

Chapter 15: Sleep

Sleep is one of the most important aspects of living a healthy life. Going through life sleep deprived is dangerous to our health. Lack of sleep causes a chronic elevation of stress hormones. The stress hormones, primarily cortisol, increase insulin and therefore turned off fat burning. The stress hormones, namely cortisol, also result in insulin resistance and all the problems that go with it. If you feel like you do not sleep well, that you don't feel refreshed upon awakening, that you are tired during the day, you need to have this checked out. One of the most common reasons for lack of good sleep in those with a weight issue is obstructive sleep apnea syndrome. This is when the soft tissues in the neck collapse during sleep and don't allow for adequate oxygenation. The decreased oxygenation causes one part of the brain to have a tug-of-war with another part of the brain. One part of your brain wants you to wake up and take deeper breaths, another part of your brain wants you to continue sleeping. As a result, you wake up just enough to take deeper breaths to supply the needed oxygen. This however, prevents you from being able fall into the deepest, stage IV sleep.

Untreated sleep apnea itself causes a number of serious medical conditions including anxiety, depression, heart disease, dementia and sexual dysfunction to name a few.

The Epworth sleep scale (<https://www.merckmanuals.com/professional/multimedia/clinical-calculator/Epworth%20Sleepiness%20Scale%20ESS>) is used to assess up person's risk of having obstructive sleep apnea. This scale measures how likely you are to nod off while

engaged in certain activities such as sitting, reading, watching TV, as a passenger in a car or in the car while stopped for a few minutes at a traffic light. (see figure1).

Sleep apnea is typically diagnosed with a sleep study. The study can be performed at home in one's own bed or in the sleep clinic. The home sleep study is unable to diagnose other sleep disorders such as restless leg syndrome and narcolepsy. Parameters monitored during the sleep study include oxygenation levels, degree of snoring, and the number of times a person stops breathing called apneic episodes.

Sleep apnea is treated with CPAP, surgery or an pharyngeal implant.

Presuming you do not have a sleep disorder such as sleep apnea or restless leg syndrome, and you are having difficulty falling or staying asleep, the following tips are considered part of a process called sleep hygiene. Sleep hygiene are ways to get herself ready for a good night's sleep. These methods have been developed with the help of sleep research.

- The principles of sleep hygiene (<https://www.sleepfoundation.org/sleep-hygiene>)
 - Maintain a regular schedule. This is perhaps the most important principal.
Going to bed and getting up the same time each day. Children aren't the only ones that do better with a regular schedule. We all do. Waking at the same time, eating at the same time and beginning our presleep routine and going to bed at the same time promote sleep.
 - Upon awakening, expose yourself to his much morning light as possible.
Getting 30 minutes of sunlight each morning can reset your circadian rhythm and suppress melatonin.

- Limit caffeine to the first 16 hours of the day. Afternoon caffeine intake can linger into the night preventing sleep.
- Limit alcohol 4 hours before bed. It should be said that moderate drinking is generally accepted to be one drink for a woman and 2 drinks for man.
- Keep the bedroom cool 68°F or less. Cooler temperatures promotes better sleep.
- Don't eat 2 hours before bedtime. Not eating 3-4 hours before bedtime is even better. This prevents the gastric contents from symptoms of reflux which includes irritation of the esophagus as well as causing a cough from acidic fumes
- Limit the drinking of liquids during the evening. This test to things. It decreases the likelihood reflux of the stomach contents and will minimize the number of times she have to get up and use the bathroom
- Turn off all electronic devices 2 hours before bed . The blue light admitted from such devices, much like the morning light you are encouraged to partake in, activates the brain and suppress his sleep. There are glasses available to wear during the evening to prevent your eyes taking in the blue light. There are smart phone apps which measure the amount of blue light admitted. Another reason is you may view items which will get you to worrying or thinking about things that are not conducive to sleep.
- It is said that taking a hot bath or shower right before bed relaxes the body and promote sleep.

- Keep the bedroom dark. This means doing without nightlights. Installing blackout blinds. Again, this is to avoid the light activation of the brain and signal that it is time for sleep.
- Consider ear plugs if you living in a noisy environment such as in the middle of a city with high-traffic noise.
- White/pink noise. Some people have the opposite problem. Perhaps the bedroom is too quiet. They start thinking about things. Some individuals do better with a little noise in the background. This could be a ceiling fan, a box fan or a white noise machine, admission specifically designed to admit low volume benign noises such as Ocean noises.
- Develop a regular bedtime ritual. Using the suggestions listed in his chapter and developing your own, unique bedtime ritual is important.
- The bed is for sleeping and intimacy. It is suggested that it not be used for snacking, homework or binging on Netflix. You want to condition yourself to associate the bed with sleeping and intimacy.
- If for some reason you don't fall asleep in 20 minutes get up! Go into another room and read something that is not too stimulating and wait to feel drowsy before giving it another ago. Avoid stimulating activities like turning on your electronic device or TV.

Supplements are often used to help promote sleep and include melatonin, GABA and magnesium. For details please see Chapter 19.

Chapter Summary

- Sleep is one of the most important aspect of our lives to promote good health.
- Obstructive sleep apnea is one of the most common conditions that prevent good sleep.
- Sleep hygiene are behaviors that research has shown to promote good sleep.

Resources

- Why We Sleep, Matthew Walker, Scribner, 2017