

ADHD

What is ADHD?

Attention-deficit/hyperactivity disorder (ADHD) is a developmental disorder marked by persistent symptoms of inattention, hyperactivity, and impulsivity. Some people mostly have symptoms of inattention. Others mostly have symptoms of hyperactivity and impulsivity. Some people have both types of symptoms.

Symptoms begin in childhood and can interfere with daily life, including social relationships and school or work performance. ADHD is well-known among children and teens, but many adults also have the disorder. Effective treatments are available to manage symptoms.

What are the symptoms of ADHD?

People with ADHD may experience an ongoing pattern of:

- **Inattention:** Difficulty paying attention
- **Hyperactivity:** Showing too much energy or moving and talking too much
- **Impulsivity:** Acting without thinking or having difficulty with self-control

Signs of inattention can include frequent difficulty with:

- Paying attention to details, leading to careless mistakes at school, work, or during other activities
- Concentrating on tasks or activities, for instance, while having conversations, taking tests, completing assignments, or reading papers
- Listening when spoken to directly
- Following instructions or finishing tasks at school, work, or home
- Organizing tasks and activities, managing time, and meeting deadlines
- Completing tasks that require sustained attention, such as homework, large projects, and complicated forms
- Losing things, such as backpacks, books, keys, wallets, and phones
- Getting easily distracted by unrelated thoughts or stimuli
- Forgetting about daily activities, such as chores, errands, and events, or other important things, like assignments, appointments, and phone calls

Signs of hyperactivity and impulsivity can include often:

- Fidgeting, tapping hands or feet, or squirming while seated
- Moving around when expected to remain seated, such as in the classroom or office, or feeling restless in these situations
- Running, climbing, or moving around at times when it is not appropriate

- Being constantly “on the go” and acting as if driven by a motor
- Being unable to quietly play or take part in hobbies and activities
- Talking excessively
- Answering questions before they are fully asked or finishing other people’s sentences
- Struggling to wait or be patient, such as when playing a game or waiting in line
- Interrupting or intruding on others, for example, in conversations, games, or meetings

What causes ADHD?

Researchers are not sure what causes ADHD, although many studies suggest that genes play a large role. Like many other disorders, ADHD probably results from a combination of factors.

In addition to genetics, researchers are looking at differences in brain development and neurobiology among people with ADHD compared to those without the disorder. They are also studying environmental factors that might increase the risk of developing ADHD, including brain injuries, nutrition, and social environments.

How is ADHD diagnosed?

Based on their specific symptoms, a person can be diagnosed with one of three types of ADHD:

- **Inattentive:** Mostly symptoms of inattention but not hyperactivity or impulsivity
- **Hyperactive-impulsive:** Mostly symptoms of hyperactivity and impulsivity but not inattention
- **Combined:** Symptoms of both inattention and hyperactivity and impulsivity

ADHD symptoms must begin in childhood (before age 12). Symptoms often continue into the teen years and adulthood. The criterion for a diagnosis differs slightly based on age.

- Children up to 16 years must show at least six symptoms of inattention, hyperactivity and impulsivity, or both.
- Adults and youth over 16 years must show at least five symptoms of inattention, hyperactivity and impulsivity, or both.

To be diagnosed with ADHD, a person’s symptoms must also:

- Occur for at least 6 months
- Be present in two or more settings (for example, at home, at work, in school, or with friends)
- Interfere with or impair social, school, or work functioning

Stress, sleep disorders, anxiety, depression, and other physical conditions or illnesses can cause similar symptoms to those of ADHD. A health care provider needs to do a thorough evaluation to determine the cause of symptoms, make a diagnosis, and identify effective treatments.

Primary care providers sometimes diagnose and treat ADHD, or they may refer the person to a mental health professional. During an evaluation, a provider usually:

- Examines the person’s mental health and medical history, including their mood and past or current health conditions.

- Looks at the person's current or, if an adult, childhood behavior and school experiences. To obtain this information, the provider may ask for permission to talk with family, friends, partners, teachers, and others who know the person well and have seen them in different settings to learn about behaviors and experiences at home, school, or elsewhere.
- Uses standardized behavior rating scales or ADHD symptom checklists to determine whether the person meets the criteria for a diagnosis of ADHD.
- Administers psychological tests that look at cognitive skills, such as working memory, executive functioning (abilities such as planning and decision-making), visual and spatial abilities, or reasoning. Such tests can help identify psychological or cognitive (thinking-related) strengths and challenges and identify or rule out possible learning disabilities.

Does ADHD look the same in everyone?

Anyone can have ADHD. However, boys and men tend to display more hyperactive and impulsive symptoms, while girls and women are more likely to be diagnosed with inattentive ADHD.

ADHD can also be diagnosed at any age, although symptoms must have begun in childhood (before age 12). Adults with ADHD often have a history of problems with school, work, and relationships.

ADHD symptoms may change as a person gets older.

- **Children** show hyperactivity and impulsivity as the most common symptoms. As academic and social demands increase, symptoms of inattention often become more prominent and begin to interfere with academic performance and peer relationships.
- **Adolescents** usually show less hyperactivity and may appear as restless or fidgeting. Symptoms of inattention and impulsivity typically continue and may cause academic, organizational, or relationship challenges. Teens with ADHD are more likely to engage in impulsive, risky behaviors, such as substance use and unsafe sexual activity.
- **Adults, including older adults**, can show inattention, restlessness, and impulsivity, although, in some people, those symptoms become less severe and less impairing. They may also be irritable, have a low tolerance for frustration and stress, or experience frequent or intense mood changes.

Some adults may not have been diagnosed with ADHD when younger because their teachers or family did not recognize the disorder, they had a mild form of the disorder, or they managed well until experiencing the demands of adulthood. But it is never too late to seek a diagnosis and treatment for ADHD and other mental health conditions that may co-occur with it. Effective treatment can make day-to-day life easier for people with ADHD and their families.

How is ADHD treated?

Although there is no cure for ADHD, current treatments may help reduce symptoms and improve functioning. Common treatments for ADHD are medication, psychotherapy, and other behavioral interventions. For children, treatment often includes parent education and school-based programs.

Researchers are studying new treatments for people with ADHD, such as cognitive training and neurofeedback. These options are usually explored only after medication and psychotherapy have already been tried. For many people, treatment involves a combination of elements.

Medication

Stimulants are the most common type of medication used to treat ADHD, and research shows them to be highly effective. They work by increasing levels of brain chemicals involved in thinking and attention.

Like all medications, stimulants can have side effects and must be prescribed and monitored by a health care provider. Tell the provider about other medications you or your child are taking. Medications for common health problems, such as diabetes, anxiety, and depression, can interact with stimulants, in which case, a provider can suggest other medication options.

Health care providers sometimes prescribe nonstimulant medications like antidepressants to treat ADHD. However, the U.S. Food and Drug Administration (FDA) has not approved these medications specifically for ADHD. Sometimes, a person must try several different medications or dosages before finding the one that works for them.

Learn more about [stimulants and other mental health medications](#). You can learn more about specific medications, including the latest approvals, side effects, warnings, and patient information, on the [FDA website](#).

Psychotherapy and behavioral interventions

Psychological interventions for ADHD can take many forms and be combined with medication and other elements for parents, families, and teachers. Adding therapy to an ADHD treatment plan can help some people better cope with daily challenges, gain confidence, or manage impulsive and risky behaviors.

Therapy is especially helpful if ADHD co-occurs with other mental disorders, such as anxiety, depression, conduct problems, or substance use disorders. Learn about [other mental disorders](#).

Several psychosocial interventions have been shown to help manage symptoms and improve functioning.

- **Behavioral therapy** helps a person change their behavior. It might involve practical assistance, such as organizing tasks or completing schoolwork, learning social skills, or monitoring one's behavior.
- **Cognitive behavioral therapy** helps a person become aware of attention and concentration challenges and work on skills to improve focus and organization and complete daily tasks (for instance, by breaking large tasks into smaller, more manageable steps).
- **Family and marital therapy** helps family members learn to handle disruptive behaviors, encourage behavior changes, and improve interactions with children and partners.

Some people find it helpful to get support from a professional life coach or ADHD coach who can teach them skills to improve daily functioning.

Parent education and support

Therapy for children and teens requires parents to play an active role. Treatment sessions with the child alone are more likely to be effective for treating symptoms of anxiety or depression that may co-occur with ADHD than for managing core symptoms of the disorder.

Mental health professionals can educate parents about the disorder and how it affects a family. They also can help parents develop new skills, attitudes, and ways of relating to their child. Examples

include parenting skills training, stress management techniques for parents, and support groups that help parents and families connect with others who have similar concerns.

School-based programs

Many children and teens with ADHD benefit from school-based behavioral interventions and academic accommodations. Interventions include behavior management plans or classroom-taught organizational and study skills. Accommodations include preferential seating in the classroom, reduced classwork, and extended time on tests and exams. Schools may provide accommodations through what is called a 504 Plan or, for children who qualify for special education services, an Individualized Education Plan (IEP).

Learn more about special education services and the [Individuals with Disabilities Education Act](#).

Cognitive training

Cognitive training approaches involve repeatedly using a program or activity over several weeks to improve specific functions, such as memory or attention. Exercises are tailored to the person's ongoing performance.

Cognitive training is shown to modestly improve the tasks being practiced. For instance, research shows the training can help memory, attention, inhibition, planning, and cognitive flexibility in people with ADHD. However, these improvements don't usually translate to changes in core ADHD symptoms of impulsivity and hyperactivity.

Neurofeedback

Neurofeedback is a noninvasive technique in which an electronic device monitors and records a person's brain activity, providing them with immediate feedback to support self-regulation. The device measures brain activity through such means as EEG or fMRI scans and feeds the information back to the person, usually in the form of a computer screen or visual cue. Through this feedback, people learn to self-regulate their brain activity to directly alter the associated behavior. The assumption is that, with repeated, real-time information, people can change their internal brain activity, with observable effects on behavior and cognition.

For people with ADHD, neurofeedback is used to train and improve specific cognitive functions. Although it is shown to help reduce some ADHD symptoms, the effects of neurofeedback remain lower than those seen from medication and psychotherapy. Additional research is needed to refine the treatment and determine for whom it works and under what conditions.

Complementary health approaches

Some people may explore complementary health approaches to manage symptoms of ADHD. These can include natural products, vitamins and supplements, diet changes, and acupuncture. Others find it helpful to make lifestyle changes, like adding more physical exercise to their daily schedule.

Unlike psychotherapy and medication that are scientifically shown to improve ADHD symptoms, complementary health approaches generally have not been found to treat ADHD effectively and do not qualify as evidence-supported interventions.

Find more information from the [National Center for Complementary and Integrative Health](#).

How can I help myself?

Medication and therapy are the most effective treatments for ADHD. Other strategies may also help manage symptoms.

- Get regular exercise, especially when feeling hyperactive or restless.
- Eat regular, healthy meals.
- Get plenty of sleep. Try to turn off screens at least 1 hour before bedtime and get between 7–9 hours of sleep every night.
- Stick to a consistent routine.
- Work on time management and organization. Prioritize time-sensitive tasks and write down assignments, messages, appointments, reminders, and important thoughts.
- Take short breaks during tasks that require sustained attention to help maintain focus and prevent burnout. Break large tasks into smaller, more manageable steps.
- Connect with people and maintain relationships. Schedule activities with friends, particularly supportive people who understand your challenges with ADHD.
- Take medications as directed. Avoid alcohol, tobacco, and drugs not prescribed for you.

How can I help my child?

- Be patient, flexible, and understanding. ADHD can be frustrating both for people who have it and the people in their lives. ADHD may make it hard for your child to perform certain tasks or behaviors. Some children may need to use different strategies to help them succeed.
- Use clear, simple, direct language to explain rules and expectations. Reward behaviors that meet these expectations with positive reinforcement. Provide consistent praise or rewards for acting in a desired way.
- Offer practical help, such as on tasks like cleaning and organizing, or simply be present and engaged while your child works, which can give them a sense of accountability and motivation and help them stay focused and on track.
- Provide opportunities to explore different activities and interests. Help your child discover their unique talents and build confidence in their abilities.

Autism Spectrum Disorder

What is autism spectrum disorder?

Autism spectrum disorder (ASD) is a neurological and developmental disorder that affects how people interact with others, communicate, learn, and behave. Although autism can be diagnosed at any age, it is described as a “developmental disorder” because symptoms generally appear in the first two years of life.

According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, a guide created by the American Psychiatric Association that health care providers use to diagnose mental disorders, people with ASD often have:

- Difficulty with communication and interaction with other people
- Restricted interests and repetitive behaviors
- Symptoms that affect their ability to function in school, work, and other areas of life

Autism is known as a “spectrum” disorder because there is wide variation in the type and severity of symptoms people experience.

People of all genders, races, ethnicities, and economic backgrounds can be diagnosed with ASD. Although ASD can be a lifelong disorder, treatments and services can improve a person’s symptoms and daily functioning. The American Academy of Pediatrics recommends that all children receive screening for autism. Caregivers should talk to their child’s health care provider about ASD screening or evaluation.

What are the signs and symptoms of ASD?

The list below gives some examples of common types of behaviors in people diagnosed with ASD. Not all people with ASD will have all behaviors, but most will have several of the behaviors listed below.

Social communication and social interaction behaviors may include:

- Making little or inconsistent eye contact
- Appearing not to look at or listen to people who are talking
- Infrequently sharing interest, emotion, or enjoyment of objects or activities (including infrequently pointing at or showing things to others)
- Not responding or being slow to respond to one’s name or to other verbal bids for attention
- Having difficulties with the back and forth of conversation
- Often talking at length about a favorite subject without noticing that others are not interested or without giving others a chance to respond
- Displaying facial expressions, movements, and gestures that do not match what is being said
- Having an unusual tone of voice that may sound sing-song or flat and robot-like
- Having trouble understanding another person’s point of view or being unable to predict or understand other people’s actions
- Difficulties adjusting behavior to different social situations
- Difficulties sharing in imaginative play or in making friends

Restrictive/repetitive behaviors may include:

- Repeating certain behaviors or having unusual behaviors, such as repeating words or phrases (a behavior called *echolalia*)
- Having a lasting intense interest in specific topics, such as numbers, details, or facts
- Showing overly focused interests, such as with moving objects or with parts of objects
- Becoming upset by slight changes in a routine and having difficulty with transitions

- Being more sensitive or less sensitive than other people to sensory input, such as light, sound, clothing, or temperature

People with ASD also may experience sleep problems and irritability.

People on the autism spectrum also may have many strengths, including:

- Being able to learn things in detail and remember information for long periods of time
- Being strong visual and auditory learners
- Excelling in math, science, music, or art

What are the causes and risk factors for ASD?

Researchers don't know the primary causes of ASD, but studies suggest that a person's genes can act together with aspects of their environment to affect development in ways that lead to ASD. Some factors that are associated with an increased likelihood of developing ASD include:

- Having a sibling with ASD
- Having older parents
- Having certain genetic conditions (such as Down syndrome or Fragile X syndrome)
- Having a very low birth weight

Not everyone who has these risk factors develops ASD.

How is ASD diagnosed?

Health care providers diagnose ASD by evaluating a person's behavior and development. ASD can usually be reliably diagnosed by the age of 2. It is important to seek an evaluation as soon as possible. The earlier ASD is diagnosed, the sooner treatments and services can begin.

Diagnosis in Young Children

Diagnosis in young children is often a two-stage process.

Stage 1: General Developmental Screening During Well-Child Checkups

Every child should receive well-child checkups with a pediatrician or an early childhood health care provider. The American Academy of Pediatrics recommends that all children receive screening for developmental delays at their 9-, 18-, and 24- or 30-month well-child visits, with specific autism screenings at the 18- and 24-month well-child visits. A child may receive additional screenings if they are at high risk for ASD or developmental problems.

Considering caregivers' experiences and concerns is an important part of the screening process for young children. The health care provider may ask questions about the child's behaviors and evaluate those answers in combination with information from ASD screening tools and clinical observations of the child.

If a child shows developmental differences in behavior or functioning during this screening process, the health care provider may refer the child for additional evaluation.

Stage 2: Additional Diagnostic Evaluation

It is important to accurately detect and diagnose children with ASD as early as possible, as this will shed light on their unique strengths and challenges. Early detection also can help caregivers determine which services, educational programs, and behavioral therapies are most likely to be helpful for their child.

A team of health care providers who have experience diagnosing ASD will conduct the diagnostic evaluation. This team may include child neurologists, developmental behavioral pediatricians, speech-language pathologists, child psychologists and psychiatrists, educational specialists, and occupational therapists.

The diagnostic evaluation is likely to include:

- Medical and neurological examinations
- Assessment of the child's cognitive abilities
- Assessment of the child's speech and language abilities
- Observation of the child's behavior
- An in-depth conversation with the child's caregivers about the child's behavior and development
- Assessment of age-appropriate skills needed to complete daily activities independently, such as eating, dressing, and toileting
- Questions about the child's family history

Because ASD is a complex disorder that sometimes occurs with other illnesses or learning disorders, the comprehensive evaluation may include blood tests and a hearing test.

The outcome of this evaluation may result in a formal diagnosis and recommendations for treatment.

Diagnosis in Older Children and Adolescents

Caregivers and teachers are often the first to recognize ASD symptoms in older children and adolescents who attend school. The school's special education team may perform an initial evaluation and then recommend that a child undergo additional evaluation with their primary health care provider or a health care provider who specializes in ASD.

A child's caregivers may talk with these health care providers about the child's social difficulties, including problems with subtle communication. These subtle communication differences may include problems understanding tone of voice, facial expressions, or body language. Older children and adolescents may have trouble understanding figures of speech, humor, or sarcasm. They also may have trouble forming friendships with peers.

Diagnosis in Adults

Diagnosing ASD in adults is often more difficult than diagnosing ASD in children. In adults, some ASD symptoms can overlap with symptoms of other mental health disorders, such as an anxiety disorder or attention-deficit/hyperactivity disorder (ADHD).

Adults who notice signs and symptoms of ASD should talk with a health care provider and ask for a referral for an ASD evaluation. Although evaluation for ASD in adults is still being refined, adults can

be referred to a neuropsychologist, psychologist, or psychiatrist who has experience with ASD. The expert will ask about:

- Social interaction and communication challenges
- Sensory issues
- Repetitive behaviors
- Restricted interests

The evaluation also may include a conversation with caregivers and other family members to learn about the person's early developmental history, which can help ensure an accurate diagnosis.

Obtaining a correct diagnosis of ASD as an adult can help people understand past challenges, identify personal strengths, and find the right kind of help. Studies are underway to determine the types of services and supports that are most helpful for improving the functioning and community integration of autistic transition-age youth and adults.

What treatment options are available for ASD?

Treatment for ASD should begin as soon as possible after diagnosis. Early treatment for ASD is important because proper care and services can reduce individuals' difficulties while helping them learn new skills and build on their strengths.

People with ASD may face a wide range of issues, which means there is no single best treatment for ASD. Working closely with a health care provider is an important part of finding the right combination of treatments and services.

Medication

A health care provider may prescribe medication to treat specific symptoms. With medication, a person with ASD may have fewer problems with:

- Irritability
- Aggression
- Repetitive behavior
- Hyperactivity
- Attention
- Anxiety and depression
- Behavioral, Psychological, and Educational Interventions

People with ASD may be referred to health care providers who specialize in providing behavioral, psychological, educational, or skill-building interventions. These programs are typically highly structured and intensive, and they may involve caregivers, siblings, and other family members. These programs may help people with ASD:

- Learn social, communication, and language skills
- Reduce behaviors that interfere with daily functioning
- Learn life skills for living independently

Depression

What is depression?

Everyone feels sad or low sometimes, but these feelings usually pass. Depression (also called major depression, major depressive disorder, or clinical depression) is different. It can cause severe symptoms that affect how a person feels, thinks, and handles daily activities, such as sleeping, eating, or working.

Depression can affect anyone regardless of age, gender, race or ethnicity, income, culture, or education. Research suggests that genetic, biological, environmental, and psychological factors play a role in the disorder.

Women are diagnosed with depression more often than men, but men can also be depressed. Because men may be less likely to recognize, talk about, and seek help for their negative feelings, they are at greater risk of their depression symptoms being undiagnosed and undertreated. Studies also show higher rates of depression and an increased risk for the disorder among members of the LGBTQI+ community.

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

What are the different types of depression?

There are two common types of depression.

- **Major depression** includes symptoms of depressed mood or loss of interest, most of the time for at least 2 weeks, that interfere with daily activities.
- **Persistent depressive disorder** (also called dysthymia or dysthymic disorder) consists of less severe depression symptoms that last much longer, usually for at least 2 years.

Other types of depression include the following.

- **Seasonal affective disorder** comes and goes with the seasons, with symptoms typically starting in the late fall and early winter and going away during the spring and summer.
- **Depression with symptoms of psychosis** is a severe form of depression in which a person experiences psychosis symptoms, such as delusions or hallucinations.
- **Bipolar disorder** involves depressive episodes, as well as manic episodes (or less severe hypomanic episodes) with unusually elevated mood, greater irritability, or increased activity level.

Additional types of depression can occur at specific points in a woman's life. Pregnancy, the postpartum period, the menstrual cycle, and menopause are associated with physical and hormonal changes that can bring on a depressive episode in some people.

- **Premenstrual dysphoric disorder** is a more severe form of premenstrual syndrome, or PMS, that occurs in the weeks before menstruation.

- [Perinatal depression](#) occurs during pregnancy or after childbirth. It is more than the “baby blues” many new moms experience after giving birth.
- **Perimenopausal depression** affects some women during the transition to menopause. Women may experience feelings of intense irritability, anxiety, sadness, or loss of enjoyment.

What are the signs and symptoms of depression?

Common signs and 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 and activities
- Fatigue, lack of energy, or feeling slowed down
- Difficulty concentrating, remembering, or making decisions
- Difficulty sleeping, waking too early in the morning, or oversleeping
- Changes in appetite or unplanned weight changes
- Physical aches or pains, headaches, cramps, or digestive problems without a clear physical cause that do not go away with treatment
- Thoughts of death or suicide or suicide attempts

Depression can also involve other changes in mood or behavior that include:

- Increased anger or irritability
- Feeling restless or on edge
- Becoming withdrawn, negative, or detached
- Increased engagement in high-risk activities
- Greater impulsivity
- Increased use of alcohol or drugs
- Isolating from family and friends
- Inability to meet responsibilities or ignoring other important roles
- Problems with sexual desire and performance

Not everyone who is depressed shows all these symptoms. Some people experience only a few symptoms, while others experience many. Depression symptoms interfere with day-to-day functioning and cause significant distress for the person experiencing them.

If you show signs or symptoms of depression and they persist or do not go away, talk to a health care provider. If you see signs of depression in someone you know, encourage them to seek help from a mental health professional.

If you or someone you know is struggling or having thoughts of suicide, call or text the [988 Suicide and Crisis Lifeline](https://www.988lifeline.org) at **988** or chat at [988lifeline.org](https://www.988lifeline.org). In life-threatening situations, call **911**.

How is depression diagnosed?

To be diagnosed with depression, a person must have symptoms most of the day, nearly every day, for at least 2 weeks. One of the symptoms must be a depressed mood or a loss of interest or pleasure in most activities. Children and adolescents may be irritable rather than sad.

Although several persistent symptoms, in addition to low mood, are required for a depression diagnosis, people with only a few symptoms may benefit from treatment. The severity and frequency of symptoms and how long they last vary depending on the person.

If you think you may have depression, talk to a health care provider, such as a primary care doctor, psychologist, or psychiatrist. During the visit, the provider may ask when your symptoms began, how long they have lasted, how often they occur, and if they keep you from going out or doing your usual activities. It may help to take some notes about your symptoms before the visit.

Certain medications and medical conditions, such as viruses or thyroid disorders, can cause the same symptoms as depression. A 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** may be anxious or 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** may get into trouble at school, sulk, be easily frustrated, feel restless, or have low self-esteem. They may have other disorders, such as anxiety, an eating disorder, attention-deficit/hyperactivity disorder, or substance use disorder. Older children and teens are also more likely to experience excessive sleepiness (called hypersomnia) and increased appetite (called hyperphagia).
- **Young adults** 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, or substance use disorder.
- **Middle-aged adults** may have more depressive episodes, decreased libido, middle-of-the-night insomnia, or early morning waking. They often report stomach problems, such as diarrhea or constipation.
- **Older adults** often feel sadness, grief, or other less obvious symptoms. They may report a lack of emotions rather than a depressed mood. Older adults are also more likely to have other medical conditions or pain that can cause or contribute to depression. Memory and thinking problems (called pseudodementia) may be prominent in severe cases.

Depression can also look different in men versus women, such as the symptoms they show and the behaviors they use to cope with them. For instance, men (as well as women) may show symptoms other than sadness, instead seeming angry or irritable.

For some people, symptoms manifest as physical problems (for example, a racing heart, tightened chest, chronic headaches, or digestive issues). Many men are more likely to see a health care provider about these physical symptoms than their emotional ones. While increased use of alcohol or drugs can be a sign of depression in any person, men are also more likely to use these substances as a coping strategy.

How is depression treated?

Depression treatment typically involves psychotherapy (in person or virtual), medication, or both. If these treatments do not reduce symptoms sufficiently, brain stimulation therapy may be another option.

Choosing the right treatment plan is based on a person's needs, preferences, and medical situation and in consultation with a mental health professional or a health care provider. Finding the best treatment may take trial and error.

For milder forms of depression, psychotherapy is often tried first, with medication added later if the therapy alone does not produce a good response. People with moderate or severe depression usually are prescribed medication as part of the initial treatment plan.

Psychotherapy

Psychotherapy (also called talk therapy or counseling) can help people with depression by teaching them new ways of thinking and behaving and helping them change habits that contribute to depression. Psychotherapy occurs under the care of a licensed, trained mental health professional in one-on-one sessions or with others in a group setting.

Psychotherapy can be effective when delivered in person or virtually via telehealth. A provider may support or supplement therapy using digital or mobile technology, like apps or other tools.

Evidence-based therapies to treat depression include cognitive behavioral therapy and interpersonal therapy. Using other forms of psychotherapy, such as psychodynamic therapy, for a limited time also may help some people with depression.

- **Cognitive behavioral therapy (CBT):** With CBT, people learn to challenge and change unhelpful thoughts and behaviors to improve their depressive and anxious feelings. Recent advances in CBT include adding mindfulness principles and specializing the therapy to target specific symptoms like insomnia.
- **Interpersonal therapy (IPT):** IPT focuses on interpersonal and life events that impact mood and vice versa. IPT aims to help people improve their communication skills within relationships, form social support networks, and develop realistic expectations to better deal with crises or other issues that may be contributing to or worsening their depression.

Medication

Antidepressants are medications commonly used to treat depression. They work by changing how the brain produces or uses certain chemicals involved in mood or stress.

Antidepressants take time—usually 4–8 weeks—to work, and problems with sleep, appetite, and concentration often improve before mood lifts. Giving a medication a chance to work is important before deciding whether it is right for you.

Treatment-resistant depression occurs when a person doesn't get better after trying at least two antidepressants. Esketamine is a medication approved by the U.S. Food and Drug Administration (FDA) for treatment-resistant depression. Delivered as a nasal spray in a doctor's office, clinic, or hospital, the medication acts rapidly, typically within a couple of hours, to relieve depression symptoms. People will usually continue to take an antidepressant pill to maintain the improvement in their symptoms.

Another option for treatment-resistant depression is to combine an antidepressant with a different type of medication that may make it more effective, such as an antipsychotic or anticonvulsant medication.

All medications can have side effects. Talk to a health care provider before starting or stopping any medication. Learn more about [antidepressants](#).

Note: In some cases, children, teenagers, and young adults under 25 years may experience an increase in suicidal thoughts or behavior when taking antidepressants, especially in the first few weeks after starting or when the dose is changed. The FDA advises that patients of all ages taking antidepressants be watched closely, especially during the first few weeks of treatment.

Information about medication changes frequently. Learn more about specific medications like esketamine, including the latest approvals, side effects, warnings, and patient information, on the [FDA website](#).

Brain stimulation therapy

Brain stimulation therapy is an option when other depression treatments have not worked. The therapy involves activating or inhibiting the brain with electricity or magnetic waves.

Although brain stimulation therapy is less frequently used than psychotherapy and medication, it can play an important role in treating depression in people who have not responded to other treatments. The therapy generally is used only after a person has tried psychotherapy and medication, and those treatments usually continue. Brain stimulation therapy is sometimes used as an earlier treatment option when severe depression has become life-threatening, such as when a person has stopped eating or drinking or is at a high risk of suicide.

The FDA has approved several types of brain stimulation therapy. The most used are electroconvulsive therapy (ECT) and repetitive transcranial magnetic stimulation (rTMS). Other brain stimulation therapies are newer and, in some cases, still considered experimental.

Natural products

The FDA has not approved any natural products for treating depression. Although research is ongoing and findings are inconsistent, some people report that natural products, including vitamin D and the herbal dietary supplement St. John's wort, helped their depression symptoms. However, these products can come with risks, including, in some cases, interactions with prescription medications.

Do not use vitamin D, St. John's wort, or other dietary supplements or natural products without first talking to a health care provider. Rigorous studies must test whether these and other natural products are safe and effective.

How can I take care of myself?

Most people with depression benefit from mental health treatment. 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 don't feel like doing them, they can improve your mood.

Other things that may help:

- Try to get physical activity. Just 30 minutes a day of walking can boost your 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.
- Connect with people. Talk to people you trust about how you are feeling.
- Delay making important life decisions until you feel better. Discuss decisions with people who know you well.
- Avoid using alcohol, nicotine, or drugs, including medications not prescribed for you.

If someone you know is depressed, 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 or access to therapy appointments.
- Remind them that, with time and treatment, their depression can lift.

Eating Disorders

What are eating disorders?

Eating disorders are serious, biologically influenced medical illnesses marked by severe disturbances to one's eating behaviors. Although many people may be concerned about their health, weight, or appearance from time to time, some people become fixated or obsessed with weight loss, body weight or shape, and controlling their food intake. These may be signs of an eating disorder.

Eating disorders are not a choice. These disorders can affect a person's physical and mental health. In some cases, they can be life-threatening. With treatment, however, people can recover completely from eating disorders.

Who is at risk for eating disorders?

Eating disorders can affect people of all ages, racial and ethnic backgrounds, body weights, and genders. Even people who appear healthy, such as athletes, can have eating disorders and be extremely ill. People with eating disorders can be underweight, normal weight, or overweight. In other words, you can't tell if someone has an eating disorder by looking at them.

The exact cause of eating disorders is not fully understood. Research suggests a combination of genetic, biological, behavioral, psychological, and social factors can raise a person's risk.

What are the common types of eating disorders?

Common eating disorders include anorexia nervosa, bulimia nervosa, binge-eating disorder, and avoidant restrictive food intake disorder. Each of these disorders is associated with different but sometimes overlapping symptoms. People exhibiting any combination of these symptoms may have an eating disorder and should be evaluated by a health care provider.

What is anorexia nervosa?

Anorexia nervosa is a condition where people avoid food, severely restrict food, or eat very small quantities of only certain foods. They also may weigh themselves repeatedly. Even when dangerously underweight, they may see themselves as overweight.

There are two subtypes of anorexia nervosa: a *restrictive* subtype and a *binge-purge* subtype.

Restrictive: People with the restrictive subtype of anorexia nervosa severely limit the amount and type of food they consume.

Binge-Purge: People with the binge-purge subtype of anorexia nervosa also greatly restrict the amount and type of food they consume. In addition, they may have binge-eating and purging episodes—eating large amounts of food in a short time followed by vomiting or using laxatives or diuretics to get rid of what was consumed.

Symptoms of anorexia nervosa include:

- Extremely restricted eating and/or intensive and excessive exercise
- Extreme thinness (emaciation)
- A relentless pursuit of thinness and unwillingness to maintain a normal or healthy weight
- Intense fear of gaining weight
- Distorted body or self-image that is heavily influenced by perceptions of body weight and shape
- Denial of the seriousness of low body weight

Over time, anorexia nervosa can lead to numerous serious health consequences, including:

- Thinning of the bones (osteopenia or osteoporosis)
- Mild anemia
- Muscle wasting and weakness
- Brittle hair and nails
- Dry and yellowish skin
- Growth of fine hair all over the body (lanugo)
- Severe constipation
- Low blood pressure

- Slowed breathing and pulse
- Damage to the structure and function of the heart
- Drop in internal body temperature, causing a person to feel cold all the time
- Lethargy, sluggishness, or feeling tired all the time
- Infertility
- Brain damage
- Multiple organ failure

Anorexia nervosa can be fatal. It has an extremely high death (mortality) rate compared with other mental disorders. People with anorexia are at risk of dying from medical complications associated with starvation. Suicide is the second leading cause of death for people diagnosed with anorexia nervosa.

What is bulimia nervosa?

Bulimia nervosa is a condition where people have recurrent episodes of eating unusually large amounts of food and feeling a lack of control over their eating. This binge eating is followed by behaviors that compensate for the overeating to prevent weight gain, such as forced vomiting, excessive use of laxatives or diuretics, fasting, excessive exercise, or a combination of these behaviors. Unlike those with anorexia nervosa, people with bulimia nervosa may maintain a normal weight or be overweight.

Symptoms and health consequences of bulimia nervosa include:

- Chronically inflamed and sore throat
- Swollen salivary glands in the neck and jaw area
- Worn tooth enamel and increasingly sensitive and decaying teeth from exposure to stomach acid when vomiting
- Acid reflux disorder and other gastrointestinal problems
- Intestinal distress and irritation from laxative abuse
- Severe dehydration from purging
- Electrolyte imbalance (too low or too high levels of sodium, calcium, potassium, and other minerals), which can lead to stroke or heart attack

What is binge-eating disorder?

Binge-eating disorder is a condition where people lose control of their eating and have reoccurring episodes of eating unusually large amounts of food. Unlike bulimia nervosa, periods of binge eating are not followed by purging, excessive exercise, or fasting. As a result, people with binge-eating disorder are often overweight or obese.

Symptoms of binge-eating disorder include:

- Eating unusually large amounts of food in a short amount of time, for example, within two hours

- Eating rapidly during binge episodes
- Eating even when full or not hungry
- Eating until uncomfortably full
- Eating alone or in secret to avoid embarrassment
- Feeling distressed, ashamed, or guilty about eating
- Frequently dieting, possibly without weight loss

What is avoidant restrictive food intake disorder?

Avoidant restrictive food intake disorder (ARFID), previously known as selective eating disorder, is a condition where people limit the amount or type of food eaten. Unlike anorexia nervosa, people with ARFID do not have a distorted body image or extreme fear of gaining weight. ARFID is most common in middle childhood and usually has an earlier onset than other eating disorders. Many children go through phases of picky eating, but a child with ARFID does not eat enough calories to grow and develop properly, and an adult with ARFID does not eat enough calories to maintain basic body function.

Symptoms of ARFID include:

- Dramatic restriction of types or amount of food eaten
- Lack of appetite or interest in food
- Dramatic weight loss
- Upset stomach, abdominal pain, or other gastrointestinal issues with no other known cause
- Limited range of preferred foods that becomes even more limited (“picky eating” that gets progressively worse)

How are eating disorders treated?

Eating disorders can be treated successfully. Early detection and treatment are important for a full recovery. People with eating disorders are at higher risk for suicide and medical complications.

A person’s family can play a crucial role in treatment. Family members can encourage the person with eating or body image issues to seek help. They also can provide support during treatment and can be a great ally to both the individual and the health care provider. Research suggests that incorporating the family into treatment for eating disorders can improve treatment outcomes, particularly for adolescents.

Treatment plans for eating disorders include psychotherapy, medical care and monitoring, nutritional counseling, medications, or a combination of these approaches. Typical treatment goals include:

- Restoring adequate nutrition
- Bringing weight to a healthy level
- Reducing excessive exercise
- Stopping binge-purge and binge-eating behaviors

People with eating disorders also may have other mental disorders (such as depression or anxiety) or problems with substance use. It's critical to treat any co-occurring conditions as part of the treatment plan.

Research also suggests that medications may help treat some eating disorders and co-occurring anxiety or depression related to eating disorders. Information about medications changes frequently, so talk to your health care provider

Where can I find help?

If you're unsure where to get help, your health care provider is a good place to start. Your health care provider can refer you to a qualified mental health professional, such as a psychiatrist or psychologist, who has experience treating eating disorders.

Post-Traumatic Stress Disorder

What is post-traumatic stress disorder, or PTSD?

It is natural to feel afraid during and after a traumatic situation. Fear is a part of the body's "fight-or-flight" response, which helps us avoid or respond to potential danger. People may experience a range of reactions after trauma, and most will recover from their symptoms over time. Those who continue to experience symptoms may be diagnosed with post-traumatic stress disorder (PTSD).

Who develops PTSD?

Anyone can develop PTSD at any age. This includes combat veterans and people who have experienced or witnessed a physical or sexual assault, abuse, an accident, a disaster, a terror attack, or other serious events. People who have PTSD may feel stressed or frightened, even when they are no longer in danger.

Not everyone with PTSD has been through a dangerous event. Sometimes, learning that a relative or close friend experienced trauma can cause PTSD.

About 6 of every 100 people will experience PTSD at some point in their lifetime, according to the National Center for PTSD, a U.S. Department of Veterans Affairs program. Women are more likely than men to develop PTSD. Certain aspects of the traumatic event and biological factors (such as genes) may make some people more likely to develop PTSD.

What are the symptoms of PTSD?

Symptoms of PTSD usually begin within 3 months of the traumatic event, but they sometimes emerge later. To meet the criteria for PTSD, a person must have symptoms for longer than 1 month, and the symptoms must be severe enough to interfere with aspects of daily life, such as relationships or work. The symptoms also must be unrelated to medication, substance use, or other illness.

The course of the disorder varies. Although some people recover within 6 months, others have symptoms that last for 1 year or longer. People with PTSD often have co-occurring conditions, such as depression, substance use, or one or more anxiety disorders.

After a dangerous event, it is natural to have some symptoms. For example, some people may feel detached from the experience, as though they are observing things as an outsider rather than experiencing them. A mental health professional—such as a psychiatrist, psychologist, or clinical social worker—can determine whether symptoms meet the criteria for PTSD.

To be diagnosed with PTSD, an adult must have all of the following for at least 1 month:

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

Re-experiencing symptoms

- Flashbacks—reliving the traumatic event, including physical symptoms, such as a racing heart or sweating
- Recurring memories or dreams related to the event
- Distressing thoughts
- Physical signs of stress

Thoughts and feelings can trigger these symptoms, as can words, objects, or situations that are reminders of the event.

Avoidance symptoms

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

Avoidance symptoms may cause people to change their routines. For example, some people may avoid driving or riding in a car after a serious car accident.

Arousal and reactivity symptoms

- Being easily startled
- Feeling tense, on guard, or on edge
- Having difficulty concentrating
- Having difficulty falling asleep or staying asleep
- Feeling irritable and having angry or aggressive outbursts
- Engaging in risky, reckless, or destructive behavior

Arousal symptoms are often constant. They can lead to feelings of stress and anger and may interfere with parts of daily life, 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
- Exaggerated feelings of blame directed toward oneself or others
- Ongoing negative emotions, such as fear, anger, guilt, or shame

- Loss of interest in previous activities
- Feelings of social isolation
- Difficulty feeling positive emotions, such as happiness or satisfaction

Cognition and mood symptoms can begin or worsen after the traumatic event. They can lead people to feel detached from friends or family members.

How do children and teens react to trauma?

Children and teens can have extreme reactions to traumatic events, but their symptoms may not be the same as those seen in adults. In children younger than age 6, symptoms can include:

- Wetting the bed after having learned to use the toilet
- Forgetting how to talk 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 usually show symptoms more like those seen in adults. They also may develop disruptive, disrespectful, or destructive behaviors. Older children and teens may feel guilt over not preventing injury or death, or have thoughts of revenge.

Why do some people develop PTSD and other people do not?

Not everyone who lives through a dangerous event develops PTSD—many factors play a part. Some of these factors are present before the trauma; others play a role during and after a traumatic event.

Risk factors that may increase the likelihood of developing PTSD include:

- Exposure to previous traumatic experiences, particularly during childhood
- Getting hurt or seeing people hurt or killed
- Feeling horror, helplessness, or extreme fear
- Having little or no social support after the event
- Dealing with stressors after the event, such as the loss of a loved one, pain and injury, or loss of a job or home
- Having a personal history or family history of mental illness or substance use

Resilience factors that may reduce the likelihood of developing PTSD include:

- Seeking out and receiving support from friends, family, or support groups
- Learning to feel okay with one's actions in response to a traumatic event
- Having a coping strategy for getting through and learning from a traumatic event
- Being prepared and able to respond to upsetting events as they occur, despite feeling fear

How is PTSD treated?

It is important for people with PTSD symptoms to work with a mental health professional who has experience treating PTSD. The main treatments are psychotherapy, medications, or a combination of psychotherapy and medications. An experienced mental health professional can help people find the best treatment plan for their symptoms and needs.

Some people with PTSD, such as those in abusive relationships, may be living through ongoing trauma. In these cases, treatment is usually most effective when it addresses both the traumatic situation and the symptoms of PTSD. People who experience traumatic events or who have PTSD may also experience panic disorder, depression, substance use, or suicidal thoughts. Treatment for these conditions can help with recovery after trauma. Research shows that support from family and friends also can be an essential part of recovery.

Psychotherapy

Psychotherapy, sometimes called talk therapy, includes a variety of treatment techniques that mental health professionals use to help people identify and change troubling emotions, thoughts, and behaviors. Psychotherapy can provide support, education, and guidance to people with PTSD and their families. Treatment can take place one on one or in a group setting and usually lasts 6 to 12 weeks but can last longer.

Some types of psychotherapy target PTSD symptoms, while others focus on social, family, or job-related problems. Effective psychotherapies often emphasize a few key components, including learning skills to help identify triggers and manage symptoms.

A common type of psychotherapy called cognitive behavioral therapy can include exposure therapy and cognitive restructuring.

- **Exposure therapy** helps people learn to manage their fear by gradually exposing them, in a safe way, to the trauma they experienced. As part of exposure therapy, people may think or write about the trauma or visit the place where it happened. This therapy can help people with PTSD reduce symptoms that cause them distress.
- **Cognitive restructuring** helps people make sense of the traumatic event. Sometimes people remember the event differently from how it happened, or they may feel guilt or shame about something that is not their fault. Cognitive restructuring can help people with PTSD think about what happened in a realistic way.

Learn more about [psychotherapy](#).

Medications

The U.S. Food and Drug Administration (FDA) has approved two selective serotonin reuptake inhibitors (SSRIs), a type of antidepressant medication, for the treatment of PTSD. SSRIs may help people manage PTSD symptoms, such as sadness, worry, anger, and feeling emotionally numb. Health care providers may prescribe SSRIs and other medications along with psychotherapy. Some medications may help treat specific PTSD symptoms, such as sleep problems and nightmares.