

The Connection Between Sleep and Physical Health

Healthy sleep promotes peak physical performance and productivity. Because sleep helps bodies rejuvenate from daily stressors, with enough quality sleep, we are better able to fight off infection as well as reduce the risk of developing a chronic disease, such as Type 2 diabetes or cardiovascular disease. Getting enough quality sleep also helps to maintain a healthy weight, which lowers the risk of diet-related non-communicable diseases.

DID YOU KNOW?

In the US, 3 in 10 working adults sleep 6 hours or less per night. Sleeping for six hours or less per night increases an individual's risk for coronary heart disease by 35%, diabetes by 25%, stroke by 22%, and obesity by 21%.

The Connection Between Sleep and Mental Health

Because sleep plays such an important role in human functioning, lack of sleep can negatively affect behavior, mood, memory, and emotions. When we have not slept well enough, we may find ourselves being forgetful and making simple mistakes throughout a day. Not getting enough quality sleep may also increase levels of anxiety and depression (which in some cases could lead to more severe mental health outcomes such as suicidal ideation), and can also impact relationships with others. In extreme cases, sleep deprivation can even cause hallucinations and delayed impulse control. On the other hand, sleeping well sharpens the mind, assists in decision-making, helps us excel at work and school, and helps balance moods and emotions.

Ways to Obtain Better Zzzz

Why is sleep so important?

Sleep is essential to physical and mental health, as it helps our bodies and minds recover and rejuvenate from the stressors of everyday life. As a result, when we sleep well, research suggests that we are more energetic, happier, and able to better concentrate. Everyone, from children to adults, can benefit from getting better sleep.



How does your body know when to sleep?

Human beings are built to be active during the day and asleep at night. Our sleep patterns are regulated by circadian rhythms. Circadian rhythms are internally driven cycles that work like a 24-hour clock, telling when we should go to sleep and when we should wake up. At night, our brains produce melatonin, a hormone that helps with the timing of circadian rhythms. This internal clock also regulates processes within the body such as hormonal activity, body temperature, and our digestive system. If we don't get enough quality sleep, these internal processes may be disrupted. In turn, this disruption can negatively affect sleep quality.

How much sleep do we need?

Although the average adult needs at least seven hours of sleep per night, some people may need more to feel fully rested. In addition to quantity of sleep, the quality of sleep is critical. In order to get quality sleep, our bodies must progress through the sleep cycle, composed of four separate sleep stages (N1, N2, N3, and REM sleep). Sleep scientists think that each sleep stage serves a different purpose. For example, most of our dreaming occurs in REM sleep, which helps us process the events that have happened to us. If we do not properly cycle through these four stages (anywhere from four to six times per night), our bodies are unable to get high-quality rest. Some signs of not getting quality sleep include:

- Feeling tired despite having slept long enough
- Having difficulty falling asleep and staying asleep
- Waking up repeatedly through the night
- Snoring or gasping for air while sleeping
- Needing an alarm clock to wake up
- Falling asleep within five minutes
- Feeling groggy or dozing off during daily activities such as watching TV, riding in a car, sitting quietly
- Feeling irritable, anxious, or having a difficult time paying attention during the daytime

How can we sleep better?

Knowing how important sleep is to health, how can we form healthy sleep habits to sleep longer, better, and more soundly? There are many ways we can adjust our daily lives to establish better sleep habits (aka sleep hygiene). Sleep hygiene includes many different habits, including to follow a consistent sleep schedule, make our bedrooms as comfortable as possible, avoid doing things other than sleep in bed (e.g., worrying, using electronics), and change our diet to promote better sleep.



Here are some simple daily changes to make to improve sleep quality:

- Dim the lights around the house 1-2 hours before bedtime.
 - Go to bed at the same time every night, and wake up at the same time each morning. Try to be consistent, even on weekends and days off.
 - Set an early enough bedtime to get the recommended hours of sleep.
 - Establish a relaxing bedtime routine such as lighting a candle and reading a book.
 - Make sure the bedroom is quiet, clutter-free, and dark.
 - Set the bedroom to a comfortable, cool temperature. Since our body temperature lowers while we sleep, setting the thermostat to a lower temperature at night can help us sleep better. Sleep experts recommend a room temperature near 65° F.
- Only use the bed for sleeping. Try to avoid other activities in bed such as watching movies, looking at a phone, or doing work.
 - Avoid using electronic devices (computers, phones, television) at least 1-2 hours before bedtime. Exposure to bright light (particularly blue light from electronic devices) can affect the ability to fall asleep. Blue light affects sleep cycles by disturbing the natural circadian rhythm. Removing electronic devices from the bedroom may help with this.
 - Avoid eating large meals before bedtime. If hunger strikes before bedtime, eat a light, healthy snack (such as an apple or banana with peanut butter).
 - Limit fluid intake before bedtime.
 - Avoid drinking alcohol. Alcohol may help to fall asleep, but it can disrupt the natural sleep cycle, causing sleep to be less restorative.
 - Avoid consuming caffeine, nicotine, and other stimulants (coffee, cigarettes, black tea, soda, chocolate, etc.) within 8 hours of bedtime.
 - Exercise earlier in the day. Although exercise can help with better sleep at night, rigorous exercise before bed may make it harder to fall asleep.
 - Avoid thinking about things that make you feel stressed or anxious before bedtime.

What to do if you still can't sleep well.

If you still experience trouble sleeping after adjusting your daily routine, consider visiting a doctor. While some medications may have potential to help with sleep, it is important to consult a doctor before trying sleep aiding medications or supplements. If you feel exhausted despite sleeping long enough, a doctor may want to assess for a sleep disorder. Sleep disorders, such as insomnia, restless legs syndrome, circadian rhythm disorders, sleep apnea and parasomnias can cause serious health complications and it is important they are treated properly. If you think you may be suffering from a sleep disorder, it is important to consult a doctor. If planning a doctor visit, keep a diary of sleep habits to bring to an appointment. Keeping a sleep diary may help in learning how to further change your sleep habits to improve sleep quality. If you choose to document in a sleep diary, keep a record of when you: go to bed, fall asleep, wake up, get out of bed, take naps, exercise, consume alcohol, consume caffeine, and take any medication.

Sleep Trivia - Let's Test Your Knowledge!

A poor night's sleep can drag your entire day down. And with so many sleep tips circulating, it can be hard to tell what tactics actually help and which are myths. Grab a few team members and put your heads together to see if you can separate sleep fact from sleep fiction.



Question 1: Fact or Fiction - The average person gets under 7 hours of sleep per night.

Question 2: Fact or Fiction - Your brain and body shut down completely when you sleep.

Question 3: Fact or Fiction - Napping provides the same long-term health benefits as nighttime sleep.

Question 4: How many hours of sleep do teens need each night?

- a) 7 to 8
- b) 9 to 10
- c) 10 to 12

BONUS: Why do teenagers scientifically keep wacky sleep schedules?

Question 5: Fact or Fiction - More than 62% of adults worldwide say they don't sleep as well as they'd like to.

Question 6: What is the average amount of sleep people take when given an unlimited opportunity for rest with no interruptions?

- a) 7 to 8
- b) 8 to 8.5
- c) 9 to 10

Question 7: What is the ideal length for a nap?

- a) 20 minutes
- b) 45 minutes
- c) One hour



Question 8: What are the four most common sleep disorders? *You will receive one point for each correct answer.

Question 9: Fact or Fiction - It takes the average person at least 30 minutes to fall asleep at night.

Question 10: Fact or Fiction - Once you're in bed, you should stay there no matter how long it takes you to fall asleep.

Question 11: What is the ideal bedtime snack?

- a) Cereal and milk
- b) Fruit
- c) Cookies
- d) Dark chocolate

Question 12: How many days can the average person survive without sleep?



Extension - Health and Human Sciences