

What Is Schizophrenia?

Evidence indicates strongly that schizophrenia is a severe disturbance in the brain's functioning. It's caused by many factors - including changes in the chemistry of the brain, changes in the structure of the brain, and genetic factors.

There are billions of nerve cells in the brain. Each nerve cell has branches that send and receive messages from other nerve cells. **Neurotransmitters**, chemicals released from these branches, carry the message from the end of one nerve branch to the cell body of another. In the brain of a person with schizophrenia, something goes wrong in this communication system.

Over time, researchers have recognized that two neurotransmitters, **dopamine** (dough-pa-meem) and **serotonin** (se-row-toe-nin) in particular, have roles to play in schizophrenia. Evidence has accumulated that suggests dopamine is very important. In the brain afflicted with schizophrenia, it appears as though there is too much of this chemical in certain areas of the brain. New evidence shows that abnormalities in serotonin activity also play an important role in the illness.

Where does schizophrenia begin?

This disease generally strikes young people for the first time in the late teens or early twenties. Some people develop schizophrenia later in life, but this is not typical. It occurs in all races, cultures, social classes and both sexes. There are important male-female differences in the disease, with schizophrenia *generally* occurring earlier in males, and later in females - but this is not a rule.

The onset and early symptoms

For some people, the illness advances so gradually that they and their family are not aware for a long time that they are ill. This is referred to as **gradual-onset schizophrenia**. A gradual build-up of symptoms may or may not lead to an **acute or crisis episode** - a short and intense period that involves delusions (e.g. believing someone is trying to harm them), hallucinations (e.g. hearing voices), distorted thinking (e.g. blocked or jumbled thoughts), and an altered sense of self (e.g. alterations in body sensations).

In some cases, however, schizophrenia may strike quickly, with individuals experiencing dramatic behaviour changes in a matter of a few weeks or even days. This is referred to as **rapid or sudden-onset**. For these people, an **acute episode usually follows. In each case, medical treatment should be sought**. A person with schizophrenia may suffer from very few episodes in their life; others have more. And some people are able to lead relatively "normal" lives between episodes. Unfortunately, after each acute episode a patient suffers, the chronic symptoms of the disease may increase, making it more and more difficult for the person to function normally. It's important, therefore, to try to avoid

relapses. This can be encouraged by following the prescribed treatment and therapy set up by the physician and family.

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What Are The Symptoms?

Symptoms of schizophrenia are divided into "**positive**" and "**negative**" categories. This can be confusing. "**Positive**" are those characteristics that are present, and should be absent. "**Negative**" are those that are absent, and should be present.

If you or someone you know suffers from schizophrenia, some or all the following symptoms may be present. The expression of these symptoms varies greatly from one individual to another. No one symptom is common to all people.

Negative Symptoms

- Blunted Affect
- Emotional withdrawal
- Poor rapport
- Passive/apathetic/social withdrawal
- Difficulty in abstract thinking
- Lack of spontaneity
- Stereotyped thinking

Positive Symptoms

- Delusions
- Hallucinations
- Thought disorders
- Excitement
- Grandiosity
- Suspiciousness/persecution
- Hostility

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Negative Symptoms (the more inward signs)

Negative symptoms may appear early and can be the initial signs of schizophrenia. Parents may notice that a child who was once a "go-getter" has become withdrawn from family and friends, has lost interest in their usual activities, and has become unfeeling.

It can become very difficult for a parent to decide whether something is really wrong with their child because the "adolescent experience" that many teenagers go through can involve similar periods of withdrawal and moodiness.

Negative symptoms include the following:

Blunted emotions or blunted affect

For the person with schizophrenia life can be devoid of feeling. Individuals may say they feel less connected emotionally to what is going on around them, and they may appear less responsive on an emotional level to their surroundings.

Alternatively, the individual may respond with inappropriate emotions because of the other things going on in his or her head - like suddenly breaking out in a fit of laughter for no apparent reason, or when hearing sad or distressing news.

Emotional withdrawal

Individuals may be detached and uncommunicative. They have few interests and few personal relationships.

Poor rapport

In general, the person may avoid eye contact with you. In conversation, they may appear bored, indifferent, lacking in warmth.

Passive/apathetic

For the individual with schizophrenia, there may be lack of interest or concern for their surroundings. A lack of energy and drive makes it difficult for them to complete simple tasks, and they are sometimes able to do little more than sleep or eat. They may appear to seek or want nothing. To those around them, they may appear lazy and sluggish. But this is the disease at work. It is as though some central drive mechanism that is normally present in most of us is missing.

Social withdrawal

The person with schizophrenia may spend most time alone because he or she feels safer and calmer; or they are so absorbed in their own thoughts/senses they lose interest in the feelings and lives of others.

Difficulty in abstract thinking

Many people with schizophrenia can only think in concrete terms. They are unable to see beyond details to the underlying meaning, unable to move from the specific to the general.

Lack of spontaneity

There may be a hesitancy in the speech or action of individuals. Some people with schizophrenia have decreased spontaneous movements or they may become very unnatural in their movements.

Stereotyped thinking

Persons with schizophrenia can hold very rigid attitudes and beliefs that may seem unreasonable to those around them. Repetitive thoughts may intrude and interfere with their thinking.

Physical symptoms

Physical activity for the individual may slow down. In severe cases, activity may stop to the point where the person sits motionless and stares into space for long periods at a time. Individuals may be unconcerned with grooming and hygiene and appear untidy.

The **negative symptoms** can prevent patients from being able to hold a job, or have a normal social life. When the symptoms are severe, it may be difficult for them to do even the simple things like grocery shopping, showering or just looking after themselves.

It was previously believed that this group of symptoms, the **negative symptoms**, were side effects of the antipsychotics used to treat schizophrenia. These "side effects" are often seen by caregivers and even people with the illness as the "price you pay" for controlling the hallucinations, delusions, and paranoia. But we now know that this may not be the case. For some people, these symptoms may be part of the disease itself. So, a person with schizophrenia may not be able to help their lack of interest, motivation, and energy.

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Positive Symptoms (the outward or more visible signs)

Delusions

Individuals suffering from delusions truly believe something that does not make sense to others around them. Typical delusions include the belief one is being spied on, plotted against, harmed or tormented. Patients may believe they possess special powers, or they are being controlled by other forces. Delusions of a religious nature are common in patients.

Hallucinations

People with schizophrenia may hear, see, smell, taste or feel something that does not exist. By far the most common are auditory hallucinations, where the individual hears voices talking about them, or to them. The voices often say critical or nasty things to the person, or command them to do things.

Thought Disorders

A person with schizophrenia may have difficulty organizing and processing their thoughts in a way that makes it possible for them to communicate clearly with other people. Their speech may appear fragmented and incoherent because their thinking is blocked or jumbled. This is sometimes called **conceptual disorganization**.

Excitement

Individuals with schizophrenia may seem hyperactive and restless. They may feel widely varying and rapidly changing emotions.

Grandiosity

Individuals may believe they have great wealth, power or fame. Their reality may be so impaired that they believe they can stop bullets with their chest or fly over buildings.

Suspiciousness/persecution

People with schizophrenia are guarded and mistrustful of others. They may believe that they are being watched or followed or suspect people are trying to harm them.

Individuals may constantly search for proof of their suspicions.

Hostility

Some people with schizophrenia may exhibit episodes of hostility. They may become abusive, sarcastic and uncooperative with their families and caregivers.

While the positive symptoms are more striking and often call attention to the person with the disease, the **negative symptoms** are also important, as they can seriously impair the person's capacity to function and fit into the world around them.

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Can Schizophrenia Be Cured?

There is no cure, but medication may help reduce many of the symptoms of the disease, so that rehabilitation, in many cases, is possible. Full recovery may occur in a small number of people, but it cannot be predicted. The delusions and hallucinations that grip young adults in the throws of their illness, usually most severe while in their 20's and 30's, tend to decline somewhat with age. So by the time a person is in their 40's and 50's, they may experience few of these positive symptoms. Of course, this is not true for everyone with schizophrenia. Some individuals may still suffer from hallucinations late in life.

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Diagnosing Schizophrenia

Unfortunately, we have no single blood test, x-ray or brain scan from which we can then say with certainty: "Yes, that is schizophrenia." To reach a diagnosis of the disease, other possible causes must be ruled out. For example, the use of street drugs, like cocaine or LSD, can cause hallucinations and delusions. Other physical illnesses can also present symptoms like schizophrenia, such as epilepsy, brain tumors and thyroid disturbances.

Since there is nothing we can measure, no medical test we can perform to help define schizophrenia, we are left only with the symptoms of the disease.

Because of this, persons with schizophrenia often acquire different "labels" from healthcare providers, before a clear diagnosis is made. This can be extremely frustrating for patients and their families. But this is a difficult disease to diagnose - symptoms may either go unrecognized or not show themselves, until the illness is fairly advanced.

For a doctor to diagnose schizophrenia, the symptoms must be present for at least six months.

That is why the most important information is a detailed patient history. The diagnosis is based on the symptoms - what the person says, what the family can provide about the person's behaviour, and what the doctor observes.

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Treating Schizophrenia

Drugs are the cornerstone of treatment for schizophrenia, just as they are the most important treatment for many physical diseases.

They are not a cure, but are used to help **control** the symptoms of the disease. Along with medication, social therapy and rehabilitation are very important tools in the treatment of this disease.

Depending on the severity of the symptoms and the stage of the illness, the individual with schizophrenia may have to be treated in the hospital, especially if acutely ill. Other individuals are able to manage their disease outside the hospital with regular visits to their doctor, and other support staff.

The family is very important in treatment of individuals with schizophrenia. Family counseling is often recommended to understand and manage problems associated with the disease. Education is extremely important. Persons with schizophrenia and caregivers should learn all they can about the treatments and therapies offered, to be able to take an active role in the management of the disease.

Medication

Medications called antipsychotics (or neuroleptics), developed in the 1950's, have proven to be one of the most important medical advances of the century. As a result, people living with schizophrenia no longer have to be hospitalized for years. Many are able to live in the community.

There are well over 30 different antipsychotics available in North America. Although antipsychotics are the main drugs used in the treatment of schizophrenia, other drugs are often prescribed to treat other symptoms like anxiety, and sleeping difficulties that

frequently afflict those with the disease. In addition, the side effects associated with conventional antipsychotics often make it necessary for people to take other medications to lessen them.

Antipsychotics are not perfect. Although they may help control the positive symptoms of schizophrenia, they have not been proven to be effective against the debilitating negative symptoms of the disease (e.g. social withdrawal, lack of drive). Some people with schizophrenia do not respond to these drugs, and the side effects may contribute to people not taking their medication (noncompliance). Without medication, one of the critical steps in the treatment of schizophrenia is missing - and relapses are more likely for these individuals. And remember, with each relapse is the chance that chronic symptoms become more severe, making treatment even more difficult.

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Side Effects

For some individuals, the side effects of their medications can cause many problems. It is the group of side effects known as **extrapyramidal symptoms (EPS)** that are the most debilitating. Uncontrollable restlessness, muscle stiffness, tremors and involuntary movements characterize these side effects. These people may further isolate themselves from family and friends because they are embarrassed by these side effects, and are unable to control them. They may decide to stop their medication. Family members may think that extrapyramidal symptoms are part of the disease itself.

That is why it is important for individuals and families to monitor drug doses regularly, and to know and understand the side effects of particular antipsychotics.

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Psychosocial Therapy And Social Support

Psychotherapy and rehabilitation go hand in hand with the use of medication in the treatment of schizophrenia. Especially when the acute phase of the illness is over, many people need help to rebuild their lives so that they can make the best use of their capabilities - enabling them to work, and build personal and social relationships. Supportive therapy is important for individuals living with schizophrenia; to provide them with encouragement, friendship and good practical advice on how to manage their day. Teaching of life skills - the management of medication, keeping appointments, learning to socialize again, getting a job - are all part of the rehabilitation process. Tragically, because the disease afflicts many people while in the full bloom of youth, they haven't even had the opportunity to learn these basic life skills yet. It's as if they did not get the chance to fully mature. So rehabilitation can be very challenging.

For most individuals, one big key in the treatment of their disease is acceptance. This is also true of the family that surrounds the person with schizophrenia. Acknowledgement that the disease is real, that it is not likely to go away, and that it may put limitations on what the person can do, will make it easier for everyone.

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The Cost Of Schizophrenia

In addition to the emotional strain caused by schizophrenia, families and people with the disease must deal with additional financial costs, primarily due to the loss of employment. Although some people with schizophrenia are able to work, many cannot.

The burden on the healthcare system is very real as well. In fact schizophrenia is the number one mental health care cost. In Canada alone, total costs are well over two billion dollars per year. The largest contributor to these costs is hospitalization.

Early treatment of the disease is critical. It has been suggested that delays in treating the early episodes of schizophrenia with medication may result in a poorer long-term outcome for individuals. At any time, over 50% of the repeat admissions to hospitals for mental illness are individuals with schizophrenia. With early treatment, with the best medications, relapses may be minimized. Costs to people with schizophrenia, their families and the healthcare system can therefore be reduced.

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The New Treatments

Thanks to an ever increasing understanding of the brain's mechanisms, unique treatments have been developed for schizophrenia. **These therapies treat symptoms previously untreated by older medications.**

Conventional antipsychotics are effective against the delusions and hallucinations in some individuals with schizophrenia, but they do not control the debilitating negative symptoms such as social and emotional withdrawal. In addition, people taking these drugs often suffer from side effects known as **extrapyramidal symptoms** (e.g. uncontrollable shaking, tremors and muscle stiffness).

This new class of therapies treats both the positive (e.g. delusions and hallucinations) and negative (e.g. social withdrawal, lack of desire or motivation) symptoms of schizophrenia. And during the course of treatment they have been shown to produce a lower incidence of side effects than older medications - especially the serious extrapyramidal symptoms discussed earlier.