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Sleep

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Have you ever really thought about your sleep? You should because you spend about one-third of your time sleeping. Making sure you're getting enough good-quality sleep is a part of living a healthy lifestyle, like eating healthy, drinking enough water, and exercising regularly.

THE IMPORTANCE OF SLEEP TO OVERALL HEALTH

Sleep affects every system of your body, from your brain to your metabolism and immune system. It is known to be especially important for brain function, where an increased volume of cerebral spinal fluid in the brain removes toxins during sleep that build up while you're active, allowing brain cells (neurons) to communicate effectively. If you don't get enough sleep, impaired brain function can make it harder to concentrate, respond quickly, or learn new information.

A chronic lack of sleep (or getting poor quality sleep) is known to increase your risk of certain diseases, including high blood pressure, heart disease, diabetes, depression, and obesity. People who get poor or little sleep also have a higher risk of stroke, reduced insulin sensitivity, and poorer blood sugar regulation than people who sleep 7–8 hours per night. Less sleep is also correlated with an increased risk of catching a common cold and increased inflammation, which contributes to conditions such as inflammatory bowel disease and Crohn's disease.

Making sure you get enough good quality sleep is also essential for losing weight. This isn't only because less sleep is highly correlated to weight gain and obesity, but people who get enough good sleep also tend to eat fewer calories. Sleep deprivation disrupts appetite hormone levels causing poor appetite regulation (meaning you end up eating more). Good quality sleep is also linked to better athletic performance, meaning your exercise is better quality, which helps you lose weight too.

SLEEP STAGES

During sleep, you cycle through different stages, which are based on the brain waves emitted and neuronal activity. Each stage is linked to different physiological markers and body movements. There are two basic kinds of sleep: non-rapid eye movement (non-REM) and rapid eye movement (REM).

- Stage 1: Non-REM sleep where you transition from being awake to being asleep only lasts a few minutes and involves the slowing of your heartbeat, breathing, eye movements, and brain waves. Your muscles relax with some occasional twitching.
- Stage 2: Non-REM light sleep makes up the majority of your time asleep. You come back to this stage from Stage 3 and REM sleep. Your heartbeat and breathing continue to slow, and your muscles relax even more. Your eye movements stop, your body temperature drops, and your brain activity continues to slow but has brief bursts of electrical activity.
- Stage 3: Non-REM deep sleep is needed to feel refreshed in the morning. It may be hard to wake you up during this stage of sleep. Stage 3 is longer in the first half of the night and shortens during each cycle throughout the night. Your heartbeat and breathing slow to their lowest level, and your muscles completely relax. Your brain waves continue to slow.
- REM: Your first REM stage happens about 90 minutes after falling asleep. It is named for the characteristic rapid eye movement from side to side under closed eyelids that occurs during this stage. Physiological markers are closer to their levels when you're awake, such as faster and irregular breathing, increased heart rate, and increased blood pressure. Your brain wave activity is closer to what it is like while you're awake, emitting mixed frequency waves. Your arm and leg muscles become temporarily paralyzed (so you don't act out your dreams while you're asleep). Less of your time is spent in REM sleep as you age.

You can dream in any stage of sleep but REM sleep is where you have the most vivid dreams (up to 2 hours each night). You probably don't remember most of your dreams. Events and feelings from your day tend to carry over into your dreams.

SLEEP REQUIREMENTS BY AGE

Although individuals have their own sleep requirements to feel their best, there are recommended sleep times for different age groups. Generally, the amount of sleep you need decreases as you age.

- Newborns (0–3 months): 14–17 hours per day
- Infants (4–11 months): 12–15 hours per day
- Toddlers (1–2 years): 11–14 hours per day
- Preschoolers (3–5 years): 10–13 hours per day
- School-age children (6–13 years): 9–11 hours per day
- Teenagers (14–17 years): 8–10 hours per day
- Young adults (18–25 years): 7–9 hours per day
- Adults (26–64 years): 7–9 hours per day
- Older adults (65+ years): 7–8 hours per day

HEALTHY SLEEP HABITS

Your daily routine, especially what you do during the few hours before bed, can have a huge impact on your sleep. You can keep a sleep diary for a few weeks to track your schedule and see what habits correspond to restful, effective sleep and what may contribute to your restlessness. There are a set of healthy sleep habits that can help you sleep better but be sure to talk to your doctor if your sleep problems continue.

- Keep a consistent sleep schedule. Be sure to get up at the same time every day, including weekends and vacations.
- Set a bedtime. Make sure it is early enough so you can get at least seven hours of sleep.
- Create and maintain a relaxing bedtime routine.
- Don't go to bed unless you're sleepy.
- Get out of bed if you haven't fallen asleep within 20 minutes.
- Keep the room at a comfortable, cooler temperature. Make sure your bedroom is quiet, relaxing, and dark.
- Use your bed only for sleep and sex.
- Limit your exposure to bright light and blue light (from electronics) in the evenings. Most electronic devices have blue light filters that can be turned on automatically at a certain time each day.
- Turn off electronic devices at least 30 minutes before bedtime.
- Avoid consuming caffeine in the late afternoon and evening, more than six hours before your bedtime.
- Don't eat a large meal a few hours before bedtime. If you are hungry, eat a light, healthy snack.
- Avoid consuming alcohol before bedtime.
- Reduce your fluid intake about an hour before bedtime. (This helps you not have to wake up and go to the toilet in the middle of the night.)
- Exercise regularly and maintain a healthy diet.

If you aren't sure how good the sleep you're getting is, see how many of the following statements apply to you. The more that sound like you, the better your sleep is.

- You fall asleep within 15–20 minutes of lying down.
- You regularly sleep 7–9 hours per day.
- Your sleep is continuous (you aren't lying awake for long periods of time).
- You wake up feeling refreshed.
- You feel alert and are able to be fully productive throughout the day. (It is normal to feel less alert during some parts of the day, such as midafternoon, but the alertness should return.)
- Your partner or family members don't notice any unusual behavior during sleep, such as snoring, restlessness, or pauses in breathing.

You can also track your sleep using phone apps or wearable fitness trackers. While some of these may not be accurate, they can still provide interesting estimations for how much time you actually spend asleep and in each sleep stage.

Resources

Websites

"Brain Basics: Understanding Sleep." National Institute of Neurological Disorders and Stroke. August 13, 2019. <https://www.ninds-nih.gov.udel.idm.oclc.org/Disorders/Patient-Caregiver-Education/Understanding-Sleep> (accessed August 23, 2019).

"Healthy Sleep." MedlinePlus. September 9, 2019. <https://medlineplus.gov/healthysleep.html> (accessed October 10, 2019).

"Healthy Sleep Habits." Sleep Education. February 9, 2017. <http://sleepeducation.org/essentials-in-sleep/healthy-sleep-habits> (accessed August 24, 2019).

"How Much Sleep Do We Really Need?" National Sleep Foundation. <https://www.sleepfoundation.org/articles/how-much-sleep-do-we-really-need> (accessed October 10, 2019).

"What Is Healthy Sleep?" National Sleep Foundation. <https://www.sleepfoundation.org/articles/what-healthy-sleep> (accessed August 24, 2019).

Organizations

American Sleep Association, 1002 Lititz Pike, No. 229, Lititz, PA, 17543, (717) 478-8556, contactASA@sleepassociation.org, <https://www.sleepassociation.org> .

National Institute of Neurological Disorders and Stroke, PO Box 5801, Bethesda, MD, 20824, (800) 352-9424, <https://www.ninds-nih.gov.udel.idm.oclc.org> .

National Sleep Foundation, 1010 N. Glebe Rd., Ste. 420, Arlington, VA, 22201, (703) 243-1697, <https://www.sleepfoundation.org> .

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