

# Is sleep important?

By: Christina Hill

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(Image: emedicinehealth)

Sleep is inevitable and necessary in order to function efficiently throughout the day. Lack of sleep can cause mental and physical breakdowns and your overall health will decrease.

There is no single answer to why humans sleep, however there are major effects when people don't.

“A network of microscopic fluid-filled channels in rats that clears waste chemicals from the brain,” said Prof Nedergaard from the University of Rochester Medical Center. “This process occurs mostly when the brain is shut off.”[Why do we sleep?]

The brain makes new connections everyday due to new experiences. While sleep is taking place the brain is cleaning out waste and strengthening itself to process the new connections that were made throughout the day. All in all sleep assist the brain in recovery.

## **Is six hours of sleep enough sleep?**

On average people sleep about 5 to 7 hours a day which can lead to chronic sleep deprivation. Studies report that almost half of the country's workers are getting less than six hours of sleep a night. There is less than 3% of the human population that has a gene that allows them to function productively on six hours of sleep yet for the remaining 97% of the population six hours of sleep is nowhere near enough sleep, according to researchers at the University of California, San Francisco.

The main factor that determines the appropriate amount of sleep a person needs each night is age. Children and teens need about 9 to 11 hours of sleep per night and adults need between 7 to 9 hours of sleep. It is important to get the recommended hours of sleep to avoid health issues such as prediabetes, hypertension and cardiovascular problems. [Dr.Kingman Strohl at University Hospitals Case Medical Center]

## **Sleep Cycles**

A team at the ATR Computational Neuroscience Laboratories in Kyoto in Japan created a dream reading machine. This is one of the very first steps towards understanding dreaming. In the experiment researchers found a correlation between brain activity and dreams. This activity is better known as REM sleep.

During REM sleep the brain's activity is similar to the activity when awake. In Non REM sleep brain waves are slower these waves are also known as theta and delta waves. In deep sleep your body is repairing itself and reenergizing. Having different stages of sleep is as important as the amount of hours of sleep one's body needs. REM sleep strengthens the circuits involving the other eye, suggesting that the brain uses sleep to adjust to changing inputs.[7 Weird Facts About Balance]

## **Sleep Deprivation**

When a person is not getting the right amount of sleep they may become sleep deprived. Sleep deprivation does not always appear as being drowsy. It may appear as having a hard time waking up in the morning, falling asleep while trying to focus your attention or needing a nap to complete the day. This lack of sleep has similar effects to being drunk on the human body. These

effects include impaired brain activity, skin aging, decreased sex drive or difficulties managing emotions.[Sleep Needs]

“Plenty of evidence suggest that losing sleep can cause problems with memory, particularly working memory, the process that allows people to hold information in an easily accessible way while working out a problem,” said Stephanie Pappas the author of *Why Do We Sleep*.

Sleep deprivation is directly linked to weight gain. Ghrelin is a hormone in the human body that stimulates appetite and Leptin is another hormone that signals the brain when the person is full. When there is lack of sleep brain activities are impaired, ghrelin levels increase which sends signals to the brain that the person is hungry and leptin levels decrease which leads to never feeling satisfied or full.

## **What’s distracting your sleep?**

“Those who read electronic books before they went to bed took longer to get to sleep, had reduced levels of melatonin(a hormone that regulates the body’s internal body clock) and were less alert in the morning,” based on a study led by Professor Charles Czeisler of Harvard Medical school. Mobile devices increase distraction which cause loss of sleep.

A sleep disturbance may also be an effect of the medications being taken. Biologically humans are like clockwork so if there's no regular sleeping schedule it will be difficult to get the right amount of hours of sleep. Other factors that may be impacting your sleep may be ingesting lots of caffeine or alcohol, stress, not exercising and even the environment your sleeping in. Shutting out outside factors may be just what you need to get a good night's sleep.