



## **A Word about Seizure Disorders**

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According to the Epilepsy Foundation, there are many different types of seizure disorders with many different causes. A common type of seizure is the Grand Mal convulsive seizure, which may be accompanied by falling to the ground, losing consciousness, stiffening or jerking of the extremities. A seizure may not however be characterized by jerking or spasms as in the case of a Petit Mal seizure where a person may simply have a lapse in awareness which may be characterized by staring.

A seizure may last from seconds to minutes. Generally speaking and if possible if a person has fallen to the ground try to gently turn the person onto her side to help keep airways clear. Clear the space around her of furniture, chairs or anything she may bump into.

A seizure will end naturally; there is nothing you as a lay person can do to stop it.

At one time it was advised to put a tongue depressor into the mouth of a person having a convulsive seizure however that advice no longer applies. A person having a seizure cannot swallow his tongue. Further, such intervention could result in danger to both parties, -- the helper could be bitten and the person with the seizure could sustain a tooth or jaw injury as a result.

If a seizure lasts more than five minutes, is accompanied by difficulty breathing, or is repeated then emergency intervention (calling an ambulance) is necessary. However if the seizure has occurred in a person who has been diagnosed as epileptic then it's not generally necessary to call an ambulance.

In the event of a Petit Mal or non-convulsive seizure, where the person has lost awareness, safeguard her as best you can be keeping her away from anything that could cause injury (e.g., hot stove, stairs, active roadways) and stay with the person until she regains full consciousness.

She may feel disoriented or embarrassed so it would be kind to find a quiet place for her to sit or rest until she feels ready to carry on.

### Details

Causes of seizure disorders: epilepsy, Asperger's Syndrome, Autism Spectrum Disorder, stress, injury or trauma to the head, infection such as brain abscess or meningitis, brain tumor, stroke, hypoglycemia, drug use (especially cocaine or

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stimulants), alcohol withdrawal, or very high fever. (People with epilepsy should always wear a medical alert tag.)

Seizures can result from exposure to lead, carbon monoxide, and many other poisons. They also can result from exposure to street drugs and from overdoses of antidepressants and other medications. They are often triggered by factors such as lack of sleep, alcohol consumption, stress, or hormonal changes associated with the menstrual cycle. For some people, light flashing at a certain speed or the flicker of a computer monitor can trigger a seizure. Smoking cigarettes also can trigger seizures.

**According to the Epilepsy Foundation ([www.epilepsyfoundation.org](http://www.epilepsyfoundation.org)):**

### **Seizure Types**

There are many different types of seizures. People may experience just one type or more than one. The kind of seizure a person has depends on which part and how much of the brain is affected by the electrical disturbance that produces seizures. Experts divide seizures into generalized seizures (absence, atonic, tonic-clonic, myoclonic), partial (simple and complex) seizures, nonepileptic seizures and status epilepticus.

### **Generalized Seizures**

Generalized seizures affect both cerebral hemispheres (sides of the brain) from the beginning of the seizure. They produce loss of consciousness, either briefly or for a longer period of time, and are sub-categorized into several major types: generalized tonic clonic; myoclonic; absence; and atonic.

Generalized tonic clonic seizures (grand mal seizures) are the most common and best known type of generalized seizure. They begin with stiffening of the limbs (the tonic phase), followed by jerking of the limbs and face (the clonic phase).

Myoclonic seizures are rapid, brief contractions of bodily muscles, which usually occur at the same time on both sides of the body. Occasionally, they involve one arm or a foot. People usually think of them as sudden jerks or clumsiness. A variant of the experience, common to many people who do not have epilepsy, is the sudden jerk of a foot during sleep. First aid is usually not needed.

Atonic seizures produce an abrupt loss of muscle tone. Other names for this type of seizure include drop attacks, astatic or akinetic seizures. They produce head drops, loss of posture, or sudden collapse. Because they are so abrupt, without any warning, and because the people who experience them fall with force, atonic seizures can result in injuries to the head and face. Protective headgear is sometimes used by children and adults; the seizures tend to be resistant to drug therapy. No first aid is needed (unless there is injury from the fall).

Absence seizures (also called petit mal seizures) are lapses of awareness, sometimes with staring, that begin and end abruptly, lasting only a few seconds. There is no warning and no after-effect. More common in children than in adults, absence seizures

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are frequently so brief that they escape detection, even if the child is experiencing 50 to 100 attacks daily.

### **Partial Seizures**

Partial seizures are subdivided into simple partial seizures (in which consciousness is retained); and complex partial seizures (in which consciousness is impaired or lost). Partial seizures may spread to cause a generalized seizure.

Virtually any movement, sensory, or emotional symptom can occur as part of a partial seizure, including complex visual or auditory hallucinations.

People who have simple partial seizures remain awake and aware throughout the seizure. However, some people, although fully aware of what's going on, find they can't speak or move until the seizure is over. Sometimes they can talk quite normally to other people during the seizure. And they can usually remember exactly what happened to them while it was going on. Simple partial seizures can affect movement, emotion, sensations, and feelings in unusual and sometimes even frightening ways.

During a complex partial seizure, a person cannot interact normally with other people, is not in control of his or her movements, speech or actions; doesn't know what he or she is doing; and cannot remember afterwards what happened during the seizure. Although someone may appear to be conscious because he or she remains standing with eyes open and moving about, it will be an altered consciousness - a dreamlike, almost trancelike state. A person may even be able to speak, but the words are unlikely to make sense and he or she will not be able to respond to others in an appropriate way.

Typically, a complex partial seizure starts with a blank stare and loss of contact with surroundings. This is often followed by chewing movements with the mouth, picking at or fumbling with clothing, mumbling and performing simple, unorganized movements over and over again. Sometimes people wander around during complex partial seizures. For example, a person might leave a room, go downstairs and out into the street, completely unaware of what he or she was doing. In rare cases, a person might try to undress during a seizure, or become very agitated, screaming, running or making flailing movements with his arms or bicycling movements with his legs. Other complex partial seizures may cause a person to run in apparent fear, or cry out, or repeat the same phrase over and over again. Actions and movements are typically unorganized, confused and unfocused during a complex partial seizure. However, if a complex partial seizure suddenly begins while someone is in the middle of a repetitive action – like dealing cards or stirring a cup of coffee – he or she may stare for a moment then continue with the action during the seizure, but in a mechanical, unorganized kind of way.

### **First Aid for Complex Partial Seizures**

- Do not restrain the person.
- Remove dangerous objects from the person's path.

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- Calmly direct the person to sit down and guide him or her from dangerous situations. Use force only in an emergency to protect the person from immediate harm, such as walking in front of an oncoming car.
- Observe, but do not approach, a person who appears angry or combative.
- Remain with the person until he or she is fully alert.

### Things to Remember

Although partial seizures affect different physical, emotional, or sensory functions of the brain, they have some things in common:

- **They don't last long.** Most last only a minute or two, although people may be confused and need a lot more time afterwards to recover fully.
- **They end naturally.** Except in rare cases, the brain has its own way of bringing the seizure safely to an end after a minute or two.
- **You can't stop them.** In an emergency, doctors may use drugs to bring a lengthy, non-stop seizure to an end. However, the average person should wait for the seizure to run its course and try to protect the person from harm while consciousness is clouded. People who have been shown how to use a Vagus Nerve Stimulator (VNS) magnet may try to stop a partial seizure in that way.
- **They are not dangerous to others.** The movements produced by a seizure are almost always too vague, too unorganized and too confused to threaten the safety of anyone else.

### Nonepileptic Seizures

Nonepileptic seizures are episodes that briefly change a person's behavior and often look like epileptic seizures. The person having nonepileptic seizures may have internal sensations that resemble those felt during an epileptic seizure. The difference in these two kinds of episodes is often hard to recognize by just watching the event, even by trained medical personnel.

### Status Epilepticus

Most seizures end after a few moments or a few minutes. If seizures are prolonged, or occur in a series, there is an increased risk of status epilepticus. The term literally means a continuous state of seizure. Status epilepticus is a medical emergency. It requires hospital treatment to bring the seizures under control.

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### First Aid for Convulsive Seizures:

When providing seizure first aid for generalized tonic clonic (grand mal) seizures, these are the key things to remember:

- Keep calm and reassure other people who may be nearby.
- Don't hold the person down or try to stop his movements.
- Time the seizure with your watch.
- Clear the area around the person of anything hard or sharp.
- Loosen ties or anything around the neck that may make breathing difficult.
- Put something flat and soft, like a folded jacket, under the head.
- Turn him or her gently onto one side. This will help keep the airway clear.
- Do not try to force the mouth open with any hard implement or with fingers. **A person having a seizure CANNOT swallow his tongue.** Efforts to hold the tongue down can injure teeth or jaw.
- Don't attempt artificial respiration except in the unlikely event that a person does not start breathing again after the seizure has stopped.
- Stay with the person until the seizure ends naturally.
- Be friendly and reassuring as consciousness returns.
- Offer to call a taxi, friend or relative to help the person get home if he seems confused or unable to get home by himself.

Failure to resume breathing signals a complication of the seizure such as a blocked airway, heart attack or severe head or neck injury. In these unusual circumstances, CPR must start immediately. If repeated seizures occur, or if a single seizure lasts longer than five minutes, the person should be taken to a medical facility immediately.

An un-complicated generalized tonic clonic (grand mal) seizure in someone who has epilepsy is not a medical emergency, even though it looks like one. It stops naturally after a few minutes without ill effects. The average person is able to continue about his business after a rest period, and may need only limited assistance, or no assistance at all, in getting home. In other circumstances, an ambulance should be called.

When these conditions exist, immediate medical attention is necessary:

- Diabetes
- Brain infections

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- Heat exhaustion
- Pregnancy
- Poisoning
- Hypoglycemia
- High fever
- Head injury

Although most seizures end naturally without emergency treatment, a seizure in someone who does not have epilepsy could be a sign of serious illness. Call for medical assistance if:

- the seizure lasts more than 5 minutes;
- there is no "epilepsy/seizure disorder" I.D. present;
- there is slow recovery, a second seizure, or difficult breathing afterwards;
- the woman is pregnant or if there is medical I.D. indicating the presence of another medical condition; or
- there are any signs of injury.

### First Aid for Non-Convulsive Seizures:

You don't have to do anything if a person has brief periods of staring or shaking of the limbs. If someone has the kind of seizure that produces a dazed state and automatic behavior, the best thing to do is:

- Watch the person carefully and explain to others what is happening. Often people who don't recognize this kind of behavior as a seizure think that the dazed person is drunk or on drugs.
- Speak quietly and calmly in a friendly way.
- Guide the person gently away from any danger, such as a steep flight of steps, a busy highway, or a hot stove. Don't grab hold, however, unless some immediate danger threatens. People having this kind of seizure are on "automatic pilot" so far as their movements are concerned. Instinct may make them struggle or lash out at the person who is trying to hold them.
- Stay with the person until full consciousness returns, and offer help in returning home.

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### Head Injury During a Seizure

If the person hits his or her head while falling, his or her post-seizure condition should be carefully monitored. Although sleepiness and confusion are natural consequences of a seizure, it should always be possible to rouse the person without difficulty. A person who fails to return to consciousness after a seizure needs further medical assessment. If head injury is a possibility, the person should be closely observed for the following signs:

- Difficulty in maintaining consciousness (an observer should try to waken the person at 20-minute intervals)
- Vomiting
- Vision problems
- Excessive sleepiness two hours or more after the seizure (unless, of course, the seizure has occurred late in the day and the person's usual bedtime is approaching)

If any of these signs are observed, or if the patient has a persistent headache after a rest period, unconsciousness with failure to respond, unequal pupil size or excessively dilated pupils, or weakness of the limbs, immediate medical attention is essential.