



# Sleeping issues after a brain injury

**Lack of sleep has a negative effect on our cognition, mood, energy levels and appetite. The average person needs eight hours of sleep a night or will suffer from decreased concentration, energy and many other problems. These effects are multiplied many times by a traumatic brain injury, stroke and other types of brain disorder.**

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## Brain injury and sleep disorders

Sleeping disorders after a brain injury can be another problem you don't need during your rehabilitation.

Unfortunately, brain injury can often lead to a sleep disorder. The American Academy of Neurology reports that as many as 40 to 65 percent of people with mild traumatic brain injury complain of insomnia.

This can be hard to detect because people with brain injuries can also have a fatigue disorder. Although some people have problems with getting too much sleep, the usual sleep disorder is trouble sleeping at night. This includes problems with timing of sleep at night, then feeling drowsy during the day.

## Causes

After a brain injury many find it not only difficult to sleep, but they are very easily awakened, sometimes dozens of times a night. On top of this, they may find themselves unable to sleep at all around 3 am, despite being desperately tired. Sleep will usually be very light, so the smallest noise brings the person instantly awake. Research suggests a major cause is disruption to the normal release of certain quantities of certain neurotransmitters in the brain during sleep which causes "sleep fragmentation" due to waking up so often.

There can be a variety of other causes disrupting sleep. Discomfort from headache, neck pain or back pain will always make it hard to get to sleep. Depression is common after a brain injury and people may find they fall asleep easily but wake up several hours before dawn and are unable to sleep again. Anxiety and inability to handle stress are other problems for many. Negative thoughts whirring through the mind will usually make it very hard to fall asleep.

## Sleeping your way to recovery

Sleep plays its part in not only helping the brain to recover from a brain injury, but in physical healing as well. In a traumatic brain injury, there are often muscles damaged. During active sleep, the brain stem secretes hormones that in effect paralyse our muscles to prevent twitching. This can play a role in helping muscles to heal, but poor sleep will hinder the process.

## Medication and sleep

There are medications that can help you with sleep problems. Some medications are designed to promote sleep but they are typically avoided by physicians who treat brain injury. Many physicians use small doses of antidepressant medications with their head-injured patients and have found them to be very effective. Typically, you take this medication a half hour before bedtime and you will sleep straight through the night.

Sometimes this medication works too well and people sleep for 12 to 15 hours for the first 2 or 3 days. This is normal as your brain is trying to "catch up" on the sleep that it's missed.



However, some people report side effects e.g. they may report that it's hard to wake up in the mornings. But once you get going in the morning, you will feel a lot better. You need to talk to your doctor about any side effects.

Sometimes the medication may seem to stop doing its job after a month and may need readjustment by your doctor.

### **Practical steps to good snoozing**

Routine is vital for sound sleep. Go to bed at exactly the same time every night-even on the weekend. Do not vary this by more than 15 minutes. That may sound extreme, but if you go to bed at the same time and get up at the same time each day, your body will adjust to that pattern.

Avoid caffeine and nicotine. These stimulants have a negative effect on the brain, and for some people it may increase the likelihood of seizures.

Don't get the body revved up with exercise late in the evening. Make sure your bedroom is at the right temperature and that the room is very dark. This can be very important because light plays a critical role in your sleep pattern. Make sure it's quiet as well. Talk with family members about respecting your need for a quiet environment.

So what about naps during the day? Some find that afternoon naps are essential due to the cognitive fatigue from a brain injury. However afternoon naps can disrupt your night time sleeping so it is important to experiment. It might be better to lie down and rest without allowing yourself to sleep.

When stress, anxiety and negative thoughts are involved, cognitive behavioural therapy can help. Your Brain Injury Association should be able to help link you up with a psychologist.

### **References and further information**

Traumatic Brain Injury Survival Guide: <http://www.tbiguide.com/sleepdisorders.html>

Sleep tips and Advice (BBC) <http://www.bbc.co.uk/science/humanbody/sleep/articles/advicetips.shtml>

American Academy of Neurology press release <https://www.aan.com/PressRoom/home/PressRelease/454>