

[Open Peer Review on Qeios](#)

Epilepsy

National Institute of Neurological Disorders and Stroke (NINDS)

Source

National Institute of Neurological Disorders and Stroke (NINDS). [Epilepsy Information Page](#).

The epilepsies are a spectrum of brain disorders ranging from severe, life-threatening and disabling, to ones that are much more benign. In epilepsy, the normal pattern of neuronal activity becomes disturbed, causing strange sensations, emotions, and behavior or sometimes convulsions, muscle spasms, and loss of consciousness. The epilepsies have many possible causes and there are several types of seizures. Anything that disturbs the normal pattern of neuron activity—from illness to brain damage to abnormal brain development—can lead to seizures. Epilepsy may develop because of an abnormality in brain wiring, an imbalance of nerve signaling chemicals called neurotransmitters, changes in important features of brain cells called channels, or some combination of these and other factors. Having a single seizure as the result of a high fever (called febrile seizure) or head injury does not necessarily mean that a person has epilepsy. Only when a person has had two or more seizures is he or she considered to have epilepsy. A measurement of electrical activity in the brain and brain scans such as magnetic resonance imaging or computed tomography are common diagnostic tests for epilepsy.