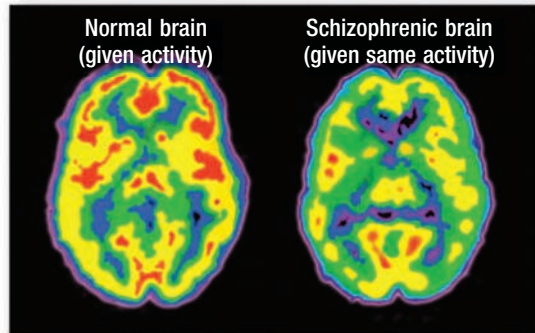


Schizophrenia



Complex Mental Disorder

Schizophrenia is a serious, chronic mental disease that affects a person's mood, understanding of reality, and ability to think clearly. The cause of schizophrenia is unclear, but it is well documented that the disorder runs in families, and there are likely environmental causes as well.

Schizophrenia can potentially cause a wide variety of symptoms, which usually appear in early adulthood. Researchers believe that these symptoms are somehow related to abnormalities in brain chemicals, including dopamine and glutamate, and differences in brain structure. Symptoms of schizophrenia are generally categorized into positive, negative, and cognitive (thinking) symptoms. Positive symptoms include sensory hallucinations (seeing, hearing, feeling or smelling things that are not there), delusions (irrational beliefs), disorganized or blocked thinking, and movement disorders. Negative symptoms are problems with mood and emotion, similar to the symptoms of depression. Cognitive symptoms are problems in thinking, including difficulty in making decisions and staying focused.

Treatment for schizophrenia is centered on relieving symptoms and allowing the patient to lead an independent, productive life. Although there is no cure for schizophrenia, antipsychotic medications can relieve many of the symptoms. There are several drugs available, including first- and second-generation antipsychotics, which are very effective in controlling symptoms. However, these are powerful medications that must be taken throughout a person's lifetime. It is very important that individuals with schizophrenia be monitored for side effects and continue their medication even when their symptoms improve. Patients and their families can also benefit from psychotherapy, specifically cognitive behavioral therapy, to help them understand how to deal with symptoms that do not respond to antipsychotics.

Antipsychotics Are the Most Effective Treatment

Schizophrenia is a lifelong illness that affects over 1% of the U.S. population. Although its cause is unknown, it has a confirmed genetic component as well as an environmental link. Men and women are equally at risk for developing this condition, and in most patients symptoms begin sometime in the late teens to twenties.

Identifying Symptoms

Symptoms are initially subtle and progress slowly, marked by social withdrawal, irritability, and trouble sleeping and concentrating. In the early stages, diagnosis may be difficult because many symptoms are similar to those of mood disorders such as depression and anxiety. As the disease progresses, there are more distinguishing features of schizophrenia, including suspicion about others; suicidal thoughts; addiction to nicotine, alcohol, or other drugs of abuse; or problems in making decisions or staying focused.

The three types of symptoms associated with schizophrenia are classified as positive, negative, and cognitive. *Positive symptoms* are the ones most often associated with schizophrenia, and they include hallucinations, such as hearing voices that do not exist, or delusions such as the belief that others are controlling a person's thoughts. They may also include repetitive movements or no movement at all. *Negative symptoms* are typically similar to depressive symptoms and may cause a patient to lose interest in everyday activities, including personal hygiene or conversation with others. *Cognitive symptoms* involve problems in thinking, which can result in illogical connections of random thoughts. Not everyone with schizophrenia experiences all three types of symptoms, although many patients suffer from more than one type.

Drug Therapy and Avoiding Relapse

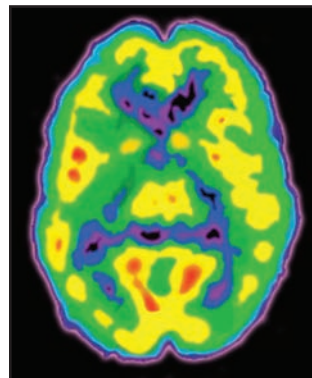
It is critical that those with schizophrenia receive the correct diagnosis and prompt treatment. Treatment is focused on symptom relief and providing the ability to live an independent and productive life.

Drugs used to treat schizophrenia work to balance the amount of natural chemicals in the brain. These agents include the "typical" or first-generation antipsychotics and the "atypical" or second-generation antipsychotics. *First-generation antipsychotics* include chlorpromazine, fluphenazine, haloperidol, and perphenazine. Although these drugs are effective, their long-term use can result in a muscle movement disorder known as *tardive dyskinesia*, which consists of fine tremor, muscle spasms, and rigidity. *Second-generation antipsychotics* include aripiprazole, olanzapine, paliperidone, quetiapine, risperidone, and ziprasidone. These medications, though less likely to cause movement disorders, have a unique set of side effects, including weight gain, high cholesterol, and an increased risk of diabetes. Anyone taking either type of antipsychotic should be monitored routinely for side effects. Antipsychotics should not be stopped abruptly, but should always be tapered off slowly or replaced with another drug according to a physician's directions.

Antipsychotics often improve many of the symptoms of schizophrenia within a few weeks of therapy. It is critical that antipsychotics be continued even after symptoms have improved in order to avoid relapse. If one antipsychotic does not relieve symptoms, it is possible another agent will work. Patients should always tell their physician and pharmacist about any other prescription drugs, OTC products, vitamins, or supplements they are taking to avoid serious drug interactions.

Benefits of Psychotherapy

In addition to appropriate drug therapy, people with schizophrenia can often benefit from cognitive behavioral therapy (CBT), which is a type of psychotherapy that teaches patients and their families how to deal with symptoms while the antipsychotics are helping balance the brain chemistry. CBT is especially helpful in dealing with symptoms that do not respond to medications and in helping patients and their families recognize the warning signs of relapse so they can take preventative action.



Neuroimaging allows for the study of differences in brain activity in people diagnosed with schizophrenia.