

# WHAT IS SCHIZOPHRENIA?



**BASIC FACTS • SYMPTOMS • FAMILIES • TREATMENTS**



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## basic facts

Schizophrenia is a common psychiatric disorder that can affect a person's thinking, emotions, and behaviors. Individuals with this illness will have periods when they have difficulty understanding the reality around them. They may hear voices other people don't hear. They may have unusual thoughts and suspicions, such as believing that other people are reading their minds, controlling their thoughts, or plotting to harm them. These experiences can terrify people with the illness and make them withdrawn or extremely agitated. In addition to symptoms such as hallucinations and delusions, which are also called positive symptoms, nearly all people with schizophrenia have some impairments in their memory, attention, and decision-making. These are called cognitive impairments. Some individuals with this illness also have what are called negative symptoms. These can include a lack of expressiveness, low motivation, apathy, an inability to experience pleasure, and a disinterest in social relationships. Depression can also be a part of the illness.

Families and society are affected by schizophrenia too. Many people with schizophrenia have difficulty holding a job or caring for themselves, so they rely on others for help. Sometimes symptoms may be so severe that a person needs to be hospitalized.

There are treatments to help improve functioning and relieve many symptoms of schizophrenia. Some individuals respond very well to these treatments and can lead rewarding and meaningful lives. Others remain severely disabled by their illness.

*Schizophrenia is a common psychiatric disorder that can affect a person's thinking, emotions, and behaviors.*

### Prevalence

About one in every hundred people (1%) develop schizophrenia at some point in their life. Schizophrenia affects men and women at equal rates. It can affect multiple members within families. Schizophrenia occurs in about 10% of people who have a first-degree relative (parent or sibling) with the disorder. People who have a second-degree relative (aunts, uncles, grandparents, or cousins) with schizophrenia also develop the disorder more often than the general population. The risk is highest for an identical twin of a person with schizophrenia. The identical twin has a 40 to 65 percent chance of developing the disorder.

*About 1 in 100 people develop schizophrenia in their lifetime.*

### Diagnosis

Schizophrenia is a psychiatric disorder that must be diagnosed by a trained mental health professional. Diagnostic interviews and medical evaluations are used to determine the diagnosis. There are currently no physical or lab tests that can diagnose schizophrenia, but they can help rule out other conditions that sometimes have similar symptoms to schizophrenia (e.g., seizure disorders, metabolic disorders, thyroid dysfunction, brain tumor, and drug use).

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### Course of Illness

Schizophrenia often first appears during young adulthood (late teens or early twenties for men and late twenties or early thirties for women). The onset of symptoms may be abrupt or gradual, but most people experience some early signs prior to the beginning of active symptoms. These early signs may include depression, social withdrawal, loss of interests, unusual behavior, or decreases in functioning (such as in school, work, or social relationships). These are often the first behaviors to worry family members and friends.

The course of schizophrenia over time varies considerably from person to person. Most individuals experience periods of symptom exacerbation and remission, while others are more chronically ill and maintain a steady level of moderate to severe symptoms and disability over time. Some individuals have a milder course of illness. The positive symptoms of schizophrenia increase during a relapse while negative symptoms and cognitive impairments tend to be more persistent and are present between episodes. Although there is great variability, some generalizations can be made about the long-term course of schizophrenia. While many individuals do not return to their prior state of functioning, about one-half to two-thirds of people with schizophrenia significantly improve or recover, some completely. About one-third of individuals are significantly affected by the disorder and experience frequent hospitalization, and about 10% of these individuals experience long-term institutionalization.

*Schizophrenia usually appears during young adulthood. Most people experience periods of symptom exacerbation and remission, while others are more chronically ill.*

### Causes

There is no simple answer to what causes schizophrenia because several factors play a part in the onset of the disorder. These include: a genetic or family history of schizophrenia, environmental stressors and stressful life events, and biological factors.

Research shows that the risk for schizophrenia results from the influence of genes acting together with environmental factors. A family history of schizophrenia does not necessarily mean children or other relatives will develop the disorder. However, studies have shown that schizophrenia does run in families (see section on Prevalence). Others believe the environment plays a key role in whether someone will develop schizophrenia. Some of the environmental factors believed to be linked to schizophrenia are malnutrition before birth, obstetric complications, poverty, and substance use. Cannabis use, especially before age 15, has been identified as a big risk factor. Stressful life events, such as family conflict, early parental loss or separation, and physical or sexual abuse, are also associated with the illness.

An imbalance of the neurotransmitters dopamine and glutamate is also linked to schizophrenia. Neurotransmitters are brain chemicals that communicate information throughout the brain and body. However, the exact role of these neurotransmitters in schizophrenia is unclear.

*Scientists believe schizophrenia is caused by several factors, including: a genetic or family history of the disorder, environmental stressors and stressful life events, and biological factors.*

The symptoms of schizophrenia fall into three broad categories: positive symptoms, negative symptoms, and cognitive symptoms.

**POSITIVE SYMPTOMS:** Positive symptoms refer to thoughts, perceptions, and behaviors that are present in people with schizophrenia, but ordinarily absent in other people. These symptoms can come and go. Sometimes they are severe, and sometimes they are hardly noticeable.

- **Hallucinations:** Hallucinations are false perceptions. The person may hear, see, feel, smell, or taste things that are not actually there. The most common type of hallucination is auditory hallucinations.
  - **Auditory:** Hearing things that other people cannot hear. Many people with the disorder hear voices. The voices may talk to the person about his or her behavior, order the person to do things, or warn the person of danger. Sometimes the voices talk to each other.
  - **Visual:** Seeing things that are not there or that other people cannot see.
  - **Tactile:** Feeling things that other people don't feel or feeling something is touching their skin that isn't there.
  - **Olfactory:** Smelling things that other people cannot smell, or not smelling the same thing that other people do smell.
  - **Gustatory:** Tasting things that are not there.
- **Delusions:** Delusions are false beliefs that are held in spite of invalidating evidence. People hold these beliefs strongly and usually cannot be "talked out" of them. The content of the delusions may include a variety of themes. Some examples include:
  - **Delusions of persecution:** The belief that they (or someone close to them) are being plotted or discriminated against, spied on, threatened, attacked or deliberately victimized.
  - **Delusions of reference:** When an individual attaches special personal meaning to actions of others or to various objects and events when there is no information to confirm this. The person may believe that certain gestures, comments, or other environmental cues are specifically directed at him or her. For example, it may seem as if special personal messages are being communicated to them through the TV, radio, or other media.
  - **Somatic delusions:** False beliefs about their body. For example, that a terrible physical illness exists or that something foreign is inside or passing through their body.
  - **Delusions of grandeur:** The belief that they are very

special or have special powers or abilities.

- **Delusions of control:** The belief that their feelings, thoughts, and actions are being controlled by other people.

- **Thought disorders:** Thought disorders are unusual or dysfunctional ways of thinking. One form of thought disorder is called "disorganized thinking." This is when a person has trouble organizing his or her thoughts or connecting them logically. They may string words together in an incoherent way that is hard to understand, often referred to as a "word salad." The person may make "loose associations," where they rapidly shift from one topic to an unrelated topic, making it very difficult to follow their conversation. "Thought blocking" may occur in which the person stops speaking abruptly in the middle of a thought. When asked why he or she stopped talking, the person



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## symptoms of schizophrenia (cont'd)

may say that it felt as if the thought had been taken out of his or her head. A person with a thought disorder might make up meaningless words, or "neologisms," or perseverate which means to persistently repeat words or ideas.

**NEGATIVE SYMPTOMS:** Negative symptoms are the absence of thoughts, perceptions, or behaviors that are ordinarily present in other people. These symptoms are often stable throughout much of the person's life.

- **Affective flattening:** Affective flattening is characterized by a reduction in the range of emotional expressiveness, including limited or unresponsive facial expression, poor eye contact, and reduced body language. The expressiveness of the person's face, voice tone, and gestures may be reduced or restricted. However, this does not mean that the person is not reacting to his or her environment or having feelings.
- **Alogia:** Alogia, or poverty of speech, is the lessening of speech fluency and productivity. The person may have difficulty or be unable to speak and may give short, empty replies to questions.
- **Avolition:** Avolition is the difficulty or inability to begin and persist in goal-directed behavior. It is often mistaken for apparent disinterest. The person may not feel motivated to pursue goals and activities. They may have little sense of purpose in their lives and have few

interests. They may feel lethargic or sleepy, and have trouble following through on even simple plans.

- **Anhedonia:** Anhedonia is defined as the inability to experience pleasure from activities one used to find enjoyable. For example, the person may not enjoy watching a sunset, going to the movies, or having close relationships with other people.

**COGNITIVE SYMPTOMS:** Cognition refers to mental processes that allow us to perform day-to-day functions, such as the ability to pay attention, to remember, and to solve problems. Cognitive impairments are considered a core feature of schizophrenia and contribute to difficulties in work, social relationships, and independent living. Some examples of cognitive symptoms in schizophrenia include: trouble concentrating or paying attention, poor memory, slow thinking, and poor executive functioning. Executive functions include the ability to plan, solve problems, and grasp abstract concepts.

*Common symptoms of schizophrenia include:*

- *Positive symptoms, such as hallucinations and delusions.*
- *Negative symptoms, such as lack of emotion and lack of motivation.*
- *Cognitive symptoms, such as poor memory and attention.*

## similar psychiatric disorders

Schizophrenia shares symptoms with some other psychiatric disorders. Prominent psychotic symptoms seen in schizophrenia are similar to those seen in other psychotic disorders, such as Schizoaffective Disorder, Schizophreniform Disorder, and Brief Psychotic Disorder. Symptoms of schizophrenia may also overlap with symptoms of Bipolar Disorder. Individuals with schizophrenia may experience mood disturbances seen in Bipolar Disorder, including mania and depression. Schizophrenia must be distinguished from a Psychotic Disorder due to a General Medical Condition, where psychotic symptoms are judged to be the direct consequence of a general medical condition. Schizophrenia must also be distinguished from a Substance-Induced Psychotic Disorder, in which psychotic symptoms are judged to be the direct consequence of drug abuse, medication, or toxin exposure.

*The symptoms of schizophrenia may overlap with symptoms of other psychiatric disorders.*



The family environment is important to the recovery of individuals with schizophrenia. Even though the disorder can be a frustrating illness, family members can help the process of recovery in many ways.

### Encourage Treatment and Rehabilitation

Medications and psychotherapy can help a person feel better, engage in meaningful activities, and improve their quality of life. The first step is to visit a doctor for a thorough evaluation. If possible, family members should be present at the evaluation to offer support, help answer the doctor's questions, and learn about the illness. If medication is prescribed, family members can provide support in taking those medications. Taking medication can be difficult - there will be times when the person won't want to take it or may just forget to take it. Encouragement and reminders are helpful. Family members can help the person fit taking medication into their personal routine. The person may also have been referred to psychosocial treatment and rehabilitation. Family members can be very helpful in supporting attendance to therapy. Some ways to do this are by giving reminders, offering support, and providing transportation to the clinic.

### Provide Support

Family stress is a powerful predictor of relapse, while family support decreases the rate of relapse. Helping the person pursue meaningful goals and activities can be very helpful in the process of recovery. It is best if family members try to be understanding rather than critical, negative or blaming. It may be difficult at times, but families do best when they are patient and appreciate any progress that is being made, however slow it may be. If family members are having difficulty being supportive, it might be because of what they believe is causing the disorder. Studies show that family members try to make sense of schizophrenia by determining its cause. They tend to think about the causes of schizophrenia as "moral" or "organic." Family members who believe the cause of schizophrenia is "moral" believe it is caused by the individual's personality (i.e., the individual is weak, lazy, or lacking self-discipline). Family members who believe the cause of schizophrenia is "organic" believe in the medical model of disease (i.e., it is a medical illness). The belief that the disorder is caused by moral weakness, laziness, or lack of self discipline leads family members to believe that the symptoms are controllable by their relative. The belief that people have control over, and hence are responsible for their symptoms, can lead to feelings of anger and may prevent family members from being supportive of their ill relative. In contrast, belief in the medical model of schizophrenia may lead family members to believe that the symptoms are not controllable, and therefore the individual is not responsible for their symptoms. This leads to greater feelings of warmth and sympathy and a greater willingness to help their relative. Research has shown that family members who hold a medical view of schizophrenia are less critical of their relative than those who hold a moral view of the disorder. These views of what causes schizophrenia are important

because critical and hostile attitudes on the part of the relative are predictive of relapse.

### Take Care of Themselves

Family members often feel guilty about spending time away from their ill relative; however, it is important that they take good care of themselves. There are many ways to do this. Family members should not allow their ill relative to monopolize their time. Spending time alone or with other family members and friends is important for their own well-being. Family members may also consider joining a support or therapy group. Counseling can often help family and friends better cope with a loved one's illness. Finally, family members should not feel responsible for solving the problem themselves. They can't. They should get the help of a mental health professional if needed.

*Family members can help the process of recovering from schizophrenia in many ways. Some ways include encouraging treatment (medication and psychotherapy), providing support, and taking care of themselves.*





There are a variety of medications and therapies available to those suffering from schizophrenia. Antipsychotic medications can help reduce symptoms and are recommended as the first-line treatment for schizophrenia. People can also learn to manage their symptoms and improve their functioning with psychosocial treatment and rehabilitation. The treatments listed here are ones which research has shown to be effective for people with schizophrenia. They are considered to be evidence-based practices.

## Medication

The section titled “Antipsychotic Medication: What You Should Know” (page 7) provides information about antipsychotic medications and their side effects.

## Social Skills Training

Many people with schizophrenia have difficulties with effective social skills. Social skills training aims to correct these deficits by teaching socially appropriate ways to express emotion and interact with others, so individuals are more likely to achieve their goals, develop relationships, and live independently. Social skills are taught in a very systematic way using behavioral techniques, such as modeling, role playing, positive reinforcement, and shaping.

## Family-Based Services

Mental illness affects the whole family. Family treatment and psychoeducation is one way families can work together towards recovery. The family and clinician meet together to discuss the problems they are experiencing. Families then attend educational sessions where they will learn basic facts about mental illness, coping skills, communication skills, problem-solving skills, and ways to work together toward recovery. Patients who participate in family interventions report fewer psychiatric symptoms, improved work functioning, and improved treatment adherence. Family members also benefit and report feeling more satisfaction with their relationship and less burden.

There are a range of family programs available. Some families benefit from just a few sessions. More intensive services are especially helpful for families that are experiencing high levels of stress and tension and for patients who are chronically symptomatic or prone to relapse. These longer-term interventions generally last 6-9 months and can be done in single family or multi-family formats.

## Supported Employment

Research shows that about 70% of adults with severe mental illness want to work and about 60% can be successfully employed when using Supported Employment. Supported Employment is designed to help people with severe mental illness find and keep competitive employment. The approach is characterized by focus on competitive work, rapid job search, absence of prevocational training, and continued support once a job is obtained. Employment specialists work with individuals to identify their career goals and personal abilities. Case managers and mental health providers work closely with employment specialist to provide support during the job seeking and keeping process.

## Cognitive Behavioral Therapy (CBT)

Cognitive behavioral therapy (CBT) is a blend of two therapies: cognitive therapy and behavioral therapy. Cognitive therapy focuses on a person's thoughts and beliefs, and how they influence a person's mood and actions, and aims to change a person's thinking to be more adaptive and healthy. Behavioral therapy focuses on a person's actions and aims to change unhealthy behavior patterns.

Treating schizophrenia with CBT is challenging. The disorder usually requires medication first. But research has shown that CBT, as an add-on to medication, can

help a person better cope with schizophrenia. CBT for schizophrenia is skill-oriented. Patients learn skills to cope with life's challenges. The therapist teaches social skills, skills related to daily functioning, and problem-solving skills. Patients learn to identify what triggers episodes of the illness, which can prevent or reduce the chances of relapse. This can help patients with schizophrenia minimize the types of stress that can lead to hospitalizations. CBT also helps patients learn more adaptive and realistic interpretations of events. Patients are also taught various coping techniques for dealing with "voices" or other hallucinations. Therapy may be done one-on-one or in a group setting.

## Assertive Community Treatment (ACT)

Assertive Community Treatment (ACT) is an approach that is most effective for individuals with the greatest service needs, such as those with a history of multiple hospitalizations or those who are homeless. In ACT, the person receives treatment from an interdisciplinary team of usually 10 to 12 professionals, including case managers, a psychiatrist, several nurses and social workers, vocational specialists, substance abuse treatment specialists, and peer specialists. The team provides coverage 24 hours, 7 days per week, and utilizes small caseloads, usually 1 staff for every 10 clients. Services provided include: case management, comprehensive treatment planning, crisis intervention, medication management, individual supportive therapy, substance abuse treatment, rehabilitation services (e.g., supported employment), and peer support. The VA's version of this program is called Mental Health Intensive Case Management (MHICM).

## Illness Self-Management

Components of illness self-management include psychoeducation, coping skills training, relapse prevention, and social skills training. Individuals learn about their psychiatric illness, their treatment choices, medication adherence strategies, and coping skills to deal with stress and symptoms. Relapse prevention involves recognizing situations that might trigger symptoms, tracking warning signs and symptoms of relapse, and developing a plan to cope with triggers and warning signs to prevent relapse. This treatment approach also teaches individuals social skills in order to improve the quality of their relationships with others.

## Psychosocial Interventions for Alcohol and Substance Use Disorders

Many individuals with schizophrenia also struggle with an alcohol or substance use disorder. Co-occurring disorders are best treated concurrently, meaning that treatment for schizophrenia should be integrated with the treatment for the alcohol or drug problem. Integrated treatment includes motivational enhancement and cognitive-behavioral interventions. Integrated treatments are effective at reducing substance use, preventing relapse, and keeping individuals in treatment longer. These interventions can be delivered one-on-one or in a group format.

## Psychosocial Interventions for Weight Management

Weight gain is one of the most significant and frustrating side effects of many medications used to treat the symptoms of schizophrenia. Weight gain can lead to problems such as diabetes and hypertension, making it a serious problem for many individuals. Help with weight loss is available. Weight programs generally last 3 months or longer and include education about nutrition and portion control. Participants learn skills to monitor their daily food and activity levels, have regular weigh-ins, and set realistic and attainable personal goals. Participation in such a program can help prevent additional weight gain and lead to modest weight loss. The VA's version of this program is called *MOVE!* It is offered in a supportive group setting.

# antipsychotic medication: what you should know

- Research has found that antipsychotic medications are effective for treating the positive symptoms in schizophrenia. It is not known exactly how they work, but one common feature is the ability to block the action of a chemical messenger in the brain called dopamine. Research suggests that malfunction of this chemical messenger system, as well as others, cause symptoms such as hallucinations and delusions.
- All antipsychotic medications must be taken as prescribed. Their effects can sometimes be noticed within the same day of the first dose. However, the full benefit of the medication may not be realized until after a few weeks of treatment. So don't stop taking your medication because you think it's not working. Give it time!
- Sometimes the antipsychotic you first try may not lead to improvement in symptoms. This is because each person's brain chemistry is unique; what works well for one person may not do as well for another. Be open to trying another medication or combination of medications in order to find a good fit. Let your doctor know if your symptoms have not improved and do not give up searching for the right medication!
- Once you have responded to treatment, it is important to continue treatment. To prevent symptoms from coming back or worsening, do not abruptly stop taking your medications, even if you are feeling better. Stopping your medication can cause a relapse. Medication should only be stopped under your doctor's supervision. If you want to stop taking your medication, talk to your doctor about how to correctly stop them.
- Most antipsychotics are prescribed once daily. If you forget to take your medication, do not double up the next day to "catch up" on the dose you missed. If your medication is prescribed to be taken twice a day, and you forget to take a dose: a rule of thumb is to take your medication if it has been 6 hours or less from the time you were supposed to take it. If it is more than six hours after the dose should have been taken, just skip the forgotten dose and resume your medication at the next regularly scheduled time. Never double up on doses of your antipsychotic to "catch up" on those you have forgotten.
- Some antipsychotic medications are available as long-acting injectables. Use of injectable medications is one strategy that can be used for individuals who regularly forget to take their medication.
- Like all medications, antipsychotic medications can have side effects. In many cases they are mild and tend to diminish with time. Many people have few or no side effects, and the side effects people typically experience are tolerable and subside in a few days. Your doctor will discuss some common side effects with you. Check with your doctor if any of the common side effects persist or become bothersome. If you experience side effects, talk to your doctor before making any decisions about discontinuing treatment.
- In rare cases, these medications can cause severe side effects. Contact your doctor immediately if you experience one or more severe symptoms.

**\*\*\*This handout provides only general information about antipsychotic medication. It does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned. This information does not constitute medical advice or treatment and is not intended as medical advice for individual problems or for making an evaluation as to the risks and benefits of taking a particular medication. The treating physician, relying on experience and knowledge of the patient, must determine dosages and the best treatment for the patient.\*\*\***

## ANTIPSYCHOTIC MEDICATIONS

These are sometimes referred to as conventional, typical or first generation antipsychotic medications:

Chlorpromazine (Thorazine)  
Fluphenazine (Prolixin)  
Haloperidol (Haldol)  
Loxapine (Loxitane or Lozapac)

Perphenazine (Trilafon)  
Thiothixene (Navane)  
Trifluoperazine (Stelazine)

These are sometimes referred to as atypical or second generation antipsychotic medications:

Aripiprazole (Abilify)  
Asenapine (Saphris)  
Clozapine (Clozaril)  
Iloperidone (Fanapt)  
Lurasidone (Latuda)

Olanzapine (Zyprexa)  
Paliperidone (Invega)  
Quetiapine (Seroquel)  
Risperidone (Risperdal)  
Ziprasidone (Geodon)

## LONG-ACTING INJECTABLE ANTIPSYCHOTIC MEDICATIONS

Certain antipsychotic medications are available as long-acting injectables. These medications are given every two to four weeks. Some patients find these more convenient because they don't have to take the medications daily. The side effects of these medications are similar to their oral counterparts.

Fluphenazine (Prolixin decanoate)    Paliperidone (Sustena)  
Haloperidol (Haldol decanoate)    Risperdal (Consta)  
Olanzapine (Zyprexa Relprevv)

## SIDE EFFECTS OF ANTIPSYCHOTIC MEDICATIONS

Some individuals experience side effects that mimic symptoms of Parkinson's disease, which are called parkinsonian or extrapyramidal symptoms. These include tremor, shuffling walk and muscle stiffness. A related side effect is akathisia, which is a feeling of internal restlessness. Additionally, prolonged use of antipsychotics may cause tardive dyskinesia, a condition marked by involuntary muscle movements in the face and body. An uncommon, but serious side effect is called Neuroleptic Malignant Syndrome (NMS). These symptoms include high fever, muscle rigidity, and irregular heart rate or blood pressure. Contact your doctor immediately if any of these symptoms appear.

People taking antipsychotic medications can also experience a variety of other side effects including: unusual dreams; blank facial expression; blurred vision; breast enlargement or pain; breast milk production; constipation; decreased sexual performance in men; diarrhea; dizziness or fainting when you sit up or stand up; difficulty urinating; drowsiness; dry mouth; excessive saliva; missed menstrual periods; mood changes; nausea; nervousness; restlessness and sensitivity to the sun.

Weight gain, changes in blood sugar regulation, and changes in blood levels of lipids (cholesterol and triglycerides) are common with some antipsychotics. Therefore, your doctor will check your weight and blood chemistry on a regular basis. If you have a scale at home, you want to regularly check your own weight. Each of these medications differ in their risk for causing these side effects. If you start to gain weight, talk to your doctor. It may be recommended that you switch medications or begin a diet and exercise program.

Clozapine can cause agranulocytosis, which is a loss of the white blood cells that help a person fight off infection. Therefore, people with who take clozapine must get their white blood cell counts checked frequently. This very serious condition is reversible if clozapine is discontinued. Despite this serious side effect, clozapine remains the most effective antipsychotic available and can be used safely if monitoring occurs at the appropriate time intervals.





IMAGE BY KEVIN ROLLY

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