

# Schizophrenia

Schizophrenia is a severe mental illness that affects how a person thinks, feels and acts. It is typically characterized by a difficulty in distinguishing between what is real and what is not. About 1% of individuals worldwide are affected by this illness, with men and women being equally affected. Onset of symptoms typically occurs between the ages of 15-35 (1,4); however, men tend to experience an earlier onset of symptoms in comparison to women (3). Individuals with schizophrenia often have difficulty socializing and functioning in society (3). Even with treatment as many as 50% of these individuals relapse within two years (2). Lack of treatment and/or lack of ongoing treatment is often thought to contribute to the chronicity of this disease (5).

Schizophrenia is not defined by any one symptom. In fact, many symptoms of this illness are implicated in a number of other neurocognitive syndromes and disorders, therefore making a differential diagnosis is critical in assuring the individual receives the proper treatment and care (5). Symptoms of schizophrenia are often described as "positive" or "negative". Positive symptoms refer to the presence or addition of a behavior or symptom and negative symptoms refer to the absence or removal of a behavior or symptom (2). Positive symptoms include hallucinations (hearing, seeing, tasting, or smelling things that are not there), delusions (false beliefs which may be either bizarre or realistic), disordered thinking, and disorganized behavior (i.e., agitated behavior, silliness). Negative symptoms are often disruptions in normal behavior and are frequently mistaken for symptoms of depression. These symptoms include social withdrawal, lack of pleasure in previously enjoyed activities or in general everyday life, lack of initiation and motivation, flattened affect, poverty of speech, decreased personal hygiene, and difficulty with activities of daily living (2,3,5). Positive symptoms tend to be better controlled by medication in comparison to negative symptoms (2).

Cognitive symptoms are often present as well. The most common neuropsychological findings include poor executive functioning skills (i.e., planning, organization, judgment, mental flexibility), trouble focusing or paying attention and difficulty with working memory skills (holding and manipulating information for a short period of time before recalling it) (1). A global decline in intellectual functioning has also been reported (1). Typically individuals with schizophrenia have little insight into their illness and therefore are unaware of the cognitive and social difficulties they experience (3).

The cause of schizophrenia remains unknown. No one gene has been identified as the root of the illness, however, it is possible that schizophrenia involves the genetic mutation of hundreds of different genes (3). Studies of brain images of individuals with schizophrenia have shown that the lateral ventricles are enlarged in about 25% of patients; however, the size does not appear to change overtime (2). It is unclear as to whether the enlargement is due to tissue loss or is pathophysiological marker of the disease (2,6). The neurotransmitters dopamine and glutamate have also been implicated in this disease, but again it is believed that there are additional contributing factors that are complex and interact with one another (2,3). Most scientists believe that the development of schizophrenia is a combination of genetics and environmental factors. Familial studies have shown that an individual has a 10% chance of developing schizophrenia if they have a first degree relative with the disorder and monozygotic twins have a 40-65% chance of developing it if their twin has it (3).

There is no cure for schizophrenia; however, several of the symptoms can be managed with antipsychotic medication (1,2,3,4,5,6,7). Medication alone, however, is not the only answer. Unfortunately many individuals with schizophrenia have a lack of awareness or insight into their disease. Treatment must also involve a psychosocial component focusing on behavior management in order increase insight, as well as to teach and help develop appropriate social skills (6).

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## References

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