

Better sleep, a simple way to reduce caloric intake

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A randomized clinical study shows that in overweight people, a slight increase in sleep duration leads to a reduction in caloric intake and weight loss.

SLEEP PROBLEMS

In our modern hyper-connected culture, where it is possible to work or play at any time of the day or night, sleeping is often perceived as a waste of time. In Canada, it is estimated that one third of adults aged 18-64 sleep insufficiently (less than 7 hours per night) or have poor quality sleep (1).

Yet, even though technology has changed a lot over the past decades, our physiological needs remain the same and it is absolutely essential to sleep well to stay healthy. For example, several studies have clearly shown that lack of sleep is closely correlated with an increased risk of developing a host of health problems, both from a physical point of view (obesity, type 2 diabetes, cardiovascular disease, cancers, accidents) and psychological (irritability, depression).

RISK OF OVERWEIGHT

Historically, people who slept a lot were considered lazy and more at risk of being overweight since they expend less energy while sleeping than while awake. We now know that this perception was false and even completely the opposite of reality: countless studies have in fact shown that it is exactly the opposite phenomenon that occurs, that is to say that they are rather people who sleep insufficiently who are at higher risk of being overweight and obese.

The factors responsible for this overweight resulting from lack of sleep are still poorly understood, but it is likely that an increase in energy intake during the waking period plays an important role. For example, studies report that in healthy individuals, a lack of sleep is associated with a higher caloric intake, around 250 to 350 additional calories per day, and this, without additional energy expenditure (2).

Poor sleep therefore seems to disrupt the energy balance of the body and this calorie surplus can certainly contribute to the higher incidence of overweight in people who sleep insufficiently.

MORE SLEEP, FEWER CALORIES

To further examine the relationship between sleep and calorie intake, researchers recruited participants (21-40 years old) who were overweight (average BMI of 28) and who reported sleeping less than six and a half hours per night in the last six months.



The volunteers were randomly separated into two groups, a control group, with no changes to their sleep routine, and an intervention group, where participants were counseled on ways to improve their sleep hygiene in order to achieve to sleep 8 hours a night: go to bed and get up at the same time every day, including weekends, favor a dark and temperate room, avoid caffeinated beverages in the evening, exercise during the day and avoid screens just before sleeping.

Over a period of two weeks, the study results indicate that this advice had a measurable impact on the sleep of the volunteers, with an average increase of 1.5 hours of sleep per night compared to the control group (3).

This increase in sleep duration translated into a significant decrease in daily calorie intake by the participants, averaging 270 calories per day less than the energy consumption by the control group.

These differences had an impact on body weight: while participants in the control group gained an average of 0.39 kg during the two weeks of the study, those in the intervention group on the contrary lost 0.48 kg, resulting in a total difference of 0.87 kg between the two groups. Such a difference in just two weeks is remarkable.

Better sleep hygiene therefore allows better control of caloric intake and body weight. As the old saying goes, who sleeps dines!

- (1) Chaput JP et al. Duration and quality of sleep among Canadians aged 18 to 79. *Health Rep.* 2017 ; 28 : 28-33.
- (2) Al Khatib HK et al. The effects of partial sleep deprivation on energy balance: a systematic review and meta-analysis. *Eur. J. Clin. Nutr.* 2017 ; 71 : 614-624.
- (3) Tasali E et al. Effect of sleep extension on objectively assessed energy intake among adults with overweight in real-life settings: a randomized clinical trial. *JAMA Intern. Med.* (published on-line, February 2022)