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Types of Seizures

Sometimes the neurons in the brain don't fire properly, and when they misfire it can cause a seizure. A seizure is a symptom of a disturbance in the electricity and chemistry of brain cells making them act differently than they normally would.

A seizure is a sudden burst of electrical energy in the brain or a misfiring of neurons. Not all misfiring neurons cross the same area of the brain. For this reason, not all seizures look the same.

FOCAL Seizures

If the misfiring neurons are in one hemisphere or one part of the brain only –we call this a focal seizure.

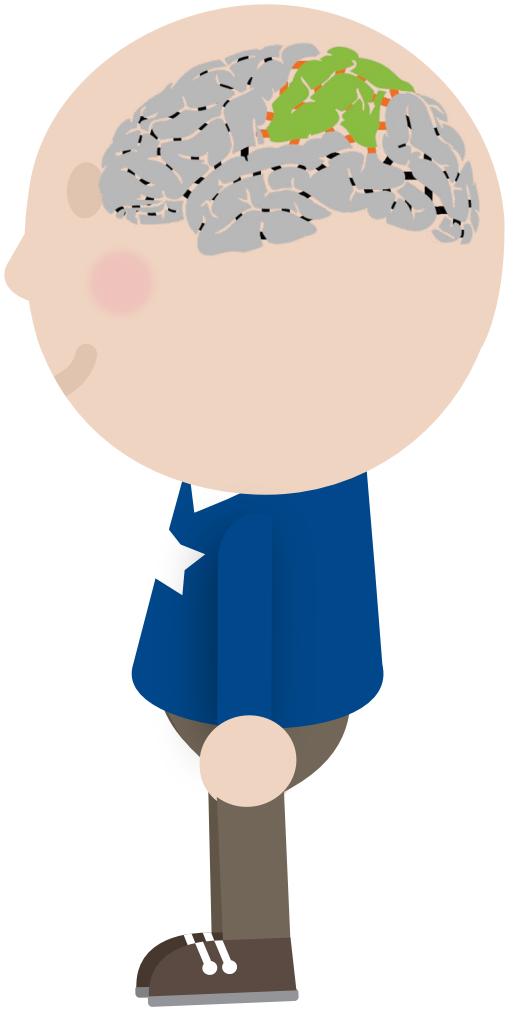
Focal seizures can originate within any lobe of the brain – causing frontal lobe seizures, temporal lobe seizures, parietal lobe seizures, insular seizures, occipital lobe seizures or a combination of brain lobes may be involved.

In a focal seizure the person may experience an unusual sensation, feeling or movement. Some people call this an aura. They may see, hear or smell something that isn't there. They may have a sudden jerky movement of the arm or leg. They may complain of a stomach upset, dizziness or tingling or burning sensation.

If there is no change in awareness during the seizure, it is classified as a focal aware seizure. Focal aware seizures can cause motor symptoms, such as muscle twitching or they may cause sensory or psychic symptoms (aura).

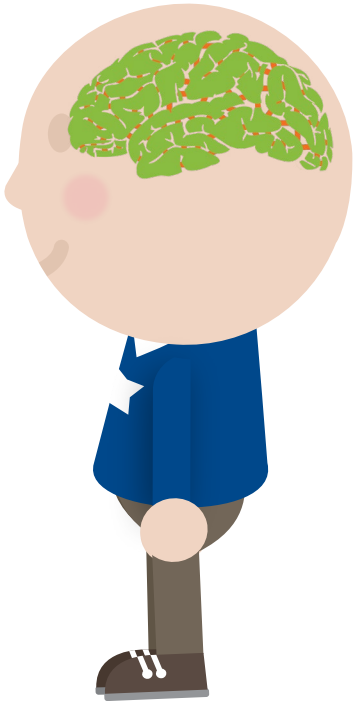
Temporal lobe epilepsy is a type of focal seizure with seizure onset in the temporal lobe. The temporal lobe is the most common site for focal impaired awareness seizures to originate. Temporal lobe seizures may be less likely to respond to drug treatment than seizures from other brain lobes, however, surgical treatment for temporal lobe seizures is very effective for many people. If there is a change in awareness, the seizure is classified as a focal impaired awareness seizure.

In this seizure a person may appear dazed and confused. They may have an alteration in consciousness, but they will not fall down to the ground and shake. They may wander, or pick at clothing or smack their lips. Their face may twitch, or a hand may jerk. Often a person is very disoriented and confused after this type of seizure.



GENERALIZED Seizures

If the misfiring neuron crosses both hemispheres of the brain, we call this a generalized seizure. In a generalized seizure, the person will temporarily lose consciousness.



Tonic-Clonic is a type of generalized seizure that causes the person to initially become stiff because there is a sudden increase in muscle tone. The individual may suddenly fall to the ground or slump over. This is followed by a second phase in which the person's body exhibits repetitive jerking movements. Prior to 1989, tonic-clonic seizures were called grand mal seizures.

In a tonic-clonic seizure, a person may begin by making a sound or groan and then fall to the ground and shake. The tonic phase is the stiffening, and the clonic phase is the shaking. They may drool, and they may lose bladder or bowel control. The skin may have a bluish or gray colour. These seizures last 1 – 3 minutes. After this type of seizure it is normal to want to sleep since the person having the seizure will feel exhausted and confused.

Another type of generalized seizure is an absence seizure. This seizure is often referred to as a 'staring spell' or 'blank stare'. It is often mistaken for daydreaming or inattention. In an absence seizure, the person will not fall to the ground and they will not shake; but they do temporarily lose consciousness. This type of seizure is short –maybe as short as 2-20 seconds. One person said that in this type of seizure she feels like a computer when the screen freezes.

Myoclonic seizures are brief, shock-like jerks of a muscle or a group of muscles. "Myo" means muscle and "clonus" means rapidly alternating contraction and relaxation—jerking or twitching—of a muscle. Usually they don't last more than a second or two. There can be just one, but sometimes many will occur within a short time.

Provoked Seizure

A seizure that results from a change in body homeostasis – changes in temperature, blood glucose or blood sodium levels can all cause a provoked seizure. If someone has repeated seizures, but the seizures are always provoked by physiological change (such as fever) they are not considered to have a neurological disorder.

Status Epilepticus

A dangerous condition of prolonged seizure activity that can be life-threatening.

Reference: Brain Matters: An Introduction to Neuroscience.