Carpe Diem – Seize the Day Blog

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Nocturnal seizures occur while a person is asleep. Since nocturnal seizures occur while a person is in a state of sleep, diagnosis can be challenging, especially if no one is present to observe them.

Although the cause of nocturnal seizures is often unknown, some seizure conditions are more likely than others to occur while sleeping. These include:

- Juvenile myoclonic epilepsy: Seizures that start during childhood and are characterized by sudden, unintended muscle contractions
- Awakening tonic-clonic seizures: A seizure that occurs upon waking from sleep, causes uncontrolled jerking and stiffness of the arms, legs, or body
- Benign Rolandic epilepsy: A seizure disorder that affects young children and adolescents
- Landau-Kleffner syndrome: A rare speech, language, behavioral, learning, and seizure syndrome that affects young children
- Frontal lobe epilepsy: A common form of epilepsy that stems from brain cells sending abnormal impulses in the frontal lobe

Many who experience nocturnal seizures do not know they have them. Symptoms of nocturnal seizures are often harder to identify because the people who experience them are asleep. Epileptic seizures can occur at any time while a person is awake or asleep. Research has shown that approximately 20% of people with epilepsy only have seizures during sleep, 40% only have seizures while awake, and 35% have seizures both while awake and asleep.[5]
Nocturnal seizures most commonly occur:

- Right after falling asleep
- Right before waking
- Right after waking

Signs that may indicate that a person has had a nocturnal seizure can include:

- Tongue biting
- Loss of bladder control and bedwetting
- Headache or bruises upon waking

Seizures during sleep may also cause involuntary movements, such as:

- Body jerks
- Stiff arms
- Stiff legs
- Crying out or making unusual noises
- Falling out of bed

Following a seizure, people can also be very hard to wake. They may also appear confused and be sleepy the next day.

The most helpful way to diagnose nocturnal seizures is to have an electroencephalogram (EEG). An EEG is a test that monitors electrical abnormalities and activity in the brain. This painless procedure involves pasting tiny electrodes connected to small wires to the scalp. These electrodes can monitor the brain's activity while awake and asleep.

Sleep studies are also commonly done for people who suspect they may be having nocturnal seizures. This study requires an overnight stay to monitor electrical activity in the brain during sleep.

Following a seizure diagnosis, additional brain imaging may be taken to examine the brain areas that are affected by seizures. The imaging may include:

- Magnetic resonance imaging (MRI)
- Computed tomography (CT) scan

There are a few treatments that are known to help prevent seizures. Antiepileptic medications are usually the first treatment for seizures. They can effectively treat symptoms, but they do not cure the underlying condition that is causing the seizures to occur. AEDs work by slowing excessive abnormal electrical signals.

Ketogenic diets are the most common diet therapy used for people who suffer from seizures. A ketogenic diet is a high-fat, high protein, and low carbohydrate diet. This diet may reduce seizures in many patients with difficult-to-manage seizures and some who do not respond well to AEDs.[7]

When AEDs and diet therapy are not providing relief from seizure activity, surgery may be considered. Epileptic surgery involves removing a portion of the brain that is causing seizures to occur.
The goal of epilepsy surgery is to reduce or eliminate epileptic seizures. Some procedures could potentially completely stop seizures for many years.

In summary, seizures result from abnormal electrical activity in the brain. Although the cause of seizures is often unknown, some seizure conditions are more likely than others to occur while sleeping. Many who experience nocturnal seizures do not know they have them.

Some symptoms may include tongue biting, loss of bladder control, headaches upon waking, or involuntary movements. Nocturnal seizures can be diagnosed through an EEG or sleep study. The most common treatments include antiepileptic medication, ketogenic diet therapy, and surgery.

Nocturnal seizures can be frustrating and significantly impact a person's quality of life. Fortunately, there are healthcare professionals, treatments, and other resources that can help. If you or a loved one has nocturnal seizures, contact a healthcare provider or sleep specialist to discuss treatment and prevention.

Frequently Asked Questions about Nocturnal Seizures

What should I do if I see someone having a nocturnal seizure?
If you see someone having a seizure in their sleep, it is essential to ensure they are safe and unable to hurt themselves. Some ways to do that include:

- Make sure there are no sharp objects or items that can cause injury near the person.
- Do not try to hold them down.
- Lie them on the floor; if possible, place a pillow under the head.
- Put them on their side to ensure a clear airway.
- Time the seizure.
- If the person is having difficulty breathing, call 911.

How frequently do nocturnal seizures occur?
The frequency of nocturnal seizures depends on the type of seizures, the person's medical history, and any treatments being used. Every patient is different.

What tests are done to diagnose a nocturnal seizure?
Nocturnal seizures are diagnosed by having an electroencephalogram, or EEG. An EEG is a test that monitors electrical abnormalities and activity in the brain. This procedure is non-invasive and involves connecting tiny electrodes with small wires to the scalp. These electrodes can monitor the brain's activity while awake and asleep.

Can nocturnal seizures go away over time?
Some children outgrow their seizures as they get older. This happens more commonly when brain imaging is normal, and there are no other neurological issues. Benign Rolandic epilepsy causes nocturnal epilepsy that starts in childhood and often goes away in adulthood.

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

Steve.Hutton@epilepsy-ohio.org