



## Schizophrenia

Schizophrenia is a brain disorder classified as a psychosis, which means that it affects a person's thinking, sense of self, and perceptions. The disorder typically becomes evident during late adolescence or early adulthood.

Signs and symptoms of schizophrenia include false perceptions called hallucinations. Auditory hallucinations of voices are the most common hallucinations in schizophrenia, but affected individuals can also experience hallucinations of visions, smells, or touch (tactile) sensations. Strongly held false beliefs (delusions) are also characteristic of schizophrenia. For example, affected individuals may be certain that they are a particular historical figure or that they are being plotted against or controlled by others.

People with schizophrenia often have decreased ability to function at school, at work, and in social settings. Disordered thinking and concentration, inappropriate emotional responses, erratic speech and behavior, and difficulty with personal hygiene and everyday tasks can also occur. People with schizophrenia may have diminished facial expression and animation (flat affect), and in some cases become unresponsive (catatonic). Substance abuse and suicidal thoughts and actions are common in people with schizophrenia.

Certain movement problems such as tremors, facial tics, rigidity, and unusually slow movement (bradykinesia) or an inability to move (akinesia) are common in people with schizophrenia. In most cases these are side effects of medicines prescribed to help control the disorder. However, some affected individuals exhibit movement abnormalities before beginning treatment with medication.

Some people with schizophrenia have mild impairment of intellectual function, but schizophrenia is not associated with the same types of physical changes in the brain that occur in people with dementias such as Alzheimer disease.

Psychotic disorders such as schizophrenia are different from mood disorders, including depression and bipolar disorder, which primarily affect emotions. However, these disorders often occur together. Individuals who exhibit strong features of both schizophrenia and mood disorders are often given the diagnosis of schizoaffective disorder.

### Frequency

Schizophrenia is a common disorder that occurs all over the world. It affects almost 1 percent of the population, with slightly more males than females developing the disorder.

## Causes

Variations in many genes likely contribute to the risk of developing schizophrenia. In most cases, multiple genetic changes, each with a small effect, combine to increase the risk of developing the disorder. The ways that these genetic changes are related to schizophrenia are not well understood, and the genetics of this disease is an active area of research. The genetic changes can also interact with environmental factors that are associated with increased schizophrenia risk, such as exposure to infections before birth or severe stress during childhood.

Deletions or duplications of genetic material in any of several chromosomes, which can affect multiple genes, are also thought to increase schizophrenia risk. In particular, a small deletion (microdeletion) in a region of chromosome 22 called 22q11 may be involved in a small percentage of cases of schizophrenia. Some individuals with this deletion have other features in addition to schizophrenia, such as heart abnormalities, immune system problems, and an opening in the roof of the mouth (cleft palate), and are diagnosed with a condition called 22q11.2 deletion syndrome.

## Inheritance Pattern

The inheritance pattern for schizophrenia is usually unknown. The risk of developing schizophrenia is somewhat higher for family members of affected individuals as compared to the general public; however, most people with a close relative who has schizophrenia will not develop the disorder themselves.

## Other Names for This Condition

- dementia praecox

## Diagnosis & Management

### Genetic Testing Information

- What is genetic testing?  
[/primer/testing/genetictesting](#)
- Genetic Testing Registry: Schizophrenia  
<https://www.ncbi.nlm.nih.gov/gtr/conditions/C0036341/>
- International Society of Psychiatric Genetics: Genetic Testing and Psychiatric Disorders  
<https://ispg.net/genetic-testing-statement/>

### Research Studies from ClinicalTrials.gov

- ClinicalTrials.gov  
<https://clinicaltrials.gov/ct2/results?cond=%22schizophrenia%22>

### Other Diagnosis and Management Resources

- MedlinePlus Encyclopedia: Mental Status Testing  
<https://medlineplus.gov/ency/article/003326.htm>
- National Institute of Mental Health (NIMH): Brain Stimulation Therapies  
<https://www.nimh.nih.gov/health/topics/brain-stimulation-therapies/brain-stimulation-therapies.shtml>
- National Institute of Mental Health (NIMH): Mental Health Medications  
<https://www.nimh.nih.gov/health/topics/mental-health-medications/index.shtml>
- National Institute of Mental Health (NIMH): Psychotherapies  
<https://www.nimh.nih.gov/health/topics/psychotherapies/index.shtml>
- United States Department of Veterans Affairs  
<https://www.mentalhealth.va.gov/mentalhealth/schizophrenia/index.asp>

### **Additional Information & Resources**

#### Health Information from MedlinePlus

- Encyclopedia: Mental Status Testing  
<https://medlineplus.gov/ency/article/003326.htm>
- Encyclopedia: Schizoaffective Disorder  
<https://medlineplus.gov/ency/article/000930.htm>
- Encyclopedia: Schizophrenia  
<https://medlineplus.gov/ency/article/000928.htm>
- Encyclopedia: Hallucinations  
<https://medlineplus.gov/ency/article/003258.htm>
- Health Topic: Schizophrenia  
<https://medlineplus.gov/schizophrenia.html>

#### Additional NIH Resources

- Medical Genetics Summaries from the National Center for Biotechnology Information  
<https://www.ncbi.nlm.nih.gov/books/NBK62008/>
- National Institute of Mental Health (NIMH): Brain Stimulation Therapies  
<https://www.nimh.nih.gov/health/topics/brain-stimulation-therapies/brain-stimulation-therapies.shtml>
- National Institute of Mental Health (NIMH): Mental Health Medications  
<https://www.nimh.nih.gov/health/topics/mental-health-medications/index.shtml>
- National Institute of Mental Health (NIMH): Psychotherapies  
<https://www.nimh.nih.gov/health/topics/psychotherapies/index.shtml>

- National Institute of Mental Health (NIMH): Schizophrenia  
<https://www.nimh.nih.gov/health/topics/schizophrenia/index.shtml>
- National Institutes of Health: Mutated Genes in Schizophrenia Map Brain Networks  
<https://www.nih.gov/news-events/nih-research-matters/mutated-genes-schizophrenia-map-brain-networks>
- National Institutes of Health: Researchers Find a Mechanism for Schizophrenia  
<https://newsinhealth.nih.gov/2016/03/researchers-find-mechanism-schizophrenia>

### Educational Resources

- American Academy of Child and Adolescent Psychiatry: Schizophrenia in Children  
[https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Schizophrenia-In-Children-049.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Schizophrenia-In-Children-049.aspx)
- American Psychiatric Association  
<https://www.psychiatry.org/patients-families/schizophrenia>
- MalaCards: schizophrenia  
<https://www.malacards.org/card/schizophrenia>
- MentalHealth.gov  
<https://www.mentalhealth.gov/what-to-look-for/psychotic-disorders/schizophrenia>
- Merck Manual Consumer Version: Schizophrenia  
<https://www.merckmanuals.com/home/mental-health-disorders/schizophrenia-and-related-disorders/schizophrenia>
- Orphanet: NON RARE IN EUROPE: Schizophrenia  
[https://www.orpha.net/consor/cgi-bin/OC\\_Exp.php?Lng=EN&Expert=3140](https://www.orpha.net/consor/cgi-bin/OC_Exp.php?Lng=EN&Expert=3140)
- World Health Organization  
[https://www.who.int/mental\\_health/management/schizophrenia/en/](https://www.who.int/mental_health/management/schizophrenia/en/)

### Patient Support and Advocacy Resources

- Brain and Behavior Research Foundation  
<https://www.bbrfoundation.org/research/schizophrenia>
- National Alliance on Mental Illness  
<https://www.nami.org/Learn-More/Mental-Health-Conditions/Schizophrenia>
- Schizophrenia and Related Disorders Alliance of America  
<https://sardaa.org/>
- Schizophrenia Society of Canada  
<https://www.schizophrenia.ca/>
- World Fellowship for Schizophrenia and Allied Disorders  
<http://world-schizophrenia.org/>

## Scientific Articles on PubMed

- PubMed  
<https://www.ncbi.nlm.nih.gov/pubmed?term=%28Schizophrenia%5BMAJR%5D%29+AND+%28schizophrenia%5BTI%5D%29+AND+genetics%5Bmh%5D+AND+review%5Bpt%5D+AND+english%5Bla%5D+AND+human%5Bmh%5D+AND+%22last+1800+days%22%5Bdp%5D>

## Catalog of Genes and Diseases from OMIM

- SCHIZOPHRENIA  
<http://omim.org/entry/181500>

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