

## **Business Problem**

We are a mental health company who would like to promote healthy ways of living. One of those healthy habits that is often overlooked is the amount of sleep individuals get. My business is a Healthcare company that believes that sleep is one of the leading factors to health and happiness in more ways than one. We believe that promoting good sleep patterns will assist in life expectancy and overall elevate healthy living and happiness.

## **Background/History**

Taking a break from our busy schedules and taking care of our body will help with overall health and increase life expectancy. Getting a good amount of sleep each night is one thing that is overlooked because of the schedules that we have. Studies have showed however that the long-term effects of not getting the recommended 7-9 hours of sleep each night puts your physical health at risk.

Individuals that do not prioritize sleep have increased risks that range anywhere from weight gain to a weakened immune system. Your cardiovascular system is one process that gets effected. By not getting enough sleep, processes that keep your heart healthy can start to slow down and increase the risk of high blood sugar, blood pressure and inflammation, and have an increased chance of suffering from heart attacks, strokes, and cardiovascular disease.

The lack of sleep can also disrupt your central nervous system. During sleep, there are pathways that form between your neurons in your brain which assist in memory, concentration and coordination. This not only increases the chances of accidents and being able to conduct their usual daily routines to the best of their ability, but it also decreases the amount an

individual can learn new processes. It has a direct impact on moods fluctuating and increase the risk of anxiety, depression, and paranoia.

An individual's immune system and respiratory system can be at risk for lack of sleep as well.

When sleeping, your immune system starts to produce infection fighting antibodies but with lack of sleep your body doesn't have time to create these substances which leaves the body more susceptible to the common cold, flu, and covid!

Along with immune risks, lack of sleep also increases the risk of becoming overweight and can increase the chances of obesity. Without enough sleep your brain reduces the amount of a hormone called Leptin. Leptin is what lets your brain know that you had enough to eat. It also reduces the amount of insulin your body produces which regulates blood sugar and lowers the bodies tolerance for glucose. While reducing these key hormones, lack of sleep increases the hormone ghrelin which tells you that you are hungry. All of these disruptions can lead to serious health conditions like diabetes.

#### **Data Explanation** (Data Prep/Data Dictionary/etc)

I am going to be using data found on various platforms about sleep. Some of the data I will be using includes a geographic range of the amount of short sleep individuals get; Any and all behavioral risks that have had a positive or negative impact with lack of sleep; Health risk factors that have increased or decreased when measured with the amount of sleep an individual gets per night and any chronic health conditions that have increased or decreased due to sleep deprivation.

## **Methods**

I will pull data from places like the CDC and include studies that are prospective with sleep at their baseline as well as any and all chronic health issues extracting relativity and 95 percent confidence intervals.

## **Analysis**

Short sleep duration was associated with a higher risk of chronic disease and death. It not only had a direct impact on risk of diabetes, but also high blood pressure, memory issues and mood swings.

## **Conclusion**

Increasing the amount of sleep one gets each night so that it falls between the recommended hours of 7 to 9 hours will assist in having a long, healthy and happy life.

## **Assumptions**

We will have a set budget for all of the resources needed to conduct our data collection and analysis as well as funding from several different health care organizations. After collecting all of the data we will make sure that we have put into place deliveries of bulletins or infographics to make the general public aware of our findings.

## **Limitations**

Hopefully in the future there could be bigger studies on this topic because it is something that everyone needs to stay healthy on a physical and mental level.

## **Challenges**

Some results were inconclusive showing that both short term and long term sleep lead to chronic health issues.

## **Future Uses/Additional Applications**

I would like to keep up to date statistics as technology increases to see if this has any type of impact on how much sleep one needs. We would survey with an increased amount of surveyors from all ages and nationalities.

## **Recommendations**

My recommendation is to conduct more studies on this topic so that people can see the data, results and numbers showing how important sleep or the lack thereof is on ones health.

## **Implementation Plan**

Our company will have several groups working on the different surveys. We will have them distribute and collect the data for a pre-determined period of time. The timeline to collect this data will be over several months to one year. There will be several project deadlines to make sure that we are keeping on track. We will always have an open form of communication utilizing teams as a way to stay on track and up to date on weekly goals. Once we

## **Ethical Assessment**

Making sure that critical values that promote professionalism are always adhered to as well as honesty, responsibility and fairness while conducting these team projects. We will also make sure that all of the personal information that we collect will stay confidential.

### memory issues

During sleep, your brain forms connections that help you process and remember new information. A lack of sleep can negatively impact both short- and long-term memory.

### trouble with thinking and concentration

Your concentration, creativity, and problem-solving skills aren't up to par when you don't get enough rest.

### mood changes

Sleep deprivation can make you moody, emotional, and quick-tempered. Chronic sleep deprivation can affect your mood and lead to anxiety or depression, which may escalate.

### accidents

Being drowsy during the day can increase your risk for car accidents and injuries from other causes.

### weakened immunity

Too little sleep weakens your immune system's defenses against viruses like those that cause the common cold and flu. You're more likely to get sick when you're exposed to these germs.

### high blood pressure

If you sleep less than five hours a night, your risk for high blood pressure increases.

### risk for diabetes

A lack of sleep affects your body's release of insulin, a blood sugar-lowering hormone. People who don't get enough sleep have higher blood sugar levels and an increased risk for type 2 diabetes.

### weight gain

With sleep deprivation, the chemicals that signal to your brain that you are full are off balance. As a result, you're more likely to overindulge even when you've had enough to eat.

### low sex drive

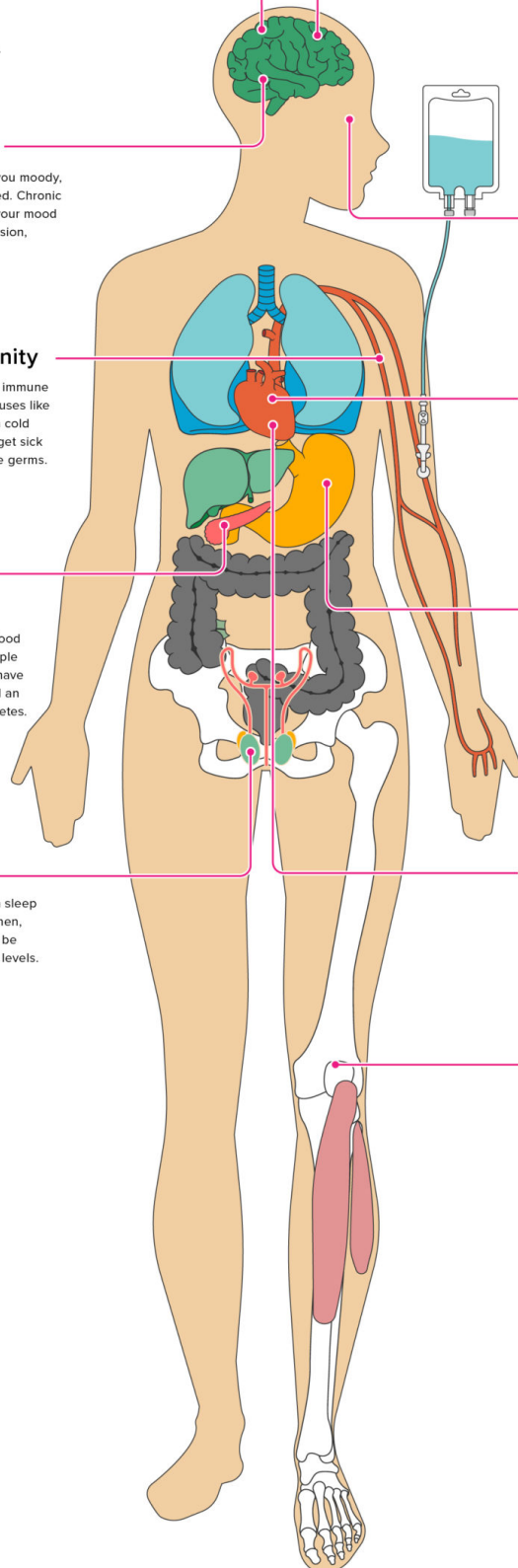
People who don't get enough sleep often have a lower libido. In men, this decreased sex drive may be due to a drop in testosterone levels.

### risk of heart disease

Sleep deprivation may lead to increased blood pressure and higher levels of chemicals linked to inflammation, both of which play roles in heart disease.

### poor balance

Lack of sleep can affect your balance and coordination, making you more prone to falls and other physical accidents.



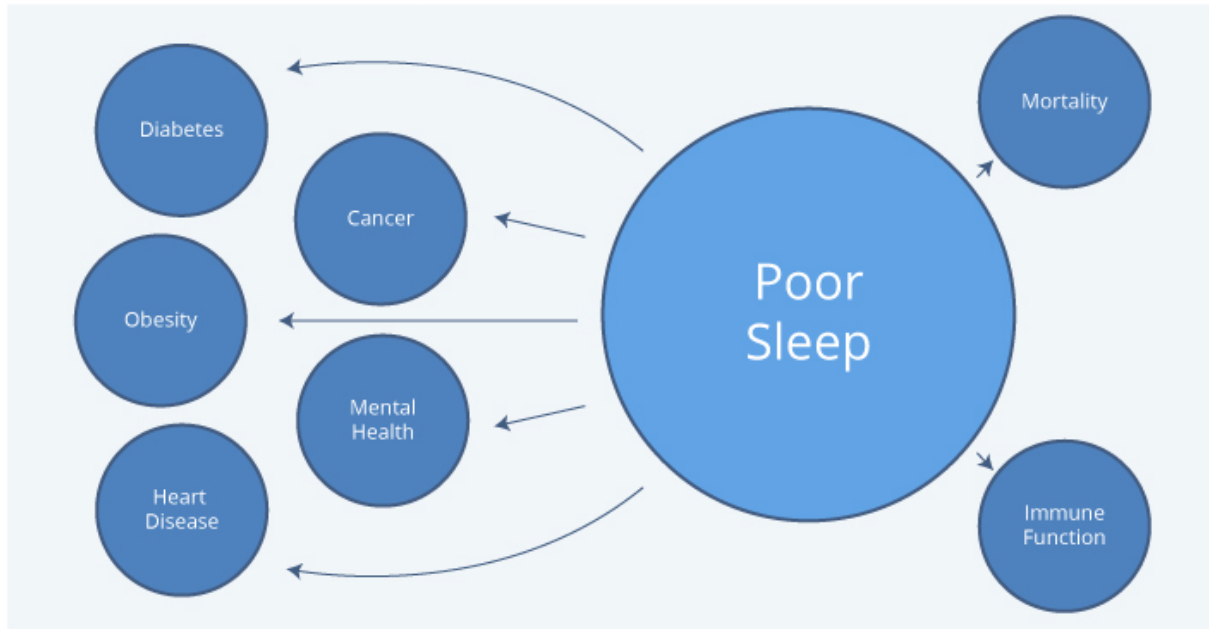
# NATIONAL HEALTHY SLEEP AWARENESS PROJECT



FOR MORE INFORMATION VISIT: [WWW.SLEEPEDUCATION.ORG/HEALTHYSLEEP](http://WWW.SLEEPEDUCATION.ORG/HEALTHYSLEEP)

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# Sleep Impacts Health





## Questions

1. Are naps during the day okay? Do they count towards the 7 hours I need?
2. What are the different cycles of sleep?
3. Is snoring a bad thing?
4. How exactly does the body heal itself at night?
5. How is lack of sleep correlated to low sex drive?
6. What are the different types of sleep disorders and what can we do to prevent them?
7. Are there foods that can assist with sleep?
8. What are things I can avoid to help me sleep better?
9. How can I get back on track with my sleep schedule?
10. What if I oversleep all of the time?