

# TIRED VS. HUNGRY

## THE SCIENCE OF SNOOZE AND HOW IT CAN HELP YOU BEAT THE MUNCHIES.

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If you find yourself thinking 'I'm starving!' consider the possibility that you may be starved of sleep rather than food.

The average Australian and New Zealander accumulates two weeks of sleep loss a year due to the everincreasing demands of work, crying babies or simply being caught up in 21stcentury clamour. More than 10 per cent of Americans suffer from chronic insomnia and 25 per cent report inadequate sleep due to one cause or another. Meanwhile, a third of people surveyed in the UK reported episodes of insomnia, and four times as many poor sleepers disclosed having relationship difficulties as did good sleepers.

But why would this make me hungry? You might ask. There are many reasons:

1. When we lack sleep, we produce *more cortisol* (the stress hormone), which stimulates hunger and drives the body to lay down visceral adipose tissue, i.e. the kind of fat that accumulates around your organs and can cause serious health problems if there's too much of it.
2. We produce *less leptin* (the satiety hormone made in fat cells), which leads to feeling hungrier and craving high fat and high sugarcontaining foods throughout the day. It also means we don't feel as satisfied after we've eaten.



3. We produce *more ghrelin* (the appetitestimulating hormone made in the gastrointestinal tract), which makes us feel hungry all day long. Men produce more ghrelin in response to sleep deprivation than do women. Research at the University of Chicago, published in *Annals of Internal Medicine* 2004, found that male volunteers who slept four hours a night for two consecutive nights had a 28 per cent increase in ghrelin and an 18 per cent reduction in leptin. This translated into feeling 24 per cent more hungry, eating more junk food and not feeling satisfied after meals.
4. In contrast, when women are sleepdeprived, they make *less GLP1* (glucagonlike peptide1), a gut hormone that acts on the brain to induce satiety and reduce the desire for food – therefore, less sleep means greater hunger.  
Not only that, we feel tired, more moody and have less energy to exercise – and often that means we feel we

## #cleansleeping

A healthy diet will help you snooze, but no amount of healthy eating will undo the damage done by poor sleep habits. Also known as ‘sleep hygiene’, good sleeping habits are about setting yourself up for a good night’s sleep. Take the following steps

1. Be consistent with what time you go to bed and what time you get up. Go to sleep and wake up at roughly the same time every day, even on weekends and holidays. Creating a regular rhythm makes us feel better and improves the overall functioning of the body.
2. Eat when you’re hungry and at the same time try to finish your last meal two to three hours before bedtime. If you find that you get hungry closer to bedtime, have a handful of almonds or one of the other tryptophan-containing foods listed above.

3. Create a winddown routine. Engage in the same set of rituals in the same order every night as you prepare for bed. This tells your brain to prepare for sleep. Winddown rituals can include:
  - dimming the lights — this will stimulate melatonin release
  - lighting a few candles
  - drinking a cup of herbal tea
  - brushing your teeth
  - laying out your exercise clothes for the next morning
  - reflecting on what you feel grateful for
  - meditating
  - listening to quiet, slow, soporific music that automatically switches off after half an hour or so
  - doing whatever calms you and signifies that the day is coming to a close.



**WE HAVE MEASURABLY LESS WILLPOWER AND LESS SELFCOMPASSION AND WE ARE MORE VULNERABLE TO EMOTIONAL EATING AND LESS ABLE TO EAT MINDFULLY.**

need food to prop us up and boost our energy levels. We have measurably less willpower and less selfcompassion and we are more vulnerable to emotional eating and less able to eat mindfully. Food actually appears more tempting because, after sleeplessness, the brain’s sensitivity to the pleasureinducing properties of food is heightened. We are also more likely to want to eat in response to seeing images of food.

To date the largest and longest study on adult sleep habits and weight is the Nurses’ Health Study, which followed 68 000 middleaged American women for up to 16 years. Those who slept five hours or less each

### You booze, you lose

Alcohol initially has a relaxant and sedative effect but it is quickly metabolised and, about four to five hours later, produces rebound wakefulness. Alcohol acts as a soporific in the acute intoxication stage, but it diminishes the quality of sleep and produces longer and more severe episodes of hypoxia (oxygen deprivation) in people with sleep apnoea.

night were 15 per cent more likely to become obese than those who slept seven hours a night. Similarly, a study on younger nurses showed that the more rotating night shifts they did (which disrupted their sleep patterns), the more likely they were to develop diabetes and obesity. Several other studies have also shown that people who sleep less than five hours a night triple their likelihood of developing Type 2 diabetes.

Not only that, sleep is absolutely essential for every aspect of physical, psychological and emotional health. Sleep deprivation negatively influences gene function, immunity to disease and tissue repair, and several studies have shown that when people are sleepdeprived they produce fewer antibodies in response to vaccines against flu, hepatitis B and other infectious diseases – not ideal, seeing as we’re coming into flu season.

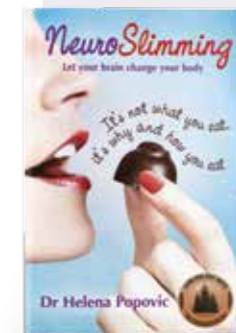
### Getting enough zzz

Everyone is different in their sleep requirements at various stages throughout their lives. Most people need seven to nine hours. Only three per cent of the population have the ‘short sleep gene’ that allows them to get away with under five hours a night. Many people *think* they can function adequately on less than seven hours but, when they are tested, the

results paint a very different picture. Conversely, consistently sleeping more than nine hours a night is also associated with an increased risk of obesity, diabetes, heart disease, cancer and headaches. Scientists are still trying to unravel why this is the case. This does not apply if you are unwell and require extra sleep to recover from an illness.

### Snooze foods, and what to avoid.

- Avoid caffeine, nicotine and alcohol at least four to six hours before going to bed. Certain food additives, colourings, flavourings and MSG can also act as stimulants and contribute to feeling wired and unable to get to asleep.
- Foods containing tyrosine, tyramine (the breakdown product of tyrosine) and glutamate all increase alertness and can also interfere with sleep. Foods containing these three amino acids are best avoided in the evening. They include processed meats like salami and chorizo, seaweed, peanuts, cheddar cheese, overripe fruit, gelatin and soy protein.
- Conversely, foods that are high in tryptophan, such as almonds, hazelnuts, milk, eggs, skinless poultry, fish, bananas, oatmeal, mushrooms and leafy green vegetables are natural sleep promoters. Including one or several of these foods at dinnertime may be helpful. Tryptophan is the amino acid from which melatonin is produced. Melatonin is the hormone that induces sleep. Melatonin follows a circadian rhythm and is released in the brain in response to darkness. 📌



This is an edited extract *NeuroSlimming* by Dr Helena Popovic, published by Viking (January 2017), \$35.00