

# Sleep and Weight Gain

## Introduction

The reason that I choose the topic of sleep and weight gain was because it is an interesting subject and something that I would be really interested in learning about. Prior to this assignment, I had no idea that sleep and weight gain was connected in any way at all. While researching and learning about it, I was able to expand my knowledge on the particular issue and I was able to learn a great deal about it. It is an important issue that can be a vital part of my health along with the health of others, which is why everyone should be made aware of it. Getting the right amount of sleep is a healthy habit that everyone should try to strive for, so that we are willing to take the steps to work towards living long and healthy lives. The discovery that sleep loss as well as getting too much sleep is connected to weight gain is something that is fairly new in discovery. By researching the topic, I can become more aware of the issue and can then begin the necessary steps in order to make a difference in my health and well-being.

## Section 1: Background and Problem Statement

Sleep is essential part of our lives. In order to live, all people need sleep. Sleep is defined as a natural and periodic state of rest during which consciousness of the world is suspended. It is a time when our bodies' refuel and repair themselves both in the physical and mental state. Lack of sleep can lead to many health problems and concerns. Some issues that can arise with a lack of sleep are high blood pressure, heart attack, stroke, stress and even injuries. However, a new study is showing that a lack of or not getting enough sleep can also lead to weight gain.

- **Web site #1 Name: Diet, Exercise and Sleep**
- **Web address: <http://www.sleepfoundation.org/article/sleep-topics/diet-exercise-and-sleep>**
- **Summary of the research:**

The National Sleep Foundation talks about how people can eat healthy and exercise daily, yet they still do not see any results in their weight loss goals. In fact, many people actually begin to gain weight instead. This is because they are missing the third piece to their “puzzle”, which is sleep. Sleep regulates your mood and helps you stay on task and function properly. It also is a vital part of a person’s energy level, which can greatly help when a person is trying to loose weight. (Diet, Exercise and Sleep)

- **Web site #2 Name: Lack of Sleep and Weight Gain: Is There a Connection?**
- **Web address: <http://www.sleep-deprivation.com/articles/effects-of-sleep-deprivation/weight.php>**
- **Summary of the research:**

Research is now being done to prove that certain sleep disorders, such as sleep apnea may be more than just disrupted sleeping. Researchers believe that this may also be a huge contributing factor of obesity, and that it is more likely to occur in someone who is overweight. Sleep apnea is defined as a disorder in which a sleeping person stops breathing because his or her airways are obstructed, or blocked. Most commonly, sleep apnea will affect men more then women but other risk factors include family history, being over the age of forty and having a large neck. If this condition is left untreated in can have many long-term risks involved in it. People who suffer from such sleeping disorders, like sleep apnea are more likely to put on weight. (Is There a Connection?)

- **Web site #3 Name: Sleep Apnea Weight Gain - How Do People With Sleep Apnea Gain Weight?**
- **Web address: <http://www.articlesbase.com/sleep-articles/sleep-apnea-weight-gain-how-do-people-with-sleep-apnea-gain-weight-1901406.html>**
- **Summary of the research:**

Most research has been done trying to figure out if lack of sleep is connected to weight gain. Although, this is proven to be true there is still another factor that connects sleep and weight gain. Getting too much sleep can also lead to an increase in a persons weight. Most cases have to do with the person spending too much time in bed and not

getting out and getting enough exercise that is needed. The recommended amount of sleep a person should get each night is between seven and eight hours. (Sleep Apnea Weight Gain)

## Section 2: Research

- **Web site #1 Name: Association between Reduced Sleep and Weight Gain in Women (Google Scholar)**
- **Web address: <http://aje.oxfordjournals.org/cgi/content/abstract/164/10/947>**
- **Summary of the research:**

Physiologic studies suggest that sleep restriction has metabolic effects that influences weight gain. The researchers investigated the association during study between self-reported usual sleep duration and subsequent weight gain in the Nurses' Health Study.

“The 68,183 women who reported habitual sleep duration in 1986 were followed for 16 years. In analyses adjusted for age and body mass index, women sleeping 5 hours or less gained 1.14 kg (95% confidence interval (CI): 0.49, 1.79) more than did those sleeping 7 hours over 16 years, and women sleeping 6 hours gained 0.71 kg (95% CI: 0.41, 1.00) more. The relative risks of a 15-kg weight gain were 1.32 (95% CI: 1.19, 1.47) and 1.12 (95% CI: 1.06, 1.19) for those sleeping 5 and 6 hours, respectively. The relative risks for incident obesity (body mass index: >30 kg/m<sup>2</sup>) were 1.15 (95% CI: 1.04, 1.26) and 1.06 (95% CI: 1.01, 1.11).”

This complicated test suggests that depending on the amount of hours a sleep a women receives a night can have a huge effect on the amount of weight they put on. (Association between)

- **Web site #2 Name: Recent weight gain in patients with newly diagnosed obstructive sleep apnea**
- **Web address:**  
**[http://journals.lww.com/jhypertension/Abstract/1999/17090/Recent\\_weight\\_gain\\_in\\_patients\\_with\\_newly.9.aspx](http://journals.lww.com/jhypertension/Abstract/1999/17090/Recent_weight_gain_in_patients_with_newly.9.aspx)**

- **Summary of the research:**

Research shows that patients with obstructive sleep apnea are often times obese. This is because obesity may contribute to both sleep apnea itself and to other cardiovascular risks associated with sleep apnea. Weight loss in obese patients with sleep apnea may ease symptoms and decrease the severity of sleep apnea. In conclusion, those who have sleep apnea also have an increase in weight gain as well. (Recent Weight Gain)

- **Web site #3 Name: Sleep loss boosts appetite, may encourage weight gain (Scirus)**

- **Web address: <http://www.uchospitals.edu/news/2004/20041206-sleep.html>**

- **Summary of the research:**

Researchers at the University of Chicago have found out that sleep deprivation alters the circulating levels of the hormones that are related to hunger, causing an increase in appetite in people, mostly in high-carbohydrate foods.

“Research subjects who slept only four hours a night for two nights had an 18 percent decrease in leptin, a hormone that tells the brain there is no need for more food, and a 28 percent increase in ghrelin, a hormone that triggers hunger.” The study showed that there was a twenty-four percent increase in appetite, with a surge in desire for sweets, such as candy and cookies, salty foods such as chips and nuts, and starchy foods such as bread and pasta.”

This is one of the first studies done that connects sleep loss to weight gain, and through this many more tests could be done. By providing the first data on the relationship between sleep and the hormones that regulate hunger, this study found that research helps to confirm and begins to explain the connection. (Sleep Lost Boosts)

### **Section 3: Statistics**

- **Web site #1 Name: How Much Sleep Do I Need?**

- **Web address: [http://www.cdc.gov/sleep/how\\_much\\_sleep.htm](http://www.cdc.gov/sleep/how_much_sleep.htm)**

- **Summary of the statistics:**

The National Sleep Foundation has a recommended amount of sleep that people should get a day based on their age. For infants, they should receive between ten and a half hours and eighteen hours of sleep a day. For toddlers and children, they should get up to fourteen or fifteen hours a day. Adolescents should get up to nine and a half hours a day and adults should get between seven and nine hours. Following these guidelines are good to have good healthy habits. (How Much Sleep Do I Need?)

- **Web site #2 Name: Sleep Deprivation**
- **Web address: <http://www.sleepdex.org/deficit.htm>**
- **Summary of the statistics:**

“It is estimated that people on average now sleep one and a half hours less than people did a century ago.” Sleep deprivation has become one for the most enduring health problems facing the United States today.

“In a 2002 “Sleep in America” poll of 1,000 adults, nearly a third said that they need at least eight hours to avoid feeling sleepy the next day. However, the respondents responded that they average 6.9 hours of sleep on weeknights and 7.5 on weekend nights.”

A huge factor that has to do with sleep deprivation is that people are constantly busy with too many other things going on in their lives. “Some experts are even beginning to wonder if widespread sleep deprivation is having an effect on America’s brainpower and creativity.” More and more studies are being done all the time to help find more answers. (Sleep Deprivation)

- **Web site #3: Sleep Deprivation Impacts Weight Loss!**
- **Web address:**  
**[http://www.mumsinscience.net/blog/\\_archives/2009/1/20/3840378.html](http://www.mumsinscience.net/blog/_archives/2009/1/20/3840378.html)**
- **Summary of the statistics:**

“In the past forty years, the American obesity epidemic has risen from one in nine adults to one in three.” The amount of sleep an adult gets a night has also changed, but

this number has decreased. Adults that sleep less than seven hours a night are significantly more likely to be obese, shown through a study done with people between the ages of 32 and 49. This study shows that the lack of sleep leads to weight gain. Hormones play a vital role in it as well. These statistics help inform people that changes need to be put into effect quickly to prevent long term health problems. (Sleep Deprivation Impacts)

## **Section 4: Consumer Information**

- **Web site #1 Name: Sleep Disorders**
- **Web address: <http://www.nlm.nih.gov/medlineplus/sleepdisorders.html>**
- **Summary of the information:**

There are four many types of sleep disorders. The first one is Insomnia, which is difficulty falling asleep or staying asleep at night. Another sleep disorder is Sleep Apnea, which is when the person suffers from breathing interruptions during sleep. Then finally there is Narcolepsy, which is when you have “sleep attacks” during the day. Finally, there is Restless Legs Syndrome in which a person will experience a tinkling or prickly sensation in their legs. All of these disorders could in fact lead to weight gain. (Sleep Disorders)

- **Web site #2 Name: Sleep Apnea**
- **Web address: <http://www.nlm.nih.gov/medlineplus/sleepapnea.html>**
- **Summary of the information:**

Sleep apnea is a common disorder that can be very serious. “In sleep apnea, your breathing stops or gets very shallow. Each pause in breathing typically lasts 10 to 20 seconds or more. These pauses can occur 20 to 30 times or more an hour.” Snoring is a common symptom of this disorder, however not everyone who stores suffers from it. When your sleep is interrupted throughout the night, you can be drowsy during the day. This causes a person not to be as active, which is linked to weight gain. (Sleep Apnea)

- **Web site #3 Name: Sleep Disorder (Sedative-Hypnotic) Drug Information**

- **Web address:**

<http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm101557.htm>

- **Summary of the information:**

The U.S. Food and Drug Administration (FDA) has requested that all manufacturers of drugs that help with sleep increase the level of their products. Some of these drugs include Ambien, Butisol, Doral, Lunesta, Prosom, Rozerem and Seconal. However, these drugs come with increased risks including “severe allergic reactions and complex sleep-related behaviors, which may include sleep-driving. Sleep driving is defined as driving while not fully awake after ingestion of a sedative-hypnotic product, with no memory of the event.” (Sleep Disorder)

## **Section 5: Solutions to the Problem (or Issue)**

- **Web site #1 Name: Sleep Apnea**

- **Web address:** [http://www.helpguide.org/life/sleep\\_apnea.htm](http://www.helpguide.org/life/sleep_apnea.htm)

- **Summary of the information:**

Sleep Apnea is a disease without one known cure. There are several factors that you can do however, to treat it. The first one is getting the right amount of sleep a night, which is between seven to nine hours. Another one would be to stop using drugs, which may eliminate snoring. A final thing would be to sleep on your side, which is a proven remedy that helps with breathing problems especially if you are a back sleeper. (Sleep Apnea)

- **Web site #2 Name: Diet, Exercise and Sleep**

- **Web address:** <http://www.sleepfoundation.org/article/sleep-topics/diet-exercise-and-sleep>

- **Summary of the information:**

The National Sleep Foundation talks about how exercise and sleep does the body good. The timing of when you work out also plays a vital role in your sleeping habit. It is best to exercise at least three hours before bedtime, so your

body has time to wind down and relax before you go to sleep. (Diet, Exercise and Sleep)

- **Web site #3 Name: Insomnia**
- **Web address: <http://worldsleepfoundation.org/insomnia>**
- **Summary of the information:**

The World Sleep Foundation defines insomnia as the inability to sleep. It is not considered a disease but it is something that many people suffer from. There are many different ways to help with it including exercise, establishing wind down time and practicing good sleep hygiene are some good tips to help stop insomnia. In cases that these things do no work, medications can be given to help people sleep, but should only be taken if really needed. (Insomnia)

### **Conclusions:**

Sleep and weight gain do in fact go hand in hand with each other. Often times, not getting the right amount of sleep can cause weight gain. However, too much sleep may also lead to weight gain as well, so it is important to know the right amount of sleep you should be getting. Taking action to do so will lead to healthier lifestyles and can prevent a person from developing harmful health conditions.

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