

Introduction

A grand mal seizure affects a person's whole body. It causes your muscles to become stiff and rigid before they tighten up and jerk uncontrollably. A grand mal seizure may last for a few seconds or minutes. A grand mal seizure is caused by electrical problems in the brain. Many people who have a grand mal seizure will never have another one. But some people may need to take anti-seizure medications every day to prevent seizures.

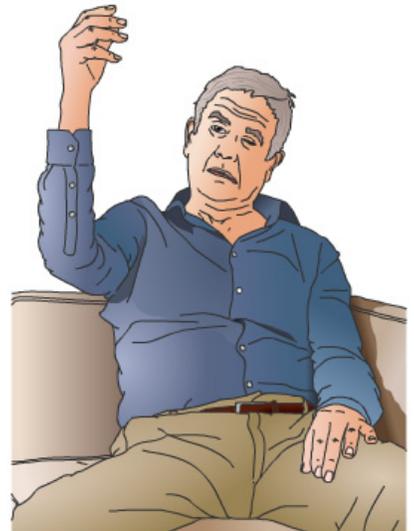
This reference summary explains grand mal seizures. It covers symptoms and causes of the condition, as well as treatment options.



Grand Mal Seizure

The brain is the control center of the body. The brain sends directions on how to move and function to the muscles and other body parts through the nerves. Certain areas of the brain control specific areas of the body. Some areas control vision. Other areas control functions such as memory, movement and sensation. Neurons, or nerve cells, send electrical and chemical signals to each other. This process is needed for the brain to feel, think and give orders to muscles.

Seizures happen because of abnormal electrical activity in the brain. The symptoms of a seizure depend on the area of the brain that is affected. The seizures happen when clusters of nerve cells in the brain send the wrong signals. A grand mal seizure is a type of seizure that affects the entire brain. Grand mal is French for “big illness.”



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A grand mal seizure may be triggered by health problems such as severely low blood sugar or a stroke. But most of the time grand mal seizures are caused by epilepsy. A stroke is a loss of blood flow to part of the brain, which damages brain tissue. Strokes are caused by blood clots and broken blood vessels in the brain. Epilepsy is a brain disorder that causes people to have seizures.

Grand mal seizures may happen to people of any age. They may happen once in your lifetime or they may happen repeatedly.

Symptoms

A grand mal seizure is also known as a tonic-clonic seizure. There are 2 stages of a grand mal seizure:

- The tonic phase.
- The clonic phase.

The tonic phase lasts about 10 to 20 seconds.

During the tonic phase, you:

- Lose consciousness.
- Lose control of your muscles. The muscles suddenly contract, becoming stiff and rigid. This causes you to fall down.



Loss of consciousness means that you are not aware of your situation. You are not able to perceive or respond to what is happening around you.

The clonic phase usually lasts for less than 2 minutes. The muscles jerk uncontrollably during the clonic phase. They flex and relax repeatedly. Certain signs and symptoms of grand mal seizures happen in some but not all people. Some people experience a warning feeling, or aura, before a grand mal seizure.

An aura may include:

- Dizziness.
- Hallucinations.
- Numbness.
- Vision, taste, smell or sensory changes.



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A hallucination is a sight, sound, smell, taste or touch that a person believes is real but it is not. Some people may scream or cry out at the start of a seizure. This is because the muscles around the vocal cords contract and force air out.

Other symptoms that may happen during a grand mal seizure include:

- Biting the cheek or tongue.
- Blue skin color.
- Breathing problems.
- Clenched jaw or teeth.

Some people having grand mal seizures may lose control of their bladder or bowels. This can happen during or after the seizure.

After a grand mal seizure, you may:

- Feel confused or tired.
- Have a severe headache.

A grand mal seizure may also cause:

- Memory loss of the events that happened right before or during the seizure.
- Weakness on one side of your body for a few minutes or a few hours.

Contact emergency medical help if you see someone having a seizure. Gently roll the person onto one side and put something soft under their head.

To help someone having a grand mal seizure:

- Loosen any tight neckwear.
- Look for a medical alert bracelet.
- Keep track of how long the seizure lasts.

Do not try to restrain a person who is having a seizure. Do not put anything in their mouth. Objects placed in a person's mouth could be bitten or inhaled during a seizure.



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Causes

Grand mal seizures happen because of abnormal electrical activity in the brain. The exact cause of the electrical changes is unknown in about half of all cases.

Grand mal seizures may be caused by underlying health problems. These include:

- Brain tumors.
- Strokes.
- Traumatic head injuries.
- Using or withdrawing from drugs or alcohol.

Other causes of grand mal seizures include:

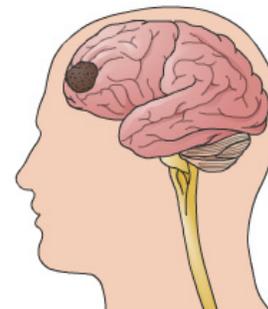
- Genetic syndromes.
- Infections, such as encephalitis or meningitis.
- Lack of oxygen.
- Problems with blood vessels in the brain.

Encephalitis is an inflammation of the brain. It is caused by a viral or bacterial infection. Meningitis is the inflammation of the thin tissue that surrounds the brain and spinal cord. It can be caused by viral or bacterial infections.

Grand mal seizures may be caused by low levels of certain substances in your blood. These include:

- Calcium.
- Glucose, or sugar.
- Magnesium.
- Sodium.

People with certain risk factors are more likely than others to have a grand mal seizure. Having one or more risk factors does not mean that a person will have a seizure. It is also possible to develop the condition without any risk factors.



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Risk factors for grand mal seizures include:

- Alcohol or drug abuse.
- Family history of conditions that cause seizures.
- Medical conditions that affect your body's electrolyte balance.
- Regular lack of sleep.

An electrolyte is a chemical that is needed for the neurons in the body to function correctly. They also help your nerves, muscles, heart and brain work normally.

Any injury to the brain increases your risk of a grand mal seizure. Injuries may be caused by:

- Previous infections.
- Stroke.
- Trauma.



Complications

Certain activities may be dangerous if you have a seizure while you are doing them. If you have had a seizure, take showers instead of baths to prevent drowning. If you go swimming, wear a life preserver. Don't go swimming alone. Having a seizure while driving a car or other equipment is dangerous. Most places have driving restrictions for people with a history of seizures.

The force of a seizure or falling during a seizure can cause injury.

Types of injuries that can happen include:

- Bone fractures.
- Head injuries.
- Joint dislocations.

Repeated short seizures can lead to brain changes. They can cause a normal brain to become epileptic. This is known as kindling. The longer a seizure lasts, the more likely it is to cause permanent changes in your brain's function and structure.



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Diagnosis

Your health care provider will perform a physical exam. He or she will ask you questions about your personal and family medical history. Your health care provider will ask for a detailed description of your seizure. People who have grand mal seizures lose consciousness and do not remember their seizures. The description of your seizure needs to come from a person who saw it.

Your health care provider will perform a neurological exam. This exam tests your:

- Coordination, balance and posture.
- Muscle strength and tone.
- Reflexes.
- Senses.

Your health care provider will also ask questions to test your thinking, judgment and memory. Blood tests may be done to check for health problems that could cause or trigger seizures.



Certain tests may be done to check for brain problems. These tests may include:

- Electroencephalogram, or EEG.
- Magnetic resonance imaging, or MRI.

An EEG is a recording of electrical activity in the brain. It is done by placing electrodes on the scalp. An MRI is an imaging test. It uses radio waves and a magnet connected to a computer to create detailed pictures of areas inside the body.

Treatment

Not everyone who has a seizure will have another one during their life. Your health care provider may decide to not start treatment until you've had more than one seizure.

Anti-seizure medications are used to control seizures. There are many different medications available.



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Take your anti-seizure medications as instructed by your health care provider. Always talk to your health care provider before you take:

- Other prescription medications.
- Over-the-counter drugs.
- Herbal remedies.

Never stop taking medications without talking to your health care provider. Surgery may be needed if medications do not control your seizures. Different types of surgeries are available.

Wear a medical bracelet if you have a seizure disorder. The bracelet should tell emergency medical providers:

- Who to contact in an emergency.
- What medications you use.
- What drugs you are allergic to.



Seizures can affect your life even after they're under control. You may be frustrated by living with the constant threat of another seizure. Talking with a therapist or other people who have had grand mal seizures may help.

Summary

A grand mal seizure affects a person's whole body. It causes your muscles to become stiff and rigid before they tighten up and jerk uncontrollably. A grand mal seizure may last for a few seconds or minutes.

The tonic phase is the first stage of a grand mal seizure. It lasts about 10 to 20 seconds. During the tonic phase, you:

- Lose consciousness.
- Lose control of your muscles. The muscles suddenly contract, becoming stiff and rigid. This causes you to fall down.

The second stage of a grand mal seizure is called the clonic phase. It usually lasts for less than 2 minutes. The muscles jerk uncontrollably during the clonic phase. They flex and relax repeatedly. Grand mal seizures happen because of abnormal electrical activity in your brain. The exact cause of the electrical changes is unknown in about half of all cases.

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Other causes of grand mal seizures include:

- Genetic syndromes.
- Infections, such as encephalitis or meningitis.
- Lack of oxygen.
- Problems with blood vessels in the brain.



Not everyone who has a seizure will have another one during their life. You may decide to not start treatment until you've had more than one seizure. Anti-seizure medications are used to control seizures. There are many different medications available.

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