

# What is Epilepsy?

**Epilepsy is a disorder of the brain that causes seizures.** These seizures are not caused by a temporary underlying medical condition such as a high fever.

**Epilepsy can affect people in very different ways.** This is because there are many causes and many different kinds of seizures. Some people may have multiple types of seizures or other medical conditions in addition to epilepsy. These factors play a major role in determining both the severity of the person's condition and the impact it has on his or her life.

**The way a seizure looks depends on the type of seizure** a person is experiencing. Some seizures can look like staring spells. Other seizures can cause a person to collapse, shake, and become unaware of what's going on around them.

**Epilepsy can be caused by different conditions that affect a person's brain.** Many times the cause is unknown. Some causes include:

- Stroke.
- Brain tumor.
- Traumatic brain injury or head injury.
- Central nervous system infection.

**A person with epilepsy is not contagious and cannot give epilepsy to another person.**

## Types of Seizures

There are many types of seizures. A person with epilepsy can have more than one type of seizure.

**The signs of a seizure depend on the type of seizure.**

Sometimes it is hard to tell when a person is having a seizure. A person having a seizure may seem confused or look like they are staring at something that isn't there. Other seizures can cause a person to fall, shake, and become unaware of what's going on around them.

**Seizures are classified into two groups.**

1. **Generalized seizures** affect both sides of the brain.

- **Absence seizures**, sometimes called petit mal seizures, can cause rapid blinking or a few seconds of staring into space.

- **Tonic-clonic seizures**, also called grand mal seizures, can make a person
  - Cry out.
  - Lose consciousness.
  - Fall to the ground.
  - Have muscle jerks or spasms.

The person may feel tired after a tonic-clonic seizure.

2. **Focal seizures** are located in just one area of the brain. These seizures are also called partial seizures.

- **Simple focal seizures** affect a small part of the brain. These seizures can cause twitching or a change in sensation, such as a strange taste or smell.
- **Complex focal seizures** can make a person with epilepsy confused or dazed. The person will be unable to respond to questions or direction for up to a few minutes.
- **Secondary generalized seizures** begin in one part of the brain, but then spread to both sides of the brain. In other words, the person first has a focal seizure, followed by a generalized seizure.

## Preventing Epilepsy

Sometimes we can prevent epilepsy. These are some of the most common ways to reduce your chances of developing epilepsy:

Brain injuries, also called traumatic brain injuries, are a frequent cause of epilepsy.

- Ride safely Use safety belts, child passenger seats, airbags, bicycle helmets, and motorcycle helmets to reduce motor vehicle and traffic injuries.
- Step carefully. Falls are the leading cause of brain injury. Adults and children have an increased chance of brain injuries from falls.
- Get help for traumatic brain injuries if they happen. The chance of epilepsy is high with severe brain injuries. Taking good care of the injury may help to avoid epilepsy.

### **Lower the chances of stroke and heart disease**

Take steps everyday to lower your chances of stroke and heart disease. These include eating well, exercising, and not smoking. These health actions may prevent epilepsy later in life.

### **Get vaccinated**

Protect yourself and your family from diseases. Immunizations (also known as vaccines or shots) lower your chances of infection that can sometimes lead to epilepsy.

### **Wash your hands and prepare food safely**

An infection called cysticercosis is the most common cause of epilepsy world-wide. It is caused by a parasite and it is prevented through good hygiene and food preparation practices. Health screening and early treatment for cysticercosis can prevent epilepsy.

### **Stay healthy during your pregnancy**

Some problems during pregnancy and childbirth can lead to epilepsy. Follow a prenatal care plan with your health care provider, like your doctor or nurse, to keep you and your baby healthy.

## How is epilepsy diagnosed?

A person who has a seizure for the first time should talk to a health care provider, such as a doctor or nurse practitioner. The provider will talk to the person about what happened, and look for the cause of the seizure. Many people who have seizures take tests such as brain scans for a closer look at what is going on. These tests do not hurt.

## How is epilepsy treated?

The most common treatments for epilepsy are:

- **Medicine.** Anti-seizure drugs are medicines that limit the spread of seizures in the brain. A health care provider will change the amount of the medicine or prescribe a new drug if needed to find the best treatment plan. Medicines work for about 2 in 3 people with epilepsy.
- **Surgery.** When seizures come from a single area of the brain (focal seizures), surgery to remove that area may stop future seizures or make them easier to control with medicine. Epilepsy surgery is mostly used when the seizure focus is located in the temporal lobe of the brain.
- **Other treatments.** When medicines do not work and surgery is not possible, other treatments can help. These include *vagus nerve stimulation*, where an electrical device is placed, or implanted, under the skin on the upper chest to send signals to a large nerve in the neck. Another option is the ketogenic diet, a high fat, low carbohydrate diet with limited calories.

## First Aid for any type of seizure

These are general steps to help someone who is having any type seizure:

- Stay with the person until the seizure ends and he or she is fully awake. After it ends, help the person sit in a safe place. Once they are alert and able to communicate, tell them what happened in very simple terms.
- Comfort the person and speak calmly.
- Check to see if the person is wearing a medical bracelet or other emergency information.
- Keep yourself and other people calm.
- Offer to call a taxi or another person to make sure the person gets home safely.
- Ease the person to the floor.
- Turn the person gently onto one side. This will help the person breathe.
- Clear the area around the person of anything hard or sharp. This can prevent injury.
- Put something soft and flat, like a folded jacket, under his or her head.
- Remove eyeglasses.
- Loosen ties or anything around the neck that may make it hard to breathe.

**Not all seizures are emergencies.** Seizures do not usually require emergency medical attention. Only call 911 if one or more of these are true:

- The person has never had a seizure before.
- The person has difficulty breathing or waking after the seizure.
- The seizure lasts longer than 5 minutes.
- The person has another seizure soon after the first one.
- The person is hurt during the seizure.
- The seizure happens in water.
- The person has a health condition like diabetes, heart disease, or is pregnant.

## What NOT to do for a person having a seizure:

- Do **not** hold the person down or try to stop his or her movements.
- Do **not** put anything in the person's mouth. This can injure teeth or the jaw. A person having a seizure cannot swallow his or her tongue.
- Do **not** try to give mouth-to-mouth breaths (like CPR). People usually start breathing again on their own after a seizure.
- Do **not** offer the person water or food until he or she is fully alert.

For more information about seizures go to <https://www.cdc.gov/epilepsy/index.html> or <https://www.healthline.com/health/epilepsy>