

ADHD and Sleep



Key Points

- **Attention deficit hyperactivity disorder (ADHD) can have an impact on the quality of people sleep.**
- **It is possible, that more than 2/3 of adults with ADHD also have issues with sleep.**
- **Sleep issues can range from delayed sleep, onset, to poor sleep quality or insomnia, but can also include specific sleep disorders such as periodic limb movement disorder, or PLMD.**
- **Some ADHD medications can make sleep worse, but some can improve sleep.**

ADHD can cause sleep problems, and sleep problems worsen and ADHD symptoms. Understanding what your sleep issues are, and building a good sleep routine can help you improve the quality of your sleep, and therefore improve your ADHD symptoms.

What is Sleep?

Researchers, even after decades of research, still do not really understand why we sleep. Sleep is a complex biological process that is essential for good health and well-being. Sleep helps to consolidate memories and to remove toxins from the brain.

While we sleep, our brains flush out toxins that build up during the day. This helps to keep our brains healthy and functioning properly. After just 72 hours without sleep, people can have difficulty concentrating, memory problems, irritability, mood swings, hallucinations, delusions, loss of coordination and impaired judgment. The longest recorded time without sleep is thought to be 11 days.

Sleep is regulated by a biological clock in our brains that is influenced by light and darkness. When it is dark outside, our bodies produce melatonin, a hormone that makes us feel sleepy. When it is light outside, our melatonin levels drop, and we feel more alert.

Most adults need around 7-9 hours of sleep per night. However, the amount of sleep we need can vary depending on our age, lifestyle, and overall health.

Sleep helps to regulate our emotions. Getting enough sleep can help us to better manage our emotions and respond to stress.

Sleep is also important for physical health. Sleep deprivation can increase the risk of chronic diseases such as heart disease, stroke, diabetes, and obesity.

What happens while we sleep?

Sleep is divided into two main stages: non-rapid eye movement (NREM) sleep and rapid eye movement (REM) sleep, or 'dream sleep'.

Sleep is roughly divided into 90 minute 'cycles', where the brain activity changes as we go from REM sleep to the deep sleep stages of NREM sleep:

REM sleep occurs every 90-120 minutes and it lasts for about 10-20 minutes.

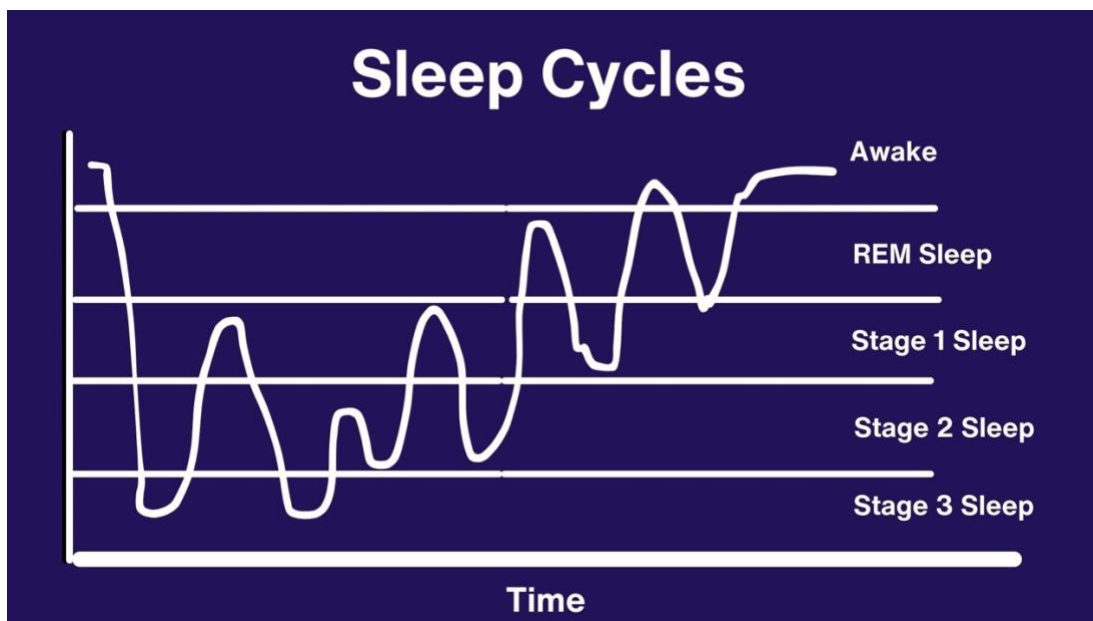
During REM sleep, our eyes move rapidly back and forth, and our brain activity is very high.

Stage 1: This is the lightest stage of sleep, and it lasts for a few minutes. During stage 1 sleep, our muscles relax, and our brain waves begin to slow down.

Stage 2: This is a deeper stage of sleep, and it lasts for about 20 minutes. During stage 2 sleep, our heart rate and breathing slow down even further.

Stage 3: This is the deepest stage of sleep, and it lasts for about 40 minutes. During stage 3 sleep, our muscles are completely relaxed, and our brain waves are very slow.

As the night gets longer these 90-minute cycles of sleep, gets shallower and shallower so towards the morning, we do not enter stage three sleep and spend more time in stage one sleep and REM sleep. The diagram below helps illustrate this.



How ADHD Effects Sleep

An estimated 25% to 50% of adults with ADHD have a sleep disorder, but this figure may be as high as 80%. This is significantly higher than the rate of sleep disorders in the general population, which is estimated to be around 30%.

The relationship between ADHD and sleep disorders is complex and not fully understood. However, there is growing evidence that sleep problems can exacerbate ADHD symptoms, and vice versa.

Adults with ADHD are more likely to have the following issues with sleep:

- Late sleep onset.
- Poor sleep quality.
- Waking up early.
- Insomnia.

Adults with ADHD are also more likely to have specific sleep disorders such as sleep apnoea, periodic limb movement disorder or restless leg syndrome.

How Sleep Effects ADHD

Adults with ADHD who do not get enough sleep are more likely to have trouble paying attention, controlling their impulses, and managing their emotions.

They may also be more likely to experience fatigue, irritability, and mood swings.

Some ADHD medications, especially the amphetamine, based stimulants, can cause delayed onset of sleep. Methylphenidate, also a stimulant, has been shown to improve sleep in some people with ADHD.

How Can I Try to Sleep Better?

Here are some sleep tips:

1. Have a good quality mattress.
2. Block out all lights.
3. Avoid alcohol, exercise, caffeine, or large meals for at least two hours before bedtime.
4. Use the '30-minute rule': if you get into bed, and do not fall asleep within 30 minutes, get out of bed, and do something restful.
5. Avoid using your phone in bed.
6. I love your bedroom to be a slightly cooler temperature in other rooms in the house.
7. Relax for 30 minutes before bed.
8. Minimise noise in your bedroom, possibly consider using earplugs.
9. Exercise during the day.
10. Make sure you get at least 30 minutes of natural light exposure during the day.