

Definition

Epilepsy is a central nervous system disorder (neurological disorder) in which the nerve cell activity in your brain is disturbed, causing a seizure during which you experience abnormal behavior, symptoms and sensations, including loss of consciousness.

Seizure symptoms vary. Some people with epilepsy simply stare blankly for a few seconds during a seizure, while others repeatedly twitch their arms or legs.

About 1 in 100 people may have an unprovoked seizure once in life. However, a solitary seizure doesn't mean you have epilepsy. At least two unprovoked seizures are generally required for an epilepsy diagnosis.

Even mild seizures may require treatment because they can be dangerous during activities such as driving or swimming. Treatment, which generally includes medications or sometimes surgery, may eliminate or reduce the frequency and intensity of seizures. Some children with epilepsy even outgrow the condition with age.

Symptoms

Because epilepsy is caused by abnormal activity in brain cells, seizures can affect any process your brain coordinates. A seizure can produce symptoms such as:

- Temporary confusion
- Loss of consciousness or awareness
- A staring spell
- Psychic symptoms
- Uncontrollable jerking movements of the arms and legs. Symptoms vary depending on the type of seizure. In most cases, a person with epilepsy will tend to have the same type of seizure each time, so the symptoms will be similar from episode to episode.

Doctors generally classify seizures as either focal or generalized, based on how the abnormal brain activity begins.

Focal seizures

When seizures appear to result from abnormal activity in just one area your brain, they're called focal (partial) seizures. These seizures fall into two categories.

- Simple focal seizures: These seizures don't result in loss of consciousness. They may alter emotions or change the way things look, smell, feel, taste or sound.

They may also result in involuntary jerking of a body part, such as an arm or leg, and spontaneous sensory symptoms such as tingling, dizziness and flashing lights.

- **Dyscognitive focal seizures:** These seizures alter consciousness or awareness and may cause you to lose awareness for a period of time. Dyscognitive focal seizures often result in staring and purposeless movements — such as hand rubbing, chewing, swallowing or walking in circles.

Generalized seizures

Seizures that appear to involve all areas of the brain are called generalized seizures. Six types of generalized seizures exist.

- **Absence seizures:** Absence seizures, also called petit mal seizures, are characterized by staring and subtle body movement. These seizures can cause a brief loss of awareness.
- **Tonic seizures:** Tonic seizures cause stiffening of your muscles. These seizures usually affect muscles in your back, arms and legs and may cause you to fall to the ground
- **Myoclonic seizures:** Myoclonic seizures usually appear as sudden brief jerks or twitches of your arms and legs.
- **Clonic seizures:** Clonic seizures are associated with rhythmic, jerking muscle movements. These seizures usually affect the neck, face and arms.
- **Atonic seizures.** Atonic seizures, also known as drop seizures, cause a loss of muscle control, which may cause you to suddenly collapse or fall down.
- **Tonic-clonic seizures:** Tonic-clonic seizures, also called grand mal seizures, are characterized by a loss of consciousness, body stiffening and shaking, and sometimes loss of bladder control or biting your tongue.

When to see a doctor

Seek immediate medical help if any of the following occurs:

- The seizure lasts more than five minutes.
- Breathing or consciousness doesn't return after the seizure stops.
- A second seizure follows immediately
- You have a high fever.
- You're experiencing heat exhaustion.

- You're pregnant.
- You have diabetes.
- You've injured yourself during the seizure.

If you experience a seizure for the first time, seek medical advice.

Causes

Epilepsy has no identifiable cause in about half of those with the condition. In about half the people with epilepsy, the condition may be traced to various factors.

- **Genetic influence:** Some types of epilepsy, which are categorized by the type of seizure you experience, run in families. In these cases, it's likely that there's a genetic influence. Researchers have linked some types of epilepsy to specific genes, though it's estimated that up to 500 genes could be tied to the condition. For most people, genes are only part of the cause of epilepsy. Certain genes may make a person more sensitive to environmental conditions that trigger seizures.
- **Head trauma:** Head trauma that occurs due to a car accident or other traumatic injury can cause epilepsy.
- **Brain conditions:** Brain conditions that result in damage to the brain, such as brain tumors or strokes, also can cause epilepsy. Stroke is a leading cause of epilepsy in adults older than age 35.
- **Infectious diseases:** Infectious diseases, such as meningitis, AIDS and viral encephalitis, can cause epilepsy.
- **Prenatal injury:** Before birth, babies are sensitive to brain damage that could be caused by several factors, such as an infection in the mother, poor nutrition or oxygen deficiencies. This brain damage can result in epilepsy or cerebral palsy.
- **Developmental disorders:** Epilepsy can sometimes be associated with developmental disorders, such as autism and neurofibromatosis.

Risk factors

Certain factors may increase your risk of epilepsy.

- **Age.** The onset of epilepsy is most common during early childhood and after age 60, but the condition can occur at any age.
- **Family history.** If you have a family history of epilepsy, you may be at an increased risk of developing a seizure disorder.
- **Head injuries.** Head injuries are reasonable for some cases of epilepsy. You can reduce your risk by wearing a seat belt while riding in a car and by wearing a helmet while bicycling, skiing, riding a motorcycle or engaging in other activities with a high risk of head injury.

- **Stroke and other vascular diseases.** Stroke and other blood vessel (vascular) diseases can lead to brain damage that may trigger epilepsy. You can take a number of steps to reduce your risk of these diseases, including limiting your intake of alcohol and avoiding cigarettes, eating a healthy diet, and exercising regularly.
- **Dementia.** Dementia can increase the risk of epilepsy in older adults.
- **Brain infections.** Infections such as meningitis, which causes inflammation in your brain or spinal cord, can increase your risk.
- **Seizures in childhood.** High fevers in childhood can sometimes be associated with seizures. Children who have seizures due to high fevers generally won't develop epilepsy, although the risk is higher if they have a long seizure, other nervous system conditions or a family history of epilepsy.

Complications

Having a seizure at certain times can lead to circumstances that are dangerous to yourself or others.

- **Falling.** If you fall during a seizure, you can injure your head or break a bone.
- **Drowning.** If you have epilepsy, you're 15 to 19 times more likely to drown while swimming or bathing than is the rest of the population because of the possibility of having a seizure while in the water.
- **Car accidents.** A seizure that causes either loss of awareness or control can be dangerous if you're driving a car or operating other equipment.
- **Pregnancy complications.** Seizures during pregnancy pose dangers to both mother and baby, and certain anti-epileptic medications increase the risk of birth defects. If you have epilepsy and you're considering becoming pregnant, talk to your doctor as you plan your pregnancy.

Most women with epilepsy can become pregnant and have a healthy baby. You'll need to be carefully monitored throughout pregnancy, and medications may need to be adjusted. It's very important that you work with your doctor to plan your pregnancy.

- **Emotional health issues.** People with epilepsy are more likely to have psychological problems, especially depression, anxiety and, in extreme cases, suicide. Problems may be a result of difficulties from dealing with the condition itself as well as medication side effects.

Other life-threatening complications from epilepsy are uncommon, but do occur.

- **Status epilepticus.** This condition occurs if you're in a state of continuous seizure activity lasting more than

five minutes, or if you have frequent recurrent seizures without regaining full consciousness in between them. People with status epilepticus have an increased risk of permanent brain damage and death.

- Sudden unexplained death in epilepsy (SUDEP). People with epilepsy also have a small risk of sudden unexplained death. The cause is unknown, but some research shows it may occur due to heart or respiratory conditions.

People with frequent generalized tonic-clonic seizures or people whose seizures aren't controlled by medications may be at higher risk of SUDEP. Overall, about 2 to 18 percent of people with epilepsy die of SUDEP.

Lifestyle and home remedies

Understanding your condition can help you control it.

- Take your medication correctly. Don't adjust your dosage levels before talking to your doctor. If you feel your medication should be changed, discuss it with your doctor.
- Get enough sleep. Lack of sleep can trigger seizures. Be sure to get adequate rest every night.
- Wear a medical alert bracelet. This will help emergency personnel know how to treat you correctly.
- Exercise. Exercising may help keep you physically healthy and reduce depression. Make sure to drink enough water and rest if you get tired during exercise.

In addition, make healthy life choices such as managing stress, limiting alcoholic beverages and avoiding cigarettes.

Coping and support

Uncontrolled seizures and their effect on your life may at times feel overwhelming or lead to depression. It's important not to let epilepsy hold you back. You can still live an active, full life. To help cope:

- Educate yourself and your friends and family about epilepsy so that they understand the condition.
- Try to ignore negative reactions from people. It helps to learn about epilepsy so that you know the facts as opposed to misconceptions about the disease. And try to keep your sense of humor.
- Live as independently as possible. Continue to work, if possible. If you can't drive because of your seizures, investigate public transportation options near you. If you aren't allowed to drive, you may want to consider moving to a city with good public transportation options.
- Find a doctor you like and with whom you feel comfortable.
- Try not to constantly worry about having a seizure.

- Find an epilepsy support group to meet people who understand what you're going through.
- If your seizures are so severe that you can't work outside your home, there are still ways to feel productive and connected to people. You may consider working from home, through working on a computer.

Let people you work and live with know the correct way to handle a seizure in case they are with you when you have one. You may offer them suggestions, such as:

- Carefully roll the person onto one side.
- Place something soft under his or her head.
- If the person is moving, clear away dangerous objects.
- Stay with the person until medical personnel arrive.
- Loosen tight neckwear.
- Don't try to put your fingers or anything else in the person's mouth. No one has ever "swallowed" his or her tongue during a seizure — it's physically impossible.
- Observe the person closely so that you can provide details on what happened.
- Time the seizures.
- Don't try to restrain someone having a seizure.
- Be calm during the seizures.

Source: The Mayo Clinic

Contact us

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