



## Epileptic Seizure Types and Symptoms

Epileptic seizures are divided into two broad categories: generalized and partial (or focal). Classifying the type of seizure is very important, and will help your doctor plan the treatment you need.

**Generalized seizures** are produced by abnormal electrical activity throughout the brain. They can result from a genetic predisposition in an otherwise healthy person or as a consequence of widespread disturbance of brain function. You may experience different types of generalized seizures, or the type may vary from one seizure to another.

| GENERALIZED SEIZURES                    | TYPICAL SYMPTOMS  |
|---|---|
| “Grand mal” or generalized tonic-clonic | Loss of consciousness, rigid muscles, whole-body convulsions; can cause a fall if you are standing    |
| Absence                                 | Staring with brief loss of consciousness; fluttering eyelids  |
| Myoclonic                               | Sporadic or repeated, brief jerks of the limbs  |
| Clonic                                  | Repetitive, rhythmic jerking movements of head or limbs   |
| Tonic                                   | Loss of consciousness, stiffness and rigidity of the whole body; can cause a fall if you are standing |
| Atonic                                  | Loss of muscle tone in head or body; can cause a fall if you are standing                             |

**Partial** or **focal seizures** are produced by electrical impulses that start in a relatively small region of the brain. The part of the brain generating the seizures is sometimes called the focus. In simple partial seizures, the patient retains awareness, whereas complex partial seizures cause the patient to lose awareness.

Partial seizures can vary in type in the same patient, or go from simple partial to complex partial, or even to generalized seizures. Partial seizures imply some localized brain disease caused by head injury, stroke, tumor, scar or developmental anomaly. The cause can sometimes be detected on imaging tests but, in many instances, it remains unknown. Rarely are partial seizures related to a genetic predisposition.

| PARTIAL (FOCAL) SEIZURES                         | TYPICAL SYMPTOMS   |
|--|--|
| <p>Simple partial<br/>(no loss of awareness)</p> | <p><i>Simple motor:</i> Jerking, stiffening confined to one side of head or body<br/><i>Simple sensory (auras):</i> Unusual sensations affecting vision, hearing, smell, taste or touch, or memory or emotional disturbances; possibility of racing heart, hot and cold feelings</p> |
| <p>Complex partial<br/>(impaired awareness)</p>  | <p>Staring, unresponsiveness; automatisms such as lip smacking, chewing, fidgeting, and other repetitive, involuntary but coordinated movements</p>  |
| <p>Partial with secondary generalization</p>     | <p>Milder seizure symptoms listed above lead to loss of consciousness and convulsions</p>  |

Two other types of attacks can look very much like an epileptic seizure, but are not epileptic in nature because they do not involve abnormal electrical activity in the brain:

- **Non-epileptic seizures** can involve loss of consciousness, abnormal movements, jerks and falls. They are usually related to psychological or emotional stress.
- **Convulsive syncope** describes fainting from a cardiac or circulatory cause, accompanied by stiffening or jerks that can mimic epilepsy.



### Cleveland Clinic Neurological Institute

The Epilepsy Center is part of the Cleveland Clinic Neurological Institute, a multidisciplinary institute that combines more than 250 medical, surgical and research specialists dedicated to the diagnosis and treatment of adult and pediatric patients with neurological and psychiatric disorders. This structure allows for a disease-specific, patient-focused approach to care. Our unique, fully integrated model is beneficial to our current standard of care, allows us to measure quality and outcomes on a continual basis, and enhances our ability to conduct research.