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## Focal seizure

All seizures are caused by abnormal electrical disturbances in the brain. Focal seizures occur when this electrical activity is in a limited area of the brain. Sometimes the seizures stay only in one part of the brain, while at other times, the seizures can turn into bilateral tonic-clonic seizures, which affect the whole brain. This is called secondary generalization.

Focal seizures can be divided into whether they affect awareness or not:

- Focal, aware
- Focal, awareness impaired

Focal seizures are also classified by whether they are motor (movements with the seizures) or not.

## Causes

Focal seizures are the most common type of seizure in people 1 year and older. In people older than 65 who have blood vessel disease of the brain or brain tumors, focal seizures are very common. Focal seizures are usually associated with an area of the brain in which nerve cells are easily excitable. This is often due to brain injury that can result from conditions such as stroke, infection, trauma, or from problems present at birth.

## Symptoms

People with focal, awareness impaired seizures may or may not remember any or all of the symptoms or events during the seizure.

Depending on where in the brain the seizure starts, symptoms may include:

- Abnormal muscle contraction, such as abnormal head or limb movements
- Staring spells, sometimes with repetitive movements such as picking at clothes or lip smacking
- Eyes moving from side to side
- Abnormal sensations, such as numbness, tingling, crawling sensation (like ants crawling on the skin)
- Seeing, smelling, or sometimes hearing things that are not there (hallucinations)
- Abdominal pain or discomfort
- Nausea
- Sweating

- Flushed face
- Dilated pupils
- Rapid heart rate/pulse

Other symptoms may include:

- Blackout spells, periods of time lost from memory
- Changes in vision
- Sensation of *déjà vu* (feeling like current place and time have been experienced before)
- Changes in mood or emotion
- Temporary inability to speak

## **Exams and Tests**

Your health care provider will perform a physical exam. This will include a detailed look at the brain and nervous system.

An electroencephalogram (EEG) will be done to check the electrical activity in the brain. People with seizures often have abnormal electrical activity seen on this test. In some cases, the test shows the area in the brain where the seizures start. The brain may appear normal after a seizure or between seizures.

Blood and urine tests may also be ordered to check for other health problems that may be causing the seizures.

Head CT or MRI scan may be done to find the cause and location of the problem in the brain.

## **Treatment**

Treatment for focal seizures includes medicines, changes in lifestyle for adults and children, such as activity and diet, and sometimes surgery. Your provider can tell you more about these options.

## **Alternative Names**

Jacksonian seizure; Seizure - partial (focal); Temporal lobe seizure; Epilepsy - partial seizures; Partial (focal) seizure

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