

# Carpe Diem – Seize the Day Blog

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Abdominal epilepsy is a very rare type of temporal lobe epilepsy. This form of epilepsy is most frequently seen in young children, but adults can have abdominal epilepsy as well. In abdominal epilepsy, abnormal electrical activity occurs in the brain's temporal lobe. This activity causes abdominal pain and other gastrointestinal (GI) symptoms, such as nausea, bloating, and cyclic vomiting. Because abdominal epilepsy is marked by abdominal symptoms rather than traditional seizure symptoms, it's often overlooked or misdiagnosed.

One study examined 150 children with chronic, recurrent abdominal pain and found that 74 percent had abnormalities in their brain waves, leading to a diagnosis of abdominal epilepsy. In this study, researchers also found that abdominal epilepsy was more common in girls, at 67 percent of all cases. One small case series that included six children noted that abdominal epilepsy was also twice as common in girls as compared to boys.

## **Symptoms of Abdominal Epilepsy**

Symptoms of abdominal epilepsy are somewhat similar to irritable bowel syndrome (IBS). These symptoms include:

- Abdominal pain that comes in waves
- Nausea
- Cyclic vomiting
- Bloating
- Cramping
- Diarrhea
- Headaches
- Anxiety
- Fatigue

These symptoms can occur together or separately. Unlike IBS, abdominal epilepsy also may be distinguished by the instances of altered consciousness during some (but not necessarily all) of the episodes. This can include confusion, jerking movements, or unresponsiveness. People with abdominal epilepsy also tend to be tired after an episode. Getting a diagnosis of a seizure disorder, let alone abdominal epilepsy, can be a long and complicated process.

The first step on the path toward an abdominal epilepsy diagnosis is a physical examination by a doctor. Because of the gastric symptoms associated with this disease, people may first seek the help of a gastroenterologist or a surgeon in their attempt to get a diagnosis. After a thorough examination and testing, including an endoscopy, the doctor may not find any signs of abdominal disease.

At this point, it may be time to see a neurologist, who may be better at recognizing the signs and symptoms of abdominal epilepsy. They may first order a CT or MRI scan to rule out any structural problems in the brain. They will also likely perform blood tests and a careful analysis of your symptoms. However, an electroencephalogram (EEG) is the primary tool used to make a diagnosis.

An EEG measures electrical activity across the brain. It is useful for determining if there is seizure-like activity in the brain. A diagnosis of abdominal epilepsy requires the observation of EEG abnormalities, such as spike and slow wave discharges.

Individuals, particularly adults, may also be encouraged to see a psychiatrist, because their GI symptoms may be seen as a sign of psychological distress rather than a physical ailment. This confusion can make the diagnostic process even more stressful for a person with abdominal epilepsy. Diagnosing children who cannot communicate their symptoms to their caregivers or doctors can be even more difficult.

Although abdominal epilepsy is a form of temporal lobe epilepsy, it doesn't present like other forms of the condition. Temporal lobe epilepsy usually consists of two types of focal (partial) seizures: focal onset aware seizures and focal onset impaired awareness seizures.

Hallmark signs of focal aware seizures include unusual feelings such as *Deja vu*, anxiety, a rising sensation in the abdomen (like being on a roller coaster), or other such sensory events.

Focal onset impaired awareness seizures include central nervous system symptoms such as loss of consciousness and repetitive behaviors, sometimes followed by a period of confusion and difficulty speaking. Sometimes, temporal lobe epileptic seizures can even turn into generalized tonic-clonic (grand mal) seizures.

Although abdominal epilepsy does not have the same characteristic symptoms as temporal lobe epilepsy, it is marked by similar EEG activity patterns that originate in or near the temporal lobe. Even if the abnormal brain activity is only apparent on an EEG, it's still considered a diagnosis of epilepsy. As with other types of epilepsy, the cause of abdominal epilepsy can sometimes be linked to a structural issue in the brain, such as a tumor. However, much of the time, the cause is unknown.

Treatment for abdominal epilepsy is similar to that of other forms of epilepsy. Anticonvulsant medications or anti-seizure medications are prescribed to those experiencing abdominal epilepsy. Benzodiazepines, which are a class of anxiety medications, can also help with seizure activity due to how these medications act on the brain.

Other medications that are geared toward the treatment of seizures may also be helpful. Unfortunately, there are no studies that systematically compare medication efficacy in the treatment of abdominal epilepsy. This is largely due to rarity of the condition.

One case study examined the use of vagus nerve stimulation (VNS) in a teenage male with abdominal epilepsy. VNS treatment involves implanting a device that sends electrical signals through the vagus nerve to help control seizures. The vagus nerve is an important connection

between the brain and the rest of the body and the main component of the parasympathetic nervous system.

According to the study, the subject had taken the medication lamotrigine (Lamictal) throughout most of his adolescence, and it had been effective. However, at age 15 his abdominal seizure frequency increased, and his doctors turned to VNS. The treatment led to a drop in seizure frequency, from about 16 per month to an average of two per month.

Although there is no cure for abdominal epilepsy, the prognosis and outlook for the disease are considered to be very good. Many people respond to first-line medication treatments and experience a significant reduction in their symptoms. The key to having a good outlook for abdominal epilepsy is coming to a diagnosis quickly so that treatment may begin as soon as possible, along with close follow-up with your doctor.

***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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