

Insomnia: types, causes and effects



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Insomnia

1. Intro:

The torture of sleeplessness is something that most people will experience at some point during their lives. The Term Insomnia is used to describe by frequently waking up throughout the night, not being able to fall asleep, and feeling tired after waking up in the morning. Unfortunately, Insomnia is a condition that is severely under-recognized.

2. Discovery: who / how / when / where

“ Insomnia”, which comes from Latin words for “ No Sleep”, is simply the deprivation of sleep. Insomnia has been observed all throughout human history, and because of this, it can't be pinpointed on when exactly it was discovered. In 1818, Johann Heinroth, a German physician referred to Insomnia as being a psychosomatic disorder.

3. History : past diagnosis, cases and treatments

There have been many documented cases of insomnia all throughout history, including the infamous Chinese King Wu. In the book *Records of the Historian* , King Wu describes how he could not sleep at night as he has not “ Secured Heaven's Support”, and thus had no time for sleep. Over 10% of the general population is currently suffering from Insomnia, with female and the elderly suffering the most.

4. Insomnia: Types

There are many types of Insomnia, including Acute, Chronic, Comorbid, Onset, and Maintenance. Generally, Insomnia is only referred to as either

Acute or Chronic based on the duration and frequency that the sleep issues have been occurring, but there are many sub categories to Insomnia as well.

Acute Insomnia refers to sleep problems that last anywhere from one night to a few weeks. These disturbances in ones sleep schedule generally occur due to an emotional or physical change in someone's life, such as illness, jet lag, and even environmental disturbances. This is generally not always the case though, as it can be caused by many other events such as a change in noises, different types of medications, caffeine / nicotine withdrawal and even pain.

Chronic Insomnia is a serious medical condition that roughly 6% of all Americans suffer from. Chronic Insomnia is referred to any type of Insomnia that has been occurring at least 3 times per week for a period of longer than 1 month, despite having the opportunity to sleep. Chronic Insomnia is a serious medical condition that is under diagnosed and under treated, despite millions of American's suffering from it every day.

Comorbid Insomnia refers to a type of insomnia that stems from another condition, such as psychological, medical, and even environmental issues. Roughly 85-90% of those diagnosed with Chronic Insomnia can trace their sleep issues back to a type of Comorbid Insomnia.

Onset Insomnia refers to having difficulty falling asleep, but once falling asleep the subject has no problem staying asleep.

Maintenance Insomnia is exactly the opposite of that. The subject can fall asleep quickly but frequently wakes up throughout the night.

- Effects:

Insomnia has many different effects, none of which are particularly good ones. Sleep is essential to our survival, while your body rests during sleep; your brain is busy processing all the information from that day and starting to create memories. Without sleep, you're at a higher risk than most at developing serious health issues such as diabetes, obesity, hypertension, and your short-term memory may be affected.

Sleep deprivation has been the cause of some of the biggest disasters that have occurred in recent history. Three Mile Island, the Exxon Valdez oil spill, and even the 1986 meltdown at Chernobyl have all been able to trace its roots back to employees sleep deprived. The real danger from sleep deprivation though is something we experience in our everyday lives, and that's on the roads. Drowsiness can often time slow down a person's reaction time to that of someone who is intoxicated. The National Highway Traffic Safety Administration estimates that fatigue is the primary cause of close to 100, 000 automobile crashes and 1, 550 deaths per year in the United States, with the greatest effect being on those below the age of 25 years old. On the job injuries have also been at an all-time high.

Another huge effect of sleep deprivation is a loss in cognitive processes. It impairs your attention, alertness, concentration, reasoning and even problem solving. All this in turn makes it extremely difficult to learn and process new information.

Sleep loss has the ability to severely affect your ability to retain information as well. In 2009, French and American researchers came to the conclusion

that “ sharp wave ripples, a brain event, is responsible for piecing together all your memory. These ripples also transfer over information that you’ve learned from the hippocampus to the brain’s neocortex, where long-term memories are stored. These sharp wave ripples primarily occur only when your body is in a deep slumber.

Depression is a key ingredient when it comes to having issues sleeping. In a 2005 Sleep in America poll, people who were diagnosed with anxiety and/or depression were often times found to be sleeping less than six hours per night. In addition to that, a 2007 study shows that those with Insomnia were over 5 times as likely to develop depression as those without it.

Some physical effects of sleep deprivation are more serious than one might think. Sleep deprivation and chronic sleep loss can lead to heart disease, attack, and even failure. It can also lead to irregular heartbeats, high blood pressure, stroke, and diabetes. According to some recent studies, nearly 90% of people suffering from Insomnia are also suffering from another health condition.

Weight gain is also a side effect of sleep loss. In a 2004 study, those that were getting less than 6 hours of sleep per night we’re close to thirty percent more likely to become obese versus those that slept for seven to nine hours per night. What ends up happening is a decrease in leptin, a hunger hormone, which is usually regulated by sleep.

Sex drive is also affected by Insomnia. Many sleep specialists say that men and women that don’t get enough sleep generally report lower libidos and a

reduced interest in sex. This can easily be pinpointed due to depleted energy from lack of sleep.

Even physical features of one's self can be affected by sleep deprivation. Aside from the covenant "bags under eyes", it turns out that chronic sleep deprivation can lead to fine lines and lackluster skin. What ends up happening is that when your body doesn't get enough sleep is that your body releases more cortisol, a stress hormone. In higher amounts of cortisol it can break down the protein that helps keep your skin elastic and smooth, collagen. In addition to that, being at a loss of sleep, your body will release too little of the human growth hormone (GH). Human Growth Hormones is essential to our body, as it's used to increase muscle, strengthen bones, and even increase the thickness of your skin.

The worst of all the above issues is that Insomnia can increase your risk of death. In 1967, the "Whitehall II Study" looked at how patterns of sleep affected the mortality rate of close to ten thousand British servants over a period of over twenty years. The results of this study were published in 2007, showed that those that had on average 5 hours of sleep per night nearly doubled their risk of death from all causes. In addition to this, it also doubled the risk of death from cardiovascular diseases.

- Causes:

What actually causes Insomnia? Well, Insomnia has many different causes that are almost always related to stress in some way. Stress, is described as "a state of mental or emotion strain resulting from adverse or very demanding circumstances." Concerns about family, school, health, and even

work can easily keep your mind extremely active throughout the night, which would cause someone to have difficulty sleeping. Anxiety is also a leading cause for Insomnia, with most adults having trouble sleeping because they feel worried or nervous at some point in time. Anxiety can often times be tied to having Onset or Maintenance Insomnia. Anxiety and Insomnia can also often times feed each other, which causes a terrible cycle between anxiousness, dread and panic.

Alcohol, Nicotine, Caffeine and other related substances can also have a huge effect on Insomnia. Caffeine causing Insomnia is a trend that's been increasing over the years due to energy drinks and other types of high caffeine beverages. Caffeine has a very short half-life, which means it takes about eight to ten hours for your liver to process 75% of the caffeine.

Nicotine is also to blame for Insomnia, with it being a stimulant. Using tobacco products or smoking cigarettes around bedtime can make it difficult to fall asleep and to sleep well throughout the night.

- People who are more prone?

Women are much more likely to get Insomnia than men are. One main reason that women are affected more is that the menstrual cycle and menopause can affect sleep. Age also has a correlation with Insomnia, as Insomnia is more frequent with the elderly. Those that have any types of conditions that cause pain and discomfort are much more likely to develop Insomnia. Insomnia is also a side effect of many over the counter medications. A recent study has showed that those that have had nightmares and a fear of the dark as children are more prone to having Insomnia.

- Treatments

There are many over the counter medications that claim to improve your sleep and assist with falling asleep, but they're actually making the condition worse. Even though sleeping pills / alcohol are technically depressants, they will end up disrupting your sleep later throughout the night. Most of the time, Insomnia can be cured just by simply changing minor things throughout the day, minimizing naps and cutting down on those late night coffees to start. Many relaxation exercises used before bedtime can help assist sleep, as they encourage mind and muscle relaxation. Deep breathing is a technique that is commonly used to assist with Insomnia. It may seem quite trivial when put into the grand perspective of things, but it ends of working for hundreds of thousands of patients.

5. Future

There is still much to be learned about Insomnia, as there are still fundamental deficits in researcher's understanding of it. When it comes to the treatment of Insomnia, the future is one that doesn't involve the use of sedatives. Many doctors are adopting methods of addressing Insomnia at its roots vs. just covering it up with some sleep medication.

- New treatments

On Aug 13th, 2014 the FDA approved a new type of prescription insomnia drug that's the first of its kind. This new drug alters the action of the brain's chemical orexin, which helps to regulate the sleep-wake cycle.

6. Conclusion

Insomnia is a serious medical condition that often times gets skimmed over by physicians. Hundreds of thousands of people suffer from Insomnia daily with the number increasing every single day. As the number increases, more and more people are beginning to realize the impact that Insomnia has on the others and how it can significantly impair the lives of others.