

Schizophrenia

Overview

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

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 aren't 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

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

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% 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. You can find the latest information on warnings, patient medication guides, or newly approved medications on the [U.S. Food and Drug Administration \(FDA\) website](#).

Psychosocial Treatments

Cognitive behavioral therapy, 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. For more information on psychosocial treatments, see the [Psychotherapies webpage](#) on the NIMH website.

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. For more information about family-based services in your area, you can visit the [family education and support groups page](#) on the National Alliance on Mental Illness website.

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. Check here for more information about [CSC programs](#).

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. Check here for more information about [ACT programs](#).

How can I help someone I 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 1-800-273-TALK (8255) or text the Crisis Text Line (text HELLO to 741741).

Finding Help

The Substance Abuse and Mental Health Services Administration (SAMHSA) provides the [Behavioral Health Treatment Services Locator](#) for finding mental health treatment facilities and programs. SAMHSA's [Early Serious Mental Illness Treatment Locator](#) provides information about treatment facilities that offer coordinated specialty care. For additional resources, visit the [NIMH Help for Mental Illnesses](#) page.

Join a Study

Clinical trials are research studies that look at new ways to prevent, detect, or treat diseases and conditions. The goal of clinical trials is to determine if a new test or treatment works and is safe. 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.

Researchers at NIMH and around the country conduct many studies with patients and healthy volunteers. We have new and better treatment options today because of what clinical trials uncovered years ago. Be part of tomorrow's medical breakthroughs. Talk to your health care provider about clinical trials, their benefits and risks, and whether one is right for you.

To learn more or find a study, visit:

- [NIMH's Clinical Trials webpage](#): Information about participating in clinical trials
- [Clinicaltrials.gov: Current Studies on Schizophrenia](#): List of clinical trials funded by the National Institutes of Health (NIH) being conducted across the country
- [Join a Study: Schizophrenia](#): List of studies being conducted on the NIH Campus in Bethesda, MD

Learn More

Free Brochures and Shareable Resources

- **Schizophrenia**: A brief brochure on schizophrenia that offers basic information on signs and symptoms, treatment, and finding help. Also available [en español](#).
- **Understanding Psychosis**: A fact sheet that presents information on psychosis, including causes, signs and symptoms, treatment, and resources for help. Also available [en español](#).
- **Shareable Resources on Schizophrenia**: Help support schizophrenia awareness and education in your community. Use these digital resources, including graphics and messages, to spread the word about schizophrenia.

Research and Statistics

- **Accelerating Medicines Partnership (AMP) Schizophrenia** Initiative: This AMP public-private collaborative effort aims to promote the development of effective, targeted treatments for those at risk of developing schizophrenia.
- **Early Psychosis Intervention Network (EPINET)**: This broad research initiative aims to develop models for the effective delivery of coordinated specialty care (CSC) services for early psychosis.

- **Journal Articles:** This webpage provides information on references and abstracts from MEDLINE/PubMed (National Library of Medicine).
- **Psychotic Disorders Research Program:** This program supports research into the origins, onset, course, and outcome of schizophrenia spectrum disorders and other psychotic illnesses.
- **Recovery After an Initial Schizophrenia Episode (RAISE):** The NIMH RAISE research initiative included two studies examining different aspects of coordinated specialty care treatments for people who were experiencing early psychosis.
- **Schizophrenia Statistics:** This webpage provides information on the best statistics currently available on the prevalence and treatment of schizophrenia in the U.S.