Sleep and epilepsy

Most people have more energy, think more clearly and react more quickly after a good night’s sleep.

For some people with epilepsy, sleep is specially important. This is because disturbed sleep patterns, or not having enough good quality sleep, can make seizures more likely.

There are also some types of epilepsy, where seizures have a particular connection to sleep.

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Links between epilepsy and sleep

There are many different types of epilepsy. And some seem to be particularly related to sleep. Three of the more common are epilepsy grand mal on awakening, juvenile myoclonic epilepsy and benign rolandic epilepsy.

Epilepsy grand mal on awakening

In this type of epilepsy, you have tonic-clonic seizures either just before, or just after, you wake. This may be in the morning, after a night’s sleep, or during the day after a nap. Tonic-clonic seizures used to be called grand mal. They are the ones most of us think of when we imagine someone having an epileptic seizure. They are sometimes referred to as convulsions.
Juvenile myoclonic epilepsy (JME)

In juvenile myoclonic epilepsy, seizures may happen shortly after waking. Or they may happen at other times, but when you are very tired. You may find that not having enough sleep could make your seizures more likely.

In JME, you have three different kinds of seizure.

- Absence seizures: you appear to be daydreaming, staring or blinking.
- Myoclonic seizures: you have brief jerking movements of different parts of your body.
- Tonic-clonic seizures: you have stiffening, then jerking of the whole of your body.

Epilepsy Action has more information about juvenile myoclonic epilepsy, absences seizures, myoclonic seizures and tonic-clonic seizures

Benign rolandic epilepsy (BRE)

If you have this kind of epilepsy, you will have focal (partial) seizures, in your sleep. Occasionally, you might have seizures when you are awake.

Focal seizures affect just a part of your body. In BRE they affect your mouth and you might dribble a lot of saliva. Sometimes they cause your arms and legs to jerk. Some people with Benign rolandic epilepsy also have tonic-clonic seizures. BRE affects almost one in five of all children with epilepsy.

Epilepsy Action has more information about focal seizures, tonic-clonic seizures, and benign rolandic epilepsy.

Stages of sleep

For some people, seizures are related to different stages of sleep. There are five stages of sleep with different brain activity in each.

1. Drowsiness - this stage lasts five or 10 minutes. Your eyes move slowly under your eyelids, your muscles begin to relax and you are easy to wake up.

2. Light sleep - your eye movements stop, your heart rate slows, and your body cools down.

3. and 4. Deep sleep - it's not easy to wake you during these stages of sleep. 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 restores your energy. Your immune system is helped by deep sleep.

5. Rapid eye movement (REM) sleep - 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.

**The effects of having seizures on your 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. REM sleep is greatly reduced, and may even disappear.

Seizures when you’re awake can also reduce your REM sleep the following night.

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 epilepsy medicine.

If it’s not possible to control all your seizures, you should try to catch up on missed sleep, particularly in the day or two after a seizure.

**The effects of epilepsy treatment on sleep**

Most people with epilepsy take epilepsy medicine to control their seizures. Like all types of medicine, epilepsy medicines can have unwanted side-effects. The following epilepsy medicines may have sleep-related side-effects.

<table>
<thead>
<tr>
<th>Epilepsy medicine</th>
<th>Side-effect</th>
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<tbody>
<tr>
<td>Ethosuximide</td>
<td>sleep disturbances, night terrors</td>
</tr>
<tr>
<td>Lamotrigine</td>
<td>insomnia (difficulty sleeping), sleep disturbance</td>
</tr>
<tr>
<td>Pregabalin</td>
<td>insomnia, abnormal dreams</td>
</tr>
<tr>
<td>Topiramate</td>
<td>sleep disturbance</td>
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<tr>
<td>Gabapentin</td>
<td>insomnia</td>
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<td>Levetiracetam</td>
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<td>Phenytoin</td>
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<td>Rufinamide</td>
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<td>Topirimate</td>
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<td>Zonisamide</td>
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If you are concerned that your epilepsy medicine is causing side-effects, speak with your doctor. They may be able to help.

**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 not everyone. Instead, it could be lack of sleep, combined with things such as stress, alcohol or going without food that is more likely to trigger seizures.

Epilepsy with other sleep disorders

Some people with epilepsy also have ‘sleep disorders’. These include sleep apnoea, restless leg syndrome, narcolepsy and night terrors. Further information about these disorders is available from NHS Direct:
Tel: 0845 4647
Website: www.nhsdirect.nhs.uk

Alerting others to your seizures

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. For example, some alarms are sensitive to movement. So if you have tonic-clonic seizures (grand mal, convulsions) then this type of 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 help you.

More information about alarms is available from the Disabled Living Foundation:
Tel: 0845 130 9177
Website: www.dlf.org.uk

How to get a good night’s sleep

If you have problems getting a good night’s sleep, Ann Jacoby and Gus Baker from Liverpool University, UK, 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

- Some seizures seem to be connected to sleep.
- Lack of sleep can trigger seizures for some people.
- Seizures and epilepsy medicines 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 own doctor.

Read more about research into epilepsy and sleep [PDF file], featured in our members' magazine Epilepsy Today.

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**About this publication**

This information is written with input from people with epilepsy and professionals. Epilepsy Action makes every effort to ensure the accuracy of information but cannot be held liable for any actions taken. If you want to know our sources, or give us feedback, contact us.

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**Epilepsy Helpline**

Freephone 0808 800 5050, text 0753 741 0044, email helpline@epilepsy.org.uk, tweet @epilepsyadvice

**Contact details**

Epilepsy Action, Gate Way Drive, Yeadon, Leeds LS19 7XY, UK, +44 (0)113 210 8800. A registered charity (No. 234343) and company limited by guarantee (No. 797997) in England.