# 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.***

Does your child with epilepsy experience the following endless cycle? Couldn't sleep. Couldn't stay awake. It's probably the curse of nocturnal seizures.

Studies have shown that 10-45% of people with epilepsy have seizures that occur predominantly or exclusively during sleep. Whereas 34% have seizures upon awakening. And 21% have diffuse seizures (while both awake and asleep). But not everyone knows they've had a nocturnal seizure if they have one! And distinguishing nocturnal seizures from other sleep behaviors, such as sleepwalking or night terrors, can be challenging.

Those with epilepsy may wake up tired, but not know they have had a seizure. If the person that you know with epilepsy does not experience daytime seizures, that person may be unaware they are at risk for nighttime seizures.

To make it more confusing, if they have unusual nighttime behavior, headaches in the morning, or unexplained mood changes, it could be a kind of parasomnia — an umbrella term for a group of sleep disorders that include night terrors, sleepwalking, teeth grinding, and restless leg syndrome. Nocturnal awakenings are sometimes confused with insomnia. In other words, you're unaware of the seizures that occur while sleeping.

Here's the science: Sleep activates electrical charges in the brain that result in seizures and seizures are timed according to the sleep-wake cycle. That sleep-wake cycle is associated with prominent changes in brain electrical activity and hormonal activity, so seizures and the sleep-wake cycle are closely related.

Normally, people cycle through all of these stages several times during the night. On occasions, nocturnal seizures can be misdiagnosed as a sleep disorder and certain sleep disorders can be misdiagnosed as epilepsy. For some people, seizures occur exclusively during sleep.

Others have seizures as they are falling asleep or waking up, and still others have seizures randomly spread throughout the day or night. The way seizures spread through the brain also seems to differ depending on sleep state. Interestingly, frontal lobe seizures begin during sleep more often than temporal lobe seizures. However, temporal lobe seizures are more likely to spread and result in a convulsion when beginning during sleep, while frontal lobe seizures are not.

This discovery could have implications for treatment if better understood. That's the good news. Unfortunately, nocturnal seizures are difficult to diagnose. Video-EEG recordings can help. Or a CT scan. There's also the MRI, a record or diary of your seizure activity. Keeping a seizure diary might be a big help.

Resources:
https://www.medicalnewstoday.com/articles/326864
https://www.healthline.com/health/epilepsy/nocturnal-seizures
https://www.sleepfoundation.org/physical-health/epilepsy-and-sleep
https://www.cedars-sinai.org/health-library/diseases-and-conditions/n/nocturnal-seizures.html
https://www.ajmc.com/view/epilepsy-and-sleep-defining-the-relationship
https://epilepsysociety.org.uk/about-epilepsy/epileptic-seizures/seizure-triggers/sleep-epilepsy
https://www.empatica.com/blog/am-i-having-seizures-while-sleeping.html
https://www.medicalnewstoday.com/articles/319430#Snug-Safety

**For more information about nocturnal seizures, consult with your neurologist or epileptologist.**

***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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