

# Sleep deprivation: causes, symptoms, and treatment

[Health & Medicine](#), [Mental Health](#)



Insufficient sleep is one of the independent risk factors leading to obesity due to poor diets in adolescence as it is a major issue worldwide. Countries such as New Zealand have a ratio of one to three children of overweight or obese, according to the health survey of New Zealand. Given the difficulties treating overweight people even as adults, prevention at an early age is considered the best option in the long-term, such as “ diet changes and physical activity behaviors”. Appetite regulation, energy stability, and choice of food are influenced by the reduction in sleep duration. In observational research, by using variables such as physical activity and screen time, it was shown that lack of sleep is an “ independent factor of poor nutritional choices”. This event concludes that sleep duration has a negative correlation with the quality of diets.

Another study was conducted with both subjective and objective measures over five days for a two to three-hour decrease each night in sleep time to report intake forms of food with high sugar content in their diets. Results have shown that there was an “ increased amount of energy content consumed by seven to twenty-one percent,” once the sleep deprivation accrued, which is a substantial quantity daily. Obesity is often linked to liking foods with a heavy amount of energy, different eating habits, and emotional state of individuals. In an “ anecdotally viewpoint, caregivers report that they have a tendency to treat their kid differently by satisfying them with treats”. This practice is associated with whenever they feel emotionally down or when they accomplish a goal, influencing food intake. The quality and amount of sleep impact an individual’s psychological state of mind. Adults need an average of seven to nine hours of sleep daily to function properly

Sleep quality is determined by a role in sleep habits influenced by their mental well being.

By conducting a cross-sectional study among medical students of a university, data collected from the self-report survey that assesses the sleep quality over a month. Out of the 153 students of the opinion poll, the “ average sleep duration was 4. 5 to 6. 9 hours”. The student’s time a person takes to transition to full sleep mode was reported to 57. 5% of 10-30 minutes, while 11. 8 % woke up nightly, 15% of students experienced nightmares, and the remaining entered deep sleep right away. The poor quality of sleep was notably associated with sleep latency, “ daytime sleepiness, academic performance, and frequency of nocturnal awakenings due to living conditions or physical health”. Studies tested on sleep health indicated that one-third of adults suffer from sleep issues because of the inadequate amount of sleep. This study also indicates that university students who are female and is also a university student are proven that women tend to have a “ longer average sleep time but poor sleep quality” than men. From a survey of 1, 845 students, there were 27% of people who experiences at least one sleep related problem or sleep disorder; which includes 12% for insomnia, 8% for periodic limb movement disorder, 7% circadian rhythm sleep disorder, 4% obstructive sleep apnea, and 4% hypersomnia.

Obstructive sleep apnea, a chronic condition where breathing repeatedly stops and starts or in shallow breaths has a correlation to sleepiness.

Lifestyle factors such as poor diet, alcohol consumption, and facing

challenges involved in family and relationships affect them mentally. Emotional stress is known for triggering insomnia, commonalities of increased social problems, and also various somatic or psychiatric disorders all linked to poor sleep. The consequences from sleep deprivation which results in learning impediment, decreasing grade point averages, and a higher risk of academic failure. Daytime sleepiness are experienced by “college students with fifty percent compared to thirty-six percent of adolescents and adults”. Evidence has shown that there is an association between the student’s sleep and grade point average; students who had GPAs of 3.24 obtained 9 hours of longer and better sleep while sleepers with 6 hours or less had GPAs of 2.74. Inadequate amount of sleep can limit the amount of REM sleep or slow-wave sleep which links to visual perceptual learning and memory. REM sleep typically occurs every 90 to 120 minutes, approximately 4 to 5 times normally each day, with each time period grows longer lasting until sunrise. Some students who are awake in the early mornings may not attain “the last 1-2 REM periods”.

The brain strengthens and integrates memory, in which “adequate and quality sleep blocks concentration difficulties” when the body is at rest. Sleep also allows the brain to increase comprehension skills and retention abilities by processing new knowledge and experiences. Students are more susceptible to have a shorter amount of sleep compared to the general population due to mental anxiety, constant stress, and academic and social demands. Schleider and Günter also demonstrated that “54.1% of students in Germany reported that learning and working problems” is associated with the lack of quality sleep. It was proven that students with low academic

performance often spend more hours each night or “ pull an all-nighter,” sacrificing their sleep time in a bid to improve their grades. This repetitive process creates a negative cycle where insufficient sleep is associated with mental health by factors such as “ age, gender, and lifestyle”. In another concept, twenty-seven subjects were tested in an episodic memorization, that involves “ viewing a series of pictures with a recognition check forty-eight hours later”. After the thirty-five hours of constant sleep deprivation, there was a significant difference in memory performance compared to the subjects who are non-sleep deprived with a difference of twenty percent.