



# Seizures - Epilepsy

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## ***Not every seizure is Epilepsy***

Usually, a seizure caused by fever, alcohol, drugs hypoglycemia or an acute injury is not Epilepsy. In over half the cases no known cause can be found for the patient's Epilepsy. The known causes of Epilepsy include:

- Mother's use of cocaine or alcohol during the pregnancy
- Prenatal infections (e.g. herpes)
- Birth trauma (lack of oxygen)
- Lead or mercury poisoning
- Severe head injuries
- Tuberos Sclerosis
- Neurofibromatosis
- Meningitis
- Brain tumors
- Strokes

Epilepsy is a chronic brain disorder with recurrent seizures. Seizures are sudden uncontrolled episodes of excess electrical discharges of brain cells. There are over 30 types of seizures. About 10% of the population will have a seizure some time during their life. But only 1% of the population has Epilepsy.

**A single seizure is not Epilepsy.**

## ***Types of Seizures***

There are several ways to classify seizures. Traditionally, seizures are either partial or generalized. Partial seizures such as simple partial or partial complex start in one area of the brain. Generalized seizures such as tonic-clonic, absence, myoclonic or atonic seizures rise from a wide brain area.

### **Partial Seizures**

**Simple Partial Seizure** is a stiffening or jerking in one extremity or one side of the body. It may cause tingling. There is no loss of consciousness.

**Complex Partial Seizure** (previously called psychomotor or temporal lobe seizures) is purposeless activity for one to three minutes such as staring, lip smacking, pacing, or being disoriented as if drugged. The patient may be emotional, or combative. Afterward, the patient usually do not remember the seizure and will often fall asleep. Before the seizure begins, some patients experience an aura (a sensation a seizure will occur) ,

### **Generalized Seizures**

**Generalized Tonic-Clonic Seizure** (previously called grand mal seizure). The patient becomes stiff and jerks for one to five minutes. They may bite their tongue, turn blue, have labored breathing and urinate or have a bowel movement. Afterward, they often have a headache, act confused and sleep for an hour or more.

**Absence Seizure** (also called petit mal) is a brief, one to ten seconds, loss of consciousness described as staring, with eye blinking or facial twitching. There is no aura. There may be dozens of these seizures during the day. The child's teachers or parent may complain that he "daydreams all the time."

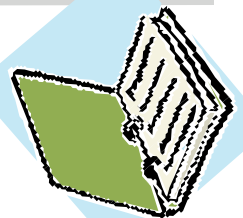
**Myoclonic Seizure** is a brief sudden muscle jerk of part or all of the body. The patient may spill their drink or fall off his chair.

**Atonic Seizure** is a sudden collapse and fall. The patient recovers within 10 seconds and continues his previous activity.

## ***Help us to treat you by keeping a Seizure Diary\****

Get a ringed binder and on the diary page write down when the seizure occurred, how long it lasted and any triggers like lack of sleeping, stress, skipping medicine dosages.

\* You can make your own diary pages or you can get a Seizure Diary Sheet (that you can photocopy) through our clinic or or you may download it from our Web site: [www.memphisneurology.com](http://www.memphisneurology.com)



# Another way to classify seizures

Rather than describe seizures as partial or generalized, they can also be classified as syndromes. Some examples of common syndromes include:



**Febrile Seizures** are generalized tonic clonic seizures seen with fever and occurring between the age of six months and five years. It occurs in 2-5% of the population. Ten percent have three or more seizures. Usually the patient does not have to take seizure medicines.

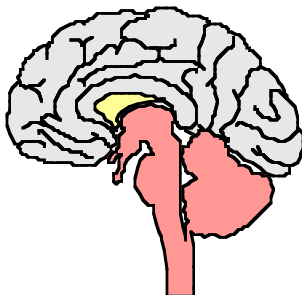
**Mesial Temporal Lobe Epilepsy** is strong association with febrile seizures, particularly complex febrile seizures. It occurs between 6-10 years of age, two thirds have complex partial seizures from the onset; a third have generalized seizures as presenting seizures, auras are very common (more than 80% have) commonest aura is an abdominal aura (60%) dejavu and psychic aura are less common.

**West's Syndrome** (Infantile Spasms) consists of infantile spasms, and EEG findings of hypsarrhythmia. Infantile spasms is a brief loss of tone followed by quick jerks of the arms, legs or head. It starts before the age of 1 year. It can be Idiopathic in which case the child has normal development or Symptomatic meaning the child is developmentally delayed. Rapid response to treatment is a better prognosis.

**Benign Rolandic Epilepsy** represents about 15-20% of childhood epilepsy. The seizures start between 1-7 years of age and stop around 15 years. The seizures often occur after falling asleep or around 5-6 a.m. when the patient is asleep. The patient may have trouble talking or be disoriented. Generalized tonic clonic seizures may occur. The patient may not require seizure medicine.

**Juvenile Myoclonic Epilepsy (JME)** is one of the most common idiopathic generalized epilepsies. The seizures usually begin in adolescents. The patient has myoclonic, absence and generalized tonic clonic seizures. Seizures occur upon awakening. Sleep deprivation, alcohol or menstrual periods may be trigger the seizures.

**Occipital Lobe Epilepsy** The patient has visual hallucinations, blindness may occur during the seizure, the patient may have a sensation of moving (without actual movement), and rapid eye blinking is common.



## Evaluation of a seizure:

A thorough history and physical exam and tests will find most causes. Testing often includes blood glucose, chemistries, CBC, and an EEG, and EKG. A MRI, CT Scan, EEG monitoring, spinal tap or metabolic tests may be ordered. The EEG checks electrical activity of the brain. The CT or MRI scan looks at the structure of the brain to check for tumors, strokes, cysts or any other abnormalities.

## Therapy:

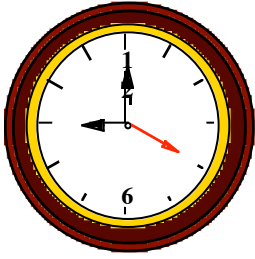
Treatment often, but not always, includes the use of seizure medicines called AEDs (Antiepileptic Drugs). These medicines are designed to control seizures with few or no side effects. Your doctor will discuss the treatment and side effects. The amount of medicine depends upon the patient's age, weight and metabolism. Blood levels are checked to ensure the right amount of medication is given. Blood tests are run to be sure the patient is not having side effects such as anemia or liver inflammation.

Know the name of the medication, its color, size and dose. If any of these are different, tell the pharmacist immediately. Take the medicine as prescribed. Know the medication's side effects. Know what to do when the patient has a seizure. Handouts on the medication and "First Aid for Seizures." are available in our clinic or our Web site:

[www.memphisneurology.com](http://www.memphisneurology.com). Never stop the medicine without talking to your doctor. Report serious side effects to your doctor.

## For further information contact:

- Epilepsy Foundation of America. (800) EFA-3700. or on the web at [www.epilepsyfoundation.org/](http://www.epilepsyfoundation.org/)
- National Institute of Neurological Disorders: [www.ninds.nih.gov/health\\_and\\_medical/disorders/epilepsy.htm](http://www.ninds.nih.gov/health_and_medical/disorders/epilepsy.htm)



# First Aid for Seizures

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## Type of Seizure

## What you need to do

### Generalized Tonic-Clonic Seizure (Grand Mal Seizure)

Generalized Tonic Clonic Seizures are also called Grand Mal Seizures. The patient

- Suddenly falls
- Becomes stiff
- this is followed by :
  - muscle jerks
  - shallow breathing
  - bluish skin
  - They may urinate or have a bowel movement

The seizure usually lasts 1 to 5 minutes.

Normal breathing returns when the seizure is over.

The patient may be confused.

He often fall asleep.

He may have a headache.

- Stay calm. Stay with the patient. Do not go for help. Call out if you need to.
- Put the patient where he cannot hurt himself (for example if he is on a table, place him on the ground).
- Loosen the patient's clothing. Remove eyeglasses, sharp objects and nearby furniture.
- Roll the patient on his right side. Tilt his head downward to allow saliva to drain away and to help him breathe.
- Place something soft under his head.
- **Do NOT** try to hold down the tongue. Do NOT stick anything in his mouth. You could cause him to choke or damage the mouth or tongue. *It is impossible to swallow your tongue.*
- **Do NOT** restrain the patient or hold him down.
- **Do NOT** give the patient anything by mouth including medication till the seizure is over and he is fully awake.
- **Do NOT** do mouth-to-mouth breathing unless the patient is not breathing **after** the seizure is over.
- When the patient stops seizing and regains consciousness, find a place for him to rest and become reoriented.

## When you need to call 911 or go to the hospital

Seizures usually stop within five minutes and generally you do not need to go to the hospital.

**Look at a clock.** If the seizures lasts longer than 5 minutes or if the seizures are occurring one after the other, call 911. To time the seizure, only count time the patient is jerking, staring or wandering. The time does **NOT** include the drowsiness that can occur after the seizure. If you take the patient to the hospital, have someone go with you. Don't cause a car accident by rushing to the hospital, but go as quickly as possible.

**If you have rectal Diastat** (it can be prescribed by your doctor), it should be given for seizure lasting more than 5 minutes, more frequent seizures during the day than they usually have or if one seizure ends and another follows soon after. *By giving Diastat, you may stop the seizure and avoid a trip to the ER.*

If there is a change in the frequency or seizure appearance, call our office at (901) 405-0275 during the day or call

## Type of Seizure

## What you need to do

### Partial Complex Seizure

(Temporal Lobe or Psychomotor)

Partial Complex Seizures are also called Temporal Lobe or Psychomotor Seizures. The patient may

- have a blank stare.
- have a chewing motion of the mouth.
- act confused or dazed.
- pick at their clothes.
- wander off, run or appear scared.

The seizure usually lasts 1 to 5 minutes.

The patient may be confused or drowsy afterward.

The patient will have no memory of the seizure.

- Stay calm. Stay with the patient. Do not go for help. Call out if you need to.
- Guide the patient away from sharp objects, or stairs.
- **Do NOT** grab the patient unless he is getting into a dangerous situation such as a balcony or a hot stove.
- **Do NOT** shout.
- **Do NOT** restrain the patient or hold him down.
- **Do NOT** expect the patient to follow your commands.
- Stay with the patient until he is completely aware of his surroundings. When the patient stops seizing and regains consciousness, help him to become reoriented.

### Absence Seizure

(Petit Mal Seizure)

Absence Seizures are also called Petit Mal Seizures. The patient will:

- have an abrupt blank stare.
- may have a blinking or have a chewing motion of the mouth.

The seizure usually lasts 10-20 seconds.

When the seizure is over, the patient will be fully awake.

- Usually no first aid is needed.
- Call your doctor if there is a significant change in the patient's seizure frequency, severity or appearance.

### Atonic and Myoclonic

### Seizures

( Drop attacks )

**Atonic Seizures:** The patient will collapse, losing muscle tone.

**Myoclonic Seizures:** the patient will

- jerk part or all of their body.
- may drop a glass or fall out of his chair.

The seizure usually lasts 1-3 seconds.

He is fully awake during the seizure.

- Usually no first aid is needed.
- Call your doctor if there is a significant change in the patient's seizure frequency, severity or appearance.

