Epilepsy and Sleep

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Introduction
Most of us have more energy, think more clearly and react more quickly after a good night’s sleep. For some people with epilepsy, sleep is especially important. This is because not sleeping for long enough, or not having enough good quality sleep, can make their seizures more likely.

In this fact sheet we look at the different ways that sleep and epilepsy are linked.

Links between epilepsy and sleep

Different kinds of epilepsy and their relationship to sleep
Epilepsy is not one condition. There are lots of different types of epilepsy, some of which are related to particular stages of sleep. These are some of the more common ones.

Epilepsy grand mal on awakening
In epilepsy grand mal on awakening you will have tonic-clonic seizures either just before, or just after, you wake up. This may be in the morning, after a night’s sleep, or during the day when you have a nap. Tonic-clonic seizures are the ones most of us think about when we imagine someone having an ‘epileptic fit’. They are sometimes called grand mal or convulsions.

Juvenile myoclonic epilepsy (JME)
If you have this kind of epilepsy, you will usually have a combination of three different kinds of seizure.

• Absence seizures: you may appear to be just staring or blinking.
• Myoclonic seizures: you have short jerking movements of different parts of your body.
• Tonic-clonic seizures: these involve the whole of your body. They are the type of seizure most of us think of when we imagine someone having an ‘epileptic fit’.
These seizures may happen shortly after waking up. Or they may happen when you are awake, but very tired. If you have JME, you could find that not having enough sleep can make your seizures more likely.

**Benign rolandic epilepsy (BRE)**
If you have this kind of epilepsy, you will have partial seizures, also known as focal seizures, in your sleep. These seizures only affect a small part of your brain. Occasionally, you might have seizures when you are awake. These seizures will affect your mouth and face, and sometimes cause your arms and legs to jerk. You might also dribble a lot of saliva. Some people with BRE also have tonic-clonic seizures. BRE affects almost one in five of all children with epilepsy.

**Non-specific epilepsies**
There are lots of other epilepsies that don’t have a particular name. In these other epilepsies you may have seizures any time, whether you’re awake or asleep. It’s not known why this is the case for some people, but seizures may be related to different stages of sleep.

**Stages of sleep**
Drowsiness - this stage lasts just five or 10 minutes. Your eyes move slowly under your eyelids, your muscles slow down and you are easy to wake up.

Light sleep - your eye movement’s stop, your heart rate slows, and your body cools down.

Deep sleep - it’s not easy to wake you during this stage of sleeps. If you do wake, you will be groggy and not quite with it for a few minutes. This kind of sleep allows your brain to rest and restore your energy. Your immune system is helped by deep sleep.

Rapid eye movement (REM) - about 70 to 90 minutes into your sleep cycle, you enter REM sleep. You usually have three to five episodes of REM sleep each night. This stage is associated with processing your emotions, filing your memories and relieving your stress.

**Seizures during sleep**
If you have a seizure during your sleep, it affects your sleep patterns for the rest of the night. Your sleep becomes lighter, and you wake up more often. The most serious effects are on REM sleep. This is greatly reduced, and may even disappear. Seizures when you’re awake can also reduce REM sleep the following night.

**REM sleep**
Although it’s important to get enough REM sleep, it’s not clear how to get enough, apart from by controlling your seizures. If your seizures aren’t fully controlled, your doctor should refer you to an epilepsy specialist for an assessment of your epilepsy and your anti-epileptic drugs (AEDs). If it’s not possible to stop all your seizures, you should try to catch up on missed sleep, particularly in the day or two after a seizure.

**Epilepsy treatment and sleep**
Most people with epilepsy take anti-epileptic drugs (AEDs) to control their seizures. Like all types of medicine, AEDs may have unwanted side-effects. The following AEDs may have sleep-related side-effects.
Ethosuximide  sleep disturbances, night terrors
Gabapentin  insomnia (difficulty sleeping)
Pregabalin  insomnia, abnormal dreams
Lamotrigine  sleep disturbances
Levetiracetam  insomnia
Phenytoin  insomnia
Rufinamide  insomnia
Topirimate  insomnia
Zonisamide  insomnia

If you are having any sleep related problems, please speak with your epilepsy nurse/doctor.

Lack of sleep as a trigger for seizures
For many years it has been thought that not having enough sleep makes a person with epilepsy more likely to have seizures. This seems to be the case for some people, but may not apply to everyone. Instead, it could be that being deprived of sleep, together with other triggers (stress, alcohol, lack of food) is more likely to trigger seizures. In the future, there may be more known about this.

Epilepsy with other sleep disorders
Some people with epilepsy also have other disorders that can affect their sleep. These include sleep apnea, restless leg syndrome, narcolepsy and night terrors. Further information about these disorders is available from NHS Direct.

Sleep studies
Sometimes a person will have a sleep disorder that is wrongly diagnosed as epilepsy. If there is any possibility that you have a sleep disorder, your doctor could refer you for a sleep study. Sleep studies can take different forms and can help to show exactly what problems you’re having while you’re asleep. Knowing what is happening in your brain while you’re trying to rest is the first step towards trying to fix it.

Detecting sleep seizures if you are alone
If you worry about having a seizure and not having anyone to make sure you’re safe, you could consider getting a seizure alarm.

There are different kinds of alarm available. What type you would need would depend on the kind of seizures you have. Some alarms are sensitive to movement, so if you have tonic-clonic seizures (grand mal, convulsions) then the alarm will detect them. There are other types of alarm available.

Alarms would only be suitable if there was someone the alarm could alert, so that they could come and help you.

More information about alarms is available from Epilepsy Action.

How to get a good night’s sleep
Researchers Ann Jacoby and Gus Baker from Liverpool University are currently researching sleep and seizures. If you have problems falling asleep, or have trouble staying asleep, they offer the following tips.

• Have a regular bedtime and getting-up time.
• Avoid taking naps during the day.
• Make sure your bedroom is at a comfortable temperature.
• Make sure the bedroom is dark and free of noise.
• Avoid stressful activities or situations before bed.
• Avoid stimulants, such as alcohol, caffeine and exercise in the late evening.
Conclusion
From the information available to us, we have been able to make the following conclusions.

- Sleep can affect seizures.
- Lack of sleep can trigger seizures for some people.
- Seizures and anti-epileptic drugs can affect sleep.
- Some people with epilepsy also have sleep disorders.
- If sleep disorders are treated, epilepsy may become better controlled.

Further information
You can get further information about any of the issues discussed here from your GP or epilepsy specialist nurse.

Epilepsy Helpline
freephone 0808 800 5050
text 07797 805 390
helpline@epilepsy.org.uk
www.epilepsy.org.uk

NHS Direct
Low call charge 0845 46 47
www.nhsdirect.nhs.uk

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