

# Epilepsy: Know the Facts

## What is Epilepsy?

Epilepsy is a neurological disorder that causes people to have recurrent seizures. A seizure is a brief disruption of electrical activity in the brain.

- Epilepsy is not contagious.
- Epilepsy is not mental illness.
- Epilepsy is not a developmental disability.



## What Causes Epilepsy?

More than half the time, the cause is unknown. When a cause can be found, it is most often one of these:

- head injury
- infection in the brain
- stroke
- brain tumor
- Alzheimer's disease
- malformation of an area of the brain
- genetic factors

## Who has Epilepsy?

More than 2 million Americans have epilepsy, and over 150,000 new cases are diagnosed in the United States each year. One in 26 people will develop epilepsy at some point in their life. Epilepsy doesn't discriminate. It affects children and adults, men and women, and people of all races, religions, ethnic backgrounds, and social classes. While epilepsy is most often diagnosed either in childhood or after the age of 65, it can occur at any age.



## How is Epilepsy Diagnosed?

Patient history, neurological examination, blood work and other tests are important in diagnosing epilepsy. Eyewitness accounts of a person's seizures are very important in helping determine the type of seizure(s) a person has. An electroencephalograph (EEG) is a commonly used test to help diagnose seizures. An EEG records the brain's electrical activity during the test. Some patterns of activity are unique to particular types of seizures. In some situations, CT scans, MRIs, and PET scans may be used to look at the internal structure and function of the brain. These tests may help pinpoint causes of seizures and epilepsy.



# How Is Epilepsy Treated?

## How to Handle a Seizure

- Don't panic – stay calm and help others around you remain calm.
- Note time when the seizure starts and when it ends.
- Direct the person away from hazards or remove objects that may present a danger.
- If the person is having a convulsive seizure, turn the person on one side and cushion his or her head.
- Remove glasses and loosen tight clothing.
- Do NOT put anything in the mouth.
- Do NOT give liquids or medication.
- Do NOT restrain.
- Stay with the person until they are awake and aware of their surroundings.

## When to Call 911

Most seizures are not medical emergencies, but an ambulance should be called if:

- The seizure lasts longer than 5 minutes or one seizure immediately follows another.
- The person does not resume normal breathing after the seizure ends.
- There is no medical ID and no known history of seizures.
- There is an obvious or suspected injury.
- The person is pregnant or has diabetes.
- The seizure happens in water.
- The person requests an ambulance.



For additional information about epilepsy, or to locate the Epilepsy Foundation nearest you, go to [www.epilepsy.com](http://www.epilepsy.com) or call 800.332.1000.

This fact sheet provides general information about epilepsy and seizures to the public. It is not intended as medical advice. People with epilepsy should not make changes to treatment or activities based on this information without first consulting their healthcare provider.

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**MEDICATION** - Drugs used to treat epilepsy are called anti-seizure medication. More than 20 anti-seizure medications are currently approved to treat epilepsy. About 7 in 10 people achieve good seizure control on one or more of these medications. Other treatments are typically tried only if medication fails.



**SURGERY** - Several types of surgery may be used for patients whose seizures do not respond to medication. Surgery may be recommended when a seizure focus can be determined and removal of all or part of the affected area can be performed without hurting vital functions like speech.

**VAGUS NERVE STIMULATION (VNS)** - A small pacemaker-like device is implanted in the left chest wall with a lead attached to the vagus nerve. The device is then programmed to deliver electrical stimulation to the brain at regular intervals. Up to 5 in 10 patients who have this device see an improvement in their seizure frequency or severity with VNS Therapy.

**RESPONSIVE NEUROSTIMULATION (RNS)** - A battery-powered neurostimulator device is placed in the skull. This device is attached to one or two wires implanted in the brain at the place where seizure activity starts. The device is able to sense a seizure and send a tiny electrical current to help stop or lessen seizure activity.

**DIETARY THERAPIES** - Dietary therapies are used primarily in children, but some may also be very helpful in adults with seizures that do not respond to medications. The most common dietary therapy is the ketogenic diet. This is a medically supervised high fat, low carbohydrate, low protein diet has been shown to benefit in as many as 2 out of every 3 children who can maintain it. Other, less restrictive diets, like the modified Atkins diet and the low glycemic index treatment, have also been tested and can work for some people.



## Types of Seizures

Seizures can take many different forms, not just the convulsive type that most people associate with epilepsy. Common types of seizures include:

**GENERALIZED TONIC CLONIC (Grand Mal)** – Convulsions, rigid muscles, jerking; typically lasts 1 to 3 minutes and followed by period of confusion.

**ABSENCE (Petit Mal)** – Blank stare lasting only a few seconds; sometimes accompanied by blinking or chewing motions.

**COMPLEX PARTIAL (Focal/Temporal Lobe)** – Staring and dazed facial expression; person is not aware of what is going on or will not remember; person may perform repetitive random movements, and may not be able to talk normally; typically lasts 1 or 2 minutes and may be followed by period of confusion.

**SIMPLE PARTIAL** – Jerking in one or more parts of the body or sensory or perceptual changes that may or may not be obvious to onlookers; the person is aware of what occurs during seizure.

**ATONIC (Drop Attacks)** – Sudden collapse with recovery within a minute.

**MYOCLONIC** – Sudden, brief, massive jerks involving all or part of the body.