



**Medical
Blueprints**

SLEEP DEBT: CAN YOU PAY IT OFF? REPORT #3017

BACKGROUND: Sleep deprivation is a term that refers to getting less than the needed amount of sleep each night. For adults, sleep should range from seven to nine hours of sleep per night, while children and teens need even more. Sleep deprivation affects around one-third of American adults. Acute sleep deprivation refers to a short period, a few days or less, when a person has a significant reduction in their sleep time. Chronic sleep deprivation, also known as insufficient sleep syndrome, is defined by the American Academy of Sleep Medicine as reduced sleep that persists for three months or longer. And, chronic sleep deficiency, or insufficient sleep, can describe ongoing sleep deprivation as well as poor sleep that occurs because of sleep fragmentation or other disruptions. While the short-term impacts are more noticeable, chronic sleep deprivation can increase the long-term risk of physical and mental health problems.

(Source: <https://www.sleepfoundation.org/sleep-deprivation>)

WAYS TO AVOID SLEEP DEBT: Getting sufficient sleep improves cognitive performance and allows you to be more focused and efficient during the day. There are ways for improving sleep hygiene to reduce the chances of accumulating sleep debt. Maintaining a set sleep schedule allows you to prioritize sleep and make sure you're getting sufficient rest. If you need to change your sleep schedule, do it slowly with small increments like 30 minutes. Having a nightly routine allows your body to relax and prepare for quality sleep. Set an alarm for 30 minutes to an hour before bed to remind you to dim the lights, turn off electronics, and find a relaxing activity. Rethink any daytime activities that may be contributing to sleep issues. Make sure you're getting enough daylight and exercise during the day, not drinking caffeine too close to bedtime, and restricting activities in your bed to just sleep and sex. Finally, optimize your bedroom environment for sleep. Keep the temperature comfortable for sleeping (around 65°F), block out any lights or noises that might keep you awake, and consider replacing your mattress, pillow, or sheets if they're getting older or uncomfortable.

(Source: <https://www.sleepfoundation.org/how-sleep-works/sleep-debt-and-catch-up-sleep>)

RESEARCH LINKS SLEEP LOSS AND INFLAMMATION: A new study found that chronic sleep deprivation increased production of immune cells linked to inflammation while also altering the immune cells' DNA. "Not only were the number of immune cells elevated, but they may be wired and programmed in a different way at the end of the six weeks of sleep restriction," said study coauthor Cameron McAlpine, an assistant professor of cardiology and neuroscience at the Icahn School of Medicine at Mount Sinai in New York City. Participants wore wrist accelerometers to track their sleep quality and duration over each 24-hour period. During the first six weeks, each one slept for the seven to eight hours that the CDC recommends for adults. The following six weeks, they reduced their sleep by 90 minutes each night. At the end of each cycle, blood was drawn and analyzed for immune cell reactivity. No negative changes were found in people who got adequate amounts of sleep. However, after the six weeks with sleep restriction, blood tests found an increase in a certain type of immune cell. Experts say a certain amount of immune system inflammation is necessary for the body to fight infections and heal wounds, but an overactive immune system can be harmful and raise the risk of autoimmune disorders and chronic disease.

(Source: <https://www.cnn.com/2022/09/27/health/sleep-loss-harms-immune-system-wellness>)

✉ For More Information, Contact:

www.sleepfoundation.org