

Connection Between Sleep And Obesity Is Enigmatic



By Ruth Kava — September 6, 2017



Let Sleeping Dogs Lie

OK, sleep is important — we get that. None of us functions very well when seriously sleep-deprived. But other than that, what health implications might there be if we're not getting adequate zzzz's? Some studies have shown an association between sleep deprivation and consumption of snack foods, as we described [here](#) [1], the implication being that sleepiness is a risk factor for obesity. A recent [study](#) [2] further investigated this supposed connection.

Writing in *PLOS One*, Dr. Gregory D. M. Potter and colleagues analyzed data from the British National Diet and Nutrition Survey to assess the possible connection between sleep duration, risk of obesity and various metabolic parameters. The sources of the data were about 1600 adults between the ages of 19 and 65 years who had responded to questionnaires about sleep duration, had completed 3 or 4 days of food diaries, and had been weighed and measured. Blood samples were taken, height, weight and waist circumference were recorded.

The investigators found a statistically significant negative association between sleep duration and BMI (Body Mass Index), i.e. the less sleep, the higher the BMI, and a similar association with waist circumference. Thus, these data were in line with those of previous studies. In addition, the longer the average sleep the higher the level of HDL ("good") cholesterol. Further, longer sleep was also negatively correlated with levels of glycated hemoglobin (HbA1c), an index of long-term blood glucose control, as well as with levels of C-reactive protein, an index of inflammation. When weekend and during the week sleep duration were averaged, both men and women reported sleeping about 7 hours per night.

However, neither of these latter measures' association was statistically significant.

Based on participants' food diaries, however, there was no significant association between sleep duration and dietary measures, and thus these data didn't support the sleep deprivation — snacking hypothesis.

Of course, the sleep durations were all self-reported, and thus might have been inaccurate to an unknown degree. In addition, the participants' napping habits were not reported, only the nighttime sleep duration was assessed. So, if napping played a large role in a person's sleep quantity, he or she might have seemed to be more sleep-deprived than was actually the case. Further, there was no substantiated measure of participants' physical activity. A sleep-deprived person might have less inclination to engage in exercise, and that might be the key to the increased level of obesity in those people.

What seems to be clear from this study is the beneficial association between more sleep and positive metabolic parameters, and this in and of itself would be a good reason to avoid sleep deprivation.

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[1] <https://www.acsh.org/news/2016/03/17/sleepless-nights-stimulate-junk-food-desires>

[2] <https://doi.org/10.1371/journal.pone.0182195>