

## Benefits from a Good Night's Sleep

**Healthy Brain Function and Emotional Wellbeing.** Sleep helps your brain work properly. While you're sleeping, your brain is preparing for the next day. It's forming new pathways to help you learn and remember information.

The Freeman · 18 Jul 2022 · 23 · Nih.gov)

Studies show that a good night's sleep improves learning. Whether you're learning math, how to play the piano, how to perfect your golf swing, or how to drive a car, sleep helps enhance your learning and problem-solving skills. Sleep also helps you pay attention, make decisions, and be creative.



Studies also show that sleep deficiency alters activity in some parts of the brain. If you are sleep-deficient, you may have trouble making decisions, solving problems, controlling your emotions and behavior, and coping with change. Sleep deficiency also has been linked to depression, suicide, and risky behavior.

Sleep-deficient children and teens may have problems getting along with others. They may feel angry and impulsive, have mood swings, feel sad or depressed, or lack motivation. They may also have problems paying attention, and they may get lower grades at school and feel stressed.

**Overall Physical Health.** Sleep plays an important role in your physical health. For example, sleep is involved in healing and repair of your heart and blood vessels. Habitual sleep deficiency is linked to an increased risk of heart disease, kidney disease, high blood pressure, diabetes, and stroke.

Sleep deficiency also increases the risk of obesity. For example, one study of teenagers showed that with each hour of sleep lost, the odds of becoming obese went up. Sleep deficiency

increases the risk of obesity in other age groups as well.

Sleep helps maintain a healthy balance of the hormones that make you feel hungry (ghrelin) or full (leptin). When you don't get enough sleep, your level of ghrelin goes up and your level of leptin goes down. This makes you feel hungrier than when you're well-rested.

Sleep also affects how your body reacts to insulin, the hormone that controls your blood glucose (sugar) level. Sleep deficiency results in a higher than normal blood sugar level, which may increase your risk for diabetes.

Sleep also supports healthy growth and development. Deep sleep triggers the body to release the hormone that promotes normal growth in children and teens. This hormone also boosts muscle mass and helps repair cells and tissues in children, teens, and adults. Sleep also plays a role in puberty and fertility.

Your immune system relies on sleep to stay healthy. This system defends your body against foreign or harmful substances. Habitual sleep deficiency can change the way in which your immune system responds. For example, if you are sleep-deficient, you may have trouble fighting common infections.

**Better Daytime Performance and Safety.**

Getting enough quality sleep at the right times helps you function well throughout the day. People who are sleepdeficient are less productive at work and at school. They take longer to finish tasks, have a slower reaction time, and make more mistakes.

After several nights of losing sleep – even a loss of just one to two hours per night – your ability to function suffers as if you haven't slept at all for a day or two.

Lack of sleep also may lead to micro-sleep. Microsleep refers to brief moments of sleep that occur when you're normally awake. You can't control micro-sleep, and you might not be aware of it. For example, have you ever driven somewhere and then not remembered part of the trip? If so, you may have experienced micro-sleep.

Even if you're not driving, micro-sleep can affect how you function. If you're listening to a lecture, for example, you might miss some of the information or feel like you don't understand the point. In reality, though, you may have slept through part of the lecture and not been aware of it.

Some people aren't aware of the risks of sleep deficiency. In fact, they may not even realize that they're sleep-deficient. Even with limited or poor-quality sleep, they may still think that they can function well.

For example, drowsy drivers may feel capable of driving. Yet, studies show that sleep deficiency harms your driving ability as much as, or more than, being drunk. It's estimated that driver sleepiness is a factor in numerous car accidents each year, resulting in deaths.

Drivers aren't the only ones affected by sleep deficiency. It can affect people in all lines of work, including health care workers, pilots, students, lawyers, mechanics, and assembly line workers.

As a result, sleep deficiency is not only harmful on a personal level, but it also can cause large-scale damage. For example, sleep deficiency has played a role in human errors linked to tragic accidents, such as nuclear reactor meltdowns, running aground of large ships, and aviation accidents. (nhlbi.