

EPILEPSY

Epilepsy/ Seizure Disorder Questions and Answers



This information provides general information about epilepsy/seizure disorders to the public. The information shared here should not be taken as full medical advice. Only your doctor can give the medical advice that is right for you.

Q: What is Epilepsy/Seizure Disorder?

A: Epilepsy/Seizure Disorder is a physical disorder formed by sudden or brief changes in which the brain works. Epilepsy/Seizure Disorder is a symptom of a neurological disorder that affects the brain and shows itself in the form of seizures. Epilepsy/Seizure Disorder is a disorder, not a disease. **Epilepsy/Seizure Disorder is not contagious.**

Did you know?

In Canada, up to 2% of the population (more than 300,000 people) have been diagnosed with Epilepsy/Seizure Disorder. Each day in Canada, an average of 42 people learn that they have Epilepsy/Seizure Disorder.

Q: What is a Seizure?

A: A seizure occurs when the normal electrical balance in the brain is lost. The brain's nerve cells fall through; they either ignite when they shouldn't or don't ignite when they should. The result is a sudden, brief, uncontrolled rush of abnormal electrical activity in the brain. Seizures are the physical effects of such unusual bursts of electrical energy in the brain.

These overactive signals may keep the brain from understanding what the eyes see, so the person stares during a seizure. Or they may affect leg muscle tone and cause a person to fall down. The type of seizure depends on how many cells are launched and which area of the brain is

involved. A seizure may be a change in behaviour, consciousness, movement, perception and or sensation.

Q: What causes seizures?

A: The brain is the control center for the body. Normal electrical signals between cells make the brain and body work properly. The cells turn electrical charges on and off automatically but sometimes the cells get stuck in the “on” position. This affects other cells and spreads to other parts or throughout the whole brain. It blocks out the usual awareness of things around us. This may change the way the world looks, or move our bodies automatically. Sometimes it may cause a convulsion. These seizures usually last a short time, and then end naturally as brain cell activity goes back to normal.

Q: What causes Epilepsy/Seizure Disorder?

A: The brain consists of millions of nerve cells, or neurons, and they’re supporting structure. Each neuron maintains itself in an electrically charged state. It receives electrical signals from other neurons, and passes them on to others. What actually happens is that a tiny amount of a special neurotransmitter substance is released from the terminals of one neuron. This chemical quickens the electrical response in the neuron next in the chain, and so signal moves ahead. All the functions of the brain, including feeling, seeing, thinking and moving muscles depend on electrical signals being passed from one neuron to the next, the message being modified as recommended. The normal brain is constantly generating electrical movements in a controlled way. In Epilepsy/Seizure Disorder this order is disrupted by some neurons discharging signals incorrectly. There may be a kind of brief electrical "storm" arising from neurons that are

mostly unstable because of a genetic defect, or from neurons made unstable by metabolic abnormalities such as low blood glucose, or alcohol. The abnormal discharge may come from a localized area of the brain.

Q: Who has Epilepsy/Seizure Disorder?

A: Epilepsy/Seizure Disorder most often starts in childhood or else late in life, but anyone can develop Epilepsy/Seizure Disorder at any time. Epilepsy/Seizure Disorder affects people of all ages, all nations, and all races. It can even occur in animals. Next to migraine headaches, it is the most common neurological disorder there is.

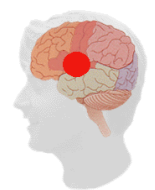
One in every 100 Canadians have active Epilepsy/Seizure Disorder.

Q: What kinds of Epilepsy/Seizure Disorder are there?

A: There are many different types of seizure disorders and syndromes in the International Classification. Most Epilepsy/Seizure Disorder is classified either Generalized or Partial seizures.

Q: What kinds of seizures do people with Epilepsy/Seizure Disorder have?

A: Partial Seizures begin in one area of the brain, called the seizure focus and only affect one part to the brain. Partial seizures begin with a blank look or stare and then may progress to chewing or uncoordinated activity. The person may look unaware of the surroundings and may seem dazed. Some people begin to act random and clumsy. They pick at their clothes or try to



take them off, walk around, pick up things, or mumble. They look afraid, and try to run and struggle. Partial seizures usually last a few minutes (2-4 minutes), after the seizure the person may feel confused. Once the patterns of the seizures are established, they are generally repeated.

DO NOT:

- Grab or hold the person (unless there is danger)
- Shout
- Expect to be heard

Auras are a brief sensation that often comes before a seizure. A person having an aura may experience unusual distortions in sight, sound, smell or emotion, or the person may have sudden jerking movements in their body. Even though a person having an aura is completely conscious and aware, they cannot stop or control what is happening.

Generalized Seizures occur when an abnormal amount of electricity occurs throughout the whole brain at once, with no possible focal point of charge or warning beforehand. Generalized seizures alter consciousness. They can be convulsive or non-convulsive. There are two forms: Generalized Tonic-Clonic (Grand Mal) and Generalized Absence (Petit Mal).

Generalized Tonic-Clonic (Grand Mal) seizures occur when seizure activity spreads throughout the entire brain. The person is unconscious from the start, and will have major convulsions with both a tonic (stiffening) and a clonic (jerking) period. After the seizure, the person is unconscious and then groggy for a while. They may want to sleep. There is no memory of what went on during the seizure. The seizure usually begins with a fall, and maybe accompanied by a sudden cry. The body stiffens (tonic), and then, after a

while, begins to jerk (clonic). There may be shallow breathing or breathing may temporarily be affected, with bluish skin or lips. There may be a loss of bladder or bowel control. Toward the end of the seizure, the person may salivate sufficiently. Tonic-Clonic seizures usually last 1 - 3 minutes, or longer.

DO NOT:

- Put anything in the person's mouth
- Shout
- Try to restrain the person
- Try artificial respiration
- Give liquids
- Don't hold the person down or try to stop his or her movements

THERE ARE SOME THINGS TO REMEMBER:

- Stay calm and reassure everyone around
- Make sure the person is not near any sharp or hard objects
- Loosen anything that may be around his or her neck, so that breathing is not difficult
- Stay with the person until the seizure is over
- When the person completes the seizure, be friendly and reassuring as he or she retains consciousness

Generalized Absence (Petit Mal) seizures create seizure activity throughout the entire brain. It is a milder type of activity; however, these seizures cause unconsciousness

without causing convulsions; afterwards there is no memory of having the seizure. This seizure consists of a period of unconsciousness with a blank stare, and begins and ends immediately, without any warning. There is no confusion after the seizure, and the person can resume full activity right away. The seizures may occur with chewing movements, rapid breathing, or rhythmic blinking.

Absence seizures are short, and usually last for 2-10 seconds. They are very mild, and may go unnoticed by many. Absence seizures may happen frequently during the day.

Status Epilepticus is any seizure that goes on for a long time (more than 10 minutes) or repeats without the person recovering. If the seizure involves convulsions, immediate medical treatment is necessary.

Did you know? About 1 in 500 people have ongoing seizures that do not respond to drug treatment. These seizures are called drug resistant or intractable.

Q: Can Epilepsy/Seizure Disorder be prevented?

A: Epilepsy/Seizure Disorder can be prevented by reducing any risk of injury or the development of new vaccines. Always wear seat belts, helmets and any safety equipment to protect against Epilepsy/Seizure Disorder as result of any accidents.

Q: Do seizures injure the brain?

A: The average seizure does not seem to have a lasting affect. Many people with Epilepsy/Seizure Disorder have

many seizures in their lives without noticeable changes in their intelligence or awareness. Regardless, seizures last an unusual long time, or a series of seizures, may injure the brain.

Q: Can a person with Epilepsy/Seizure Disorder harm another person while, having a seizure?

A: The person having the seizure can not control his or her actions during a seizure, therefore, are not capable of carrying out a attack on someone. If a person having a seizure is grabbed or held down during a seizure, he or she may lash out by instinct; however, intentional violence should not happen.

Q: Should an ambulance be called when someone is having a seizure?

A: If you know the person has Epilepsy/Seizure Disorder, then when they seizure it is not necessary to call an ambulance -- unless the seizure lasts longer than 5 minutes; or another seizure begins after the first; or the person does not awake after the jerking movements have stopped. If the person having the seizure seems ill, injured or is pregnant they should seek medical attention. If the person seizures for the first time an ambulance is necessary.

Q: What kinds of tests are used when determining if a person may have Epilepsy/Seizure Disorder?

A: A doctor's main tool in diagnosing Epilepsy/Seizure Disorder is a thorough examination in medical history and as much information as he or she can get about what the persons seizures look like and what had happened just before the seizure occurred. Another major device used is

called an electroencephalograph (EEG). This machine records brain waves which, are picked up by tiny wires attached to the head. Electrical signals from brain cells are recorded as wavy lines by the machine. The brain waves may show special patterns, which help the doctor diagnose the patient with Epilepsy/Seizure Disorder, or not. CT or MRI machines take pictures of the brain to see if there is any growths, scars, or other physical conditions in the brain that may be causing the seizures.

Q: How do Doctors treat Epilepsy/Seizure Disorder?

A: Epilepsy/Seizure Disorder is treated by drugs, surgery, or a special diet. Drug therapy is by far the most common, and is always tried first.

Q: Does Epilepsy/Seizure Disorder affect mental ability?

A: Intelligence tests of people with Epilepsy/Seizure Disorder generally show normal range intelligence. This means that some people with Epilepsy/Seizure Disorder are very smart, some are not, and most people are somewhere in the middle. Some children with Epilepsy/Seizure Disorder whose tests show them to be average or above average intelligence do not do as well at school as might be expected. This may be due to a number of factors which researchers are now investigating. Many different things, some of which may reduce mental ability, can cause Epilepsy/Seizure Disorder.

Did you know? These famous people had/have Epilepsy/Seizure Disorder:

- Neil Young
- Aristotle
- Alexander the Great
- Joan of Arc
- Charles Dickens
- Vincent Van Gogh
- George Frederick Handel
- Lord Byron
- Julius Cesar
- Alfred Noble
- Danny Glover
- Richard Burton
- Leonardo Da Vinci
- Margaux Hemingway
- Peter Tchaikovsky
- Martin Luther
- Sir Isaac Newton
- Leon Bender
- Harriet Tubman
- Buddy Bell
- Bobby Jones
- Beethoven
- Agatha Christie
- Budha
- James Madison
- Neil Ambercrombie
- **Elton John**



Q: Can the drugs cure Epilepsy/Seizure Disorder?

A: No, drugs do not cure Epilepsy/Seizure Disorder. The drugs will prevent seizures as long as they are taken on a regular basis. A recent study shows that when drugs are slowly withdrawn by the physician after a person has been seizure free for a few years, there is a good chance of staying seizure free without medication in the future.

However, many people with Epilepsy/Seizure Disorder remain taking their anti-epileptic medication for many years.

Did you know? About 1 in 10 people have spontaneous seizures sometime in life. If there is only one seizure, they are not considered to have Epilepsy/Seizure Disorder.

Q: Can a person become addicted to their anti-epileptic (AED) medication?

A: This is unlikely to happen. People who take drugs for Epilepsy/Seizure Disorder depend on them to prevent seizures, and if he or she stops taking them abruptly its likely for the person to have a seizure or even a series of seizures. The medications are not prescribed in quantities to produce a “high,” and are seldom abused in the sense that more than the prescribed dose is taken.

Q: When is Epilepsy/Seizure Disorder treated by surgery?

A: Surgery is considered only when seizures are frequent and when drugs have failed. Seizure surgery is never taken

lightly. Surgery is far less dangerous than people think and recovery is often quite rapid. Surgery should be considered by parents whose children have uncontrolled partial seizures, particularly if the child is experiencing serious drug side effects. A doctor or a neurologist must refer you to a surgeon.

Q: What sort of diet is used to treat Epilepsy/Seizure Disorder?

A: The diet is called a ketogenic diet and works best on children under 11. It is very high in fats. It produces a chemical condition in the body called ketosis, which in some people, especially in children, prevents seizures. A ketogenic diet is usually tried after medications have failed to stop the seizures. Like any other treatments for Epilepsy/Seizure Disorder, it must be prescribed and monitored by a physician. There is no evidence that any other type of special diet is of benefit to people with Epilepsy/Seizure Disorder.

Q: What are the chances of outgrowing Epilepsy/Seizure Disorder?

A: In some forms of childhood Epilepsy/Seizure Disorder, the chances seem to be quite good, especially in children who have absence seizures (petit mal) only.

However, there is not yet any way to tell in advance whether an individual child will be one of those who’s condition vanishes later in life. In a condition known as benign childhood Epilepsy/Seizure Disorder, the seizures almost disappear after adolescence.

Q: Does Epilepsy/Seizure Disorder get worse with age?

A: Generally no, unless the seizures are being caused by an underlying brain problem that gets worse with time, such as a tumor. If anything, seizure frequency seems to decrease, as a person grows older. However, new cases of Epilepsy/Seizure Disorder may develop in older people.

Q: Can a person with Epilepsy/Seizure Disorder get a driver's license?

A: Yes, if the seizures are under control and he or she is under doctor's care. Different provinces have different rules about how long a person must be seizure free before being allowed driving.

Q: Can people with Epilepsy/Seizure Disorder drink alcohol?

A: Some can and some can not. Heavy use of alcohol is likely to make seizures worse and should be avoided. Moderate use depends on the reaction of individual. There may also be an increased risk of seizures if alcohol is being used when anti-seizure medication is being taken. Many doctors advise their patients with Epilepsy/Seizure Disorder to avoid alcohol altogether.

Q: Can people with Epilepsy/Seizure Disorder be employed?

A: Yes. Some people who are seizure free and except for having to take medication, are no different from any other worker. Some still may have seizures, but working at the right place, they'd be valuable workers. Each person's abilities or limitations should be considered.

Q: Can a person with Epilepsy/Seizure Disorder swim?

A: It all depends on how controlled the person's seizures are, and the doctor's recommendation. A child or adult with good, reliable control should be able to swim safely. A person who is aware of the Epilepsy/Seizure Disorder and is a good swimmer, should accompany the person, in-case a seizure should occur. A seizure prone person should swim only when there is close supervision available. Water sports are always a potential hazard when a person has Epilepsy/Seizure Disorder, but with proper attention to safety, participation is possible.

Q: Are seizures with fever related to Epilepsy/Seizure Disorder?

A: Most babies who have fever seizures do not go on to develop Epilepsy/Seizure Disorder. Even though you can't always prevent seizures with fever in young children, there may be some things that will help. You should always ask your doctor about it. Parents should seek medical attention immediately after a baby has a convulsion.

Did you know? About 4 in 100 people have two or more spontaneous seizures. In many cases, however, the seizures are mild and may not require treatment.

Epilepsy and Seizure Association of Manitoba

One of the major goals of the Association is education. There are over 23,000 Manitobans, of all ages, with epilepsy/seizure disorders. Here are some of the services we provide:

- Free Information Packages
- School Awareness Programs
- Community Education
- Print and Video Library
- Support Groups

If you have any further questions and/or would like to discuss epilepsy/seizure disorder with our Association, please feel free to contact us.

**For more information
or to become a member
contact:**



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**Epilepsy and Seizure Association of Manitoba
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