Sleepless Nights Stimulate Junk Food Desires

By ACSH Staff — March 17, 2016

Midnight snack via Shutterstock

Ever found yourself burning the midnight oil or needlessly awake, while munching a late-night snack like ice cream or potato chips? If so, you're not alone, and a recent study may now explain such sleep-deprived snacking.

In years past, the United States topped the list as the fattest country in the world. In addition, the Centers for Disease Control said that around one-third of American adults suffer from obesity, and just last month it added that about one-third of American adults don't get enough sleep.

A recent study appearing in the journal SLEEP shows that sleep deprivation can alter the chemistry in our brains, causing us to seek out something pleasurable. And at night, that delight is frequently food, which tends to be of the rewarding, high-calorie variety. It's the same brain chemistry that takes place when someone smokes marijuana.

"Evidence from laboratory and epidemiological studies has started to consistently associate insufficient sleep with an increased risk of obesity," Eric Hanlon, the author of the recent study, and research associate at the University of Chicago, told CNN.

For their study, Hanlon's team tested two groups of young adults: one group had four "normal," 8.5-hour nights of sleep; the other had four "bad," 4.5-hour nights of sleep.

The two groups were administered healthy meals each day. But on the last day, the groups were allowed to follow their healthy meal with a snack binge. This included what the researchers considered "highly palatable, rewarding snacks" such as cookies and chips.

The "bad" sleep group ended up eating many more unhealthy snacks than the normal group, gulping down more carbs and double the protein and fat.

Hanlon's team found that inadequate sleep influenced the endocannabinoid levels in the brains of
those in the sleep-deprived group. Endocannabinoids cause people to feel abnormally hungry and eat more than is needed. Same holds true when a person gets high smoking pot, and has the "munchies."

Hanlon's team found that sleep shortage also causes sleep-deprived people to eat more than is required, powered by the energy produced during their extra waking hours.

"The increase in endocannabinoid concentration occurred at the same time people reported feeling hungrier," says Hanlon. "It was definitely surprising to see an increase."

This is not the first time researchers have linked sleep deprivation to weight gain. A 2013 study [7] found that sleep-deprived individuals tend to eat larger portion sizes and make unhealthy food choices. The study also saw these people's ghrelin -- aka the "hunger hormone" -- blood levels increase with lack of sleep.

Other studies have also shown that poor sleep habits in general can affect people's food intake. A Northwestern University study [8] found that people who went to bed late and woke up late ended up eating almost 250 calories more per day than those who slept and woke up early.

As Frank Scheer, from Brigham and Women's Hospital's Medical Chronobiology Program, told CNN, "uncovering and understanding the respective influence of these different factors" may eventually help rid sleep-deprived people of their unhealthy cravings.