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Sleep

How much impact does sleep have on health?



In a world of plenty, people can't seem to get enough sleep. The amount of sleep a person gets, or the lack thereof, can have a significant impact on overall health and wellness, quality of life and safety—both on the roads and in the workplace. The Centers for Disease Control and Prevention estimates that 25 percent of U.S. adults get insufficient sleep or rest at least 15 out of every 30 days. This lack of sleep has a bigger impact on health than many people realize.

Why Sleep?

Decades of scientific research into the question of why people sleep has yielded inconclusive answers. Popular theories have been proposed:

- **Inactivity theory:** Sleeping at night, as opposed to during the day, is an adaptation to help organisms stay out of harm's way.
- **Energy conservation theory:** Demand for energy (food) is reduced at night when it is least efficient to search for food.
- **Restorative theories:** Muscle growth, tissue repair, protein synthesis and the release of growth hormone all occur while the body is at rest.
- **Brain plasticity theory:** Sleep is the time for changes to the brain's structure and organization.

Whether one or all of these theories is correct is still being explored. Regardless of the reason, quality sleep is important and beneficial for people of all ages and in all stages of life.

Benefits of Sleep

Adequate, restful sleep has numerous benefits. In addition to feeling refreshed and alert, sleep enables the body to fight off infection; supports the metabolism of sugar to prevent diabetes; can improve academic performance; and increases safety and effectiveness in the workplace. Additionally, it can reduce the risk of chronic diseases. Getting enough sleep on a daily basis can improve quality of life and overall health.

Consequences of Insufficient Sleep

A lack of sleep can have both short- and long-term consequences. Insufficient sleep impacts everything from interpersonal relationships to work productivity to memory function. Sleepiness is a factor in injuries and accidents, and driving while drowsy is comparable to driving while under the influence of alcohol. In fact, being awake for 18 hours straight causes a person to drive as if having a blood alcohol level of .05; being awake for 24 hours is like driving with a blood alcohol level of .10 (.08 is the legal drinking limit in most states).

Perhaps the most significant side effect of chronic lack of sleep is an increased risk for chronic diseases and health problems. Poor sleep has been linked to obesity, diabetes, heart disease and hypertension, mood disorders, reduced immune function and decreased life expectancy.

Sleep and Appetite

The negative impact sleep has on chronic diseases and weight gain can be partially explained by the link between sleep and hormone regulation. During sleep the body produces hormones to help control appetite, energy metabolism and glucose processing. Poor sleep is linked to increased insulin production after meals, decreased levels of leptin and increased levels of ghrelin. These three hormones perform the functions of regulating glucose, promoting fat storage, alerting the brain that it's had enough food, and stimulating appetite. The over- and underproduction of these hormones is detrimental to health and weight control.

Sleep Recommendations

Research into the amount of sleep needed to experience the benefits of adequate rest led to a joint consensus statement from the American Academy of Sleep Medicine and the Sleep Research Society. According to these groups, adults (18+ years) should regularly sleep seven or more hours every night for optimal health. Healthy sleep is commonly measured by duration, but also requires good quality, appropriate timing and regularity and the absence of sleep disturbances and disorders. Additionally, nine or more hours of sleep might be necessary for young adults, people with illnesses or those recovering from partial or total sleep deprivation.

The amount of sleep kids need varies greatly from that of adults. A consensus statement of the American Academy of Sleep Medicine recommends the following:

Age
Daily Sleep Needs
Infants
4–12 months
12–16 hours
Children
1–2 years
11–14 hours
Children
3–5 years
10–13 hours
Children
6–12 years
9–12 hours
Teenagers
13–18 years
8–10 hours

Getting adequate sleep during adolescence is a subject gaining attention nationally. According to the Centers for Disease Control and Prevention and the American Academy of Pediatrics, nearly 70 percent of teens sleep seven hours or less on a school night, despite the recommendation to sleep for eight to 10 hours per night. The phenomenon is so severe that later start times are recommended for high school to better match adolescents' biological clocks. Lack of sleep often contributes to skipped breakfast, a meal that is particularly important for growth and mental function in adolescents.

How to Improve Sleep

Most experts agree that there are simple steps to take to start getting better sleep:

- Reduce caffeine consumption after 12 p.m.
- Get regular physical activity, but not within three hours of bedtime
- Sleep in a relaxing environment, free of screens

These are general guidelines for improving sleep; interventions should be specific to an individual's sleep health needs. A problem for one person may not be an issue for another, so it's important to identify unique sleep habits and problems and to get help from outside sources if necessary.

Together with physical activity and healthy eating, sleep habits lay the foundation for a lifetime of overall health and wellness. Adequate rest reduces disease risk, helps create safer roads and workplaces, and contributes to an improved quality of life.

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