiety disorders.

WHAT DOES THE RESEARCH SHOW?

- A 2019 systematic review and meta-analysis of 34 studies found that interventions based on cognitive-behavioral programs, self-reflection, and mindfulness-based approaches produce satisfactory and significant results in relation to the reduction of stress, anxiety, and depression in students.
- A 2019 meta-analysis involving 862 participants with anxiety disorders or high trait anxiety compared meditation techniques to relaxation therapies and concluded that meditation seems to be slightly more effective than relaxation in the treatment of anxiety. The meta-analysis also found that meditation might also remain more effective at 12-month follow-up.
- A 2018 randomized controlled trial examined whether a transcendental meditation (TM) program could increase EEG brain integration and positive affect, and decrease psychological distress in 96 school district staff. The study found that TM participants had improved brain integration and positive affect and a reduction in psychological distress, including anxiety.
- A 2018 randomized controlled trial examined the effects of a single, short bout of aerobic exercise (i.e., a brisk walk) or meditation, as well as exercise and meditation combined on state anxiety among 110 young adults. The study found that meditation (vs a brisk walk) may be a preferred method of attenuating anxiety symptomology.
- A 2017 randomized controlled trial involving 57 participants with generalized anxiety disorder found that mindfulness meditation training was associated with a significantly greater decrease in partial work days and decrease in healthcare utilization.
- A 2014 systematic review and meta-analysis of 47 trials with 3,515 participants found that mindfulness meditation programs had moderate evidence of improved anxiety. The reviewers concluded that clinicians should be aware that meditation programs can result in small to

moderate reductions of multiple negative dimensions of psychological stress.

SAFETY

Meditation is generally considered to be safe for healthy people. However, people with physical limitations may not be able to participate in certain meditative practices involving movement.

Relaxation Techniques

Relaxation techniques may reduce anxiety in individuals with chronic medical problems and those who are having medical procedures. However, research demonstrates that conventional psychotherapy, for individuals with generalized anxiety disorder, may be more effective than relaxation techniques.

WHAT DOES THE RESEARCH SHOW?

- A 2014 meta-analysis of a total of 41 studies involving 2,132 participants with generalized anxiety disorder found some indications that cognitive-behavioral therapy was more effective than relaxation techniques over the long term.
- A 2016 randomized trial of 236 women undergoing large core breast biopsy found that adjunctive self-hypnotic relaxation decreased procedural pain and anxiety.
- A 2012 randomized controlled trial of 39 participants with inflammatory bowel disease found that those who received the relaxation-training intervention showed a statistically significant improvement in anxiety levels as compared to the control group.

SAFETY

Relaxation techniques are generally considered safe for healthy people. People with serious physical or mental-health problems should discuss relaxation techniques with their healthcare providers.

Natural Products

CHAMOMILE

There is some research that suggests that a chamomile extract may be helpful for generalized anxiety disorder, but the studies are preliminary, and their findings are not conclusive.

What Does the Research Show?

- A 2016 randomized controlled trial involving 179 participants with moderate to severe generalized anxiety disorder found that chamomile extract produced a clinical meaningful reduction in anxiety symptoms over 8 weeks.
- Results from a 2009 randomized, double-blind, placebo-controlled efficacy and tolerability trial of chamomile extract in 57 patients with mild-to-moderate generalized anxiety disorder suggest that chamomile may have modest anxiolytic activity in patients with mild-to-moderate generalized anxiety disorder.

Safety

- There have been reports of allergic reactions, including rare cases of anaphylaxis, in people who have consumed or come into contact with chamomile products.
- People are more likely to experience allergic reactions to chamomile if they are allergic to related plants such as ragweed, chrysanthemums, marigolds, or daisies.
- Interactions between chamomile and cyclosporine and warfarin have been reported, and there are theoretical reasons to suspect that chamomile might interact with other drugs as well.

KAVA

Kava extract may produce moderately beneficial effects on anxiety symptoms; however, the use of kava

supplements has been linked to a risk of severe liver damage.

What Does the Research Show?

- A 2018 systematic review found that kava may produce short-term improvements for anxiety, but is not a replacement for prolonged antianxiety use. The reviewers noted that liver toxicity is especially possible if taken longer than 8 weeks.
- A 2013 randomized controlled trial involving 75 participants with generalized anxiety disorder concluded that standardized kava extract may be a moderately effective short-term option for the treatment of generalized anxiety disorder.

Safety

- The use of kava supplements has been linked to a risk of severe liver damage, according to the U.S. Food and Drug Administration. However, a 2013 randomized controlled trial of 75 participants who received kava extract over a 6-week period found no significant differences across groups for liver function tests, nor any significant adverse reactions associated with kava administration. Long-term safety studies of kava are needed.
- Kava has been associated with several cases of dystonia and may interact with several drugs, including drugs used for Parkinson disease (PD).

MELATONIN

There is some research that suggests melatonin may help reduce anxiety in patients who are about to have surgery and may be as effective as standard treatment with midazolam in reducing preoperative anxiety.

What Does the Research Show?

- A 2019 randomized controlled trial found that melatonin showed sufficient anxiolytic effect in patients undergoing dental surgery without affecting cognitive and psychomotor functions.
- A 2018 randomized clinical trial compared the effects of melatonin and oxazepam in the management of anxiety and insomnia on patients following primary percutaneous coronary intervention (PCI). Results of the study suggest that melatonin may be more effective than oxazepam in improving the sleep quality and anxiety levels of patients with STEMI (ST-Elevation Myocardial Infarction), and it could be considered a new alternative to benzodiazepines in this setting.
- A 2017 randomized trial involving 80 children undergoing surgery found that melatonin was as effective as midazolam in reducing children's anxiety in both preoperative room and at induction of anesthesia.
- A 2015 Cochrane review of 12 studies involving 774 participants found that melatonin compared to placebo, given as premedication, reduced preoperative anxiety (measured 50 to 100 minutes after administration) and may reduce postoperative anxiety (6 hours after surgery). The reviewers also found that melatonin may be equally as effective as standard treatment with midazolam in reducing preoperative anxiety.

Safety

- Melatonin supplements appear to be safe when used short-term; less is known about long-term safety.

LAVENDER

Although some studies of lavender preparations for anxiety have shown some therapeutic effects, in general, many of these studies have been of poor methodological quality.

What Does the Research Show?

- A 2019 systematic review and meta-analysis of a qualitative synthesis of data including 65 randomized controlled trials (7,993 participants) and 25 non-randomized studies (1,200 participants), and a quantitative synthesis of data involving 37 randomized controlled trials (3,964 participants) found that overall, oral administration of lavender essential oil was effective for anxiety, whereas for inhalation there was only an indication of an effect of reasonable size, due to the heterogeneity of available studies. Lavender essential oil administered through massage appeared to be effective, but available studies were not sufficient to determine whether the benefit was due to a specific effect of lavender.
- A 2018 randomized controlled trial examined the effects of lavender oil aromatherapy on anxiety and sleep quality in 70 patients undergoing chemotherapy and found a significant improvement in anxiety in the lavender group.
- A 2017 meta-analysis of five studies involving 1,165 participants with anxiety diagnoses found Silexan (lavender oil) to be significantly superior to placebo in ameliorating anxiety symptoms independently of diagnosis. The study also found a tendency for greater clinical effect when analyzing separately generalized anxiety disorder patients in comparison with all other diagnosis.

Safety

- When lavender teas and extracts are taken by mouth, they may cause headache, changes in appetite, and constipation.
- Using lavender supplements with sedative medications may increase drowsiness.

Section 46.2 | Autism and Complementary Health Approaches

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Autism Spectrum Disorder and Complementary Health Approaches,” National Center for Complementary and Integrative Health (NCCIH), April 2021; Text beginning with the heading “Melatonin” is excerpted from “Autism Spectrum Disorder and Complementary Health Approaches: What the Science Says,” National Center for Complementary and Integrative Health (NCCIH), April 2021.

Estimates of the prevalence of autism in the United States vary, but the most recent U.S. government statistics estimate that about 1 in 54 children has been identified with autism spectrum disorder (ASD). There is no cure for ASD, but research shows that early diagnosis and interventions, such as during preschool or before, are more likely to have major positive effects on symptoms and later skills. Many parents choose complementary health approaches for their children with ASD to help manage symptoms; however, despite this use there is a paucity of high-quality research focused on complementary approaches for ASD. Of the ASD research that has been conducted, most has been in the pediatric population; very few trials of complementary health approaches have been conducted in adults with ASD.

The existing research indicates that melatonin may be beneficial for sleep disorders associated with ASD. Music therapy may have a positive effect on social interaction, and communication and behavioral skills in those affected by ASDs. However, there is insufficient evidence to determine whether other complementary health approaches such as supplementation with omega-3 fatty acids or vitamin B₆, or chelation are efficacious for ASD symptoms.

This section provides information on the evidence base of several commonly used complementary health approaches for ASD.

MELATONIN

Research findings suggest that melatonin may help with sleep problems in children with ASD.

What Does the Research Show?

- A 2020 review of the literature concluded that melatonin supplementation is both safe and efficacious in the treatment of sleep disorders for children with ASD.
- A 2017 randomized controlled trial involving a total of 125 children and adolescents found that a formulation of prolonged-release melatonin was efficacious and safe for treatment of insomnia in children and adolescents with ASD with/without attention deficit hyperactivity disorder (ADHD) and neurogenetic disorders. After 13 weeks of treatment, participants slept on average 57.5 minutes longer at night with the melatonin intervention compared to 9.14 minutes with placebo. Sleep latency decreased by 39.6 minutes on average in the melatonin treatment group and 12.5 minutes with placebo without causing earlier wakeup time.
- A 2011 systematic review and meta-analysis of 5 randomized, double-blind, placebo-controlled trials involving a total of 57 participants with ASD found that relative to baseline data, melatonin increased total sleep duration by an average of 73 minutes and decreased sleep latency by an average of 66 minutes. Similar beneficial results were observed when melatonin was compared with placebo.

Safety

- A 2014 review of melatonin as an option for managing sleep disorders in children with ASD found no serious safety concerns attributed to melatonin use in this population in the evaluated studies. Some reported adverse effects associated with melatonin use in children with ASD include morning drowsiness, increased enuresis, headache, dizziness, diarrhea, rash, and hypothermia. Melatonin is primarily metabolized by CYP1A2 and CYP2C19, so inhibitors of CYP1A2 may increase melatonin concentrations. Melatonin may decrease blood pressure or serum glucose, so patients who are being treated with agents that affect blood pressure or serum glucose concentrations should be monitored closely.
- A 2018 prospective, open-label follow-up study evaluated the nightly 2, 5, or 10 mg prolonged-release formulation of melatonin in 95 children and adolescents who completed a 13-week double-blind trial. The study found that this formulation of prolonged-release melatonin was a safe option for long-term treatment (up to 52 weeks reported in the study) of children with ASD and neurogenetic disorders who have insomnia.
- Most studies of melatonin have examined short-term use; however, there is a lack of long-term safety data.

OMEGA-3 FATTY ACID SUPPLEMENTATION

At present, there is insufficient evidence that omega-3 fatty acid supplementation is an effective treatment for ASD.

What Does the Research Show?

- A 2017 systematic review of 19 randomized controlled trials concluded that there is little evidence to support the use of nutritional supplements or dietary therapies for children with ASD.
- A 2011 Cochrane review of two small randomized controlled trials concluded that there is no high-quality evidence that omega-3 fatty acid supplementation is effective for improving core or associated symptoms of ASD.

Safety

- Omega-3 fatty acid supplements usually do not have negative side effects. When side effects do occur, they typically consist of minor gastrointestinal symptoms.
- It is uncertain whether people with fish or shellfish allergies can safely consume fish oil

supplements.

PROBIOTICS

The current clinical evidence does not support the use of probiotics to modify behavior in people with ASD.

What Does the Research Show?

- A 2019 systematic review of six clinical trials concluded that overall, there is limited efficacy of probiotics in the management of gastrointestinal or behavioral symptoms in children with ASD.
- A 2015 review of four studies concluded that overall, there is currently no convincing evidence that probiotic supplementation alters behavior in children with ASD.

Safety

- None of the studies included in the reviews reported adverse effects. However, there have been reports linking probiotics to severe side effects, such as dangerous infections, in people with serious underlying medical problems.

SECRETIN

Evidence suggests that single or multiple dose intravenous secretin, a gastrointestinal hormone, is not effective as a treatment for ASD.

What Does the Research Show?

- A 2012 Cochrane review of 16 randomized controlled trials of intravenous secretin compared to placebo in a total of more than 900 children found no improvements for core features of ASD. The reviewers concluded that there is strong evidence that single or multiple dose intravenous secretin is not effective, and it should not be recommended or administered as a treatment for ASD.
- A 2011 systematic review of seven randomized controlled trials concluded that there is clear evidence that secretin lacks benefit. The reviewers noted that because of the high strength of evidence for lack of effectiveness, secretin as an intervention for ASD warrants no further study.

Safety

- The 2012 Cochrane review also analyzed the studies for adverse effect and found that no serious events, such as anaphylaxis, were reported. However, several studies reported some adverse events following secretin administration, including tantrums, hyperactivity, aggression, flushing, and other behavioral symptoms.

VITAMIN B₆ AND MAGNESIUM

To date, there is insufficient evidence to support the use of vitamin B₆ and magnesium as a treatment option for ASD.

What Does the Research Show?

- A 2005 Cochrane review of one small study concluded that because of the small number of studies, their low methodological quality, and small sample sizes, no recommendation can be advanced regarding the use of vitamin B₆ and magnesium as a treatment for ASD.

Safety

- The studies included in the Cochrane review had no reported clinically significant side effects

during administration of high doses of vitamin B₆ and magnesium.

CHELATION

There is no evidence that indicates the effectiveness of pharmaceutical chelation as an intervention for ASD. Furthermore, there is substantial evidence that there is no link between heavy metals and autism.

What Does the Research Show?

- A 2015 Cochrane review of 1 randomized controlled trial of oral DMSA chelation involving 77 children with ASD found no evidence to suggest that pharmaceutical chelation is an effective intervention for ASD. The reviewers noted that before any more trials on chelation for ASD are conducted, evidence that supports a causal link between heavy metals and autism and methods that ensure the safety of participants are needed.

Safety

- There have been previous reports of serious adverse events from intravenous chelation, including hypocalcemia, renal impairment and reported death. The 2015 Cochrane review concluded that given these reports, the risks of chelation for ASD currently outweigh any possible (or potential) benefits.

MUSIC THERAPY

There is some evidence that music therapy may help to improve some social and behavioral skills in children with ASD.

What Does the Research Show?

- A 2018 randomized controlled trial of 51 children (ages 6 to 12) with ASD found that 8 to 12 weeks of individual music intervention improved social communication and functional brain connectivity.
- A 2014 Cochrane review of 10 studies involving a total of 165 children with ASD found that music therapy was superior to “placebo” therapy or standard care for social interaction, nonverbal and verbal communication skills, initiating behavior, and social-emotional reciprocity. The review concluded that music therapy may help children with ASD to improve their skills in areas such as social interaction and communication, and may also contribute to increasing social adaptation skills in children with ASD and to promoting the quality of parent-child relationships.
- A 2017 randomized controlled trial of 364 children in 9 countries found that improvisational music therapy, when compared with enhanced standard care (i.e., usual care as locally available plus parent counseling to discuss parents’ concerns and provide information about ASD), resulted in no significant difference in severity of symptoms based on the Autism Diagnostic Observation Schedule social affect domain over 5 months.

Safety

- Music therapy for people with ASD appears to be safe. None of the studies included in the Cochrane review above reported any side effects caused by music therapy.

ACUPUNCTURE

Results of clinical trials on the effectiveness of acupuncture for ASD have been mixed, but there is currently no conclusive evidence to support the use of acupuncture for the treatment of ASD.

What Does the Research Show?

- A 2012 systematic review of 11 randomized controlled trials found “mixed” evidence of acupuncture’s effectiveness as a treatment for ASD symptoms.
- A 2011 Cochrane review of 10 randomized controlled trials involving 390 children ages 3 to 18, conducted in China and Egypt, concluded that there is no conclusive evidence that acupuncture is effective for treatment of ASD in children, and no randomized controlled trials have been conducted in adults.
- A 2019 systematic review and meta-analysis of 14 trials with 968 participants (11 of the trials were included in the meta-analysis) found scalp acupuncture treatment may be an effective treatment for children with ASD. The reviewers noted, however, that given the heterogeneity and number of participants in the reviewed studies, randomized controlled trials of high quality and design are required before widespread application of this therapy.

Safety

- Relatively few complications from using acupuncture have been reported. Still, complications have resulted from use of nonsterile needles and improper delivery of treatments.
- A few studies in children with ASD included in the reviews above reported either no adverse events or minor side effects, but relevance between these reported adverse effects and acupuncture was unclear.

Section 46.3 | Depression and Complementary Health Approaches

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Depression and Complementary Health Approaches,” National Center for Complementary and Integrative Health (NCCIH), October 2019; Text beginning with the heading “Omega-3 Fatty Acid Supplementation” is excerpted from “Depression and Complementary Health Approaches: What the Science Says,” National Center for Complementary and Integrative Health (NCCIH), October 2019.

Many individuals with depression turn to complementary health approaches as an adjunct to or in place of conventional treatment. Although these approaches are commonly used and readily available in the marketplace, many of them have not been rigorously studied for the treatment of depression. For some approaches, there is uncertainty regarding their efficacy while, for others, the evidence suggests a modest reduction in the symptoms of depression. Some natural products used in this regard (e.g., St. John’s wort) have significant herb-drug interaction concerns. Healthcare providers should know what complementary approaches their patients are using alone, or in combination with, conventional care. For this reason, it is important that you understand the benefits and risks of these complementary approaches to advise your patients.

This section provides the state of the science for several of these complementary health approaches.

OMEGA-3 FATTY ACID SUPPLEMENTATION

At present, it is uncertain whether omega-3 fatty acid supplementation may be useful for depression. Some studies have shown small effects in adjunctive therapy in patients with a diagnosis of major depressive disorder (MDD) and on depressive patients without a diagnosis of MDD; however, most trials have been adjunctive studies. Controlled trials of omega-3 fatty acids as monotherapy are inconclusive compared to standard antidepressant medicines, and it remains unclear that a mechanism is present to suggest that a pharmacological or biological antidepressant effect exists.

What Does the Research Show?

- A 2015 Cochrane review of 26 randomized controlled trials involving a total of 1,478 participants concluded that there is not sufficient high quality evidence to determine the effects of

omega-3 polyunsaturated fatty acid as a treatment for major depressive disorder.

- A 2015 double-blind, randomized controlled trial comparing EPA and DHA as monotherapy for MDD in 1,954 participants found that neither EPA-enriched nor DHA-enriched fatty acid supplementation was superior to placebo.

Safety

- Omega-3 fatty acid supplements are generally safe and well-tolerated. When side effects do occur, they typically consist of minor gastrointestinal symptoms and fishy aftertaste.
- There is some concern that omega-3 supplements may extend bleeding time. The risk appears to be minimal, and should never be used in patients who take drugs that affect platelet function. It is important to discuss any potential herb-drug interactions with patients if they are considering using omega-3 fatty acids.
- It is uncertain whether people with fish or shellfish allergies can safely consume fish oil supplements and should not be used in such patients.

ST. JOHN'S WORT (HYPERICUM PERFORATUM)

Results of some studies suggest that St. John's wort (*Hypericum perforatum*) may have an effect on mild-to-moderate major depressive disorder (MDD) for a limited number of patients, similar to standard antidepressants, but the evidence is far from definitive. Although some studies have demonstrated a slight efficacy over placebo, others contradict these findings.

The significant herb-drug interactions of St. John's wort (*Hypericum perforatum*) are important safety considerations.

What Does the Research Show?

- A 2015 systematic review and network meta-analysis of 66 studies involving 15,161 patients examined whether antidepressants and other agents, including St. John's wort (*Hypericum perforatum*), may be more effective than placebo in the primary care setting. The reviewers found that St. John's wort (*Hypericum perforatum*), as well as some other agents, showed some positive results, but because the current evidence is limited, conclusions about their place in clinical practice cannot be drawn.
- The 2010 American Psychiatric Association Task Force on Complementary and Alternative Medicine report states that St. John's wort (*Hypericum perforatum*) may eventually become a reasonable treatment for mild-to-moderate major depressive disorder (MDD) for a limited number of individuals, although not all recent studies for the treatment of MDD demonstrated efficacy over placebo. The report also indicates any potential efficacy is only a greater consensus and support from studies in mild-to-moderate MDD.
- In a 2011 randomized controlled trial examining the treatment of minor depression with St. John's wort (*Hypericum perforatum*) or citalopram over the course of 12 weeks, neither St. John's wort nor citalopram showed any benefit over placebo.
- A 2012 study examined longer-term efficacy of St. John's wort (*Hypericum perforatum*) versus sertraline and placebo in patients with major depressive disorder and found that St. John's wort, sertraline, and placebo produced similar treatment effects over the course of 26 weeks.

Safety

- Drug interactions with St. John's wort (*Hypericum perforatum*) limit use and are important safety considerations.
- Combining St. John's wort (*Hypericum perforatum*) and certain antidepressants can lead to serotonin syndrome, with dangerous symptoms ranging from tremor and diarrhea to very

dangerous confusion, muscle stiffness, drop in body temperature, and even death.

- Other side effects of St. John's wort (*Hypericum perforatum*) are usually minor and uncommon and may include upset stomach and sensitivity to sunlight. Also, St. John's wort may worsen feelings of anxiety in some people.
- A rare, but possible side effect of taking St. John's wort (*Hypericum perforatum*) is psychosis. Those with certain mental-health disorders, such as bipolar disorder, are at risk of experiencing this rare side effect. Therefore, it is important to discuss this potential side effect with patients who are considering using St. John's wort and encourage discontinuation of the herb if they experience a worsening of symptoms.
- Taking St. John's wort (*Hypericum perforatum*) increases the activity of cytochrome P450 3A4 (CYP3A4) enzyme and reduces plasma concentrations and can weaken many prescription medicines, such as:
 - Antidepressants
 - Oral contraceptives
 - Cyclosporine
 - Digoxin
 - Some HIV drugs including indinavir
 - Some chemotherapeutic agents including irinotecan
 - Warfarin and other anticoagulants

SAME

Current scientific research does not support the use of SAME for the treatment of depression.

What Does the Research Show?

- A 2016 Cochrane review of eight randomized controlled trials involving 934 adults concluded that there is not enough high quality evidence nor the ability to draw firm conclusions based on that evidence about the effects of SAME for the treatment of depression.
- Preliminary results from a 2014 randomized controlled trial in a subsample of 144 participants with major depressive disorder (MDD) who received SAME, escitalopram, or placebo for 12 weeks provided some evidence for the use of SAME in the treatment of MDD. However, in the parent study, SAME failed to demonstrate any advantage over placebo for MDD.

Safety

- A 2009 review of evidence for SAME for the treatment of MDD concluded that there is insufficient evidence examining whether the oral preparations of SAME can be safe or efficacious when used as adjunctive treatment for patients with MDD who are unresponsive to antidepressants.
- Information on the long-term safety of SAME is limited and inconclusive. However, in one study of alcohol-related liver disease in which participants took SAME for 2 years, no serious side effects were reported.
- SAME may decrease the effects of levodopa. It is also possible that SAME might interact with drugs and dietary supplements that increase levels of serotonin, including some antidepressants, L-tryptophan, and St. John's wort, but the evidence for such interactions is very limited.
- SAME promotes the growth of *Pneumocystis*, a fungus that can cause pneumonia in people with suppressed immune systems. It is possible that taking SAME might increase the likelihood or severity of *Pneumocystis* infection in people who are HIV positive and should never be used in these patients.

- Side effects of SAME appear to be uncommon, and when they do occur they are usually problems such as nausea or digestive upsets.

INOSITOL

Data from current scientific research do not support the use of inositol for the treatment of depression.

What Does the Research Show?

- A 2016 systematic review and meta-analysis of several adjunctive nutraceuticals for depression found no significant benefit over placebo for inositol.
- A 2014 meta-analysis of seven randomized controlled trials (two bipolar studies, one bipolar and major depressive disorder (MDD) study, two MDD studies, and two premenstrual dysphoric disorder (PMDD) studies) involving 242 participants found no significant treatment effect of inositol for depressed patients. However, inositol showed a trend of efficacy of depressive symptoms over placebo in patients with PMDD.

Safety

- There is a paucity of data on the safety and side effects of inositol. A 2014 meta-analysis of inositol for depression and anxiety disorders found that inositol marginally caused gastrointestinal upset compared with placebo. A 2011 European review on the safety of inositol had similar findings in that inositol induced gastrointestinal side effects such as nausea, flatus, and diarrhea.

ACUPUNCTURE

There is some evidence that suggests acupuncture may have provide a modest reduction in symptoms of depression, particularly when compared with no treatment or a control.

What Does the Research Show?

- A 2018 Cochrane review of 64 studies involving a total of 7,104 participants concluded that acupuncture may result in a moderate reduction in the severity of depression when compared with treatment as usual/no treatment, and the use of acupuncture may lead to a small reduction in the severity of depression when compared with a control. Reviewers also concluded that the effects of acupuncture compared with medication and psychological therapy are uncertain because of the low quality of evidence.
- A 2019 meta-analysis of seven trials compared the effectiveness of acupuncture therapy in patients with poststroke depression and found evidence to support the use of acupuncture for this condition. Subgroup analyses also showed that acupuncture alone resulted in better outcomes than drug therapy in improving depressive symptoms.
- A 2019 systematic review and meta-analysis of 29 studies involving 2,268 participants (22 trials were conducted in China and 7 conducted outside of China) concluded that acupuncture may be a suitable adjunct to usual care and standard antidepressant medication. However, most of the trials included in the review and meta-analysis were at a high risk of bias.

Safety

- Relatively few complications from using acupuncture have been reported. Still, complications have resulted from the use of nonsterile needles and improper delivery of treatments.
- When not delivered properly, acupuncture can cause serious adverse effects, including skin infections, punctured organs, pneumothoraces, and injury to the central nervous system.

MUSIC THERAPY

There is some evidence that music therapy may provide short-term benefits for people with depression.

What Does the Research Show?

- A 2017 Cochrane review of nine studies involving a total of 421 participants (411 of whom were included in the meta-analysis that investigated short-term effects of music therapy for depression) concluded that music therapy provides short-term beneficial effects for people with depression. Reviewers also found that music therapy shows efficacy in decreasing anxiety levels and improving functioning of depressed individuals.

Safety

- There are no adverse effects associated with music therapy.

YOGA

There is some evidence that yoga may be helpful in reducing depressive symptoms.

What Does the Research Show?

- A 2017 Cochrane review of 23 studies (involving 1,272 participants) in people with depressive symptoms (although not necessarily diagnosed with depression), yoga was helpful in reducing symptoms in 14 of the studies.
- A 2017 systematic review of 7 studies (involving 240 participants) found some evidence of beneficial effects of yoga for major depressive disorder (MDD); however, the reviewers judged the evidence to be insufficient to justify recommending yoga for people with this condition. Problems included the small number of people studied and an inability to compare benefits with risks because of inadequate information on safety.

Safety

- Yoga is generally considered a safe form of physical activity for healthy people when performed properly, under the guidance of a qualified instructor. However, as with other types of physical activity, injuries can occur. The most common injuries are sprains and strains. Serious injuries are rare.
- People with health conditions, older adults, and pregnant women may need to avoid or modify some yoga poses and practices.

Section 46.4 | Seasonal Affective Disorder and Complementary Health Approaches

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Seasonal Affective Disorder and Complementary Health Approaches,” National Center for Complementary and Integrative Health (NCCIH), January 2019; Text beginning with the heading “Light Therapy” is excerpted from “Seasonal Affective Disorder and Complementary Health Approaches : What the Science Says,” National Center for Complementary and Integrative Health (NCCIH), January 2019.

Seasonal affective disorder (SAD), a type of depression that comes and goes with the seasons, typically starts in the late fall and early winter and goes away during the spring and summer. Depressive episodes linked to the summer can occur, but are much less common than winter episodes of SAD. Some of the symptoms of the winter pattern of SAD include having low energy, overeating, craving carbohydrates, and social withdrawal. Light therapy has become a standard treatment of SAD, and antidepressants have also been shown to improve SAD symptoms.

Some people turn to complementary health approaches to prevent SAD, including light therapy, cognitive-behavioral therapy – SAD, St. John’s wort, melatonin, and vitamin D. This section provides the

summary of current research for these modalities.

LIGHT THERAPY

There is some evidence that light therapy may be useful as a preventive treatment for people with a history of season affect disorder. The idea behind light therapy is to replace the diminished sunshine of the fall and winter months using daily exposure to a light box. Most typically, light boxes filter out the ultraviolet rays and require 20–60 minutes of exposure to 10,000 lux of cool-white fluorescent light, an amount that is about 20 times greater than ordinary indoor lighting.

What Does the Research Show?

- A 2015 Cochrane review of one study involving 46 people concluded that there is limited evidence on light therapy as preventive treatment for patients with a history of seasonal affect disorder. Evidence is limited based on methodological limitations and small sample sizes of studies. The review authors noted that the decision for or against initiating preventive treatment of seasonal affect disorder or using other preventive options should be strongly based on patient preferences.
- A 2004 randomized controlled trial of 98 participants examined the effect of light therapy and exercise on depressive symptoms, and found that both treatments, even in combination, seem to be well tolerated and effective on symptoms.
- A 2001 randomized controlled trial of 57 participants with SAD found that symptom scores decreased by more than 40 percent after exposure to 4 weeks of bright white or dim red light.

Safety

- Ultraviolet lights should be avoided because of the increased risk of skin cancer.
- People should avoid staring directly into the light to avoid possible retinal injury.
- Side effects are typically mild, and include vision issues such as blurry vision, photophobia, or headache.
- Light therapy may induce mania in patients with unrecognized or undertreated bipolar disorder.

COGNITIVE-BEHAVIORAL THERAPY

There is some evidence that cognitive-behavioral therapy – SAD can be effective in reducing the recurrence and remissions of SAD and has been shown to be sustained at least between a first and second winter season.

Cognitive-behavioral therapy (CBT) is type of psychotherapy that is effective for SAD. Traditional cognitive-behavioral therapy has been adapted for use with SAD (CBT-SAD). CBT-SAD relies on basic techniques of CBT such as identifying negative thoughts and replacing them with more positive thoughts along with a technique called “behavioral activation.” Behavioral activation seeks to help the person identify activities that are engaging and pleasurable, whether indoors or outdoors, to improve coping with winter.

What Does the Research Show?

- A 2016 randomized head-to-head trial of 177 participants found that CBT-SAD was superior to light therapy two winters following acute treatment, suggesting greater durability for CBT-SAD.

Safety

- Cognitive-behavioral therapy is generally considered safe for most people.

ST. JOHN’S WORT

There is limited evidence that St. John's wort may improve some symptoms of SAD; however, the studies have been small.

What Does the Research Show?

- A 2018 review of the following two trials concluded that there is currently no supportive evidence for any specific herbal intervention to confidently treat SAD.
- A 1994 study of 20 participants who received St. John's wort combined with either bright light or dim light therapy found significant reductions in depressive symptoms in both groups, but no significant difference between the two groups.
- A 1999 study of 168 participants with SAD examined the effects of St. John's wort on depressive symptoms and compared results to St. John's wort plus light therapy. Improvement in symptoms were seen in both groups, with no significant differences between them.

Safety

- St. John's wort can weaken the effects of many medicines, including antidepressants, contraceptives, cyclosporine, digoxin, indinavir, irinotecan, and anticoagulants.
- Taking St. John's wort with certain antidepressants or other drugs that affect serotonin may lead to increased serotonin-related side effects, which may be potentially serious.
- St. John's wort may cause increased sensitivity to sunlight. Other side effects can include anxiety, dry mouth, dizziness, gastrointestinal symptoms, fatigue, headache, or sexual dysfunction.

MELATONIN

Patients with SAD experience an aberrant seasonal variation in their light/dark nocturnal melatonin profile. The shorter photoperiod in winter causes delayed inhibition of morning melatonin secretion in patients with SAD but not in healthy individuals.

There is some limited evidence (small trials involving few patients) that suggests melatonin improves sleep in some patients with SAD; however, no definite conclusions about its effectiveness can be made.

What Does the Research Show?

- A 2018 systematic review concluded that the few trials of melatonin for SAD suggest no place for this supplement as a treatment for SAD, but further investigation is needed to draw definite conclusions.
- A 2015 Cochrane review found no available methodologically sound evidence indicating that melatonin is or is not an effective intervention for prevention of seasonal affect disorder and improvement of patient-centered outcomes among adults with a history of seasonal affect disorder.
- A 2003 controlled study conducted in Europe in 58 participants with SAD or weather-associated mood changes found significant improvements in quality of sleep and vitality in the SAD group; however, melatonin was ineffective in the weather-associated mood group.

Safety

- Melatonin appears to be safe when used short-term, but the lack of long-term studies means we do not know if it is safe for extended use.
- Side effects of melatonin are uncommon but can include drowsiness, headache, dizziness, or nausea. There have been no reports of significant side effects of melatonin in children.

VITAMIN D

At present, vitamin D supplementation by itself is not considered an effective SAD treatment. Low blood

levels of vitamin D are often found in people with SAD; however, the evidence for its use has been mixed. Although some studies suggest vitamin D supplementation may be as effective as light therapy, others found vitamin D had no effect.

What Does the Research Show?

- A 2014 randomized controlled trial of 34 health-care professionals failed to demonstrate an effect of vitamin D on SAD symptoms, but the study authors noted that the findings may be limited by confounders.
- A 2006 randomized trial of 2,117 older women found that daily supplementation of vitamin D did not lead to an improvement in mental-health scores.
- A 1999 study of 15 participants compared vitamin D and broad spectrum phototherapy in the treatment of SAD. Participants receiving vitamin D improved in all outcome measures, while the phototherapy group had no significant change in depression scale measures.

Safety

- High doses of vitamin D may cause fatigue, abdominal cramps, nausea, vomiting, renal damage, and other adverse effects.

Section 46.5 | Sleep Disorders and Complementary Health Approaches

This section includes text excerpted from “Sleep Disorders: In Depth,” National Center for Complementary and Integrative Health (NCCIH), October 2015. Reviewed August 2021.

WHAT ARE SLEEP DISORDERS AND HOW IMPORTANT ARE THEY?

There are more than 80 different sleep disorders. This fact sheet focuses on insomnia – difficulty falling asleep or difficulty staying asleep. Insomnia is one of the most common sleep disorders.

Is It a Sleep Disorder or Not Enough Sleep?

Some people who feel tired during the day have a true sleep disorder, but for others, the real problem is not allowing enough time for sleep. Adults need at least 7 to 8 hours of sleep each night to be well rested, but the average adult sleeps for less than 7 hours a night.

WHAT THE SCIENCE SAYS ABOUT COMPLEMENTARY HEALTH APPROACHES AND INSOMNIA

Complementary approaches can be classified by their primary therapeutic input (how the therapy is taken in or delivered), which may be:

- Nutritional (e.g., special diets, dietary supplements, herbs, probiotics, and microbial-based therapies).
- Psychological (e.g., meditation, hypnosis, music therapies, relaxation therapies).
- Physical (e.g., acupuncture, massage, spinal manipulation).
- Combinations such as psychological and physical (e.g., yoga, tai chi, dance therapies, some forms of art therapy) or psychological and nutritional (e.g., mindful eating).

Nutritional approaches include what the National Center for Complementary and Integrative Health (NCCIH) previously categorized as natural products, whereas psychological and/or physical approaches include what was referred to as mind and body practices.

Research has produced promising results for some complementary health approaches for insomnia, such as relaxation techniques. However, evidence of effectiveness is still limited for most products and

practices, and safety concerns have been raised about a few.

Psychological and Physical Approaches

- There is evidence that relaxation techniques can be effective in treating chronic insomnia.
- In a preliminary study, mindfulness-based stress reduction, a type of meditation, was as effective as a prescription drug in a small group of people with insomnia.
- Preliminary studies in postmenopausal women and women with osteoarthritis suggest that yoga may be helpful for insomnia.
- Some practitioners who treat insomnia have reported that hypnotherapy enhanced the effectiveness of cognitive-behavioral therapy and relaxation techniques in their patients, but very little rigorous research has been conducted on the use of hypnotherapy for insomnia.
- A small 2012 study on massage therapy showed promising results for insomnia in postmenopausal women. However, conclusions cannot be reached on the basis of a single study.
- Most of the studies that have evaluated acupuncture for insomnia have been of poor scientific quality. The current evidence is not rigorous enough to show whether acupuncture is helpful for insomnia.

Nutritional Approaches

MELATONIN AND RELATED DIETARY SUPPLEMENTS

- Melatonin may help with jet lag and sleep problems related to shift work.
- A 2013 evaluation of the results of 19 studies concluded that melatonin may help people with insomnia fall asleep faster, sleep longer, and sleep better, but the effect of melatonin is small compared to that of other treatments for insomnia.
- Dietary supplements containing substances that can be changed into melatonin in the body – L-tryptophan and 5-hydroxytryptophan (5-HTP) – have been researched as sleep aids.

HERBS

- Although chamomile has traditionally been used for insomnia, often in the form of a tea, there is no conclusive evidence from clinical trials showing whether it is helpful. Some people, especially those who are allergic to ragweed or related plants, may have allergic reactions to chamomile.
- Although kava is said to have sedative properties, very little research has been conducted on whether this herb is helpful for insomnia. More importantly, kava supplements have been linked to a risk of severe liver damage.
- Clinical trials of valerian (another herb said to have sedative properties) have had inconsistent results, and its value for insomnia has not been demonstrated. Although few people have reported negative side effects from valerian, it is uncertain whether this herb is safe for long-term use.
- Some “sleep formula” dietary supplements combine valerian with other herbs such as hops, lemon balm, passionflower, and kava or other ingredients such as melatonin and 5-HTP. There is little evidence on these preparations from studies in people.

OTHER COMPLEMENTARY HEALTH APPROACHES

- Aromatherapy is the therapeutic use of essential oils from plants. It is uncertain whether aromatherapy is helpful for treating insomnia because little rigorous research has been done on this topic.
- A 2010 systematic review concluded that current evidence does not demonstrate significant effects of homeopathic medicines for insomnia.

IF YOU ARE CONSIDERING COMPLEMENTARY HEALTH APPROACHES FOR SLEEP PROBLEMS

- Talk to your healthcare providers. Tell them about the complementary health approach you are considering and ask any questions you may have. Because trouble sleeping can be an indication of a more serious condition, and because some prescription and over-the-counter drugs can contribute to sleep problems, it is important to discuss your sleep-related symptoms with your healthcare providers before trying any complementary health product or practice.
- Be cautious about using any sleep product – prescription medications, over-the-counter medications, dietary supplements, or homeopathic remedies. Find out about potential side effects and any risks from long-term use or combining products.
- Keep in mind that “natural” does not always mean safe. For example, kava products can cause serious harm to the liver. Also, a manufacturer’s use of the term “standardized” (or “verified” or “certified”) does not necessarily guarantee product quality or consistency. Dietary supplements can cause health problems if not used correctly. The healthcare providers you see about your sleep problems can advise you.
- If you are pregnant, nursing a child, or considering giving a child a dietary supplement, it is especially important to consult your (or your child’s) healthcare provider.
- If you are considering a practitioner-provided complementary health practice, check with your insurer to see if the services will be covered, and ask a trusted source (such as your healthcare provider or a nearby hospital or medical school) to recommend a practitioner.
- Tell all your healthcare providers about any complementary health approaches you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

Section 46.6 | Substance-Use Disorders and Complementary Health Approaches

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Mind and Body Approaches for Substance Use Disorders,” National Center for Complementary and Integrative Health (NCCIH), April 2018; Text beginning with the heading “Acupuncture” is excerpted from “Mind and Body Approaches for Substance Use Disorders: What the Science Says,” National Center for Complementary and Integrative Health (NCCIH), April 2018.

Mindfulness-based approaches have shown some success when applied to the treatment of substance abuse and addiction. Mindfulness-based approaches for substance abuse treatment, in part, attempt to decrease the impact of negative affect, which is thought to serve as a trigger for substance use. Improving distress tolerance is an important aspect of mindfulness-based substance abuse treatment. These approaches can be part of a comprehensive addiction treatment plan that includes behavioral modifications, and may include pharmaceuticals to decrease cravings, group therapy, or counseling.

This section provides a summary of current research on mind and body approaches, such as acupuncture, hypnotherapy, mindfulness meditation, music therapy, and yoga for substance-use disorders.

ACUPUNCTURE

To date, there is not enough consistent data to support the use of acupuncture for substance-use outcomes; however, there are some findings that suggest acupuncture may have positive effects as an adjunctive therapy for withdrawal/craving and anxiety symptoms. Only a few high-quality studies on acupuncture for smoking cessation have been conducted, so firm conclusions about its effectiveness cannot be drawn

What Does the Research Show?

- A 2016 systematic review and meta-analysis of 41 studies involving 5,227 participants found no

consistent differences between acupuncture and comparative treatments for substance use. There were some findings in favor of acupuncture for withdrawal/craving and anxiety symptoms; however, those findings are limited by low quality evidence.

- A 2014 Cochrane review of 38 randomized trials concluded that although pooled estimates suggest possible short-term effects there is no consistent, bias-free evidence that acupuncture, acupressure, or laser therapy have a sustained benefit on smoking cessation for 6 months or more. However, lack of evidence and methodological problems mean that no firm conclusions can be drawn.
- A 2014 randomized controlled trial of 67 military veterans in recovery from substance-use disorder found that participants' craving and anxiety levels decreased significantly after a single session of acupuncture or relaxation response intervention, suggesting there may be some value in attending regular acupuncture or relaxation response intervention sessions.
- A 2016 systematic review of four trials found that auricular acupuncture was not effective in reducing acute opiate craving or withdrawal, it may be useful as an adjunct treatment to increase treatment retention and decrease methadone detoxification and maintenance dosages in opioid-use disorder.

Safety

- Relatively few complications from the use of acupuncture have been reported to the FDA, in light of the millions of people treated each year and the number of acupuncture needles used. Still, complications have resulted from inadequate sterilization of needles and from improper delivery of treatments.
- When not delivered properly, acupuncture can cause serious adverse effects, including infections and punctured organs.

HYPNOTHERAPY

There is some evidence to suggest that hypnotherapy may improve smoking cessation, but data are not definitive.

What Does the Research Show?

- A 2014 randomized controlled trial of 164 patients hospitalized with cardiac or pulmonary illness compared the efficacy of hypnotherapy alone, as well as hypnotherapy with nicotine replacement therapy, to conventional nicotine replacement therapy alone. The study found that hypnotherapy patients were more likely than nicotine replacement therapy patients to be nonsmokers at 12 weeks and 26 weeks after hospitalization.
- A 2010 Cochrane review of eleven studies compared hypnotherapy with 18 different control interventions. The authors found that hypnotherapy did not have a greater effect on 6-month quit rates than other interventions or no treatment. They concluded that there is not enough evidence to show whether hypnotherapy could be as effective as counseling treatment.
- A 2012 meta-analysis of randomized controlled trials found that acupuncture, hypnotherapy, and aversive smoking increased smoking abstinence, but the patient population in the analysis was small and reports of smoking cessation were not validated by bio-chemical means.

Safety

- Hypnosis is considered safe when performed by a health professional trained in hypnotherapy.
- Self-hypnosis also appears to be safe for most people. There are no reported cases of injury resulting from self-hypnosis.

MINDFULNESS MEDITATION

Available data suggest that mindfulness-based interventions may help significantly reduce the consumption of several substances including alcohol, cigarettes, opiates, and others compared to control groups; however, many studies have had small sample sizes, methodological problems, and a lack of consistently replicated findings.

What Does the Research Show?

- A 2016 review found that mindfulness-based interventions effectively reduce pain intensity, improve functional status, improve pain-related psychological consequences, and improve quality of life; they can also be used as adjunct therapy aimed at improving health-related quality of life in individuals with substance-use disorders interested in self-management strategies. Further, in smokers, mindfulness training used as adjunct therapy with pharmacotherapy shows efficacy in maintaining abstinence comparable to standard of care.
- A 2014 systematic review of 24 studies found evidence suggesting that mindfulness-based interventions can reduce the consumption of several substances including alcohol, cocaine, amphetamines, marijuana, cigarettes, and opiates to a significantly greater extent than waitlist controls, nonspecific educational support groups, and some specific control groups. The review also found preliminary evidence suggesting that mindfulness-based interventions are associated with a reduction in cravings. However, the findings are limited due to small sample sizes of the studies and lack of methodological details.
- Relapse is common following substance abuse treatments. In a 2014 randomized controlled trial involving 286 individuals who successfully completed initial treatment for substance-use disorders, mindfulness-based relapse prevention (MBRP), a group-based psychosocial aftercare that integrates evidence-based practices from mindfulness-based interventions and a cognitive-behavioral relapse prevention (RP) approaches was compared to a 12-step programming and psychoeducation (treatment as usual (TAU)). Compared with TAU, participants assigned to MBRP and RP reported significantly fewer days of substance use and heavy drinking at the 6-month follow-up. Cognitive-behavioral RP showed an advantage over MBRP in time to first drug use. MBRP participants, however, reported significantly fewer days of substance use and significantly decreased heavy drinking at the 12-month follow-up, compared with RP and TAU. These results suggest that mindfulness practices may help reduce the risk of substance abuse relapse by strengthening the ability to monitor and cope with discomfort associated with drug craving or negative affect.
- A 2014 randomized controlled trial involving 286 individuals who successfully completed initial treatment for substance-use disorders found that compared with treatment as usual, participants assigned to receive mindfulness-based relapse prevention (MBRP) and cognitive-behavioral relapse prevention (RP) approaches reported significantly lower risk of relapse to substance use and heavy drinking. Further, among those who used substances, those in the MBRP and RP groups had significantly fewer days of substance use and heavy drinking at the 6-month follow-up.
- A 2011 randomized controlled trial comparing mindfulness training with a standard behavioral smoking cessation treatment found that individuals who received mindfulness training showed a greater rate of reduction in cigarette use immediately after treatment and at 17-week follow-up.
- Several studies have used functional magnetic resonance imaging to examine the effects of mindful attention on the anterior cingulate and prefrontal cortex in smokers, the areas of the brain associated with cravings and self-control. In a 2017 study of 23 participants who completed either mindfulness training or cognitive-behavioral treatment for smoking cessation, the researchers found that stress reactivity in several brain regions including the amygdala and

anterior/mid insula was related to reductions in smoking after treatment. These same regions also differentiated between treatment groups such that the mindfulness training group showed lower stress-reactivity compared to the cognitive-behavioral treatment group. The findings suggest that reduction in stress reactivity may be one of the underlying mechanisms of mindfulness-based treatments. In a 2013 study, participants' self-reported results demonstrated that mindful attention reduced cravings. In addition, the brain imaging results indicated that mindful attention reduced neural activity in a craving-related region of the subgenual anterior cingulate cortex. In another 2013 study, a 2-week course of meditation (5 hours in total) produced a significant reduction in smoking, compared to a relaxation training control. Results of brain imaging showed increased activity for the meditation group in the anterior cingulate and prefrontal cortex.

Safety

- Meditation is considered to be safe for healthy people.
- There have been rare reports that meditation could cause or worsen symptoms in people who have certain psychiatric problems, but this question has not been fully researched.

MUSIC THERAPY

Although there is some evidence that music therapy may have an effect on emotional and motivational outcomes and perceived helpfulness, the efficacy of music therapy for substance abuse disorders is unclear.

What Does the Research Show?

- A 2017 systematic review of 34 quantitative and 6 qualitative studies found beneficial effects of music therapy and music-based interventions on emotional and motivational outcomes, participation, locus of control, and perceived helpfulness, but results were inconsistent across studies. Efficacy of music therapy for substance abuse disorders is unclear.

YOGA

Only a few studies have been conducted on the effects of yoga for smoking cessation. Although preliminary results have been positive, larger, high-quality studies are needed to determine rigorously if yoga is an effective treatment.

What Does the Research Show?

- A 2013 systematic review of 14 clinical trials concluded that yoga and meditation-based therapies hold promise in assisting with smoking cessation; however, larger, high-quality studies are needed to determine rigorously if yoga and meditation are effective treatments.
- A 2012 study examined the effect of yoga on smoking cessation. Results of this study provide preliminary evidence that yoga may be an effective adjunctive treatment for smoking cessation in women.
- A 2011 study examined the effects of physical activity, including cardiovascular exercise and Hatha yoga, on craving to smoke and smoking withdrawal. Participants who engaged in physical activity reported a decrease in craving to smoke, an increase in positive affect, and a decrease in negative affect.

Safety

- Yoga is generally low-impact and safe for healthy people when practiced appropriately under the guidance of a well-trained instructor.
- Overall, those who practice yoga have a low rate of side effects, and the risk of serious injury

from yoga is quite low. However, certain types of stroke as well as pain from nerve damage are among the rare possible side effects of practicing yoga.

- Women who are pregnant and people with certain medical conditions, such as high blood pressure, glaucoma, and sciatica should modify or avoid some yoga poses.

Chapter 47 | Pets Are Good for Mental Health

Nothing compares to the joy of coming home to a loyal companion. The unconditional love of a pet can do more than keep you company. Pets may also decrease stress, improve heart health, and even help children with their emotional and social skills.

An estimated 68 percent of U.S. households have a pet. But, who benefits from an animal? And which type of pet brings health benefits?

Over the past 10 years, the National Institutes of Health (NIH) has partnered with the Mars Corporation's WALTHAM Centre for Pet Nutrition to answer questions like these by funding research studies.

Scientists are looking at what the potential physical and mental health benefits are for different animals – from fish to guinea pigs to dogs and cats.

POSSIBLE HEALTH EFFECTS

Research on human-animal interactions is still relatively new. Studies have shown positive health effects, but the results have been mixed.

Interacting with animals has been shown to decrease levels of cortisol (a stress-related hormone) and lower blood pressure. Other studies have found that animals can reduce loneliness, increase feelings of social support, and boost your mood.

The NIH/Mars Partnership is funding a range of studies focused on the relationships we have with animals. For example, researchers are looking into how animals might influence child development. They are studying animal interactions with kids who have autism, attention deficit hyperactivity disorder (ADHD), and other conditions.

“There’s not one answer about how a pet can help somebody with a specific condition,” explains Dr. Layla Esposito, who oversees NIH’s Human-Animal Interaction Research Program. “Is your goal to increase physical activity? Then you might benefit from owning a dog. You have to walk a dog several times a day and you’re going to increase physical activity. If your goal is reducing stress, sometimes watching fish swim can result in a feeling of calmness. So there’s no one type fits all.”

The National Institutes of Health is funding large-scale surveys to find out the range of pets people live with and how their relationships with their pets relate to health.

“We’re trying to tap into the subjective quality of the relationship with the animal – that part of the bond that people feel with animals – and how that translates into some of the health benefits,” explains Dr. James Griffin, a child development expert at NIH.

ANIMALS HELPING PEOPLE

Animals can serve as a source of comfort and support. Therapy dogs are especially good at this. They are sometimes brought into hospitals or nursing homes to help reduce patients’ stress and anxiety.

“Dogs are very present. If someone is struggling with something, they know how to sit there and be loving,” says Dr. Ann Berger, a physician and researcher at the NIH Clinical Center in Bethesda, Maryland. “Their attention is focused on the person all the time.”

Berger works with people who have cancer and terminal illnesses. She teaches them about mindfulness to help decrease stress and manage pain.

“The foundations of mindfulness include attention, intention, compassion, and awareness,” Berger says.

“All of those things are things that animals bring to the table. People kind of have to learn it. Animals do this innately.”

Researchers are studying the safety of bringing animals into hospital settings because animals may expose people to more germs. A current study is looking at the safety of bringing dogs to visit children with cancer, Esposito says. Scientists will be testing the children’s hands to see if there are dangerous levels of germs transferred from the dog after the visit.

Dogs may also aid in the classroom. One study found that dogs can help children with ADHD focus their attention. Researchers enrolled two groups of children diagnosed with ADHD into 12-week group therapy sessions. The first group of kids read to a therapy dog once a week for 30 minutes. The second group read to puppets that looked like dogs.

Kids who read to the real animals showed better social skills and more sharing, cooperation, and volunteering. They also had fewer behavioral problems.

Another study found that children with autism spectrum disorder were calmer while playing with guinea pigs in the classroom. When the children spent 10 minutes in a supervised group playtime with guinea pigs, their anxiety levels dropped. The children also had better social interactions and were more engaged with their peers. The researchers suggest that the animals offered unconditional acceptance, making them a calm comfort to the children.

“Animals can become a way of building a bridge for those social interactions,” Griffin says. She or he adds that researchers are trying to better understand these effects and who they might help.

Animals may help you in other unexpected ways. A study showed that caring for fish helped teens with diabetes better manage their disease. Researchers had a group of teens with type 1 diabetes care for a pet fish twice a day by feeding and checking water levels. The caretaking routine also included changing the tank water each week. This was paired with the children reviewing their blood glucose (blood sugar) logs with parents.

Researchers tracked how consistently these teens checked their blood glucose. Compared with teens who were not given a fish to care for, fish-keeping teens were more disciplined about checking their own blood glucose levels, which is essential for maintaining their health.

While pets may bring a wide range of health benefits, an animal may not work for everyone. Studies suggest that early exposure to pets may help protect young children from developing allergies and asthma. But, for people who are allergic to certain animals, having pets in the home can do more harm than good.

HELPING EACH OTHER

Pets also bring new responsibilities. Knowing how to care for and feed an animal is part of owning a pet. NIH/Mars funds studies looking into the effects of human-animal interactions for both the pet and the person.

Remember that animals can feel stressed and fatigued, too. It is important for kids to be able to recognize signs of stress in their pet and know when not to approach. Animal bites can cause serious harm.

“Dog bite prevention is certainly an issue parents need to consider, especially for young children who don’t always know the boundaries of what’s appropriate to do with a dog,” Esposito explains.

Researchers will continue to explore the many health effects of having a pet. “We’re trying to find out what’s working, what’s not working, and what’s safe – for both the humans and the animals,” Esposito says.

Chapter 48 | Technology and the Future of Mental-Health Treatment

Technology has opened a new frontier in mental-health support and data collection. Mobile devices such as cell phones, smartphones, and tablets are giving the public, doctors, and researchers new ways to access help, monitor progress, and increase understanding of mental well-being.

Mobile mental-health support can be very simple, but effective. For example, anyone with the ability to send a text message can contact a crisis center. New technology can also be packaged into an extremely sophisticated app for smartphones or tablets. Such apps might use the device's built-in sensors to collect information on a user's typical behavior patterns. If the app detects a change in behavior, it may provide a signal that help is needed before a crisis occurs. Some apps are stand-alone programs that promise to improve memory or thinking skills. Others help the user connect to a peer counselor or to a health-care professional.

Excitement about the huge range of opportunities has led to a burst of app development. There are thousands of mental health apps available in iTunes and Android app stores, and the number is growing every year. However, this new technology frontier includes a lot of uncertainty. There is very little industry regulation and very little information on app effectiveness, which can lead consumers to wonder which apps they should trust.

Before focusing on the state of the science and where it may lead, it is important to look at the advantages and disadvantages of expanding mental-health treatment and research into a mobile world.

THE PROS AND CONS OF MENTAL HEALTH APPS

Experts believe that technology has a lot of potential for clients and clinicians alike. A few of the advantages of mobile care include:

- **Convenience.** Treatment can take place anytime and anywhere (e.g., at home in the middle of the night or on a bus on the way to work) and may be ideal for those who have trouble with in-person appointments.
- **Anonymity.** Clients can seek treatment options without involving other people.
- **An introduction to care.** Technology may be a good first step for those who have avoided mental-healthcare in the past.
- **Lower cost.** Some apps are free or cost less than traditional care.
- **Service to more people.** Technology can help mental-health providers offer treatment to people in remote areas or to many people in times of sudden need (e.g., following a natural disaster or terror attack).
- **Interest.** Some technologies might be more appealing than traditional treatment methods, which may encourage clients to continue therapy.
- **24-hour service.** Technology can provide round-the-clock monitoring or intervention support.
- **Consistency.** Technology can offer the same treatment program to all users.
- **Support.** Technology can complement traditional therapy by extending an in-person session, reinforcing new skills, and providing support and monitoring.
- **Objective data collection.** Technology can quantitatively collect information such as location, movement, phone use, and other information.

This new era of mental-health technology offers great opportunities, but also raises a number of concerns. Tackling potential problems will be an important part of making sure new apps provide benefits without causing harm. That is why the mental-health community and software developers are focusing on:

- **Effectiveness.** The biggest concern with technological interventions is obtaining scientific evidence that they work and that they work as well as traditional methods.
- **For whom and for what.** Another concern is understanding if apps work for all people and for all mental-health conditions.
- **Privacy.** Apps deal with very sensitive personal information so app makers need to be able to guarantee privacy for app users.
- **Guidance.** There are no industry-wide standards to help consumers know if an app or other mobile technology is proven effective.
- **Regulation.** The question of who will or should regulate mental-health technology and the data it generates needs to be answered.
- **Overselling.** There is some concern that if an app or program promises more than it delivers, consumers may turn away from other, more effective therapies.

CURRENT TRENDS IN APP DEVELOPMENT

Creative research and engineering teams are combining their skills to address a wide range of mental-health concerns. Some popular areas of app development include:

Self-Management Apps

“Self-management” means that the user puts information into the app so that the app can provide feedback. For example, the user might set up medication reminders, or use the app to develop tools for managing stress, anxiety, or sleep problems. Some software can use additional equipment to track heart rate, breathing patterns, blood pressure, etc. and may help the user track progress and receive feedback.

Apps for Improving Thinking Skills

Apps that help the user with cognitive remediation (improved thinking skills) are promising. These apps are often targeted toward people with serious mental illnesses.

Skill-Training Apps

Skill-training apps may feel more like games than other mental health apps as they help users learn new coping or thinking skills. The user might watch an educational video about anxiety management or the importance of social support. Next, the user might pick some new strategies to try and then use the app to track how often those new skills are practiced.

Illness Management, Supported Care

This type of app technology adds additional support by allowing the user to interact with another human being. The app may help the user connect with peer support or may send information to a trained health-care provider who can offer guidance and therapy options. Researchers are working to learn how much human interaction people need for app-based treatments to be effective.

Passive Symptom Tracking

A lot of effort is going into developing apps that can collect data using the sensors built into smartphones. These sensors can record movement patterns, social interactions (such as the number of texts and phone calls), behavior at different times of the day, vocal tone and speed, and more. In the future, apps may be able to analyze these data to determine the user’s real-time state of mind. Such apps may be able to recognize changes in behavior patterns that signal a mood episode such as mania, depression, or

psychosis before it occurs. An app may not replace a mental-health professional, but it may be able to alert caregivers when a client needs additional attention. The goal is to create apps that support a range of users, including those with serious mental illnesses.

Data Collection

Data collection apps can gather data without any help from the user. Receiving information from a large number of individuals at the same time can increase researchers' understanding of mental health and help them develop better interventions.

RESEARCH VIA SMARTPHONE

Dr. Patricia Areán's pioneering BRIGHTEN study, showed that research via smartphone app is already a reality. The BRIGHTEN study was remarkable because it used technology to both deliver treatment interventions and also to actually conduct the research trial. In other words, the research team used technology to recruit, screen, enroll, treat, and assess participants. BRIGHTEN was especially exciting because the study showed that technology can be an efficient way to pilot test promising new treatments, and that those treatments need to be engaging.

A NEW PARTNERSHIP: CLINICIANS AND ENGINEERS

Researchers have found that interventions are most effective when people like them, are engaged, and want to continue using them. Behavioral health apps will need to combine the engineers' skills for making an app easy to use and entertaining with the clinician's skills for providing effective treatment options.

Researchers and software engineers are developing and testing apps that do everything from managing medications to teaching coping skills to predicting when someone may need more emotional help. Intervention apps may help someone give up smoking, manage symptoms, or overcome anxiety, depression, posttraumatic stress disorder (PTSD), or insomnia. While the apps are becoming more appealing and user-friendly, there still is not a lot of information on their effectiveness.

EVALUATING APPS

There are no review boards, checklists, or widely accepted rules for choosing a mental health app. Most apps do not have peer-reviewed research to support their claims, and it is unlikely that every mental health app will go through a randomized, controlled research trial to test effectiveness. One reason is that testing is a slow process and technology evolves quickly. By the time an app has been put through rigorous scientific testing, the original technology may be outdated.

Currently, there are no national standards for evaluating the effectiveness of the hundreds of mental health apps that are available. Consumers should be cautious about trusting a program. However, there are a few suggestions for finding an app that may work for you:

- Ask a trusted health-care provider for a recommendation. Some larger providers may offer several apps and collect data on their use.
- Check to see if the app offers recommendations for what to do if symptoms get worse or if there is a psychiatric emergency.
- Decide if you want an app that is completely automated or an app that offers opportunities for contact with a trained person.
- Search for information on the app developer. Can you find helpful information about her or his credentials and experience?
- Beware of misleading logos. The National Institute of Mental Health (NIMH) has not developed and does not endorse any apps. However, some app developers have unlawfully

used the NIMH logo to market their products.

- Search the PubMed database offered by the U.S. National Library of Medicine (NLM). This resource contains articles on a wide range of research topics, including mental health app development.
- If there is no information about a particular app, check to see if it is based on a treatment that has been tested. For example, research has shown that Internet-based cognitive-behavior therapy (CBT) is as effective as conventional CBT for disorders that respond well to CBT, such as depression, anxiety, social phobia, and panic disorder.
- Try it. If you are interested in an app, test it for a few days and decide if it is easy to use, holds your attention, and if you want to continue using it. An app is only effective if keeps users engaged for weeks or months.

WHAT IS THE NIMH'S ROLE IN MENTAL-HEALTH INTERVENTION TECHNOLOGY?

Between FY2009 and FY2015, NIMH awarded 404 grants totaling 445 million for technology-enhanced mental-health intervention grants. These grants were for studies of computer-based interventions designed to prevent or treat mental-health disorders.

NIMH staff actively review and evaluate research grants related to technology. In recent years, these grants focused on:

- Feasibility, efficacy, and effectiveness research
- Technology for disorders such as schizophrenia, HIV, depression, anxiety, autism, suicide, and trauma
- More interventions for cognitive issues, illness management, behavior, and health communication
- Fewer interventions for a personal computer and more interventions for mobile devices
- More engaging ways to deliver therapies or skill development (e.g., interactive formats or game-like approaches)
- Real-time (users exchanging information with peers or professionals as needed)
- Active and passive mobile assessment/monitoring

A significant portion of NIMH funding of these types of technologies is through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs.

In addition, NIMH created the National Advisory Mental Health Council Workgroup on Opportunities and Challenges of Developing Information Technologies on Behavioral and Social Science Research to track and guide the cutting edge of this rapidly-changing area. In 2017, the workgroup released a report reviewing the opportunities for – and the challenges of – using new information technologies to study human behaviors relevant to the NIMH mission. NIMH's interest in this area of research was further highlighted in a 2018 notice identifying research on digital health technology to advance the assessment, detection, prevention, treatment, and delivery of services for mental-health conditions as a high-priority area for the Institute.

The Future: What Types of Research Does the NIMH Expect in the Future?

Recently, there has been increased interest in:

- Using mobile technology for a wider range of disorders, from mild depression or anxiety to schizophrenia, autism, and suicide
- Developing and refining new interventions, instead of adapting existing interventions to work with new technologies
- Developing technologies that work on any device

- Incorporating face-to-face contact or remote counseling (phone or online) to provide a balance between technology and the “human touch”

This chapter includes text excerpted from “Technology and the Future of Mental Health Treatment,” National Institute of Mental Health (NIMH), September 2019.

Chapter 49 | Health Insurance and Mental-Health Services

DO YOU HAVE INSURANCE QUESTIONS ABOUT MENTAL HEALTH OR ADDICTION SERVICES?

Help is available, if you have:

- Been denied coverage
- Reached a limit on your plan (such as copayments, deductibles, yearly visits, etc.)
- Have an overly large copay or deductible

You may be protected by Mental Health and Substance Use Disorder Coverage Parity laws require most health plans to apply similar rules to mental-health benefits as they do for medical/surgical benefits. Select your insurance type below for more about the protections that apply for you, and to get assistance information. There are federal and state agencies who can provide assistance.

Q: Does the Affordable Care Act Require Insurance Plans to Cover Mental-Health Benefits?

Answer: As of 2014, most individual and small group health insurance plans, including plans sold on the Marketplace are required to cover mental health and substance-use disorder services. Medicaid Alternative Benefit Plans also must cover mental health and substance-use disorder services. These plans must have coverage of essential health benefits, which include 10 categories of benefits as defined under the healthcare law. One of those categories is mental health and substance-use disorder services. Another is rehabilitative and habilitative services. Additionally, these plans must comply with mental health and substance use parity requirements, as set forth in the Mental Health Parity and Addiction Equity Act (MHPAEA), meaning coverage for mental health and substance abuse services generally cannot be more restrictive than coverage for medical and surgical services.

Q: How Do You Find Out If Your Health Insurance Plan Is Supposed to Be Covering Mental Health or Substance-Use Disorder Services in Parity with Medical and Surgical Benefits? What Do You Do If You Think Your Plan Is Not Meeting Parity Requirements?

Answer: In general, for those in large employer plans, if mental health or substance-use disorder services are offered, they are subject to the parity protections required under MHPAEA. And, as of 2014, for most small employer and individual plans, mental health and substance-use disorder services must meet MHPAEA requirements.

If you have questions about your insurance plan, we recommend you first look at your plan's enrollment materials, or any other information you have on the plan, to see what the coverage levels are for all benefits. Because of the Affordable Care Act, health insurers are required to provide you with an easy-to-understand summary about your benefits including mental-health benefits, which should make it easier to see what your coverage is. More information also may be available via the Mental Health and Addiction Insurance Help consumer portal prototype and with your state Consumer Assistance Program (CAP). Additional, helpful information on what you can do to better understand the parity protections you have is available in Know your Rights: Parity for Mental Health and Substance-Use Disorder Benefits.

Q: Does Medicaid Cover Mental Health or Substance-Use Disorder Services?

Answer: All state Medicaid programs provide some mental-health services and some offer substance-use disorder services to beneficiaries, and Children's Health Insurance Program (CHIP) beneficiaries receive

a full service array. These services often include counseling, therapy, medication management, social work services, peer supports, and substance-use disorder treatment. While states determine which of these services to cover for adults, Medicaid and CHIP requires that children enrolled in Medicaid receive a wide range of medically necessary services, including mental-health services. In addition, coverage for the new Medicaid adult expansion populations is required to include essential health benefits, including mental health and substance-use disorder benefits, and must meet mental health and substance abuse parity requirements under MHPAEA in the same manner as health plans. Find additional information on Medicaid and mental health and substance-use disorder services.

Q: Does Medicare Cover Mental Health or Substance-Use Disorder Services?

Answer: Yes, Medicare covers a wide range of mental-health services.

Medicare Part A (Hospital Insurance) covers inpatient mental-healthcare services you get in a hospital. Part A covers your room, meals, nursing care, and other related services and supplies.

Medicare Part B (Medical Insurance) helps cover mental-health services that you would generally get outside of a hospital, including visits with a psychiatrist or other doctor, visits with a clinical psychologist or clinical social worker, and lab tests ordered by your doctor.

Medicare Part D (Prescription Drug) helps cover drugs you may need to treat a mental-health condition. Each Part D plan has its own list of covered drugs, known as “formulary.” If you get your Medicare benefits through a Medicare Advantage Plan (like an HMO or PPO) or other Medicare health plan, check your plan’s membership materials or call the plan for details about how to get your mental-health benefits.

If you get your Medicare benefits through traditional Medicare (not a Medicare Advantage plan) and want more information, visit Medicare and Your Mental-Health Benefits.

Q. What Can You Do If You Think You Need Mental Health or Substance-Use Disorder Services for Yourself or Family Members?

Here are three steps you can take right now:

1. Learn more about how you, your friends, and your family can obtain health insurance coverage provided by Medicaid or CHIP or the Health Insurance Marketplaces by visiting [HealthCare.gov](https://www.healthcare.gov).
2. Find out more about how the law is expanding coverage of mental health and substance-use disorder benefits and federal parity protections:
3. Find help in your area with the Behavioral Health Treatment Services Locator or the Find a Health Center.

Q: What Is the Health Insurance Marketplace?

The Health Insurance Marketplace is designed to make buying health coverage easier and more affordable. The Marketplace allows individuals to compare health plans, get answers to questions, find out if they are eligible for tax credits to help pay for private insurance or health programs like the Children’s Health Insurance Program (CHIP), and enroll in a health plan that meets their needs. The Marketplace Can Help You:

- Look for and compare private health plans.
- Get answers to questions about your health coverage options.
- Get reduced costs, if you are eligible.
- Enroll in a health plan that meets your needs.

Chapter 50 | Working with a Mental-Health Condition

Millions of Americans living with mental-health conditions lead happy, successful lives. People with very serious mental health and substance-abuse problems might have trouble with basic needs, like finding a place to live, a job, or healthcare. Learn more about your legal rights, finding a job, and how to stay healthy during stressful transitions.

HOW CAN YOU FIND A JOB?

Many people with mental-health conditions can and do work. Finding a job you enjoy can help improve your mental health and give you a sense of purpose. Studies show that most adults with a serious or severe mental-health condition want to work and about 6 out of 10 can succeed with the right kind of support. More than 1 in every 4 women who work have a disability of some type (a physical disability or a mental-health condition).

Women whose mental-health conditions have affected their ability to accomplish daily tasks may have more trouble finding a job, especially if they have been out of the workforce for a long time. If you do not have a full-time job right now, you may want to try a part-time job or volunteer before committing to full-time work. You can also take an online test, called a “skills assessment” or an “interest assessment,” which can help you learn more about the types of work you might enjoy.

Check with the mental health agency where you receive mental health services. Your state may offer several different ways to find employment, including:

- **Vocational rehabilitation (rehab) services.** Rehab services help a person with a serious mental-health condition or disability find and keep a job. Different states and communities have different requirements for who is eligible to get vocational rehab services.
- **Supported employment.** This type of program helps people with serious mental illnesses get jobs in the community and be successful in the workplace.
- **Clubhouses.** Clubhouses are settings that allow people with serious mental-health conditions to live and work together, providing services and support to one another.
- **Local public employment office.** The Department of Labor (DOL) operates employment offices in all 50 states. You can find job counselors and information about opportunities available in your area. Visit the DOL’s service locator to find an office near you.

IF YOU CANNOT WORK, WHAT DO YOU DO ABOUT MONEY?

If you are unable to work because of a mental-health condition or any other disability, there are some options for financial support. These include disability insurance and disability payments through Social Security.

- **Disability insurance.** Some people purchase disability insurance policies, either on their own or through their employer, before a disability happens. If you have been paying each month into a disability insurance policy and now you are disabled and cannot work, you may be able to receive payments. Contact your employer or insurance company for more information.
- **Social Security Income (SSI).** SSI is cash assistance for people who have little to no income. The amount of cash you receive from SSI depends on your other income and living arrangements. Currently, the standard amount is about \$700 per month for an individual, but

your payment may be more or less, depending on where you live and what other help you may get. To find out whether you qualify for SSI benefits, visit the Social Security Administration (SSA) website or call the SSA at toll-free phone: 800-772-1213.

- **Social Security Disability Insurance (SSDI).** SSDI provides monthly income to people who become disabled by a physical or mental-health condition before retirement age. More than 1 in 3 people who receive SSDI get it because of a mental-health condition.

If you are a member of the military, you can get your Social Security application processed faster.

HOW DO YOU PAY FOR TREATMENT?

Most health plans cover preventive services, like depression screening for adults and behavioral assessments for children, at no additional cost. Most health insurance plans must cover treatment for mental health and substance-use problems in the same ways medical or surgical problems are covered.

- If you have insurance, contact your insurance provider to find out what is included in your plan.
- If you have Medicaid, your plan will provide some mental health services and may offer services to help with substance-use disorders.
- If you have Medicare, your plan may help cover mental health services, including hospital stays, visits to a therapist, and medicines you may need.

If you do not have insurance, see whether you are eligible for free or low-cost health insurance (including Medicaid or the Children's Health Insurance Plan) at the website: [HealthCare.gov](https://www.healthcare.gov).

SHOULD YOU TELL PEOPLE YOU WORK WITH THAT YOU HAVE A MENTAL-HEALTH CONDITION?

There is no law that requires you to share personal health information, including mental-health conditions, with anyone you work with. Telling others about your mental-health condition can affect your job in the future. If you want to tell someone you work with about your mental health illness, think about your reasons carefully. It might help to make a list of the good and bad outcomes of telling your manager or someone in human resources.

Your employer must make reasonable accommodations if they know about your mental-health condition, but employers do not have to accommodate disabilities that they do not know about. This may help you decide whether you tell your employer about your mental-health condition.

Learn more reasons to tell or not tell your employer about a mental-health condition from the U.S. Equal Employment Opportunity Coalition and the National Alliance on Mental Illness.

WHAT LAWS PROTECT PEOPLE WITH DISABILITIES?

Many federal laws protect the rights of people with disabilities, including mental-health conditions. The main law is the Americans with Disabilities Act (ADA). It mostly protects people from discrimination at work and in public places and programs.

Under the ADA, you are protected if:

- Your mental-health condition (if left untreated) interferes with your ability to get things done at home or at work
- You can perform the essential functions of a job you have or hope to get, with or without reasonable accommodations (such as a flexible work schedule)

Other laws that protect people with disabilities include:

- **The Fair Housing Act.** This law makes it illegal to deny housing to a renter or buyer because of a disability. Owners must also make reasonable accommodations to people with disabilities.
- **The Individuals with Disabilities Education Act.** This law requires that a free public education be made available to children and youth with disabilities. It also requires that the education be designed to meet their unique educational needs.
- **The Rehabilitation Act of 1973.** This law is very broad and requires that all federal programs, activities, and employment be accessible to people with disabilities. It served as the foundation for the ADA and helps people with disabilities become employed and independent.

HOW DOES THE AMERICANS WITH DISABILITIES ACT PROTECT YOU AT WORK?

The Americans with Disabilities Act (ADA) protects you from discrimination based on disability, including harassment related to disability. For example, you cannot be fired just because you take medicine for a mental-health condition. However, an employer can fire you for poor performance. It is better to ask for reasonable accommodations before a disability causes problems with job performance. Under the ADA:

- Your employer must make reasonable accommodations if they know about your mental-health condition. Your employer is allowed to ask for documentation from a health-care professional about your condition. The documentation does not need to be detailed.
- Employers do not have to accommodate disabilities that they do not know about. This may help you decide whether you tell your employer about your mental-health condition.
- If your employer knows about your disability and you are having a difficult time doing your job, your employer is allowed to ask whether you need reasonable accommodations.
- An employer cannot legally ask questions about your medical or psychiatric history during an interview.
- An employer is allowed to ask you questions that help the employer decide whether you can perform essential duties of a job. An employer may ask you about your ability to meet the physical requirements for jobs involving physical labor, your ability to get along with people, or your ability to finish tasks on time and to come to work every day.

WHAT IS AN EXAMPLE OF A REASONABLE ACCOMMODATION AT WORK FOR SOMEONE WITH A MENTAL-HEALTH CONDITION?

Examples of reasonable accommodations for people with mental-health conditions may include:

- Providing self-paced workloads and flexible hours
- Adjusting your job responsibilities
- Allowing leave (paid or unpaid) if you are hospitalized or temporarily unable to work
- Assigning a flexible, supportive, and understanding supervisor
- Changing your work hours to allow you to attend psychiatrist or therapist appointments
- Providing more support or supervision, such as writing to-do lists and checking in more often with your supervisor

An employer does not have to provide these specific accommodations, but these types of accommodations are often considered reasonable for some jobs.

WHAT DO YOU DO IF YOU HAVE BEEN DISCRIMINATED AGAINST BECAUSE OF YOUR MENTAL-HEALTH CONDITION?

If you have experienced employment discrimination because of your mental-health condition, you can file

an administrative charge or complaint with the U.S. Equal Employment Opportunity Commission (EEOC) or a state or local anti-discrimination agency. You can also file a lawsuit in court, but only after filing an administrative charge.

The Fair Housing Act bars discrimination in rental housing for people with disabilities. This means that property owners or managers cannot refuse to rent to you because of a disability, including mental-health conditions. Learn more about the Fair Housing Act website: (www.justice.gov/crt/fair-housing-act-1#disability). If you believe you have been discriminated against, you can file a housing complaint online through the Fair Housing Act.

WHAT STEPS CAN YOU TAKE TO PROTECT YOUR MENTAL HEALTH?

During stressful times like job and housing transitions, you can try the following tips to stay mentally healthy:

- **Take your medicines.** If you take medicines for a mental-health condition, do not stop taking them without first talking with your doctor or nurse.
- **Have a plan.** Learn about the things that help you feel well and about the things that cause you to feel stressed. Develop a plan so that you can identify warning signs that your mental or physical health might be slipping and an action plan for getting the support you need to stay well.
- **Get enough sleep.** Lack of sleep can affect your mental and physical health. It can also make it more difficult to cope with mental-health conditions.
- **Reach out to your support network.** Tell your friends and family if you are going through something like a job or housing transition. Ask for help if you need it.
- **Be physically healthy.** Getting active, quitting smoking, limiting alcohol, and eating the right amount of healthy foods from across the food groups help your body and mind feel better.
- **Get professional help.** Keep your appointments with a mental-health professional such as a therapist, counselor, or social worker. This person can help notice signs of mental-health conditions getting worse.

This chapter includes text excerpted from "Working with a Mental Health Condition," Office on Women's Health (OWH), U.S. Department of Health and Human Services (HHS), August 28, 2018.

Chapter 51 | **COVID-19 and Mental Health**

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Section 51.1 | Mental Healthcare during COVID-19 Pandemic

This section includes text excerpted from “CMS Data Shows Vulnerable Americans Forgoing Mental Health Care during COVID-19 Pandemic,” Centers for Medicare & Medicaid Services (CMS), May 14, 2021.

The Centers for Medicare & Medicaid Services (CMS) released data today highlighting the continued impact the COVID-19 public health emergency (PHE) is having on Medicaid and Children’s Health Insurance Program (CHIP) beneficiaries and utilization of health services. The data show that, from March through October 2020, beneficiaries have foregone millions of primary, preventive, and mental healthcare visits due to the COVID-19 PHE, compared to the same time period in 2019. Although utilization rates for some treatments have rebounded to prepandemic levels, mental-health services show the slowest rebound.

This decline in utilization is occurring at a time when preliminary evidence shows mental-health conditions have worsened nationwide.

The gap in service utilization due to the PHE, particularly for mental-health services, may have a substantial impact on long-term health outcomes. Medicaid and CHIP-funded mental-health services, in addition to primary and preventative services, cover the majority of children, people living in poverty, and those with special healthcare needs. Medicaid and CHIP also cover millions of racial and ethnic minorities.

To help close this gap in services, CMS is emphasizing mental healthcare in its recently launched Connecting Kids to Coverage National Campaign, a national outreach and enrollment initiative funded under the Children’s Health Insurance Program Reauthorization Act (CHIPRA) and the Affordable Care Act, that reaches out to families with children and teens eligible for Medicaid and CHIP.

The Biden-Harris Administration is committed to achieving mental health parity, expanding access to mental healthcare, and eliminating mental-health stigmas. In addition to improving access to mental-health services provided to Medicaid and CHIP beneficiaries, President Biden’s American Rescue Plan provided funding

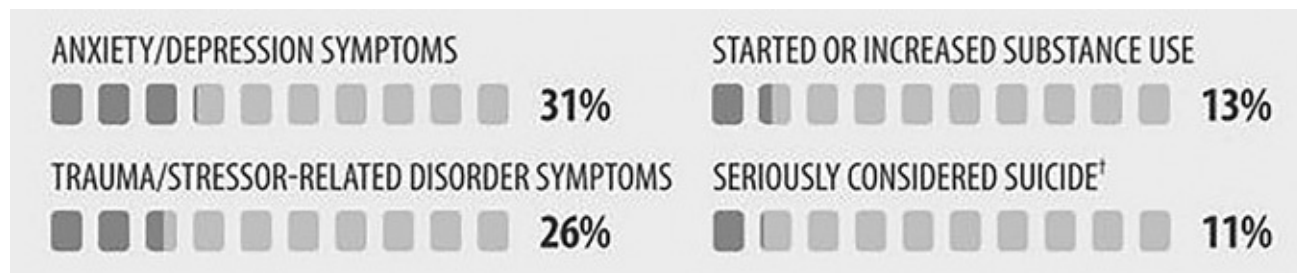


Figure 51.1. People Struggling with Mental Health or Substance Use during COVID-19

to address our mental health and substance-use challenges, including \$3 billion in funding for block grants to address mental health and substance-use prevention, treatment, and recovery services. This is alongside \$1.4 billion to support the mental health needs of health-care professionals and first responders, as well as funding specifically for pediatric mental health.

“More than 100 million Americans, including 43 million children, relied on us to deliver access to mental health and other services they needed through Medicaid and CHIP in 2020. Medicaid is the largest payer in the nation for mental health and that care is a lifeline for many,” said CMS Acting Administrator

Liz Richter. “This new data provides a window into the impacts of the pandemic for marginalized communities – particularly children and other vulnerable people – and is critical as we work towards meeting the needs of those that rely on Medicaid and CHIP. While we are encouraged that people are accessing some healthcare services at pre-pandemic levels, there is work to do to connect people to mental healthcare services and to ensure we fill the gap in other types of services that was caused by the pandemic. The Centers for Medicare & Medicaid Services is committed to connecting people and children to healthcare – including mental healthcare.”

Specifically, the results demonstrate a 34 percent decline in the number of mental-health services utilized by children under age 19, compared to the same time period in 2019, and 22 percent decline in the number of mental-health services utilized by adults aged 19 to 64, compared to the same time period in 2019. This translates to approximately 14 million fewer mental-health services for children and approximately 12 million fewer mental-health services for adults, for a total of nearly 26 million fewer mental-health services utilized across both groups. Similarly, although there are preliminary reports of increased drug-related mortality due to the COVID-19 PHE, substance-use disorder service utilization fell by 3.6 million services (13 percent decline) when compared to the same time period in 2019.

It is important to note that the data does show that utilization rates for certain primary and preventive services for children under age 19 have recovered to pre-pandemic levels, or have started to rebound across many areas of the country. While this recovery is encouraging, millions of services still need to be delivered to make up for those missed between March and October 2020. Preliminary 2020 data shows 9 percent fewer childhood vaccinations for beneficiaries under age two (1.8 million services), 21 percent fewer child screening services (4.6 million services) among children under age 19, and 39 percent fewer dental services (11.4 million services) among children under age 19 when compared to pre-pandemic levels. This data takes into account increases in telehealth utilization of services via telehealth.

Throughout the pandemic, the CMS has encouraged states to consider telehealth options to combat COVID-19 and increase access to care. This updated data snapshot demonstrates a marked increase in the number of services delivered via telehealth compared to prior years. The number of services delivered via telehealth surged 2,700 percent during the PHE to nearly 68 million between March and October 2020. However, this increase has not been enough to offset the decline in service utilization in other areas.

For COVID-19 treatment and acute care use, the preliminary findings show more than 1.2 million Medicaid and CHIP beneficiaries received COVID-19 treatment, and nearly 124,000 were hospitalized through October 2020. Despite significant variance across states regarding this data, preliminary results suggest that the COVID-19 treatment rate increases with age. In addition, Medicaid and CHIP paid for nearly 10 million COVID-19 tests or testing related services, although this data does not include tests provided free of charge or covered by other insurance programs, including Medicare.

Centers for Medicare & Medicaid Services (CMS) will continue monitoring and working with states, providers and stakeholders to develop and implement innovative ways to provide access to critical healthcare such as preventive childhood vaccinations and mental-health services to beneficiaries enrolled in Medicaid and CHIP.

Section 51.2 | Mental Health and Coping during the Coronavirus Pandemic

This section includes text excerpted from “Mental Health and Coping during the Coronavirus (COVID-19) Pandemic,” U.S. Department of Health and Human Services (HHS), May 14, 2021.

Everyone reacts differently to stressful situations such as an infectious disease outbreak. It is normal to experience a wide range of emotions.

Are you feeling a mix emotions during Coronavirus?

Stress during an infectious disease outbreak can include:

- Fear and worry about your own health and the health of your loved ones
- Changes in sleep or eating patterns
- Difficulty sleeping or concentrating
- Worsening of chronic health problems
- Worsening of mental-health conditions
- Increased use of alcohol, tobacco, or other drugs

TIPS AND ADVICE FOR COPING DURING CORONAVIRUS

Coping with Stress during the COVID-19 Pandemic

Social distancing, quarantine, and isolation can be overwhelming and cause strong emotions in adults and children. Finding ways to cope with stress in a healthy way will make you, the people you care about, and your community stronger.

Grieving during the COVID-19 Pandemic

People grieve and accept loss in different ways. Remember that mourning takes time and can present itself in many different emotions.

Talking to Children about Coronavirus

Parents, caregivers, and other trusted adults play an important role in helping children make sense of what they hear in a way that is honest, accurate, and minimizes anxiety or fear.

Helping Older Adults Stay Healthy at Home

Many older adults are feeling isolated in their homes, which can affect their health and well-being. Stay connected from your home by video chatting and calling friends and family.

Supporting Veterans through the COVID-19 Pandemic

Service members, veterans, and their family members may experience stress differently. There are practical steps you can take to manage anxiety and improve your well-being.

Section 51.3 | Coping with Stress

This section contains text excerpted from the following sources: Text in this section begins with excerpts from “Coping with Stress,” Centers for Disease Control and Prevention (CDC), July 22, 2021; Text under the heading “Tips to Reduce Your Stress and Anxiety” is excerpted from “Feeling Stressed or Anxious about the COVID-19 Pandemic?” Substance Abuse and Mental Health Services Administration (SAMHSA), January 1, 2020; Text under the heading “Principles of Psychological First Aid” is excerpted from “Are You Working to Help People Affected by the COVID-19 Pandemic?” Substance Abuse and Mental Health Services Administration (SAMHSA), January 1, 2020.

The COVID-19 pandemic has had a major effect on our lives. Many of us are facing challenges that can be stressful, overwhelming, and cause strong emotions in adults and children. Public-health actions, such as social distancing, are necessary to reduce the spread of COVID-19, but they can make us feel isolated and lonely and can increase stress and anxiety. Learning to cope with stress in a healthy way will make you, the people you care about, and those around you become more resilient.

Stress can cause the following:

- Feelings of fear, anger, sadness, worry, numbness, or frustration
- Changes in appetite, energy, desires, and interests

- Difficulty concentrating and making decisions
- Difficulty sleeping or nightmares
- Physical reactions, such as headaches, body pains, stomach problems, and skin rashes
- Worsening of chronic-health problems
- Worsening of mental-health conditions
- Increased use of tobacco, alcohol, and other substances

It is natural to feel stress, anxiety, grief, and worry during the COVID-19 pandemic. Below are ways that you can help yourself, others, and your community manage stress.

HEALTHY WAYS TO COPE WITH STRESS

- **Take breaks from watching, reading, or listening to news stories, including those on social media.** It is good to be informed, but hearing about the pandemic constantly can be upsetting. Consider limiting news to just a couple times a day and disconnecting from phone, tv, and computer screens for a while.
- **Take care of your body.**
 - Take deep breaths, stretch, or meditate.
 - Try to eat healthy, well-balanced meals.
 - Exercise regularly.
 - Get plenty of sleep.
 - Avoid excessive alcohol, tobacco, and substance use.
 - Continue with routine preventive measures (such as vaccinations, cancer screenings, etc) as recommended by your healthcare provider.
 - Get vaccinated with a COVID-19 vaccine when available.
- **Make time to unwind.** Try to do some other activities you enjoy.
- **Connect with others.** Talk with people you trust about your concerns and how you are feeling.
- **Connect with your community- or faith-based organizations.** While social distancing measures are in place, try connecting online, through social media, or by phone or mail.

HELPING OTHERS COPE

Taking care of yourself can better equip you to take care of others. During times of social distancing, it is especially important to stay connected with your friends and family. Helping others cope with stress through phone calls or video chats can help you and your loved ones feel less lonely or isolated.

TIPS TO REDUCE YOUR STRESS AND ANXIETY

- Limit or avoid news coverage if it causes you more stress and anxiety.
- Focus on positive things in your life that you can control.
- Keep stress under control by exercising, eating healthy, reading, or by trying relaxation techniques such as yoga.
- Talk about your experiences and feelings to loved ones and friends, if you find it helpful.
- Connect with others who may be experiencing stress about the pandemic.
- Take time to renew your spirit through meditation, prayer, or helping others in need.

PRINCIPLES OF PSYCHOLOGICAL FIRST AID

- Respond to requests and initiate contacts in a nonintrusive, compassionate, and helpful way.
- Help people meet their basic needs.
- Calm emotionally overwhelmed or disoriented individuals.

- Identify immediate needs and concerns.
- Empower people to take steps to meet their needs.
- Encourage people to reach out to family and friends via phone, text, or other virtual methods.
- Provide information about common stress reactions.
- Link people with available resources.

Section 51.4 | **Mental-Health Impacts of COVID-19**

This section includes text excerpted from “One Year In: COVID-19 and Mental Health,” National Institute of Mental Health (NIMH), April 9, 2021.

It has been over a year now since the coronavirus disease 2019 (COVID-19) pandemic struck the United States full force. A year of hunkering down and Zooming in, teleworking and telepsychiatry, economic and social upheaval, and steady scientific progress. Looking back to last March, we knew this would be difficult. But, we did not know how difficult. And we certainly did not know that the challenge of COVID-19 would last this long.

This year has been a challenging one on multiple fronts. For many Americans, this challenge has been overwhelming, affecting their mental health. Understanding the impact of the pandemic on mental health, and on those with serious mental illness, is critical to the National Institute of Mental Health (NIMH) mission of responding with research that will pave the way for prevention, recovery, and cure.

From prior research on disasters and epidemics we mostly knew what to expect. In the immediate wake of a traumatic experience, large numbers of affected people report distress, including new or worsening symptoms of depression, anxiety, and insomnia. Most people will recover, though that recovery can take some time. A notable fraction of people will develop chronic symptoms severe enough to meet criteria for a mental illness, such as posttraumatic stress disorder (PTSD) or major depressive disorder. People who experience more severe stressors, such as exposure to the dead or dying, and people with more prolonged disruptions are more likely to experience enduring symptoms that would benefit from intervention. We also know that people are more likely to develop chronic or severe reactions if they have one or more risk factors, such as poor social supports, financial difficulties, food or housing instability, or a history of mental illness. Receiving economic or social supports and using coping strategies can lower these risks and maximize a person’s chances for recovery.

It seems that much of what we have learned from past disasters and epidemics is holding true in the context of the COVID-19 pandemic. Several surveys, including those collected by the Centers for Disease Control (CDC), have shown substantial increases in self-reported behavioral health symptoms. According to one CDC report, which surveyed adults across the United States in late June of 2020, 31 percent of respondents reported symptoms of anxiety or depression, 13 percent reported having started or increased substance use, 26 percent reported stress-related symptoms, and 11 percent reported having serious thoughts of suicide in the past 30 days. These numbers are nearly double the rates we would have expected before the pandemic. As in prior studies, this survey showed that risk factors for reporting anxiety symptoms or suicidal ideation included food insufficiency, financial concerns, and loneliness.

The NIMH, and numerous other government agencies and non-profit organizations have been spreading the message that physical distancing does not mean we must stop supporting one another. In fact, research shows that helping others is a coping strategy that can reduce the mental-health impacts of the pandemic. We also know that addressing people’s basic needs can help alleviate their psychiatric symptoms. For example, one study showed that food insufficiency was independently associated with all symptoms of poor mental health, but that association was mitigated for those who received free groceries or meals.

Early in the pandemic, there were concerns that suicide rates would increase. So far, data from the CDC suggest that overall suicide death rates have remained steady or have even fallen during the pandemic.

Yet, there is also cause for concern in the emerging data. There is clear evidence that the pandemic has not affected all Americans equally. As is often the case, unfortunately, the most vulnerable among us are also feeling the mental health effects most intensely. Job loss, housing instability, food insecurity, and other risk factors for poor outcomes have disproportionately hit minority communities. And while overall suicide rates may have remained steady, data from states such as Maryland and Connecticut suggest that, early in the pandemic, the number of African Americans dying by suicide increased.

Emerging data also indicate that people with schizophrenia and other serious mental illnesses have also been hard hit by the pandemic. Individuals with schizophrenia, for instance, are nearly 10 times more likely to contract COVID-19 and are nearly three times more likely to die from it if they do fall ill, compared with individuals who do not have a mental illness. Finally, deaths due to opioid overdose rose substantially in the context of the pandemic. These data remind us that we need to work hard to address long-standing disparities and ensure access to life-saving medical and psychiatric care is available for all Americans.

Indeed, the pandemic has raised awareness of mental health symptoms and service needs. Crisis intervention services such as SAMHSA's Disaster Distress Helpline (800-985-5990) and the Crisis Text Line (text HOME to 741741) reported substantial increases in volume early in the pandemic, reflecting anxiety and distress brought on by COVID-19's many uncertainties. And although data indicate the volume of mental health and suicide risk visits to emergency departments initially dropped when states issued stay-at-home orders, these visits increased again after stay-at-home restrictions were lifted.

The CDC, NIMH, and other agencies have been working hard to raise public awareness of the resources that are available to support people's immediate mental health needs, including the Disaster Distress Helpline, the Crisis Text Line, and the Suicide Prevention Lifeline (1-800-273-TALK). In addition, many mental-healthcare providers made a rapid transition to phone- and computer-based telehealth, with widespread adoption across both private and public mental-health systems.

The mental-health impacts of COVID-19 continue. From all that we know, it is clear these impacts will outlive the pandemic itself. Therefore, it is crucial that we work together to apply evidence-based strategies to support the mental health needs of all Americans and to make these strategies broadly available, especially in vulnerable communities.

Chapter 52 | **Cancer and Mental Health**

Chapter Contents

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Section 52.1 | Psychological Stress and Cancer

This section includes text excerpted from “Psychological Stress and Cancer,” National Cancer Institute (NCI), December 10, 2012. Reviewed August 2021.

WHAT IS PSYCHOLOGICAL STRESS?

Psychological stress describes what people feel when they are under mental, physical, or emotional pressure. Although it is normal to experience some psychological stress from time to time, people who experience high levels of psychological stress or who experience it repeatedly over a long period of time may develop health problems (mental and/or physical).

Stress can be caused both by daily responsibilities and routine events, as well as by more unusual events, such as a trauma or illness in oneself or a close family member. When people feel that they are unable to manage or control changes caused by cancer or normal life activities, they are in distress. Distress has become increasingly recognized as a factor that can reduce the quality of life of cancer patients. There is even some evidence that extreme distress is associated with poorer clinical outcomes. Clinical guidelines are available to help doctors and nurses assess levels of distress and help patients manage it.

This section provides a general introduction to the stress that people may experience as they cope with cancer.

HOW DOES THE BODY RESPOND DURING STRESS?

The body responds to physical, mental, or emotional pressure by releasing stress hormones (such as epinephrine and norepinephrine) that increase blood pressure, speed heart rate, and raise blood sugar levels. These changes help a person act with greater strength and speed to escape a perceived threat.

Research has shown that people who experience intense and long-term (i.e., chronic) stress can have digestive problems, fertility problems, urinary problems, and a weakened immune system. People who experience chronic stress are also more prone to viral infections such as the flu or common cold and to have headaches, sleep trouble, depression, and anxiety.

CAN PSYCHOLOGICAL STRESS CAUSE CANCER?

Although stress can cause a number of physical health problems, the evidence that it can cause cancer is weak. Some studies have indicated a link between various psychological factors and an increased risk of developing cancer, but others have not.

Apparent links between psychological stress and cancer could arise in several ways. For example, people under stress may develop certain behaviors, such as smoking, overeating, or drinking alcohol, which increase a person’s risk for cancer. Or someone who has a relative with cancer may have a higher risk for cancer because of a shared inherited risk factor, not because of the stress induced by the family member’s diagnosis.

HOW DOES PSYCHOLOGICAL STRESS AFFECT PEOPLE WHO HAVE CANCER?

People who have cancer may find the physical, emotional, and social effects of the disease to be stressful. Those who attempt to manage their stress with risky behaviors such as smoking or drinking alcohol or who become more sedentary may have a poorer quality of life after cancer treatment. In contrast, people who are able to use effective coping strategies to deal with stress, such as relaxation and stress management techniques, have been shown to have lower levels of depression, anxiety, and symptoms

related to the cancer and its treatment. However, there is no evidence that successful management of psychological stress improves cancer survival.

Evidence from experimental studies does suggest that psychological stress can affect a tumor's ability to grow and spread. For example, some studies have shown that when mice bearing human tumors were kept confined or isolated from other mice – conditions that increase stress – their tumors were more likely to grow and spread (metastasize). In one set of experiments, tumors transplanted into the mammary fat pads of mice had much higher rates of spread to the lungs and lymph nodes if the mice were chronically stressed than if the mice were not stressed. Studies in mice and in human cancer cells grown in the laboratory have found that the stress hormone norepinephrine, part of the body's fight-or-flight response system, may promote angiogenesis and metastasis.

In another study, women with triple-negative breast cancer who had been treated with neoadjuvant chemotherapy were asked about their use of beta blockers, which are medications that interfere with certain stress hormones, before and during chemotherapy. Women who reported using beta blockers had a better chance of surviving their cancer treatment without a relapse than women who did not report beta blocker use. There was no difference between the groups, however, in terms of overall survival.

Although there is still no strong evidence that stress directly affects cancer outcomes, some data do suggest that patients can develop a sense of helplessness or hopelessness when stress becomes overwhelming. This response is associated with higher rates of death, although the mechanism for this outcome is unclear. It may be that people who feel helpless or hopeless do not seek treatment when they become ill, give up prematurely or fail to adhere to potentially helpful therapy, engage in risky behaviors such as drug use, or do not maintain a healthy lifestyle, resulting in premature death.

HOW CAN PEOPLE WHO HAVE CANCER LEARN TO COPE WITH PSYCHOLOGICAL STRESS?

Emotional and social support can help patients learn to cope with psychological stress. Such support can reduce levels of depression, anxiety, and disease- and treatment-related symptoms among patients. Approaches can include the following:

- Training in relaxation, meditation, or stress management
- Counseling or talk therapy
- Cancer education sessions
- Social support in a group setting
- Medications for depression or anxiety
- Exercise

Some expert organizations recommend that all cancer patients be screened for distress early in the course of treatment. A number also recommend rescreening at critical points along the course of care. Health-care providers can use a variety of screening tools, such as a distress scale or questionnaire, to gauge whether cancer patients need help managing their emotions or with other practical concerns. Patients who show moderate-to-severe distress are typically referred to appropriate resources, such as a clinical health psychologist, social worker, chaplain, or psychiatrist.

Section 52.2 | Depression in Cancer Patients

ABOUT DEPRESSION

Depression is different from normal sadness.

Depression is not simply feeling sad. Depression is a disorder with specific symptoms that can be diagnosed and treated. For every 10 patients diagnosed with cancer, about 2 patients become depressed. The numbers of men and women affected are about the same.

A person diagnosed with cancer faces many stressful issues. These may include:

- Fear of death
- Changes in life plans
- Changes in body image and self-esteem
- Changes in day-to-day living
- Worry about money and legal issues

Sadness and grief are common reactions to a cancer diagnosis. A person with cancer may also have other symptoms of depression, such as:

- Feelings of disbelief, denial, or despair
- Trouble sleeping
- Loss of appetite
- Anxiety or worry about the future

Not everyone who is diagnosed with cancer reacts in the same way. Some cancer patients may not have depression or anxiety, while others may have major depression or an anxiety disorder.

Signs that you have adjusted to the cancer diagnosis and treatment include the following:

- Being able to stay active in daily life
- Continuing in your roles as spouse, parent, or employee
- Being able to manage your feelings and emotions related to your cancer

This summary is mainly about depression in adults with cancer. There is a section at the end of the summary about depression in children with cancer.

Some cancer patients may have a higher risk of depression.

There are known risk factors for depression after a cancer diagnosis. Anything that increases your chance of developing depression is called a “risk factor for depression.” Factors that increase the risk of depression are not always related to the cancer.

Risk factors related to cancer that may cause depression include the following:

- Learning you have cancer when you are already depressed
- Having cancer pain that is not well controlled
- Being physically weakened by the cancer
- Having pancreatic cancer
- Having advanced cancer or a poor prognosis
- Feeling you are a burden to others
- Taking certain medicines, such as:
 - Corticosteroids
 - Procarbazine
 - L-asparaginase
 - Interferon alfa
 - Interleukin-2
 - Amphotericin B

Risk factors not related to cancer that may cause depression include the following:

- A personal history of depression or suicide attempts
- A family history of depression or suicide
- A personal history of mental problems, alcoholism, or drug abuse
- Not having enough support from family or friends
- Stress caused by life events other than cancer
- Having other health problems, such as stroke or heart attack that may also cause depression

There are many medical conditions that can cause depression.

Medical conditions that may cause depression include the following:

- Pain that does not go away with treatment
- Abnormal levels of calcium, sodium, or potassium in the blood
- Not enough vitamin B₁₂ or folate in your diet
- Anemia
- Fever
- Too much or too little thyroid hormone
- Too little adrenal hormone
- Side effects caused by certain medicines

Family members also have a risk of depression.

Anxiety and depression may occur in family members who are caring for loved ones with cancer.

Family members who talk about their feelings and solve problems together are less likely to have high levels of depression and anxiety.

DIAGNOSIS OF DEPRESSION

There are different types of depression.

The type of depression depends in part on the symptoms the patient is having and how long the symptoms have lasted. Major depression is one type of depression. Treatment depends on the type of depression.

Major depression has specific symptoms that last longer than two weeks.

It is normal to feel sad after learning you have cancer, but a diagnosis of major depression depends on more than being unhappy.

Symptoms of major depression include the following:

- Feeling sad most of the time
- Loss of pleasure and interest in activities you used to enjoy
- Changes in eating and sleeping habits
- Slow physical and mental responses
- Feeling restless or jittery
- Unexplained tiredness
- Feeling worthless, hopeless, or helpless
- Feeling a lot of guilt for no reason
- Not being able to pay attention
- Thinking the same thoughts over and over
- Frequent thoughts of death or suicide

The symptoms of depression are not the same for every patient.

Your healthcare provider will talk with you to find out if you have symptoms of depression.

Your healthcare provider will want to know how you are feeling and may want to discuss the following:

- Your feelings about having cancer. Talking with your doctor about this may help you see if your feelings are normal sadness or more serious.
- Your moods. You may be asked to rate your mood on a scale.
- Any symptoms you may have and how long the symptoms have lasted.
- How the symptoms affect your daily life, such as your relationships, your work, and your ability to enjoy your usual activities.
- Other parts of your life that are causing stress.
- How strong your social support system is.
- All the medicines you are taking and other treatments you are receiving. Sometimes, side effects of medicines or the cancer seem like symptoms of depression. This is more likely during active cancer treatment or if you have advanced cancer.

This information will help you and your doctor find out if you are feeling normal sadness or have depression.

Checking for depression may be repeated at times when stress increases, such as if cancer gets worse or if it comes back after treatment.

Physical exams, mental exams, and lab tests are used to diagnose depression.

In addition to talking with you, your doctor may do the following to check for depression:

- **Physical exam and history.** An exam of the body to check general signs of health, including checking for signs of disease, such as lumps or anything else that seems unusual. A history of your health habits, past illnesses including depression, and treatments will also be taken. A physical exam can help rule out other causes of your symptoms.
- **Laboratory tests.** Medical procedures that test samples of tissue, blood, urine, or other substances in the body. These tests help to diagnose disease, plan and check treatment, or monitor the disease over time. Lab tests are done to rule out a medical condition that may be causing symptoms of depression.
- **Mental status exam.** An exam done to get a general idea of your mental state by checking the following:
 - How you look and act
 - Your mood
 - Your speech
 - Your memory
 - How well you pay attention and understand simple concepts

TREATMENT OF DEPRESSION

The decision to treat depression depends on how long it has lasted and how much it affects your life.

You may have depression that needs to be treated if you are not able to perform your usual activities, have severe symptoms, or the symptoms do not go away. Treatment of depression may include talk therapy, medicines, or both.

Counseling or talk therapy helps some cancer patients with depression.

Your doctor may suggest you see a psychologist or psychiatrist for the following reasons:

- Your symptoms have been treated with medicine for 2 to 4 weeks and are not getting better.
- Your depression is getting worse.

- The antidepressants you are taking are causing unwanted side effects.
- The depression keeps you from continuing with your cancer treatment.

Most counseling or talk therapy programs for depression are offered in both individual and small-group settings. These programs include:

- Crisis intervention
- Psychotherapy
- Cognitive-behavioral therapy

More than one type of therapy program may be right for you. A therapy program can help you learn about the following:

- Coping and problem-solving skills
- Relaxation skills and ways to lower stress
- Ways to get rid of or change negative thoughts
- Giving and accepting social support
- Cancer and its treatment

Talking with a clergy member may also be helpful for some people.

Antidepressant medicine helps cancer patients with depression.

Antidepressants may help relieve depression and its symptoms. You may be treated with a number of medicines during your cancer care. Some anticancer medicines may not mix safely with certain antidepressants or with certain foods, herbals, or nutritional supplements. It is important to tell your healthcare providers about all the medicines, herbals, and nutritional supplements you are taking, including medicines used as patches on the skin, and any other diseases, conditions, or symptoms you have. This can help prevent unwanted reactions with antidepressant medicine.

When you are taking antidepressants, it is important that you use them under the care of a doctor. Some antidepressants take from 3 to 6 weeks to work. Usually, you begin at a low dose that is slowly increased to find the right dose for you. This helps to avoid side effects. Antidepressants may be taken for a year or longer.

There are different types of antidepressants.

Most antidepressants help treat depression by changing the levels of chemicals called “neurotransmitters” in the brain, while some affect cell receptors. Nerves use these chemicals to send messages to one another. Increasing the amount of these chemicals helps to improve mood. The different types of antidepressants act on these chemicals in different ways and have different side effects.

Several types of antidepressants are used to treat depression:

- **SSRIs (selective serotonin reuptake inhibitors).** Medicines that stop serotonin (a substance that nerves use to send messages to one another) from being reabsorbed by the nerve cells that make it. This means there is more serotonin for other nerve cells to use. SSRIs include drugs such as citalopram, fluoxetine, and vilazodone.
- **SNRIs (serotonin-norepinephrine reuptake inhibitors).** Medicines that stop the brain chemicals serotonin and norepinephrine from being reabsorbed by the nerve cells that make it. This means there is more serotonin and norepinephrine for other nerve cells to use. Some SNRIs may also help relieve neuropathy caused by chemotherapy or hot flashes caused by menopause. SNRIs include older drugs, such as tricyclic antidepressants, as well as newer drugs like venlafaxine.
- **NDRIs (norepinephrine-dopamine reuptake inhibitors).** Medicines that stop the brain

chemicals norepinephrine and dopamine from being reabsorbed. This means there is more norepinephrine and dopamine for other nerve cells to use. The only NDRI currently approved to treat depression is bupropion.

The following antidepressants may also be used:

- Mirtazapine
- Trazodone
- Monoamine oxidase inhibitors (MAOIs)

Other medicines may be given along with antidepressants to treat other symptoms. Benzodiazepines may be given to decrease anxiety and psychostimulants may be given to improve energy and concentration.

The antidepressant that is best for you depends on several factors.

Choosing the best antidepressant for you depends on the following:

- Your symptoms
- Side effects of the antidepressant
- Your medical history
- Other medicines you are taking
- How you or your family members responded to antidepressants in the past
- The form of medicine you are able to take (such as a pill or a liquid)

You may have to try different treatments to find the one that is right for you.

Your doctor will watch you closely if you need to change or stop taking your antidepressant.

You may need to change your antidepressant or to stop taking it if severe adverse effects occur or your symptoms are not getting better. Check with your doctor before you stop taking an antidepressant. For some types of antidepressants, your doctor will reduce the dose slowly. This is to prevent side effects that can occur if you suddenly stop taking the medicine.

It is important for you to know what to expect when you change or stop antidepressants. Your doctor will watch you closely while lowering or stopping doses of one medicine before starting another.

SUICIDE RISK IN PATIENTS WITH CANCER

Cancer patients may feel hopeless at times and think about suicide.

Cancer patients sometimes feel hopeless. Talk with your doctor if you feel hopeless. There are ways your doctor can help you.

Feelings of hopelessness may lead to thinking about suicide. If you or someone you know is thinking about suicide, get help as soon as possible. You can get help from the National Suicide Prevention Lifeline, 800-273-8255. The Lifeline is available 24 hours a day, 7 days a week. The deaf and hard of hearing can contact the TTY Lifeline at 800-799-4889. All calls are confidential.

Certain factors may add to a cancer patient's risk of thinking about suicide.

Some of these factors include the following:

- Having a personal history of depression, anxiety, or other mental-health problem, or suicide attempts
- Having a family member who has attempted suicide
- Having a personal history of drug or alcohol abuse
- Feeling hopeless or that you are a burden to others
- Not having enough support from family and friends

- Being unable to live a normal, independent life because of problems with activities of daily living, pain, or other symptoms
- Being within the first 3–5 months of your cancer diagnosis
- Having advanced cancer or a poor prognosis
- Having cancer of the prostate, lung, head and neck, or pancreas
- Not getting along well with the treatment team

An assessment is done to find the reasons for feeling hopeless or thoughts of suicide.

Talking about thoughts of hopelessness and suicide with your doctor gives you a chance to describe your feelings and fears, and may help you feel more in control. Your doctor will try to find out what is causing your hopeless feelings, such as:

- Symptoms that are not well controlled
- Fear of having a painful death
- Fear of being alone during your cancer experience

You can find out what may be done to help relieve your emotional and physical pain.

Controlling symptoms caused by cancer and cancer treatment is important to prevent suicide.

Cancer patients may feel desperate to stop any discomfort or pain they have. Keeping pain and other symptoms under control will help to:

- Relieve distress
- Make you feel more comfortable
- Prevent thoughts of suicide

Treatment may include antidepressants. Some antidepressants take a few weeks to work. The doctor may prescribe other medicines that work quickly to relieve distress until the antidepressant begins to work. For your safety, it is important to have frequent contact with a health-care professional and avoid being alone until your symptoms are controlled. Your healthcare team can help you find social support.

DEPRESSION IN CHILDREN

Some children have depression or other problems related to cancer.

Most children cope well with cancer. However, a small number of children may have:

- Depression
- Anxiety
- Trouble sleeping
- Problems getting along with family or friends
- Problems following the treatment plan

These problems can affect the child's cancer treatment and enjoyment of life. They can occur at any time from diagnosis to well after treatment ends. Survivors of childhood cancer who have severe late effects from cancer treatment may be more likely to have symptoms of depression.

A mental-health specialist can help children with depression.

Assessment for depression includes looking at the child's symptoms, behavior, and health history.

As in adults, children with cancer may feel depressed, but do not have the medical condition of depression. Depression lasts longer and has specific symptoms. The doctor may assess a child for depression if a problem, such as not eating or sleeping well, lasts for a while. To assess for depression, the doctor will ask about the following:

- How the child is coping with illness and treatment
- Past illnesses and how the child coped with the illness
- The child's sense of self-worth
- Home life with family
- The child's behavior, as seen by the parents, teachers, or others
- How the child is developing compared with other children her or his age

The doctor will talk with the child and may use a set of questions or a checklist that helps to diagnose depression in children.

The symptoms of depression are not the same in every child.

A diagnosis of depression depends on the symptoms and how long they have lasted. Children who are diagnosed with depression have an unhappy mood and at least four of the following symptoms every day for 2 weeks or longer:

- Appetite changes
- Not sleeping or sleeping too much
- Being unable to relax and be still (such as pacing, fidgeting, and pulling at clothing)
- Frequent crying
- Loss of interest or pleasure in usual activities
- Lack of emotion in children younger than 6 years
- Feeling very tired or having little energy
- Feelings of worthlessness, blame, or guilt
- Unable to think or pay attention and frequent daydreaming
- Trouble learning in school, not getting along with others, and refusing to go to school in school-aged children
- Frequent thoughts of death or suicide

Treatment may be talk therapy or medicine such as antidepressants.

Talk therapy is the main treatment for depression in children. The child may talk to the counselor alone or with a small group of other children. Talk therapy may include play therapy for younger children. Therapy will help the child cope with feelings of depression and understand their cancer and treatment.

Antidepressants may be given to children with major depression and anxiety. In some children, teenagers, and young adults, antidepressants may make depression worse or cause thoughts of suicide. The U.S. Food and Drug Administration (FDA) has warned that patients younger than age 25 who are taking antidepressants should be watched closely for signs that the depression is getting worse and for suicidal thinking or behavior.

Section 52.3 | Delirium in Advanced Cancer

This section includes text excerpted from "Delirium (PDQ®) – Patient Version," National Cancer Institute (NCI), April 26, 2019.

ABOUT DELIRIUM

Delirium is a confused mental state that can occur in patients who have cancer.

Delirium is a confused mental state that can occur in patients who have cancer, especially advanced cancer. Patients with delirium have problems with the following:

- Attention
- Thinking

- Awareness
- Behavior
- Emotions
- Judgement
- Memory
- Muscle control
- Sleeping and waking

There are three types of delirium:

- **Hypoactive.** The patient is not active and seems sleepy, tired, or depressed.
- **Hyperactive.** The patient is restless or agitated.
- **Mixed.** The patient changes back and forth between being hypoactive and hyperactive.

Delirium may come and go during the day.

The symptoms of delirium usually occur suddenly. They often occur within hours or days and may come and go. Delirium is often temporary and can be treated. However, in the last 24 to 48 hours of life, delirium may be permanent because of problems like organ failure. Most advanced cancer patients have delirium that occurs in the last hours to days before death.

CAUSES OF DELIRIUM

Delirium may be caused by cancer, cancer treatment, or other medical conditions.

There is often more than one cause of delirium in a cancer patient, especially when the cancer is advanced and the patient has many medical conditions. Causes of delirium include the following:

- Organ failure, such as liver or kidney failure
- **Electrolyte imbalances.** Electrolytes are important minerals (including salt, potassium, calcium, and phosphorous) in blood and body fluids. These electrolytes are needed to keep the heart, kidneys, nerves, and muscles working the way they should.
- Infections
- **Paraneoplastic syndromes.** Symptoms that occur when cancer-fighting antibodies or white blood cells attack normal cells in the nervous system by mistake.
- **Side effects of medicines and treatments.** Patients with cancer may take medicines with side effects that include delirium and confusion. The effects usually go away after the medicine is stopped.
- Withdrawal from medicines that depress (slow down) the central nervous system (brain and spinal cord)

It is important to know the risk factors for delirium.

Patients with cancer are likely to have more than one risk factor for delirium. Identifying risk factors early may help prevent delirium or decrease the time it takes to treat it. Risk factors include the following:

- Serious illness
- Having more than one disease
- Older age
- Dementia
- Low level of albumin (protein) in the blood, which is often caused by liver problems
- Infection
- High level of nitrogen waste products in the blood, which is often caused by kidney problems

- Taking medicines that affect the mind or behavior
- Taking high doses of pain medicines, such as opioids

The risk increases when the patient has more than one risk factor. Older patients with advanced cancer who are hospitalized often have more than one risk factor for delirium.

EFFECTS OF DELIRIUM ON THE PATIENT, FAMILY, AND HEALTH-CARE PROVIDERS

Delirium causes changes in the patient that can upset the family and caregivers.

Delirium may be dangerous to the patient if her or his judgment is affected. Delirium can cause the patient to behave in unusual ways. Even a quiet or calm patient can have a sudden change in mood or become agitated and need more care.

Delirium can be upsetting to the family and caregivers. When the patient becomes agitated, family members often think the patient is in pain, but this may not be the case. Learning about differences between the symptoms of delirium and pain may help the family and caregivers understand how much pain medicine is needed. Health-care providers can help the family and caregivers learn about these differences.

Delirium may affect physical health and communication.

Patients with delirium are:

- More likely to fall
- Sometimes unable to control bladder and/or bowels
- More likely to become dehydrated (drink too little water to stay healthy)

They often need a longer hospital stay than patients without delirium.

The confused mental state of these patients may make them:

- Unable to talk with family members and caregivers about their needs and feelings
- Unable to make decisions about care

This makes it harder for health-care providers to assess the patient's symptoms. The family may need to make decisions for the patient.

DIAGNOSING DELIRIUM

Possible signs of delirium include sudden personality changes, problems thinking, and unusual anxiety or depression.

When the following symptoms occur suddenly, they may be signs of delirium:

- Agitation
- Not cooperating
- Changes in personality or behavior
- Problems thinking
- Problems paying attention
- Unusual anxiety or depression

The symptoms of delirium are a lot like symptoms of depression and dementia.

Early symptoms of delirium are like symptoms of depression and dementia. Delirium that causes the patient to be inactive may appear to be depression. Delirium and dementia both cause problems with memory, thinking, and judgment. Dementia may be caused by a number of medical conditions, including Alzheimer disease. Differences in the symptoms of delirium and dementia include the following:

- Patients with delirium often show changes in how alert or aware they are. Patients who have dementia usually stay alert and aware until the dementia becomes very advanced.
- Delirium occurs suddenly (within hours or days). Dementia appears gradually (over months to years) and gets worse over time.

Older patients with cancer may have both dementia and delirium. This can make it hard for the doctor to diagnose the problem. If treatment for delirium is given and the symptoms continue, then the diagnosis is more likely dementia. Checking the patient's health and symptoms over time can help diagnose delirium and dementia.

Physical exams and other laboratory tests are used to diagnose the causes of delirium.

Doctors will try to find the causes of delirium.

- **Physical exam and history.** An exam of the body to check general signs of health, including checking for signs of disease, such as lumps or anything else that seems unusual. A history of the patient's health habits, past illnesses including depression, and treatments will also be taken. A physical exam can help rule out a physical condition that may be causing symptoms.
- **Laboratory tests.** Medical procedures that test samples of tissue, blood, urine, or other substances in the body. These tests help to diagnose disease, plan and check treatment, or monitor the disease over time.

TREATMENT OF DELIRIUM

Treatment includes looking at the causes and symptoms of delirium.

Both the causes and the symptoms of delirium may be treated. Treatment depends on the following:

- Where the patient is living, such as home, hospital, or nursing home
- How advanced the cancer is
- How the delirium symptoms are affecting the patient
- The wishes of the patient and family

Treating the causes of delirium usually includes the following:

- Stopping or lowering the dose of medicines that cause delirium
- Giving fluids to treat dehydration
- Giving drugs to treat hypercalcemia (too much calcium in the blood)
- Giving antibiotics for infections

In a terminally ill patient with delirium, the doctor may treat just the symptoms. The doctor will continue to watch the patient closely during treatment.

Treatment without medicines can also help relieve symptoms.

Controlling the patient's surroundings may help with mild symptoms of delirium. The following may help:

- Keep the patient's room quiet and well-lit, and put familiar objects in it
- Put a clock or calendar where the patient can see it
- Have family members around
- Keep the same caregivers as much as possible

Patients who may hurt themselves or others may need to have physical restraints.

Treatment may include medicines.

Medicines may be used to treat the symptoms of delirium depending on the patient's condition and heart health. These medicines have serious side effects and the patient will be watched closely by a doctor.

These medicines include the following:

- Haloperidol
- Olanzapine
- Risperidone
- Lorazepam
- Midazolam

Sedation may be used for delirium at the end of life or when delirium does not get better with treatment.

When the symptoms of delirium are not relieved with standard treatments and the patient is near death, in pain, or has trouble breathing, other treatment may be needed. Sometimes medicines that will sedate (calm) the patient will be used. The family and the healthcare team will make this decision together.

The decision to use sedation for delirium may be guided by the following:

- The patient will have repeated assessments by experts before the delirium is considered to be refractory (does not respond to treatment)
- The decision to sedate the patient is reviewed by a team of health-care professionals and not made by one doctor
- Temporary sedation, for short periods of time such as overnight, is considered before continuous sedation is used
- The team of health-care professionals will work with the family to make sure the team understands the family's views and that the family understands palliative sedation

Chapter 53 | Diabetes and Mental Health

Is mental health pretty low on your list of priorities for managing diabetes? This may change your mind.

Mental health affects so many aspects of daily life – how you think and feel, handle stress, relate to others, and make choices. You can see how having a mental-health problem could make it harder to stick to your diabetes care plan.

THE MIND-BODY CONNECTION

Thoughts, feelings, beliefs, and attitudes can affect how healthy your body is. Untreated mental health issues can make diabetes worse, and problems with diabetes can make mental health issues worse. But, fortunately if one gets better, the other tends to get better, too.

DEPRESSION: MORE THAN JUST A BAD MOOD

Depression is a medical illness that causes feelings of sadness and often a loss of interest in activities you used to enjoy. It can get in the way of how well you function at work and home, including taking care of your diabetes. When you are not able to manage your diabetes well, your risk goes up for diabetes complications like heart disease and nerve damage.

People with diabetes are 2 to 3 times more likely to have depression than people without diabetes. Only 25 percent to 50 percent of people with diabetes who have depression get diagnosed and treated. But, treatment – therapy, medicine, or both – is usually very effective. And without treatment, depression often gets worse, not better.

Symptoms of depression can be mild to severe, and include:

- Feeling sad or empty
- Losing interest in favorite activities
- Overeating or not wanting to eat at all
- Not being able to sleep or sleeping too much
- Having trouble concentrating or making decisions
- Feeling very tired
- Feeling hopeless, irritable, anxious, or guilty
- Having aches or pains, headaches, cramps, or digestive problems
- Having thoughts of suicide or death

If you think you might have depression, get in touch with your doctor right away for help getting treatment. The earlier depression is treated, the better for you, your quality of life (QOL), and your diabetes.

STRESS AND ANXIETY

Stress is part of life, from traffic jams to family demands to everyday diabetes care. You can feel stress as an emotion, such as fear or anger, as a physical reaction like sweating or a racing heart, or both.

If you are stressed, you may not take as good care of yourself as usual. Your blood sugar levels can be affected too – stress hormones make blood sugar rise or fall unpredictably, and stress from being sick or injured can make your blood sugar go up. Being stressed for a long time can lead to other health problems or make them worse.

Anxiety – feelings of worry, fear, or being on edge – is how your mind and body react to stress. People

with diabetes are 20 percent more likely than those without diabetes to have anxiety at some point in their life. Managing a long-term condition like diabetes is a major source of anxiety for some.

Studies show that therapy for anxiety usually works better than medicine, but sometimes both together works best. You can also help lower your stress and anxiety by:

- **Getting active.** Even a quick walk can be calming, and the effect can last for hours.
- Doing some relaxation exercises, like meditation or yoga
- Calling or texting a friend who understands you (not someone who is causing you stress!)
- **Grabbing some “you” time.** Take a break from whatever you are doing. Go outside, read something fun – whatever helps you recharge.
- Limiting alcohol and caffeine, eating healthy food, and getting enough sleep

Anxiety can feel like low blood sugar and vice versa. It may be hard for you to recognize which it is and treat it effectively. If you are feeling anxious, try checking your blood sugar and treat it if it is low.

There will always be some stress in life. But, if you feel overwhelmed, talking to a mental-health counselor can help. Ask your doctor for a referral.

DIABETES DISTRESS

You may sometimes feel discouraged, worried, frustrated, or tired of dealing with daily diabetes care, like diabetes is controlling you instead of the other way around. Maybe you have been trying hard but not seeing results. Or you have developed a health problem related to diabetes in spite of your best efforts.

Those overwhelming feelings, known as “diabetes distress,” may cause you to slip into unhealthy habits, stop checking your blood sugar, even skip doctor’s appointments. It happens to many – if not most – people with diabetes, often after years of good management. In any 18-month period, 33 percent to 50 percent of people with diabetes have diabetes distress.

Diabetes distress can look like depression or anxiety, but it can not be treated effectively with medicine. Instead, these approaches have been shown to help:

- Make sure you are seeing an endocrinologist for your diabetes care. She or he is likely to have a deeper understanding of diabetes challenges than your regular doctor.
- Ask your doctor to refer you to a mental-health counselor who specializes in chronic health conditions.
- Get some one-on-one time with a diabetes educator so you can problem-solve together.
- Focus on one or two small diabetes management goals instead of thinking you have to work on everything all at once.
- Join a diabetes support group so you can share your thoughts and feelings with people who have the same concerns (and learn from them too).

TALK TO YOUR HEALTHCARE TEAM

Your healthcare team knows diabetes is challenging, but may not understand how challenging. And you may not be used to talking about feeling sad or down. But, if you are concerned about your mental health, let your doctor know right away. You are not alone – help is available!

Chapter 54 | Epilepsy and Mental Health

WHAT ARE THE EPILEPSIES?

The epilepsies are chronic neurological disorders in which clusters of nerve cells, or neurons, in the brain sometimes signal abnormally and cause seizures. Neurons normally generate electrical and chemical signals that act on other neurons, glands, and muscles to produce human thoughts, feelings, and actions. During a seizure, many neurons fire (signal) at the same time – as many as 500 times a second, much faster than normal. This surge of excessive electrical activity happening at the same time causes involuntary movements, sensations, emotions, and behaviors and the temporary disturbance of normal neuronal activity may cause a loss of awareness.

Epilepsy can be considered a spectrum disorder because of its different causes, different seizure types, its ability to vary in severity and impact from person to person, and its range of coexisting conditions. Some people may have convulsions (sudden onset of repetitive general contraction of muscles) and lose consciousness. Others may simply stop what they are doing, have a brief lapse of awareness, and stare into space for a short period. Some people have seizures very infrequently, while other people may experience hundreds of seizures each day. There also are many different types of epilepsy, resulting from a variety of causes. Recent adoption of the term “the epilepsies” underscores the diversity of types and causes.

In general, a person is not considered to have epilepsy until she or he has had two or more unprovoked seizures separated by at least 24 hours. In contrast, a provoked seizure is one caused by a known precipitating factor such as a high fever, nervous system infections, acute traumatic brain injury, or fluctuations in blood sugar or electrolyte levels.

Anyone can develop epilepsy. About 2.3 million adults and more than 450,000 children and adolescents in the United States currently live with epilepsy. Each year, an estimated 150,000 people are diagnosed with epilepsy. Epilepsy affects both males and females of all races, ethnic backgrounds, and ages. In the United States alone, the annual costs associated with the epilepsies are estimated to be \$15.5 billion in direct medical expenses and lost or reduced earnings and productivity.

The majority of those diagnosed with epilepsy have seizures that can be controlled with drug therapies and surgery. However, as much as 30 to 40 percent of people with epilepsy continue to have seizures because available treatments do not completely control their seizures (called “intractable” or “medication resistant” epilepsy).

While many forms of epilepsy require lifelong treatment to control the seizures, for some people the seizures eventually go away. The odds of becoming seizure-free are not as good for adults or for children with severe epilepsy syndromes, but it is possible that seizures may decrease or even stop over time. This is more likely if the epilepsy starts in childhood, has been well-controlled by medication, or if the person has had surgery to remove the brain focus of the abnormal cell firing.

Many people with epilepsy lead productive lives, but some will be severely impacted by their epilepsy. Medical and research advances in the past two decades have led to a better understanding of the epilepsies and seizures. More than 20 different medications and a variety of dietary treatments and surgical techniques (including two devices) are now available and may provide good control of seizures. Devices can modulate brain activity to decrease seizure frequency. Advance neuroimaging can identify brain abnormalities that give rise to seizures which can be cured by neurosurgery. Even dietary changes can effectively treat certain types of epilepsy. Research on the underlying causes of the epilepsies,

including identification of genes for some forms of epilepsy, has led to a greatly improved understanding of these disorders that may lead to more effective treatments or even to new ways of preventing epilepsy in the future.

MENTAL HEALTH AND STIGMATIZATION

Depression is common among people with epilepsy. It is estimated that one of every three persons with epilepsy will have depression in the course of her or his lifetime, often with accompanying symptoms of anxiety disorder. In adults, depression and anxiety are the two most frequent mentalhealth-related diagnoses. In adults, a depression screening questionnaire specifically designed for epilepsy helps health-care professions identify people who need treatment. Depression or anxiety in people with epilepsy can be treated with counseling or most of the same medications used in people who do not have epilepsy. People with epilepsy should not simply accept that depression is part of having epilepsy and should discuss symptoms and feelings with health-care professionals.

Children with epilepsy also have a higher risk of developing depression and/or attention deficit hyperactivity disorder compared with their peers. Behavioral problems may precede the onset of seizures in some children.

Children are especially vulnerable to the emotional problems caused by ignorance or the lack of knowledge among others about epilepsy. This often results in stigmatization, bullying, or teasing of a child who has epilepsy. Such experiences can lead to behaviors of avoidance in school and other social settings. Counseling services and support groups can help families cope with epilepsy in a positive manner.

This chapter includes text excerpted from "The Epilepsies and Seizures: Hope through Research," National Institute of Neurological Disorders and Stroke (NINDS), June 26, 2020.

Chapter 55 | Heart Disease and Mental Health

Mental health is an important part of overall health and refers to a person's emotional, psychological, and social well-being. Mental health involves how we think, feel, act, and make choices.

Mental health disorders can be short- or long-term and can interfere with a person's mood, behavior, thinking, and ability to relate to others. Various studies have shown the impact of trauma, depression, anxiety, and stress on the body, including stress on the heart.

WHAT MENTAL-HEALTH DISORDERS ARE RELATED TO HEART DISEASE?

Some of the most commonly studied mental-health disorders associated with heart disease or related risk factors include the following:

- **Mood disorders.** People living with mood disorders, such as major depression or bipolar disorder, find that their mood affects both psychological and mental well-being nearly every day for most of the day.
- **Anxiety disorders.** People respond to certain objects or situations with fear, dread, or terror. Anxiety disorders include generalized anxiety, social anxiety, panic disorders, and phobias.
- **Posttraumatic stress disorder (PTSD).** People can experience PTSD after undergoing a traumatic life experience, such as war, natural disaster, or any other serious incident.
- **Chronic stress.** People are in a state of uncomfortable emotional stress – accompanied by predictable biochemical, physiological, and behavioral changes – that is constant and persists over an extended period of time.

There may be other behavioral-health disorders, such as substance-use disorders, that are connected to heart disease.

WHAT IS THE CONNECTION BETWEEN MENTAL-HEALTH DISORDERS AND HEART DISEASE?

A large and growing body of research shows that mental health is associated with risk factors for heart disease before a diagnosis of a mental-health disorder and during treatment. These effects can arise both directly, through biological pathways, and indirectly, through risky health behaviors.

People experiencing depression, anxiety, stress, and even PTSD over a long period of time may experience certain physiologic effects on the body, such as increased cardiac reactivity (e.g., increased heart rate and blood pressure), reduced blood flow to the heart, and heightened levels of cortisol. Over time, these physiologic effects can lead to calcium buildup in the arteries, metabolic disease, and heart disease.

Evidence shows that mental-health disorders – such as depression, anxiety, and PTSD – can develop after cardiac events, including heart failure, stroke, and heart attack. These disorders can be brought on after an acute heart disease event from factors including pain, fear of death or disability, and financial problems associated with the event.

Some literature notes the impact of medicines used to treat mental-health disorders on cardiometabolic disease risk. The use of some antipsychotic medications has been associated with obesity, insulin resistance, diabetes, heart attacks, atrial fibrillation, stroke, and death.

Mental-health disorders such as anxiety and depression may increase the chance of adopting behaviors such as smoking, inactive lifestyle, or failure to take prescribed medications. This is because people

experiencing a mental-health disorder may have fewer healthy coping strategies for stressful situations, making it difficult for them to make healthy lifestyle choices to reduce their risk for heart disease.

WHAT GROUPS HAVE HIGHER RATES OF HEART DISEASE FROM MENTAL-HEALTH DISORDERS?

Specific populations, such as the following, show higher rates of heart disease as a result of preexisting mental-health disorders:

- **Veterans.** Studies found that veterans are at a higher risk for heart disease, mainly due to PTSD as a result of combat.
- **Women.** Studies exclusively focused on women found that PTSD and depression may have damaging effects on physical health, particularly with increased risk for coronary heart disease (CHD)-related morbidity and mortality.
- **Couples with someone who has PTSD.** Comparative studies found that couples where one or both partners had PTSD experienced more severe conflict, greater anger, and increased cardiovascular reactivity to conflict discussions than couples where neither partner had PTSD. Anger and physiological stress responses to couple discord might contribute to CHD and heart disease risk within these relationships.
- **Racial and ethnic minorities.** Lastly, studies focused on racial or ethnic minority groups found that depression, stress, and anxiety due to disparities in social determinants of health, adverse childhood experiences, and racism/discrimination could place certain subpopulations at a higher risk for hypertension, cardiovascular reactivity, heart disease, and poor heart health outcomes.

WHAT CAN BE DONE FOR PEOPLE WITH MENTAL-HEALTH DISORDERS?

Addressing mental-health disorders early by providing access to appropriate services and support to increase healthy behaviors (e.g., increased physical activity, improved diet quality, and reduced smoking) can reduce someone's risk of experiencing a heart disease event.

Below are some actions that healthcare systems, healthcare professionals, individuals, and researchers can take to promote heart disease prevention and support mental health.

Actions for Healthcare Systems

- Set up multidisciplinary teams that include both mental health and heart disease professionals.
- Employ clinical decision support or electronic health record systems to coordinate care among the multidisciplinary teams.

Actions for Healthcare Professionals

- Talk to your patients about the relationship between mental health and heart disease.
- Incorporate mental-health screening and treatment into care surrounding a major heart disease event and chronic disease.
- Involve individuals and their family members in communication and decision making regarding treatment following a heart disease event.
- For patients with severe mental-health disorders and pre-existing heart disease or its risk factors:
 - Consider prescribing or switching a patient to a psychotropic medication with lower risk for heart disease, while weighing any clinical benefits and potential for adverse events.
 - Consider the potential interactions between prescribed medicines for heart disease and prescribed psychotropic medications.
 - Monitor heart health outcomes and risk factors, and adjust doses of heart disease

medicines if required.

Actions for Individuals

- Recognize the signs and symptoms of mental-health disorders and heart disease.
- Talk with your healthcare professionals about potential heart conditions in relation to your mental-health disorder and treatment options.
- Know that your family history and genetic factors likely play some role in your risk for heart disease.
- Know which conditions increase the risk of heart disease.
- Maintain a healthy lifestyle.

Actions for Researchers

- Address the role of social determinants of health and health disparities in improving the intersection between mental health and heart health outcomes.
- Understand the link and impact of mental health on the prevention and treatment of heart disease and its risk factors.
- Describe the biological pathway between mental-health disorders and heart disease to understand the intermediate and long-term outcomes (e.g., chronic inflammation, cardiac reactivity, heart rate variability, and coronary artery calcification).
- Analyze the impact of emotional well-being (i.e., a state in which people understand and manage their emotions through achievable goals, positive relationships, and responsible decision-making) on mental health and physical health.
- Expand traditional heart disease risk assessments, such as the Atherosclerotic Cardiovascular Disease Risk Estimator (ASCVD) or Framingham 10-Year Risk of General Cardiovascular Disease, to include mental-health disorders.
- Develop valid and reliable screening instruments to help identify vulnerable populations.

This chapter includes text excerpted from "Heart Disease and Mental Health Disorders," Centers for Disease Control and Prevention (CDC), May 6, 2020.

Chapter 56 | Human Immunodeficiency Virus and Mental Health

HIV, or human immunodeficiency virus, is the virus that causes AIDS (acquired immunodeficiency syndrome) and can be transmitted during sexual intercourse; by sharing syringes; or perinatally during pregnancy, childbirth, or breastfeeding.

HIV weakens the immune system by destroying CD4 positive (CD4+) T cells, a type of white blood cell that is important for fighting off infections. The loss of these cells means that people living with HIV are more vulnerable to other infections and diseases.

People living with HIV may be diagnosed with AIDS when they have one or more opportunistic infections (infections that occur because HIV weakens the immune system), such as pneumonia or tuberculosis, and have a very low number of CD4+ T cells (less than 200 cells per cubic millimeter of blood).

People living with HIV/AIDS are at a higher risk for mental disorders. The stress associated with living with a serious illness or condition, such as HIV, can affect a person's mental health. It is important for people living with HIV to know that they have a higher chance of developing mood, anxiety, and cognitive disorders. For example, depression is one of the most common mental-health conditions faced by people living with HIV. It is important to remember that mental disorders are treatable. People who have a mental disorder can recover completely.

Situations that can contribute to mental-health problems for people living with HIV include:

- Having trouble getting mental-health services
- Experiencing a loss of social support, resulting in isolation
- Experiencing a loss of employment or worries about being able to perform at work
- Having to tell others about an HIV diagnosis
- Managing HIV medicines and medical treatment
- Dealing with loss, including the loss of relationships or the death of loved ones
- Facing stigma and discrimination associated with HIV/AIDS

HIV and related infections can also affect the brain and the rest of the nervous system. This may change how a person thinks and behaves. Also, some medications used to treat HIV may have side effects that affect a person's mental health.

Understanding how living with HIV can affect mental health and knowing what resources are available can make it easier for people to manage their overall health and well-being.

CENTRAL NERVOUS SYSTEM DISEASE ASSOCIATED WITH HIV

HIV causes significant inflammation in the body. This inflammation can cause neurological complications by damaging the spinal cord and brain, which make up the central nervous system.

Antiretroviral therapy (ART), a combination of HIV medications taken daily, helps stop HIV from replicating and spreading in the body. Despite effective ART, people living with HIV are still at risk for central nervous system diseases associated with HIV. These diseases can be neurological (affecting the nervous system) or neurocognitive (affecting cognition or mental processing).

Severe neurological impairments such as dementia, brain atrophy, and encephalitis (inflammation of the brain) are less common in people who use ART, compared to people living with HIV who are not on

ART. However, there are still less severe forms of central nervous system diseases associated with HIV. Researchers are working to better understand how HIV affects the central nervous system; this information will be helpful to develop new treatments to improve the lives of people living with HIV. Understanding which types of cells in the central nervous system are targeted by the HIV infection and how those cells are damaged may help shape efforts to prevent, treat, and cure HIV. Research efforts also focus on understanding why HIV is harder to eliminate in some tissues in the body and what strategies might be more effective on those cells.

HIV TREATMENTS AND THERAPIES

Research shows that HIV treatment should begin as soon as possible after diagnosis to achieve the best health outcomes. HIV treatment usually includes a combination of medicines called “antiretroviral therapy” (ART). Following a treatment plan, such as taking the medications prescribed by a health-care provider, is critical for controlling and suppressing the virus. Following the treatment plan can be difficult, but there are strategies that can help.

Starting ART also can affect mental health in different ways. Sometimes ART can help to relieve anxiety because knowing that you are taking care of yourself can provide a sense of security. However, coping with the reality of living with a chronic illness like HIV can be challenging. In addition, some antiretroviral medicines may cause symptoms of depression, anxiety, and sleep disturbance and may make some mental-health issues worse.

For these reasons, it is important for people living with HIV to talk to their health-care provider about their mental health. A conversation about mental health should be part of a complete medical evaluation before starting ART, and discussions about mental health should continue throughout treatment.

People living with HIV should be open and honest with their provider about any changes in their mental health, such as thinking or how they feel about themselves and life in general. People living with HIV should also discuss any alcohol or substance use with their provider.

People living with HIV should also tell their health-care provider about any over-the-counter or prescribed medications they may be taking, including any psychiatric medicines, because some of these drugs may interact with antiretroviral medications.

TALK TO YOUR HIV HEALTHCARE PROVIDER

Talk to your HIV health-care provider if you are experiencing any of the symptoms above. Your provider may ask you some questions to assess how you are feeling and may prescribe medications to help with depression or anxiety or refer you to a mental-health specialist.

If you are taking antiretroviral therapy (ART) or plan to take ART, consider the following:

- Sometimes ART can relieve your anxiety because knowing you are taking care of yourself can give you a sense of securing.
- However, some antiretroviral medications may cause symptoms of depression, anxiety, and sleep disturbance, and may make some mental-health issues worse. Talk to your health-care provider to better understand how your HIV treatment might affect your mental health and if anything can be done to address the side effects.
- Also, some medicines for mental-health conditions or mood disorders can interact with ART.

Communicate openly and honestly with your health-care provider about your mental health so that she or he can help you find the support you need. Discuss any changes in the way you are thinking, or how you are feeling about yourself and life in general.

MENTAL-HEALTH PROVIDERS AND PROGRAMS

Because mental-health conditions are common, many outlets can help you maintain good mental health. If you are having symptoms of depression or another mental-health condition, talk to your health-care provider, social worker, or case manager. These people can refer you to a mental-health provider who can give you the care you need.

Types of mental-health providers include:

- **Psychiatrists.** Medically trained physicians who treat mental-health problems with various therapies, like talk therapy, and by prescribing medicine.
- **Psychologists.** Trained professionals who help people cope with life challenges and mental-health problems with therapies, like talk therapy, but usually cannot prescribe medicines.
- **Therapists.** Mental health or marriage and family counselors who help people cope with life issues and mental-health problems.

You may also choose to join a support group. Support groups include:

- **Mental health support groups.** An organized group of peers who meet in a safe and supportive environment to provide mental health support to members of the group.
- **HIV support groups.** An organized group of peers living with HIV who meet in a safe and supportive environment to provide support to other people living with HIV.

Work with a trained mental-health professional to learn about treatment options such as therapy and/or medicine. You and your provider can develop a plan that will help you regain and maintain good mental health.

Other ways to help improve mental health and well-being include:

- **Exercise.** Regular exercise may help improve symptoms of depression and decrease stress. When you exercise, your brain releases chemicals called “endorphins.” These chemicals help improve your mood.
- **Meditation.** Recent studies suggest that mindfulness meditation can help ease depression, anxiety, and stress.

You may find it helpful to create an action plan for your mental well-being. SAMHSA offers a free self-help guide you can use to create and maintain a wellness plan for yourself.

This chapter contains text excerpted from the following sources: Text in this chapter begins with excerpts from “HIV/AIDS and Mental Health,” National Institute of Mental Health (NIMH), November 2020; Text beginning with the heading “Talk to Your HIV Healthcare Provider” is excerpted from “Mental Health,” HIV.gov, U.S. Department of Health and Human Services (HHS), March 19, 2020.

Chapter 57 | Chronic Pain and Posttraumatic Stress Disorder

WHAT IS CHRONIC PAIN?

Chronic pain is when a person suffers from pain in a particular area of the body (e.g., in the back or the neck) for at least three to six months. It may be as bad as, or even worse than, short-term pain, but it can feel like more of a problem because it lasts a longer time. Chronic pain lasts beyond the normal amount of time that an injury takes to heal.

Chronic pain can come from many things. Some people get chronic pain from normal wear and tear of the body or from aging. Others have chronic pain from various types of cancer, or other chronic medical illnesses. In some cases, the chronic pain may be from an injury that happened during an accident or an assault. Some chronic pain has no explanation.

HOW COMMON IS CHRONIC PAIN?

Approximately one in three Americans suffer from some kind of chronic pain in their lifetimes, and about one-quarter of them are not able to do day-to-day activities because of their chronic pain. Between 80 percent and 90 percent of Americans experience chronic problems in the neck or lower back.

HOW DO HEALTHCARE PROVIDERS EVALUATE PAIN?

Care providers generally assess chronic pain during a physical exam, but how much pain someone is in is hard to determine. Every person is different and perceives and experiences pain in different ways. There is often very little consistency when different doctors try to measure a patient's pain. Sometimes the care provider may not believe the patient, or might minimize the amount of pain. All of these things can be frustrating for the person in pain. Additionally, this kind of experience often makes patients feel helplessness and hopeless, which in turn increases tension and pain and makes the person more upset. Conversation between the doctor and patient is important, including sharing information about treatment options. If no progress is made, get a second opinion.

WHAT IS THE EXPERIENCE OF CHRONIC PAIN LIKE PHYSICALLY?

There are many forms of chronic pain, including pain felt in: the low back (most common); the neck; the mouth, face, and jaw (TMJ); the pelvis; or the head (e.g., tension and migraine headaches). Of course, each type of condition results in different experiences of pain.

People with chronic pain are less able to function well in daily life than those who do not suffer from chronic pain. They may have trouble with things such as walking, standing, sitting, lifting light objects, doing paperwork, standing in line at a grocery store, going shopping, or working. Many patients with chronic pain cannot work because of their pain or physical limitations.

WHAT IS THE EXPERIENCE OF CHRONIC PAIN LIKE PSYCHOLOGICALLY?

Research has shown that many patients who experience chronic pain (up to 100 percent of these patients) tend to also be diagnosed with depression. Because the pain and disability are always there and that may even become worse over time, many of them think suicide is the only way to end their pain and frustration. They think they have no control over their life. This frustration may also lead the person to use drugs or have unneeded surgery.

CHRONIC PAIN AND POSTTRAUMATIC STRESS DISORDER

Some people's chronic pain stems from a traumatic event, such as a physical or sexual assault, a motor vehicle accident, or some type of disaster. Under these circumstances the person may experience both chronic pain and posttraumatic stress disorder (PTSD). The person in pain may not even realize the connection between their pain and a traumatic event. Approximately 15 percent to 35 percent of patients with chronic pain also have PTSD. Only 2 percent of people who do not have chronic pain have PTSD. One study found that 51 percent of patients with chronic low-back pain had PTSD symptoms. For people with chronic pain, the pain may actually serve as a reminder of the traumatic event, which will tend to make the PTSD even worse. Survivors of physical, psychological, or sexual abuse tend to be more at risk for developing certain types of chronic pain later in their lives.

This chapter includes text excerpted from "Chronic Pain and PTSD: A Guide for Patients," National Center for Posttraumatic Stress Disorder (NCPTSD), U.S. Department of Veterans Affairs (VA), October 17, 2019.

Chapter 58 | Sleep Disorders and Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) is unique among mental-health disorders in that sleep problems represent two of the diagnostic criteria of the fifth edition of the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*; recurrent nightmares are part of the intrusion cluster of symptoms, and insomnia is a component of the arousal cluster. While these sleep problems are symptoms of PTSD, the evidence suggests that they tend to become independent problems over time, warranting sleep-focused assessment and treatment. Further, it has been argued that sleep disturbance plays a critical role in the maintenance of PTSD and is a hallmark of the disorder. Fortunately, efficacious treatment options, both medications, and forms of cognitive-behavioral therapy (CBT) exist.

PREVALENCE AND CONSEQUENCES OF SLEEP PROBLEMS

Insomnia is one of the most common symptoms of PTSD, and has been reported to occur in 90–100 percent of Vietnam era veterans with the disorder. In the Millennium Cohort Study, an ongoing epidemiologic cohort study of military health, 92 percent of active duty personnel with PTSD, compared to 28 percent of those without PTSD, reported clinically significant insomnia. As these studies indicate, insomnia is the norm for veterans with PTSD. A smaller number of studies have examined the prevalence of chronic nightmares in veterans with PTSD. In the National Vietnam veterans Readjustment Study, 52 percent of combat veterans with PTSD reported a significant nightmare problem. In a general community sample, nightmares were endorsed by 71 percent of individuals with PTSD. Posttraumatic nightmares are independently associated with daytime distress and impaired functioning over and above the impact of overall PTSD severity.

Insomnia and recurrent nightmares are traditionally thought of as symptoms of PTSD, but this view has changed over time due to several converging lines of evidence. First, individuals with insomnia prior to trauma exposure are more likely to develop PTSD following the exposure, indicating that disturbed sleep increases vulnerability to PTSD. Second, insomnia occurring in the acute aftermath of a traumatic event is a significant risk factor for the later development of PTSD, suggesting that early sleep disturbance precedes the development of the full disorder. Third, studies are finding that insomnia and recurrent nightmares are independently associated with a number of negative sequelae, including suicidal ideation and behavior, over and above the effects of PTSD and depression.

Finally, studies also indicate that insomnia often persists following trauma-focused treatments such as prolonged exposure (PE) or cognitive processing therapy (CPT). Even when trauma-focused therapy is associated with statistically significant improvements in sleep, effect sizes are small and not clinically significant. Such as insomnia, nightmares frequently do not improve with trauma-focused treatment although the degree of improvement is larger than for insomnia. If the sleep disturbance were purely a symptom of PTSD it should resolve following successful treatment of the overall disorder. Insomnia and, to a lesser extent, nightmares are now thought of as comorbid problems that develop a degree of independence over time and warrant targeted treatment.

It is important to be aware that insomnia and recurrent nightmares are often not the only sleep disorders that individuals with PTSD experience. There is growing evidence that this population also suffers from obstructive sleep apnea (OSA), a sleep-related breathing disorder, more often than the general population

although not all studies have found an association with PTSD. OSA involves repetitive blockage of the airway that leads to fragmented sleep and reduced flow of oxygen to the brain. Given the impact of OSA on sleep, it is not surprising that studies are finding that treatment of comorbid apnea can improve not only sleep symptoms, but overall PTSD severity as well. The primary treatment for OSA is continuous positive airway pressure (CPAP), in which a mask is worn at night that delivers pressurized air to keep the airway open. In some studies, patients with PTSD have lower adherence to CPAP. A small body of evidence is beginning to show that parasomnias other than nightmares, such as sleep walking and rapid eye movement (REM) behavior disorder, are also more common in patients with PTSD, but it is not clear to what extent these represent comorbid disorders or are directly caused by trauma-related mechanisms. What is clear is that screening for sleep disorders beyond insomnia and recurrent nightmares needs to be routinely incorporated in the clinical assessment of PTSD.

TREATMENT OF SLEEP PROBLEMS IN PTSD

Two primary approaches to treating sleep problems exist in PTSD, pharmacotherapy, and psychotherapy. Each has demonstrated efficacy when compared to placebo or control conditions, but little is known about the efficacy of using both approaches concurrently. The preferred treatment approach for insomnia, when available, is CBT.

Pharmacotherapy

One approach to the treatment of insomnia in the context of PTSD is the use of hypnotic medications and other medications with sedative side effects. However, there are very few clinical trials examining the efficacy of these medications in individuals with PTSD. Of note, some medications used to treat PTSD can cause or exacerbate insomnia (e.g., selective serotonin reuptake inhibitors (SSRIs)). In terms of nightmares, the main option available is prazosin, an alpha-adrenergic receptor antagonist that has been used for the treatment of hypertension. Prazosin has been found to be effective for reducing nightmares and improving sleep in veterans with PTSD in multiple trials. However, the rigorous, recently completed large US Department of Veterans Affairs (VA) multisite VA Cooperative Study found no advantage of prazosin compared to placebo in reducing the nightmare disturbance and improving sleep.

Evidence also exists that shows patients frequently discontinue prazosin use prematurely. Raskind et al. have suggested that higher standing blood pressure, an indicator of noradrenergic stimulation of alpha-1 adrenoceptors, may be a useful biomarker for identifying a subgroup of individuals with combat-related PTSD likely to benefit from prazosin. Of note, prazosin is not sedating so it does not shorten sleep onset latency although it does promote REM sleep continuity. The antihistaminic drug hydroxyzine was found to decrease nightmares and improve sleep in one placebo-controlled trial. Hertzberg, Feldman, Beckham, and Davidson provided some evidence for the usefulness of trazodone in treating PTSD, including the sleep disturbance, but there has been no large randomized controlled trial (RCT). Although no benzodiazepine has been studied in such a trial, the nonbenzodiazepine drug eszopiclone, which acts at the benzodiazepine receptor, showed efficacy for treating PTSD and the associated sleep disturbance in a small RCT. Regarding the atypical antipsychotic drugs, adjunctive risperidone had modest efficacy in improving sleep quality in veterans with PTSD and, in a RCT, quetiapine monotherapy was shown to reduce symptoms of military-related PTSD, with an unclear effect on sleep quality specifically.

Cognitive-Behavioral Treatments

The preferred treatment approach for insomnia is cognitive behavioral treatment for insomnia (CBT-I), a series of strategies focused on stimulus control, sleep restriction, de-arousal techniques, sleep hygiene, and cognitive restructuring. Treatment length is typically 6 sessions, but ranges from 4–8 sessions for

most patients. CBT-I has demonstrated efficacy in patients with primary insomnia in many randomized trials and several meta-analyses. CBT-I has demonstrated sustained improvement in insomnia symptoms on follow-up assessments ranging from 1–3 years. The durability of treatment effects is a clear advantage over long-term pharmacotherapy, as are the lower risk of side effects and the absence of drug interactions. A recent randomized trial in veterans with PTSD found that CBT-I led to greater improvements in sleep and reductions in disruptive sleep-related behaviors than placebo, demonstrating the efficacy of CBT-I in this population. CBT-I may also be a good first step prior to beginning trauma-focused therapy.

A psychotherapeutic (CBT) approach to treating nightmares is imagery rehearsal therapy (IR), which is also referred to as nightmare rescripting because it entails choosing a recurrent nightmare and finding a way to change the content in a way that makes it less intense or distressing. There are several trials of IR with positive outcomes in civilian populations but a large, randomized trial in Vietnam veterans with PTSD failed to demonstrate clear efficacy. Systematic reviews found that most of the clinical trials to date were of mixed scientific rigor. Additional studies are needed before conclusions can be made regarding the efficacy of this treatment approach in Veteran and nonveteran populations, as well as comparing IR to prazosin.

Group Treatment

Both CBT-I and IR can be delivered individually as well as in a group format; also, CBT-I or components of CBT-I can be added to IR. A typical group consists of 6–8 individuals and meets weekly for 6 weeks (longer if CBT-I and IR are both delivered) for 90 minutes per visit. The material is the same as in the individual treatments, with the added element of hearing the experiences of other veterans with PTSD. A pilot study of combined CBT-I and IR delivered in a group format found significant improvements in both insomnia and nightmares, although most of the improvement in nightmares occurred prior to the introduction of IR content. This suggests that, at least for some individuals, CBT-I alone can lead to improvements in nightmares.

This chapter includes text excerpted from “PTSD and Sleep,” National Center for Posttraumatic Stress Disorder (NCPTSD), U.S. Department of Veterans Affairs (VA), 2016. Reviewed August 2021.

Chapter 59 | Stroke and Mental Health

Stroke occurs when a blood vessel in the brain ruptures and bleeds or when blood supply to the brain is cut off, which is frequently caused by a blood clot that prevents blood from passing through an artery.

People who have had a stroke frequently experience mental-health problems, such as anxiety, depressive, and/or aggressive symptoms, and almost one-third of stroke survivors experience depression.

The below mentioned are the mental-health changes that can occur to a person who has suffered a stroke.

DEPRESSION

Clinical depression is a significant medical condition that might develop immediately after brain trauma or weeks afterward and can lead the person to feel helpless, despair, and low self-esteem. These emotions can last for weeks or months. Depression might affect how often she or he gets sick and how quickly they recover from a stroke.

The most common type of depression after a stroke is poststroke depression. However, the majority of cases of depression following a stroke are undiagnosed. People who have suffered a stroke may hide or be unaware of their symptoms. A caregiver can provide invaluable insight and aid in the early detection of depression.

The symptoms of depression are:

- Feeling gloomy or melancholy

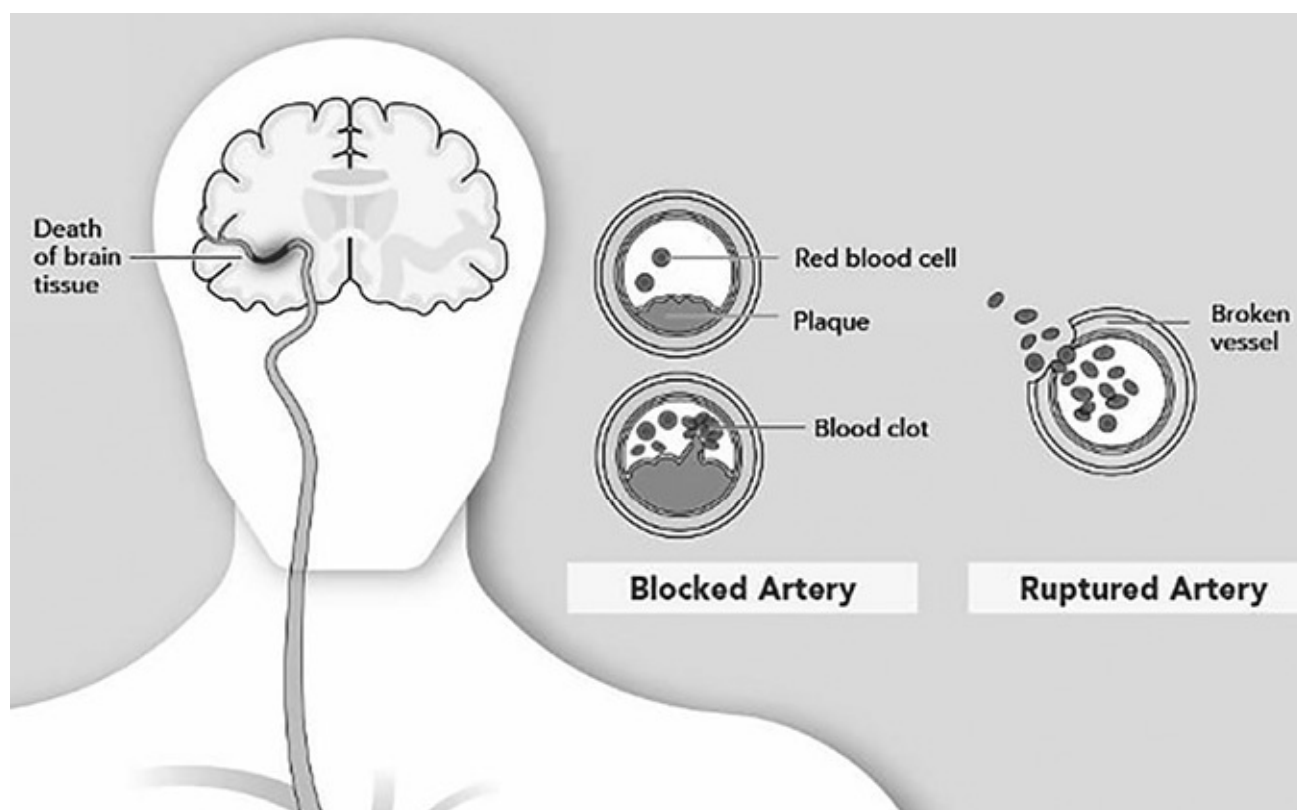


Figure 59.1. Stroke

- Being restless
- Feeling worthless, or guilty

- Increased or decreased appetite
- Difficulty in thinking, remembering, or making decisions
- Feeling tired and weak
- Frequent headaches
- Experiencing issues with digestion
- Problems with sexual functioning
- Having suicidal thoughts

ANXIETY

Anxiety is a strong fearful mood that can lead to persistent concern. Though anxiety attacks are a natural reaction to the strains of ordinary life, they can be severe and chronic (long-term) and must be treated. When a person experiences physical problems that prohibit them from feeling well and interfere with their career or social life, she or he should get help.

Anxiety symptoms include:

- Feeling dizzy or lightheaded
- Increased heartbeat
- Difficulty breathing
- Sleeping trouble
- Nausea
- Feeling irritated or restless
- Difficulty in concentration

DIFFICULTY IN PAYING ATTENTION

People who have suffered a stroke may find it difficult to focus on anything for more than a few seconds. They might get distracted by the activities going on around them and it will be difficult for them to determine a significant topic to discuss. One can help them by:

- Making sure they look at you while you are talking
- Talking to them in short and simple sentences
- Requesting them to recall and say what was said to them
- Reducing any loud noises and eliminating distractions around them

FEELING CONFUSED

A stroke affected person may have no idea what has occurred to them, where they are, what year it is, or who is around them. This can be terrifying, but is not uncommon. It is crucial that the person is in a safe and comfortable environment and that they are not confronted with unpleasant conduct. A few steps to help them and make them comfortable are to:

- Keep their favorite objects and pictures in the room
- Limit any activities around them that might cause confusion
- Keep a calendar in their room
- Frequently reminding them of family members, friends, places, and dates
- Talk about familiar things and topics

LOSS OF INHIBITION

A person who has experienced stroke might show a change in connecting with people. It is very important for family members and caregivers to understand this and the behavior that they might exhibit, such as:

- Being aggressive or violent

- Temporal outbursts that can be both physical or verbal
- Inappropriate sexual or social behavior
- Impulsive behavior

EMOTIONAL CHANGES

Strokes can have a wide range of consequences, many of which are visible and easy to recognize, but there might also be subtle impacts, such as emotional alterations. Although we cannot see feelings or thoughts, changes in emotions frequently result in a shift in behavior, which may indicate that something is wrong.

DIFFICULTY IN PLANNING AND ORGANIZING

When it comes to communication and everyday life skills, we need to be able to plan, evaluate our progress, and attain our goals. People who have had a stroke may find this difficult. They may struggle to express their thoughts in a way that makes sense. They could jumble up their thoughts or forget to mention key details. They may be able to express their desires, but might be unable to carry out their plans.

THOUGHT PROCESS AND JUDGEMENTAL ISSUES

People who have had a stroke may find it difficult to solve complex problems. They would be unable to make sound decisions on their employment, income, or abilities and might frequently desire to engage in things that they are unable to perform (return to work) or are dangerous to engage in (drive a car). It is common to find themselves talking about the same concerns over and over again, or getting stuck on a certain topic.

LACK OF SELF-AWARENESS

Changes in physical ability, reasoning, or emotions are typically unnoticed by those who have had a stroke. They are unaware of the need to work on their recovery and treatment. Others, they believe, are pressuring them to do things they do not need, understand, or want to do, which can be terrifying. They could lose faith in their family and the hospital staff. They may make up lies or make excuses for their actions when they cannot remember what happened.

MEMORY PROBLEMS

Memory issues can occur in people who have had a stroke. Though they might recall incidents from a long time ago, it might be difficult for them to remember new information or new learning (short-term memory), shortly before or after the occurrence of stroke. They can be helped by:

- Asking them to write down about their day or activities they have done
- Helping them with hints to recall
- Repeating information frequently
- Asking them to repeat new information
- Labeling familiar images or objects

The world can be weird, puzzling, and frightening for those who have had a stroke. It is difficult for them to comprehend all of the changes that have occurred in their lives. They do not understand why they require treatment and angry feelings are frequently directed at family members and hospital personnel. The family members and caregivers must make sure they understand the posteffects of stroke and how to take care of their loved ones.

References

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2. "Depression and Anxiety After Stroke Fact Sheet," Stroke Foundation, May 11, 2017.
3. "Effects of Stroke: Mental Changes," Memorial Medical Center, April 22, 2015.
4. "Changes to Mental Health, Emotional Health or Both after a Stroke," Allina Health, May 1, 2018.

"Stroke and Mental Health," © 2021 Omnigraphics. Reviewed August 2021.

Chapter 60 | A Glossary of Terms Related to Mental Health

acetylcholine: It is the neurotransmitter at neuromuscular junctions, at synapses in the ganglia of the visceral motor system, and at a variety of sites within the central nervous system.

addiction: A chronic, relapsing disease characterized by compulsive drug seeking and use, despite serious adverse consequences, and by long-lasting changes in the brain.

agitation: A condition in which a person is unable to relax and be still. The person may be very tense and irritable, and become easily annoyed by small things.

agoraphobia: An intense fear of being in open places or in situations where it may be hard to escape, or where help may not be available.

albumin: A type of protein found in blood, egg white, milk, and other substances.

anorexia nervosa (AN): An eating disorder that makes people lose more weight than is considered healthy for their age and height.

antidepressant: Medication used to treat depression and other mood and anxiety disorders.

antipsychotic: Medication used to treat psychosis.

antisocial personality disorder (ASPD): A mental condition in which a person has a long-term pattern of manipulating, exploiting, or violating the rights of others without any remorse.

benzodiazepine: A type of central nervous system (CNS) depressant prescribed to relieve anxiety and sleep problems. Valium and Xanax are among the most widely prescribed medications.

beta-blockers: A type of medication that reduces nerve impulses to the heart and blood vessels, which makes the heart beat slower and with less force.

bipolar disorder: A disorder that causes severe and unusually high and low shifts in mood, energy, and activity levels, as well as unusual shifts in the ability to carry out day-to-day tasks. Also known as “manic depression.”

body dysmorphic disorder (BDD): A serious illness in which a person is overly worried about minor or imaginary physical flaws.

bulimia nervosa (BN): Often called “bulimia,” is a type of eating disorder. People with bulimia eat large amounts of food at one time, then try to get rid of the food or weight gained by throwing up, taking laxatives, fasting (not eating anything), or exercising a lot more than normal.

clinical trial: A scientific study using human volunteers (also called “participants”) to look at new ways to prevent, detect, or treat disease. Treatments might be new drugs or new combinations of drugs, new surgical procedures or devices, or new ways to use existing treatments.

cognitive-behavioral therapy (CBT): CBT helps people focus on how to solve their current problems. This type of therapy helps the patient learn how to identify distorted or unhelpful thinking patterns, recognize and change inaccurate beliefs, relate to others in more positive ways, and change behaviors accordingly.

comorbidity: The occurrence of two disorders or illnesses in the same person, also referred to as “co-occurring conditions” or “dual diagnosis.” Patients with comorbid illnesses may experience a more severe illness course and require treatment for each or all conditions.

craving: A powerful, often uncontrollable desire for drugs.

deep breathing: An active process that involves conscious control over breathing in and out. This may involve controlling the way in which air is drawn in (e.g., through the mouth or nostrils), the rate (e.g., quickly or over a length of time), the depth (e.g., shallow or deep), and the control of other body parts (e.g., relaxation of the stomach).

delirium: A mental state in which a person is confused, disoriented, and not able to think or remember clearly. The person may also be agitated and have hallucinations, and extreme excitement.

dementia: Loss of brain function that occurs with certain diseases. It affects memory, thinking, language, judgment, and behavior.

dopamine: A brain chemical, classified as a neurotransmitter, found in regions that regulate movement, emotion, motivation, and pleasure.

electroconvulsive therapy (ECT): A treatment for severe depression and certain mental disorders. A brief seizure is induced by giving electrical stimulation to the brain through electrodes placed on the scalp. Also called “ECT” and “electroshock therapy.”

factitious disorder: A condition in which a patient intentionally falsifies medical or psychiatric symptoms. Symptoms can be self-induced or fabricated.

gamma-aminobutyric acid (GABA): It is an amino acid that serves as the primary inhibitory neurotransmitter in the brain and a major inhibitory neurotransmitter in the spinal cord.

generalized anxiety disorder (GAD): A mental disorder in which a person is often worried or anxious about many things and finds it hard to control this anxiety.

glutamate: The most common neurotransmitter in a person’s body, which increases neuronal activity, is involved in early brain development, and may also assist in learning and memory.

hypercalcemia: Higher than normal levels of calcium in the blood. Some types of cancer increase the risk of hypercalcemia.

hypersomnia: A state characterized by subjective report of tiredness and objective evidence of inability to maintain vigilance.

impulse control disorder (ICD): A condition where people have impulses that are difficult or impossible to resist.

insomnia: A chronic or acute sleep disorder characterized by a complaint of difficulty initiating, and/or maintaining sleep, and/or a subjective complaint of poor sleep quality that result in daytime impairment and subjective report of impairment.

light therapy: The treatment of disease with certain types of light. Light therapy can use lasers, LED, fluorescent lamps, and ultraviolet or infrared radiation. Also called “phototherapy.”

magnetic resonance imaging (MRI): An imaging technique that uses magnetic fields to take pictures of the brain’s structure.

meditation: A group of techniques, most of which started in Eastern religious or spiritual traditions. In meditation, individuals learn to focus their attention and suspend the stream of thoughts that normally occupy the mind. This practice is believed to result in a state of greater physical relaxation, mental calmness, and psychological balance. Practicing meditation can change how a person relates to the flow of emotions and thoughts in the mind.

narcissistic personality disorder (NPD): A mental-health condition in which a person believes they are better than everyone else.

narcolepsy: A disorder of sleep and wakefulness characterized by excessive daytime sleepiness,

disrupted nighttime sleep, and various combinations of irresistible onset of sleep, cataplexy, hypnagogic hallucinations or sleep paralysis.

neurotransmitters: Chemicals in the brain that helps nerve cells communicate with each other.

norepinephrine: A neurotransmitter present in the brain and the peripheral (sympathetic) nervous system; and a hormone released by the adrenal glands. Norepinephrine is involved in attention, responses to stress, and it regulates smooth muscle contraction, heart rate, and blood pressure.

obsessive-compulsive disorder (OCD): A common, chronic, and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts (obsessions) and/or behaviors (compulsions) that she or he feels the urge to repeat over and over.

opioid: A compound or drug that binds to receptors in the brain involved in the control of pain and other functions (e.g., morphine, heroin, hydrocodone, oxycodone).

persistent depressive disorder: Also called “dysthymia” is a depressed mood that lasts for at least two years.

phobia: A condition in which a person suffers from an unusual amount of fear of a certain activity or situation.

posttraumatic stress disorder (PTSD): An anxiety disorder that develops in reaction to physical injury or severe mental or emotional distress, such as military combat, violent assault, natural disaster, or other life-threatening events.

prefrontal cortex: A highly developed area at the front of the brain that, in humans, plays a role in executive functions such as judgment, decision-making and problem-solving, as well as emotional control and memory.

premenstrual syndrome (PMS): A combination of symptoms that many women get about a week or two before their period. Most women, over 90 percent, say they get some premenstrual symptoms, such as bloating, headaches, and moodiness.

psychiatrist: A doctor (M.D.) who treats mental illness. Psychiatrists must receive additional training and serve a supervised residency in their specialty. They can prescribe medications.

psychologist: A clinical psychologist is a professional who treats mental illness, emotional disturbance, and behavior problems. They use talk therapy as treatment, and cannot prescribe medication. A clinical psychologist will have a master’s degree (M.A.) or doctorate (Ph.D.) in psychology, and possibly more training in a specific type of therapy.

psychotherapy: A term for a variety of treatment techniques that aim to help a person identify and change troubling emotions, thoughts, and behavior.

purging: Forcing oneself to vomit.

schizoaffective disorder: A mental condition that causes both a loss of contact with reality (psychosis) and mood problems (depression or mania).

schizophrenia: A severe mental disorder that appears in late adolescence or early adulthood. People with schizophrenia may have hallucinations, delusions, loss of personality, confusion, agitation, social withdrawal, psychosis, and/or extremely odd behavior.

seasonal affective disorder (SAD): A mental-health condition that is triggered by the changing of the seasons. This condition is a subtype of major depressive disorder and bipolar disorder.

sedatives: Drugs that suppress anxiety and promote sleep; the National Survey on Drug Use and Health (NSDUH) classification includes benzodiazepines, barbiturates, and other types of CNS depressants.

self-esteem: A feeling of self-worth, self-confidence, and self-respect.

sleep disorder: These are clinical conditions that are a consequence of a disturbance in the ability to initiate or maintain the quantity and quality of sleep needed for optimal health, performance, and well-being.

social anxiety disorder: Also called “social phobia,” is a mental-health condition. It is an intense, persistent fear of being watched and judged by others. This fear can affect work, school, and your other day-to-day activities.

stimulants: A class of drugs that enhances the activity of monamines (such as dopamine) in the brain, increasing arousal, heart rate, blood pressure, and respiration, and decreasing appetite; includes some medications used to treat attention deficit hyperactivity disorder (ADHD) (e.g., methylphenidate and amphetamines), as well as cocaine and methamphetamine.

synapse: The tiny gap between neurons, where nerve impulses are sent from one neuron to another.

tai chi: A mind-body practice that originated in China as a martial art. Individuals doing tai chi move their bodies slowly and gently, while breathing deeply and meditating. (Tai chi is sometimes called “moving meditation.”)

thyroid hormone: A hormone that affects heart rate, blood pressure, body temperature, and weight. Thyroid hormone is made by the thyroid gland and can also be made in the laboratory.

tolerance: A condition in which higher doses of a drug are required to produce the same effect achieved during initial use; often associated with physical dependence.

yoga: A combination of breathing exercises, physical postures, and meditation used to calm the nervous system and balance the body, mind, and spirit.

This glossary contains terms excerpted from documents produced by several sources deemed reliable.

Chapter 61 | Crisis Hotlines and Helplines

Boys Town National Hotline

(Crisis hotline that helps parents and children cope with stress and anxiety)

Toll-Free: 800-448-3000

Childhelp National Child Abuse Hotline

Toll-Free: 800-4-A-CHILD (800-422-4453)

Covenant House

(Helping homeless youth in the United States)

Toll-Free: 800-388-3888

Disaster Distress Helpline

Toll-Free: 800-985-5990

Disaster Mental Health

Toll-Free: 877-294-HELP (877-294-4357)

Division of Developmental Disabilities

Toll-Free: 800-832-9173

Division of Mental Health and Addiction Services (DMHAS)

Toll-Free: 800-382-6717

National Hopeline Network

Toll-Free: 800-442-HOPE (800-442-4673)

National Domestic Violence Hotline (NDVH)

Toll-Free: 800-799-SAFE (800-799-7233)

National Eating Disorders Association (NEDA) Information and Referral Helpline

Toll-Free: 800-931-2237

National Organization for Victim Assistance (NOVA)

(Victims/survivors only)

Toll-Free: 800-TRY-NOVA (800-879-6682)

National Runaway Switchboard (NRS)

Toll-Free: 800-RUNAWAY (800-786-2929)

National Sexual Assault Hotline

Toll-Free: 800-656-HOPE (800-656-4673)

National Suicide Prevention Lifeline

Toll-Free: 800-273-TALK (800-273-8255)

Postpartum Depression (PPD) Moms

Toll-Free: 800-PPD-MOMS (800-773-6667)

S.A.F.E. ALTERNATIVES®

Toll-Free: 800-DONTCUT (800-366-8288)

Safe Helpline

Toll-Free: 877-995-5247

Substance Abuse and Mental Health Services Administration's (SAMHSA) National Helpline

(Also known as the “Treatment Referral Routing Service”)

Toll-Free: 800-662-HELP (800-662-4357)

Suicide Prevention Crisis Center

Toll-Free: 877-7-CRISIS (877-727-4747)

Trevor Project Suicide

(A prevention helpline for lesbian, gay, bisexual, transgender, and questioning youth)

Toll-Free: 866-4U-TREVOR (866-488-7386)

Below is a list of toll-free national helplines and hotlines that provide anonymous, confidential information to callers. They can answer questions and help you in times of need.

Chapter 62 | Mental-Health Disorders: Resources for Information and Support

GOVERNMENT AGENCIES THAT PROVIDE INFORMATION ABOUT MENTAL-HEALTH DISORDERS

Center for Mental Health Services (CMHS)

5600 Fishers Ln.
Rockville, MD 20857
Phone: 240-276-1310
Website: www.samhsa.gov/about-us/who-we-are/offices-centers/cmhs

Center for Substance Abuse Treatment (CSAT)

5600 Fishers Ln.
Rockville, MD 20857
Phone: 240-276-1660
Website: www.samhsa.gov/about-us/who-we-are/offices-centers/csac

National Institute of Neurological Disorders and Stroke (NINDS)

P.O. Box 5801
Bethesda, MD 20824
Toll-Free: 800-352-9424
Phone: 301-496-5751
Fax: 301-402-2186
Website: www.ninds.nih.gov
E-mail: braininfo@ninds.nih.gov

National Institute on Aging (NIA)

31 Center Dr., MSC 2292
Bldg. 31, Rm. 5C27
Bethesda, MD 20892
Toll-Free: 800-222-2225
Toll-Free TTY: 800-222-4225
Website: www.nia.nih.gov
E-mail: niac@nia.nih.gov

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

5635 Fishers Ln.
MSC 9304
Bethesda, MD 20892
Toll-Free: 888-MY-NIAAA (888-696-4222)
Phone: 301-443-3860
Website: www.niaaa.nih.gov
E-mail: niaaaweb-r@exchange.nih.gov

National Institute on Drug Abuse (NIDA)

301 N. Stonestreet Ave.
3WFN, MSC 6024
Bethesda, MD 20892
Phone: 301-443-1124/ 301-443-6245
Website: www.drugabuse.gov
E-mail: media@nida.nih.gov

Substance Abuse and Mental Health Services Administration (SAMHSA)

5600 Fishers Ln.
Rockville, MD 20857
Toll-Free: 877-SAMHSA-7 (877-726-4727)
Toll-Free TTY: 800-487-4889
Fax: 240-221-4292
Website: www.samhsa.gov/about-us/contact-us
E-mail: SAMHSAInfo@samhsa.hhs.gov

PRIVATE AGENCIES THAT PROVIDE INFORMATION ABOUT MENTAL-HEALTH DISORDERS

Alzheimer's Association

225 N. Michigan Ave.
17th Fl.
Chicago, IL 60601-7633
Toll-Free: 800-272-3900
Phone: 312-335-8700
TDD: 312-335-5886
Toll-Free Fax: 866-699-1246
Website: www.alz.org
E-mail: info@alz.org

American Academy of Child and Adolescent Psychiatry (AACAP)

3615 Wisconsin Ave., N.W.
Washington, DC 20016-3007
Phone: 202-966-7300
Fax: 202-464-0131
Website: www.aacap.org
E-mail: communications@aacap.org

American Art Therapy Association (AATA)

4875 Eisenhower Ave., Ste. 240
Alexandria, VA 22304
Toll-Free: 888-290-0878
Phone: 703-548-5860
Fax: 703-783-8468
Website: www.arttherapy.org
E-mail: info@arttherapy.org

American Association for Geriatric Psychiatry (AAGP)

6728 Old McLean Village Dr.
McLean, VA 22101
Phone: 703-718-6026
Fax: 703-556-8729
Website: www.aagponline.org
E-mail: main@aagponline.org

American Association for Marriage and Family Therapy (AAMFT)

112 S. Alfred St.
Alexandria, VA 22314-3061
Phone: 703-838-9808
Fax: 703-838-9805
Website: www.aamft.org
E-mail: central@aamft.org

American Association of Suicidology (AAS)

5221 Wisconsin Ave., N.W.
2nd Fl.
Washington, DC 20015
Phone: 202-237-2280
Fax: 202-237-2282
Website: www.suicidology.org
E-mail: info@suicidology.org

American Counseling Association (ACA)

6101 Stevenson Ave., Ste. 600
Alexandria, VA 22304
Toll-Free: 800-347-6647
Phone: 703-823-9800
Fax: 703-823-0252
Toll-Free Fax: 800-473-2329
Website: www.counseling.org
E-mail: membership@counseling.org

American Foundation for Suicide Prevention (AFSP)

199 Water St.
11th Fl.
New York, NY 10038
Toll-Free: 888-333-2377
Phone: 212-363-3500/ 347-826-3577
Fax: 212-363-6237
Website: www.afsp.org
E-mail: info@afsp.org

American Psychiatric Association (APA)

800 Maine Ave., S.W., Ste. 900
Washington, DC 20024
Toll-Free: 888-357-7924

Phone: 202-559-3900

Website: www.psychiatry.org

E-mail: apa@psych.org

American Psychological Association (APA)

750 1st St., N.E.

Washington, DC 20002-4242

Toll-Free: 800-374-2721

Phone: 202-336-5500

TDD: 202-336-6123

Fax: 202-336-5502

Website: www.apa.org

E-mail: public.affairs@apa.org

Anxiety and Depression Association of America (ADAA)

8701 Georgia Ave., Ste. 412

Silver Spring, MD 20910

Phone: 240-485-1001

Fax: 240-485-1035

Website: www.adaa.org

E-mail: information@adaa.org

Association for Applied Psychophysiology and Biofeedback (AAPB)

4400 College Blvd., Ste. 220

Overland Park, KS 66211

Toll-Free: 800-477-8892

Phone: 303-422-8436

Website: www.aapb.org

E-mail: info@aapb.org

Association for Behavioral and Cognitive Therapies (ABCT)

305 7th Ave.

16th Fl.

New York, NY 10001

Phone: 212-647-1890

Fax: 212-647-1865

Website: www.abct.org

E-mail: membership@abct.org

Brain & Behavior Research Foundation

747 3rd Ave.

33rd Fl.

New York, NY 10017

Toll-Free: 800-829-8289

Phone: 646-681-4888

Website: www.bbrfoundation.org

E-mail: info@bbrfoundation.org

Brain Injury Association of America (BIAA)

3057 Nutley St., Ste. 805

Fairfax, VA 22031-1931

Toll-Free: 800-444-6443

Phone: 703-761-0750

Fax: 703-761-0755

Website: www.biausa.org

E-mail: info@biausa.org

Caring.com

P.O. Box 32217

Charlotte, NC 28232

Toll-Free: 800-973-1540

Website: www.caring.com

E-mail: directory-operations@caring.com

Depressed Anonymous

P.O. Box 17414

Louisville, KY 40214

Phone: 502-569-1989

Website: www.depressedanon.com

E-mail: depanon@netpenny.net

Depression and Bipolar Support Alliance (DBSA)

55 E. Jackson Blvd., Ste. 490

Chicago, IL 60604

Toll-Free: 800-826-3632

Fax: 312-642-7243

Website: www.dbsalliance.org

E-mail: info@DBSAlliance.org

Families for Depression Awareness

391 Totten Pond Rd., Ste. 101

Waltham, MA 02451

Phone: 781-890-0220/ 615-604-1114

Fax: 781-890-2411

Website: www.familyaware.org

E-mail: info@familyaware.org

Family Caregiver Alliance (FCA)

101 Montgomery St., Ste. 2150

San Francisco, CA 94104

Toll-Free: 800-445-8106

Phone: 415-434-3388

Website: www.caregiver.org

E-mail: info@caregiver.org

Geriatric Mental Health Foundation (GMHF)

6728 Old McLean Village Dr.
McLean, VA 22101
Phone: 703-718-6026
Fax: 703-556-8729
Website: www.gmhfonline.org
E-mail: web@GMHFOonline.org

International Foundation for Research and Education on Depression (iFred)

P.O. Box 17598
Baltimore, MD 21297-1598
Fax: 443-782-0739
Website: www.ifred.org
E-mail: info@ifred.org

International Obsessive-Compulsive Disorder (OCD) Foundation

P.O. Box 961029
Boston, MA 02196
Phone: 617-973-5801
Fax: 617-507-0495
Website: www.iocdf.org
E-mail: info@iocdf.org

International Society for the Study of Trauma and Dissociation (ISSTD)

4201 Wilson Blvd.
3rd Fl.
Arlington, VA 22203
Toll-Free: 844-994-7783
Toll-Free Fax: 888-966-0310
Website: www.isst-d.org
E-mail: info@isst-d.org

International Society for Traumatic Stress Studies (ISTSS)

111 West Jackson Blvd., Ste. 1412
Chicago, IL 60604
Phone: 847-686-2234
Fax: 847-686-2251
Website: www.istss.org
E-mail: info@istss.org

Mental Health America (MHA)

500 Montgomery St., Ste. 820
Alexandria, VA 22314
Toll-Free: 800-969-6642
Phone: 703-684-7722
Fax: 703-684-5968
Website: www.mhanational.org
E-mail: info@mhanational.org

Mental Health Association of Westchester (MHA)

580 White Plains Rd., Ste. 510

Tarrytown, NY 10591

Phone: 914-345-0700/ 914-847-6178

Website: www.mhawestchester.org

E-mail: help@mhawestchester.org

National Alliance on Mental Illness (NAMI)

4301 Wilson Blvd., Ste. 300

Arlington, VA 22203

Toll-Free: 800-950-NAMI (800-950-6264)

Phone: 703-524-7600

TDD: 703-516-7227

Fax: 703-524-9094

Website: www.nami.org

E-mail: info@nami.org

National Association of Anorexia Nervosa and Associated Disorders (ANAD)

P.O. Box 409047

Chicago, IL 60640

Toll-Free: 888-375-7767

Phone: 312-262-6897

Website: www.anad.org

E-mail: hello@anad.org

National Association of School Psychologists (NASP)

4340 E.W., Hwy., Ste. 402

Bethesda, MD 20814

Toll-Free: 866-331-6277

Phone: 301-657-0270

TTY: 301-657-4155

Fax: 301-657-0275

Website: www.nasponline.org

E-mail: membership@naspweb.org

National Center for Child Traumatic Stress (NCCTS)

11150 W. Olympic Blvd., Ste. 650

Los Angeles, CA 90064

Phone: 310-235-2633

Fax: 310-235-2612

Website: www.nctsn.org/about-us/contact-us

E-mail: info@nctsn.org

National Center for Victims of Crime (NCVC)

2000 M St., N.W., Ste. 480

Washington, DC 20036

Toll-Free: 855-484-2846

Phone: 202-467-8700

Fax: 202-467-8701

Website: www.victimsofcrime.org

E-mail: info@victimsofcrime.org

National Council on Problem Gambling (NCPG)

730 11th St., N.W., Ste. 601

Washington, DC 20001

Toll-Free: 800-522-4700

Phone: 202-547-9204

Fax: 202-547-9206

Website: www.ncpgambling.org

E-mail: ncpg@ncpgambling.org

National Eating Disorders Association (NEDA)

1500 Bdwy., Ste. 1101

New York, NY 10036

Toll-Free: 800-931-2237

Phone: 212-575-6200

Fax: 212-575-1650

Website: www.nationaleatingdisorders.org

E-mail: info@NationalEatingDisorders.org

National Federation of Families for Children's Mental Health (FFCMH)

15800 Crabbs Branch Way, Ste. 300

Rockville, MD 20855

Phone: 240-403-1901

Website: www.ffcmh.org

E-mail: ffcmh@ffcmh.org

Postpartum Support International (PSI)

6706 S.W., 54th Ave.

Portland, OR 97219

Toll-Free: 800-944-4773

Phone: 503-894-9453

Fax: 503-894-9452

Website: www.postpartum.net

E-mail: psioffice@postpartum.net

Suicide Awareness Voices of Education (SAVE)

7900 Xerxes Ave., S., Ste. 810

Bloomington, MN 55431

Toll-Free: 800-273-8255

Phone: 952-946-7998

Website: www.save.org

E-mail: save@save.org

Suicide Prevention Resource Center (SPRC)

940 N.E., 13th St.

Nicholson Tower, 4N. 4900
Oklahoma City, OK 73104
Toll-Free: 800-273-8255
Website: www.sprc.org
E-mail: info@sprc.org

Resources in this chapter were compiled from several sources deemed reliable; all contact information was verified and updated in August 2021.

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