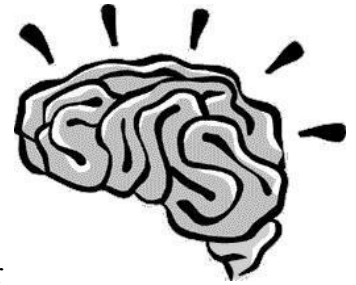


## What is epilepsy?

Epilepsy is a neurological disorder in which brain activity becomes abnormal, causing seizures or periods of unusual behavior, sensations, and sometimes loss of awareness. A person is considered to have epilepsy if they meet any of the following conditions:

1. Two or more unprovoked (not caused by anything specifically) seizures that occur more than 24 hours apart.
2. One unprovoked seizure and a high chance of having further seizures over the next 10 years because of an abnormal test result or other medical condition.
3. Diagnosis of an epilepsy syndrome (for example, Lennox-Gastaut syndrome).



## What is a seizure?

The brain controls how the body moves by sending out small electrical signals from the brain, through nerves, to the muscles. A **seizure** is caused by an abnormal burst of electrical activity within the brain that changes the way the body functions. Seizures can cause someone to become unresponsive, have unusual body movements, or behave strangely. This can last from a few seconds to minutes.

## What causes epilepsy?

*We are not always able to find a specific cause for a child's epilepsy.* Sometimes a condition, such as brain injury, brain malformation, or a specific genetic or medical disease, is discovered as the cause of epilepsy. Epilepsy can also run in families. We do know that younger children are more likely to have seizures than older children or adults. This is likely due to the rapid changes taking place in a developing brain. This also means that as a child's brain develops, they may outgrow their tendency to have seizures.

## How common is epilepsy?

About 1% of children will have a seizure before age 14. Epilepsy affects 2.2 million Americans, with males being at a slightly higher risk than females.

## How is epilepsy diagnosed?

A detailed description of a seizure-like event is the most helpful tool in determining if your child has had a seizure. A medical provider will also do a physical exam and may order additional testing. The most commonly ordered test is an **electroencephalogram (EEG)**. This is a painless test that is used to measure the electrical activity in the brain. It can detect abnormal bursts of electrical activity in the brain that may indicate if a child is prone to having seizures and what type of seizure. While a normal EEG is reassuring, it does not mean that a seizure did not occur. In some cases, pictures of the brain can be helpful, and a **magnetic resonance imaging (MRI)** or **computed tomography (CT)** will be ordered.

# Epilepsy

## What are the different types of epilepsy?

There are many different classifications of epilepsy based on a child's type of seizure. Two common types of seizures include generalized and focal seizures, which are discussed below. Some children may have both types of seizures.

**Focal seizures** (which were once called partial seizures) start in one part of the brain. Depending on where in the brain the seizure is located, the child may remain awake or may lose consciousness. The seizure can feel or look different in each child, depending on which part of the brain is affected. The seizure may spread to different parts of the brain and affect different parts of the body. Your child may not be responsive to voice or touch during a focal seizure.

**Generalized seizures** start on both sides of the brain at the same time. This causes a sudden change in a child's consciousness. Sometimes these seizures can last for just seconds, causing the child to have a brief "staring spell" before returning to normal activity. They may also cause a child to suddenly fall, have a quick jerk of their body, or have stiffening and/or rhythmic jerking movements on both sides of their body. A child will be unresponsive to your voice or touch during a generalized seizure.

## How is epilepsy treated?

A child with epilepsy needs to be seen regularly by a neurology medical provider. Often a daily **antiepileptic medication** will be recommended to prevent seizures. Medications are chosen based on the type of the seizure and the individual needs of the child. The medication dosage is determined by the child's weight, but the dosage may need to be adjusted if a child continues to have seizures, and/or as the child grows. Sometimes a few different medications are tried before finding one that will best help.



## How long will my child need medication?

As a child's brain develops, they may outgrow their seizures. If a child has not had a seizure while on medicine for two full years, your provider may consider discontinuing antiepileptic medications. An updated EEG is often used to help guide the decision to stop medicines. Medications are usually decreased slowly, and the child is closely observed for a return of seizures. Many children are able to stop medication, but some children will remain on medicine into adulthood.

## References and Resources:

<https://www.epilepsy.com/learn/about-epilepsy-basics>

<http://www.nlm.nih.gov/medlineplus/epilepsy.html>

<https://www.kidshealth.org/en/parents/epilepsy.html>