

October Weighing In 2015

Are you Sleeping Enough?

One of the questions we ask when you come to the office is how well are you sleeping. Most people say they sleep very well. Very few tell us that they're actually having a struggle. However, after people have been in the program a couple of months, an increasing number of them come in and say that they wish they would have been more honest and told me they were actually lacking in the sleep department!

There are an ever-increasing number of studies finding a direct connection between sleep deprivation and weight gain. It's very difficult for us at the Weigh Station to deny this cause-and-effect relationship that we see in patients on a day-to-day basis. Patients who get at least 7 hours per night have a tendency to have less body fat than those that don't. There are, of course, other factors that determine who becomes overweight and who does not. For example, there is the obvious relationship between your food intake and your amount of exercise as well as your gene pool.

We all recognize that if you have obesity in your family, your risk of you being obese is higher than someone where there is no obesity. But sleep is a more integral part of the process than most patients realize. In a study done between 1982 and 1984 involving 9000 people, researchers found that the people who spend an average of 6 hours or less per night of sleep were 27% more likely to be overweight than people who got 7 to 9 of sleep. Those averaging in the range of 4 to 5 hours sleep per night were 73% more likely to be overweight or obese!!

Many patients who are sleep deprived don't even recognize it. Many of us think there is quite a bit of latitude in the amount of sleep we need for good health and optimal brain usage. However, researchers disagree. They have set 7 hours as a minimum for all except for the very young and the very old. There are several ways to tell whether or not you are becoming sleep deprived. One is you are drowsy during the good part of the day, especially in the morning. Another is that you fall asleep at night in a couple of minutes. Non-sleep deprived people take about 15 to 20 minutes to fall asleep at night.

For the sleep-deprived, there are obvious tie-ins to your obesity and your inability to lose weight. Chronic sleepiness makes physical activity fairly unlikely. There are also a number of things going on in your body that would contribute to your weight gain. The most common side effect of sleep deprivation is a hormonal disturbance specifically involving hormones of Leptin and ghrelin. When you don't get enough sleep, your body has too little Leptin and too much ghrelin.

Leptin is an intricate hormone involved in the regulation of your appetite, your calorie burning and your metabolism. Leptin is that chemical that tells your brain when you're full, when it starts burning up calories, and when it should create energy for your body. Usually it triggers a series of messengers and responses that start in the hypothalamus and end in the thyroid gland. (The thyroid gland controls way your body stores and uses energy). During sleep, Leptin levels increase, telling your brain you have plenty of energy for the time being and that there's no need to trigger the feeling of hunger or to burn calories. But when you don't get enough sleep, there is too little leptin in your body which throughout multiple series of steps makes your brain think you don't have enough energy for your needs.

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So your brain tells you you're hungry, even though you don't actually need food at that time. It takes steps to store calories you eat as fat so you will have enough energy the next time you really need it. As you can see, the decrease in leptin is brought about by your sleep deprivation and can result in a constant feeling of hunger and a general slowdown of your metabolism. Much to their chagrin, many people wake up hungry around 2 or 3 a.m. and end up raiding the refrigerator. This is called nighttime eating syndrome.

The other hormone found to be related to sleep and weight is ghrelin. The main purpose of ghrelin is basically to extract the total opposite of leptin; it tells your brain when you need to eat, and when it should stop burning calories and when it should start to store fat. During sleep, your levels of ghrelin decrease because sleep requires far less energy than being awake does. People who don't sleep enough end up with too much ghrelin in their system, so the body thinks it's hungry and it needs much more food and calories. It stops burning the calories because it thinks there's a shortage. Recently, scientists have hypothesized that these hormonal changes that occur during sleep are the result of a revolutionary need that took place to help humans to survive on food shortages like during wintertime. Traditionally, winters have long nights with little food and summer had short nights with abundance of food. During the shorter nights we needed less sleep, less leptin, and more ghrelin made the body eat as much as possible to save the calories for the long winters ahead. With winter came more sleep, meaning more leptin, less ghrelin, and the body had time to burn calories which were stored up from the summer.

Sleep deprivation has also been found to increase levels of stress hormones resistance to insulin, both of which contribute to weight gain. Insulin resistance leads to type II diabetes.

So the national sleep foundation offered the following tips:

Try to aim for 7 to 9 hours of sleep per night

Increase your exercise level but try not to exercise within three hours of your bedtime

Don't drink caffeine or alcohol near bedtime. Caffeine can keep you awake and alcohol can disrupt the normal stages of your sleep.

Another little bit of information that may help you. The later you are up at night, the greater is the likelihood that you're going to eat, and the more likely you eat high carbohydrate containing foods. One other contributing factor to such weight gain is that the body burns most calories during REM sleep. REM sleep is that deep, restful face of sleep. The less sleep you get means less time and less REM sleep.

Most sleep experts say that 7 to 8 hours of sleep at night would be appropriate. If you have trouble sleeping or sticking to a nightly routine, try to add in some exercise during the day. Some people struggle with worrying at night. During the day, banish your worries in a journal and keep your pre-bedtime activities to just relaxing ones.

Please let us know if you're having sleep difficulties. We have many resources that will help you to conquer your weight and get your rest to wake up refreshed.

Proverbs 3:24 If you lie down, you will not be afraid; when you lie down, your sleep will be sweet.

Be blessed,
Chuck Shaffer MD

Understanding Weight Loss with a Ketogenic Approach:

When you come to The Weigh Station for help losing weight it's important to understand that the process is not as simple as eat less, exercise more. Obesity is a game changer, metabolically speaking, an obese body does not metabolize food the same as a non obese body. Weight loss is multi-factorial; the degree of insulin resistance, genetics, and other hormonal factors dictate one's ability to lose weight much more than calories in vs. calories out. Insulin, however, is the number one factor we treat here at The Weigh Station.

Insulin levels can fluctuate based on several things; however, food is the most powerful tool in shutting it down. Carbohydrates, unlike protein and fat cause insulin levels to increase. To allow the body to burn fat, insulin levels must drop. It is important to remember that carbohydrates are therefore more than just calories, they are metabolic regulators. The more carbohydrate you eat the more stuck in the fat storing cycle you become. This has nothing to do with calorie expenditure; it has more to do with energy flow.

The best way to lose weight successfully is by shutting down insulin by adapting to a ketogenic diet. This means you must restrict carbohydrates while increasing fat intake for several weeks. It is important not to over exercise at this time since intense exercise can also cause fluctuations in insulin levels. It takes several weeks for the body to become keto adapted. Being keto-adapted means that the body has switched from a carbohydrate energy flow to a fat energy flow successfully.

It is equally important that you eat what is recommended in the program book. "Overdoing" the diet by eating only or too much protein will result in a weight plateau and may damage your metabolism more. If you have eaten all protein for three days, it is time to advance your diet to stage 2. Eating more protein than what is recommended can result in the amino acids from protein being converted to glucose by a process called gluconeogenesis that happens in the liver. This could actually take you out of ketosis. A well formulated ketogenic diet should be high in fat, not protein.

Saturated fat and monounsaturated fats are the primary fuels recommended for ketosis. These are burned for energy and not stored; therefore, they do not damage your heart or increase your health risks like they may if you were eating them along with simple carbohydrate. Remember, ketosis is a metabolic shift. Refer back to your fats list in your program book, these should make up the majority of your calorie intake, especially if you exercise! A ketogenic diet of 70% fat is recommended.

A limited amount of fruit can also be incorporated. Remember, you are here to improve your overall health (not just to lose weight). Fruits approved from our program are important to incorporate since they are loaded with antioxidants and other health benefits. Each patient is different, so it is important to determine how much fruit is tolerated for each individual.

Overall, remember to eat! If you are having difficulty following the program please tell us. We are here to help and look forward to seeing you succeed!

Tricia Foley, MS, RD