

Carpe Diem – Seize the Day Blog

Editor's Note: Content presented in the Carpe Diem – Seize the Day Blog is for awareness and informational purposes only, and it is not meant to be a diagnostic tool.

We all know the facts concerning epilepsy.

- The 4th most common neurological problem – only migraine, stroke, and Alzheimer's disease occurs more frequently.
- Epilepsy affects sixty-five million individuals world-wide.
- There are 3.4 million people in the United States diagnosed with epilepsy.
- Each year there are 150,000 or 48 out of 100,000 people who will develop epilepsy.
- One out of twenty six individuals in the U.S. will develop epilepsy at some point in their lives.
- Only 2 out of 3 adults with active epilepsy were seeing a neurologist or epilepsy specialist.
- The main symptom of epilepsy is unpredictable and recurrent seizures.
- A doctor will diagnose a patient with epilepsy if they have had at least two such seizures that cannot be chalked up to some other cause like low blood sugar.

However, did you know that in about sixty percent of cases, the doctor will not be able to determine a cause for the patient's epilepsy? In the other forty percent, the causes can include the following:

Genetics

Epilepsy can run in families, and some types of epilepsy have been linked to specific genes. In fact, over five hundred genes have been linked to epilepsy. Different genes, however, have different effects. Some genes affect the way neurons communicate with each other, while others increase a patient's resistance to some medications. Epilepsy can also be a mutation, the result of an altered gene affecting the brain in some fashion. While epilepsy can occur by itself, it can also be part of a syndrome. Many such epilepsy syndromes, like Angelman syndrome or childhood absence epilepsy, are caused by genetic factors.

Head Trauma

Any head trauma that affects the brain can cause epilepsy. Falls, gunshot wounds, automobile accidents, and blows to the head have all caused epilepsy. Such injuries can cause swelling and bleeding in the brain. In such cases, the patient will usually start having seizures a few days to a few weeks after the initial injury. Epilepsy may eventually fade after the injury heals. In other cases, scar tissue forms on the injured part of the brain and disrupts the neurons' function, resulting in the 'electrical storms' that disrupt communication between neurons and cause seizures. This type of epilepsy is sometimes called post-traumatic epilepsy and is particularly common in soldiers who have suffered brain injuries. Patients can reduce the risk of brain injury by wearing a helmet when cycling, or skiing, or doing anything else with a substantial risk of head injury. Similarly, they should wear a seatbelt when in a car.

Infectious Diseases

Diseases like meningitis, AIDS, or viral encephalitis can cause epilepsy. In fact, infectious diseases are the most common cause of epilepsy, especially in developing countries. Diseases that attack the central nervous system can cause acute symptomatic seizures, which start when the patient is first infected and stop when the patient has fully recovered. They can also cause epilepsy, which is a chronic and on-going condition. Cytomegalovirus (CMV) is the most world's common viral infection that affects developing babies and causes a variety of congenital disabilities including epilepsy and various brain malformations. While most infectious diseases that can cause epilepsy are bacterial or viral, some are caused by parasites reaching the brain, such as cerebral malaria and neurocysticercosis. The latter is caused by tapeworm larvae forming cysts in the brain.

Brain Conditions

Epilepsy is most common in small children and older adults. New cases of epilepsy decline after the age of ten and then pick up again after around fifty-five. Older adults are susceptible to brain conditions like Alzheimer's disease, strokes, and brain tumors, which can all cause epilepsy. Strokes, in fact, are the most common causes of seizures in older patients. Patients who start having seizures a month or longer after the initial stroke have a greater risk of developing epilepsy. Some developmental disorders, such as neurofibromatosis or autism, can be associated with epilepsy. For example, about a third of individuals with autism also have epilepsy.

Injury Before Birth

Injury before birth is another cause of epilepsy. Anything that can damage the brain can cause epilepsy, and a baby's head and brain are particularly delicate before birth, during birth and during the first few weeks of life. Common causes of injury before birth or during birth include disorders affecting the placenta, oxygen deprivation, infections of the brain, head trauma, and abnormally difficult labor. Signs of injury before or during birth can include pale or bluish coloring, lethargy, trouble feeding or breathing, and abnormal heart rate. If the doctor suspects the baby may have a seizure disorder, they can perform tests like an encephalogram (EEG), magnetic resonance imaging (MRI), or a computed tomography (CT) scan to look for signs of seizure activity in the brain.

Before ending this edition of the blog, I would like to provide one more number. If Epilepsy Alliance of Ohio can provide any help to your family in the way of epilepsy awareness sessions, epilepsy education sessions, or support, please be sure to contact us at 513-721-2905 or 877 - 804-2241.

Editor's Note: The Carpe Diem – Seize the Day Blog will be distributed and posted weekly. Always remember – CARPE DIEM – SEIZE THE DAY!

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