

# Epilepsy

The term **epilepsy** applies to a group of nervous system disorders characterized by recurrent **seizures**, which are sometimes called **convulsions**. A seizure occurs when there are abnormal bursts of electrical activity in the brain.

Although head trauma, strokes, brain tumors, brain infections, and withdrawal from drugs (including alcohol) can cause seizures, the recurrent seizures of epilepsy are usually **idiopathic** (of unknown cause). The February 4, 2004, issue of *JAMA* includes an article about treatments for epilepsy.

## SEIZURES

- Seizures can affect vision, speech, or movement and can affect only part of the brain (a **partial seizure**) or the entire brain (a **generalized seizure**).
- Seizures usually last a few seconds to a few minutes and may or may not cause loss of consciousness.
- Some people experience an **aura**, a sensation that they are about to have a seizure.
- Seizure activity varies for different persons with epilepsy. **Absence seizures** (formerly called **petit mal**) involve staring off into space for a few moments. **Complex partial seizures** involve unresponsiveness and sometimes subtle movements of the face, arms, and legs lasting 1 or 2 minutes. **Generalized tonic-clonic seizures** (formerly called **grand mal**) involve sudden loss of consciousness and falling down (sometimes causing injuries) with rapid jerking of the arms and legs.

## EVALUATING EPILEPSY

- A careful description of the nature and timing of seizures is very important.
- If epilepsy is suspected, your doctor may recommend seeing a neurologist (a doctor specializing in the brain and nervous system).
- The neurologist will perform a neurological examination to see how well your brain and nervous system are working.
- An **electroencephalogram (EEG)**, a test that measures brain electrical activity, may be used to look for changes in brain activity typical of various types of epilepsy.
- Images of the brain may be taken using **computed tomography (CT)** scans—computerized x-rays—or **magnetic resonance imaging (MRI)**—use of magnetic fields to visualize tissues—to look for abnormalities such as tumors.

## TREATMENT OF EPILEPSY

- Medication is the first approach for treating epilepsy. A number of different medications are available that can prevent seizures from occurring.
- **Vagus nerve stimulation (VNS)** uses a device to prevent seizures by sending a small, regular pulse of electricity to the vagus nerve, a large nerve in the neck.
- Brain surgery is sometimes an option for people whose seizures cannot be controlled by medications.

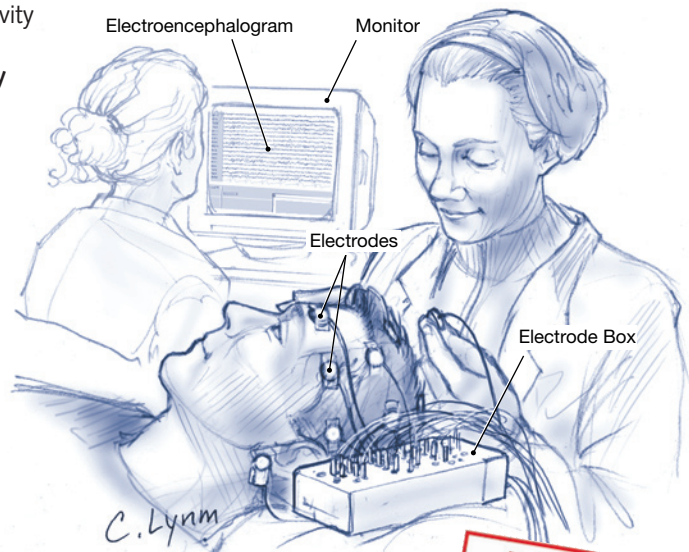
## FOR MORE INFORMATION

- The Epilepsy Foundation  
800/332-1000  
[www.epilepsyfoundation.org](http://www.epilepsyfoundation.org)
- National Institute of Neurological Disorders and Stroke  
800/352-9424  
[www.ninds.nih.gov](http://www.ninds.nih.gov)

## INFORM YOURSELF

To find this and other JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). A Patient Page on traumatic brain injury was published in the June 11, 2003, issue.

Sources: American Epilepsy Society, National Society for Epilepsy, National Institute of Neurological Disorders and Stroke, The Epilepsy Foundation



Sharon Parmet, MS, Writer

Cassio Lynn, MA, Illustrator

Richard M. Glass, MD, Editor

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