

# The Importance of Sleep

The lack of proper amounts of sleep, and lack of a good diet, are two of the most damaging forms of stress on the body, leading to many health problems. Getting good sleep means getting at least five hours of uninterrupted sleep in order for the brain to reach the deepest levels of electrical activity known as delta waves. Without a nightly recharge of these brain waves, a person awakens feeling like they never went to sleep. Whether the pattern is waking up at 3 AM every night and not being able to go back to sleep, or falling asleep and waking up every two or three hours, if the five to six-hour limit of sleeping is not reached, brain function cannot be optimal. So, resolving sleep issues is important for this reason alone.

Sleep is also a time when metabolic functions change and slow down. Some of these metabolic changes help regulate appetite. Appetite is controlled by the hormones ghrelin and leptin. Leptin is stored in and released from fat tissue and our gut will send a message to our brain if we are full and satisfied, and it inhibits appetite and increases energy. Ghrelin, on the other hand, is a hormone made in the stomach which increases appetite and lowers energy levels. Studies have shown that sleep deprivation causes an almost 20 percent decline in leptin and an increase in ghrelin levels of as much as 28 percent. This means that lack of sleep makes people hungrier. Another study showed that less sleep correlated with higher BMI, possibly due to the fact that hungrier people eat more.

Another important effect of not sleeping is a decrease in immunity. Studies show that people who are deprived of sleep from 3 AM-7AM experience a 30% drop in immunity and a 50% drop in immune function from 10pm-3 AM. Not sleeping one night could cause a drop in your immunity for up to 4 weeks. So, it's very important to get regular sleep every day.

Resolving problems with the cortisol and insulin curves is crucial for stopping or reducing the symptoms of SMI. This leads to improvements in metabolic balance connected to appetite, weight gain, and insulin levels, and these changes then further augment the improvements in the sleep cycle. As your stress gets under control, the hypoglycemia symptoms should go away unless you have a candida (yeast overgrowth).

## References:

Shahrad Taheri,<sup>1,2</sup> Ling Lin,<sup>1</sup> Diane Austin,<sup>2</sup> Terry Young,<sup>2</sup> and Emmanuel Mignot <sup>1,\*</sup>Short Sleep Duration Is Associated with Reduced Leptin, Elevated Ghrelin, and Increased Body Mass Index. *PLoS Med.* 2004 Dec; 1(3): e62. Published online 2004 Dec 7. doi: 10.1371/journal.pmed.0010062

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