

Seizures and Seizure Awareness

Seizures

Seizures are sudden, uncontrollable, electrical changes in the brain. There are many types of seizures that cause a variety of signs related to the part of the brain affected. Seizures can cause loss of awareness, twitching or shaking of the body, or staring spells. Most seizures last less than a few minutes and may cause the person to be confused afterwards.

Seizure Awareness

The brain is the control center of the body. Cells in the brain send electrical signals out to other parts of the body to make them work together with the brain. Brain cells work like little switches to turn off and on the signals that control movement, sensation and consciousness. When a seizure occurs, it is as if some of the cells get stuck in the “on” position and cause signals that make parts of the body shake. A person having a seizure may lose awareness of surroundings, have uncontrollable, jerky movements, or experience visual changes.

Seizures are a sign of a brain disorder. Some possible causes include:

- Brain tumors
- Alzheimer’s disease
- Stroke or transient ischemic attack (TIA)
- Congenital conditions
- Brain injury
- Lack of oxygen
- High fever
- Infections
- Alcohol or drug use
- Kidney or liver failure

Types of Seizures

There are two major kinds of seizures:

- **Generalized seizures** happen when the whole brain is suddenly swamped with electrical signals. The person having the seizure will lose consciousness and their body will stiffen and begin jerking. Sometimes, they will lose control of their bladder and/or bowels.
- **Partial seizures** happen when only a part of the brain receives a signal.
 - **Simple partial seizures** are also known as a **focal seizure**. This type of seizure can be different for each person depending on the area of the brain where the seizure begins. It can be any unusual body movement, like jerking or tremors. The person remains conscious and aware of what is happening, but cannot control their movements.

- **Complex partial seizures** involve the area of the brain that affects alertness and awareness. With this type of seizure, the person:
 - Usually cannot remember the events of the seizure
 - Can have a brief staring spell or repeat their movements
 - May be tired or confused afterwards, sometimes for several hours
 - May have a warning or feeling that a seizure is about to occur

A partial seizure can turn into a generalized seizure if the electrical signals spread to other areas of the brain.

Signs of a seizure:

Aura –a warning sign right before the seizure that may be:

- Headache
- Change in vision
- Hearing noises
- Smelling a scent such as smoke.

What to do during a seizure:

- Keep calm and let the person know you are there to help
- Do not hold the person down
- Time how long the seizure lasts. A seizure can last from seconds to minutes.
- **Call 911 right away if the person has never had a seizure before or if the seizure lasts longer than 5 minutes.** A person with epilepsy should always wear a medical alert or bracelet.
- Turn the person on his/her side.
- **Do not** put anything in the person's mouth.
- **Do not start CPR.** If the person does not start breathing after the seizure has stopped, call 911 and then start CPR.
- Protect the person from injury by moving nearby objects.
- Loosen tight clothing, especially around the neck.
- Stay with the person until his/her breathing is normal and they are fully awake

For a partial seizure:

- Watch the person carefully and guide them away from anything that may be harmful.
- Remain calm and stay with the person until the seizure has passed.
- If the person loses consciousness:
 - Try to help them gently to the floor.
 - Turn the person on his or her side if they begin to choke or vomit.
 - Place something soft under the head to protect it.
 - Loosen any tight clothing.
- Do not try to hold the person down to stop the shaking. The movements will stop on their own.
- Do not place anything in the person's mouth.
- Move any objects that could cause injury to the person during the seizure.

Symptoms During the Seizure:

- Staring spells
- Facial twitching
- Problems breathing
- Black outs, loss of memory or confusion
- Drooling
- Problems controlling bowel or bladder
- Convulsions or uncontrollable body motions such as chewing motions, body stiffening, jerking or lip smacking
- Changes in sensation or vision

After the Seizure is Over

- Let the person rest.
- Stay with them and reassure them.
- Try to write some notes about the seizure to share with the doctor.
- Describe how long the seizure lasted, the area or areas of the body that were shaking, and whether or not there was loss of consciousness or loss of bladder and/or bowel control.

Most seizures do not last long. However, get medical help right away if:

- The seizure is generalized and lasts for more than 5 minutes
- The person does not wake up or does not begin to breathe again after the seizure is over
- Another seizure occurs shortly after the first one

Special Instructions

- Many state laws keep you from driving for up to 12 months after you have had a seizure. Check with your local authorities and your local physician about when you can begin driving again.
- If medicines have been prescribed for seizures, take them exactly as ordered by your doctor.
- Try to take them around the same time(s) each day.
- **Do not** stop taking the medicines without first talking to your doctor.
- Report any unusual side effects to your doctor.
- Always check with your doctor before taking any other type of medicine.
- Report any signs of infection, such as a sore throat or a fever of 101°F (38.3°C) or higher.
- Practice moderation. Try to spread your daily activities out throughout the day. Don't try to do everything at once.
- Get plenty of rest.
- Try to avoid extremes of physical or mental stress.
- Avoid alcohol. An occasional drink may be okay. Ask your doctor what amount of alcohol is safe for you.
- Study your feelings and your surroundings after a seizure to see if something might have triggered it or if you may have had some warning that it was coming.

What to do after a seizure:

The time after the seizure and before the person wakes up is called the postictal state. Most people are very tired and confused during this time.

- Allow the person to lie quietly. It may take some time for them to be fully alert
- When the person wakes up call them by name
- Tell the person what happened and where they are
- Speak calmly
- If injured, take them to a doctor's office, urgent care, or emergency room
- Write down what happened during the seizure and report to the doctor or health care team
 - Any warning signs
 - The parts of the body the seizure affected or injured
 - How long the seizure lasted
 - What the person was doing before and after the seizure

Injury

The average seizure does not have any lasting effects on the brain. However, it can be a warning sign of increased pressure in the brain. If you have a seizure, you need to let your doctor know about it. A seizure is seldom a cause of injury, but there is greater danger if it occurs while swimming, driving or near a place where a fall could result in injury.

Call 911 if the:

- Person does not have a medic alert necklace or bracelet that says "epilepsy" or "seizure"
- Person is pregnant, injured, or has diabetes
- Seizure occurred in water
- Seizure lasted more than 5 minutes
- Second seizure starts shortly after the first one stopped
- Person is not breathing or does not wake up after the seizure has stopped

Treatment

If the person has never had a seizure, the doctor will check to see if there is a medical problem that caused the seizure. Blood tests and other tests such as computerized tomography (CT) scan, magnetic resonance imaging (MRI), electroencephalogram (EEG) or lumbar puncture may be done.

A seizure caused by a high fever or certain medicine is treated by removing the cause. For a person with epilepsy, a seizure may be a sign that his or her medicine needs changed. Medicines, called anticonvulsants, may be used to control seizures.

Seizures are uncontrolled activities that could cause serious injury. Participating in certain activities alone, such as climbing, biking, and swimming should be avoided.