PERSONAL DEVELOPMENT E-BOOK 2:

Informational Guide on Sleep



By The American Institute of Health Care Professionals, Inc.

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Common Sleep Disorders

Over 40 million Americans are thought to be dealing with some type of chronic sleep disorder. In addition to those numbers there are millions who have to deal with occasional insomnia or disrupted sleep patterns.

To date there are over 70 different types of sleep disorders with the most common being:

- Insomnia
- Sleep Apnea
- Restless Leg Syndrome
- Narcolepsy

Insomnia is the one that most people are familiar with. It is defined as experiencing a poor quality of sleep and it includes not being able to fall asleep or to stay asleep.

Insomnia is extremely common and occurs in almost 50% of the U.S. population. About 10% of people are dealing with chronic insomnia, this is insomnia which has been going on for years.

Sleep Apnea is a disorder that affects your breathing. People with sleep apnea will have a reduction in their breathing patterns and they may pause breathing altogether.

There are two different types of sleep apnea:

- Central Sleep Apnea is where the brain does not send signals to the muscles to breath.
- Obstructive Sleep Apnea is where the brain does send a signal to the muscles to breathe. What happens is that the person's airway is obstructed and prevents the correct amount of air flow to pass.

It is possible to suffer with both forms of sleep apnea. Many people with this condition are obese and have to sleep with breathing apparatus during the night.

Restless Leg Syndrome is a sleep disorder that makes a person feel uncomfortable sensations in their legs. The person may also have an uncontrollable desire to move their legs.

This is not a condition where your legs cramp. Rather, that you experience strange feelings such as tingling, pins and needles, pulling or a prickly feeling.

It is thought that the reason this causes sleep issues is because it is so difficult to find a comfortable position for your legs.

Narcolepsy is a disease that affects your central nervous system. This results in you experiencing daytime sleepiness, known as EDS. People who have narcolepsy often have loss of muscle tone, hallucinations, and an inability to move or talk.

These symptoms can be present together or individually and they can be in various forms of severity.

If you think you may be suffering from any of these sleep disorders then consult with your doctor for further advice.

Do You Snore at Night?

Snoring can be a huge issue for numerous people. What you may not know is that it is directly related to your sleeping patterns. Snoring affects approximately 45% of men and 30% of women. Certain things such as drinking alcohol or taking medications can cause you to snore.

Snoring is caused by vibrations. These vibrations cause particles in the air to form sound waves. When your stomach makes those rumbling noises it is because your stomach is vibrating, as air and food passes through.

When a person is sleeping airflow causes the tissues on the roof of your mouth, or palate, and throat to vibrate. This results in that familiar snoring sound.

Snoring causes lots of problems for people. If you snore, this can affect your partner quite badly, causing them to lose sleep. Snoring could be a sign that you have a certain medical condition.

Snoring is related to your breathing process. Your body naturally wants to breathe through your nose. While this is not a problem for most people, it is extremely difficult for others.

People with blocked nasal passages suffer with allergies, a deviated septum, sinus infections or a swelling of the large adenoids in the back of your throat.

One of the most common reasons that you snore is due to narrow airways. Your tonsils are located at the back of your mouth and swell to fight bacteria and viruses. Sometimes after fighting an infection your tonsils do not return to their normal size. They stay enlarged and cause your airway to become narrow. Your airway starts to vibrate and this causes you to snore.

Your mouth has several components, one of this is the soft palate. This is the flap of tissue that hangs down in the back of your mouth. If this piece of tissue is too long or flops all over the place, it can cause snoring. From this soft palate your uvula hangs down and if this is unusually long or thick it can cause snoring issues.

The base of your tongue is the portion of your tongue which is located at the very back of your mouth. Your tongue is a large muscle that helps direct your food while chewing and swallowing. Another function of the tongue is that it helps you form your words.

Your tongue is attached to the inner part of your jaw bone in the front and to your hyoid bone on the bottom. To work correctly your tongue must be able to move freely. This is why it is not attached very tightly at the top of your tongue.

If your tongue is not able to slip backwards it can narrow your air flow space which flows into your pharynx. When this movement is hindered it results in you snoring.

How Much Sleep Does a Person Need?

The amount of sleep that a person requires varies as they age. Newborn babies, for example, require anywhere from 12 to 18 hours of sleep per day. While an adult can manage on only 7 hours. There are several factors that affect the number of hours you need on a regular basis, this article will discuss some of these.

The biggest thing to understand is that there is no magic number when it comes to sleep. Sleep patterns are as individual as your personality. The quality of your sleep is often more important than the actual number of hours.

There are two basic principles that pertain to sleep:

- Basal Sleep
- Sleep Debt

Basal sleep is the amount of sleep required by your body to keep your body functioning at an optimal point. Sleep Debt is the number of hours you lose due to either poor sleeping habits, sickness, or other problems that keep you awake.

Studies show that most adults need between 7 to 8 hours of basal sleep per night. Sleep Debt is connected to those times when you are feeling sleepy and tired, even if you just slept for 7 hours.

What this research suggests is that your body needs to catch up to your sleep debt numbers. Depending on how sleep deprived you are, this may take several nights of sleeping for 7 hours or more to catch up on.

Your mood and energy levels are a good indication of sleep deprivation. People who do not sleep enough are at more risk of being involved in a car accident, are at risk for heart disease and diabetes. Plus many people find that they gain weight when they do not sleep enough for long periods of time.

The best way to determine just how much sleep you require is to pay attention to your body. Note things such as what kind of mood you are in, are you feeling more hungry than usual and how much energy you have.

Pay attention to how many nights per week that you do get enough sleep. If this number is low then you may want to look at your sleep habits and make some changes.

Quite often having a warm bath or shower before going to bed can make a huge difference. As can not drinking coffee or alcohol too close to bedtime.

After noting your sleep habits for a few weeks you should be able to determine just how much sleep your body actually requires.

Getting the Correct Diagnosis for Your Sleep Disorder

Unfortunately millions of people are affected by some form of sleep disorder or another. Sleep disorders are found in various forms and some of the most familiar ones include:

- Insomnia
- Sleep Apnea
- Sleep Walking
- Snoring
- Nightmares
- Sleeping problems due to shift work
- Sleepiness

With so many various forms of sleeping disorders and treatments, it is vital that you get the correct diagnosis from your doctor. There are several tests that can help determine what your sleep disorder is.

One of the first things your doctor will do is run a medical history along with a full physical exam. This will help identify if any other health issues are present, this could be the reason for you not sleeping.

During your test you need to be honest with your doctor. Especially with your use of any prescription or non-prescription medications, your alcohol and tobacco usage, along with how much caffeine you consume.

If this checkup does not reveal the cause of your sleep disorder then further, specialized testing can be performed. There are several 'sleep disorder' tests that can help with this.

The first is known as a Polysomnography or a sleep study test. A test is performed where electrodes are attached to your face and scalp. This is so your brain waves can be measured along with your muscle tone. This test is similar to an EEG and is run overnight while you sleep.

During this test your airflow, breathing effort, blood oxygen levels and leg movements are also monitored. In some areas a portable, at home, sleep monitor can be used to determine the same things.

A multiple sleep latency test or MSLT is used to measure daytime sleepiness. During this test you will be allowed to have four of five naps in a quiet room during the day. This test is often performed at 2 or 3 hour intervals.

The test will measure how long it takes you to get to sleep from being awake and this measures your sleep latency. During the repeated naps, an average can be calculated. If your sleep latency shows 5 minutes or less then you are dealing with severe daytime sleepiness.

Another test that is performed is the Wakefulness Test, or MWT. This measures your ability to stay awake while resting in a quiet, dark room.

There is also a test which is given in the form of a questionnaire. This is known as the Epworth Sleepiness Scale, and your doctor will normally give this to you. The tests asks a variety of questions about how long it takes you to fall asleep in various situations.

Do You Take Naps?

Napping is a habit that many people enjoy, in fact many animals consistently nap throughout the day. The scientific term for those who sleep for short periods during the day is 'polyphasic'. Humans are a minority when it comes to sleeping, in that we divide our day into two periods, one of being awake and one of sleeping.

While napping is common in young children and the elderly, it is not known if it is a natural sleeping pattern. Your lifestyle could also affect the way you sleep.

So many people lead busy lives that they just don't spend enough time asleep. This results in them taking short naps throughout the day. Or, if this isn't possible, they start to suffer with sleeping issues.

Research has uncovered three different ways people nap:

- 1. Planned napping is the act of taking a nap to compensate for having to stay up later than usual. You nap in advance so you can manage to stay awake later into the evening.
- 2. An emergency nap is one such as having to stop and rest when driving long distances. This is to avoid getting over tired and being involved in an accident.
- 3. Habitual napping is taking a nap at the same time each day. Young children are accustomed to having a nap after lunch each day.

A nap can be extremely beneficial. Most naps are short term and last about 20 or 30 minutes. After taking a nap you often feel more alert and your energy levels are restored. Many people enjoy naps as they love the renewed feelings they experience afterwards.

People who work shifts can be deprived of sleep. It is very difficult to constantly change your sleeping patterns. This can lead to fatigue and lack of job performance. Shift workers often nap during the day in an attempt to restore their Sleep Debt and catch up on sleep.

If you find you enjoy naps and they help you function better than that is great. But you want to avoid using naps as a way to actually sleep. It is still important that you strive for a longer period of uninterrupted sleep whenever possible.

Napping could be a sign that you are dealing with a health issue or suffering from a sleep disorder. Take a look at your lifestyle and see if you can make any changes that will allow you to get a good night's sleep.

The Stages of Sleep

When it comes to sleep most people have experienced those nights when you are in a deep sleep, nothing disturbs you, and you wake up feeling refreshed. Then there are those nights where you sleep lightly and get up in the morning feeling more tired than when you went to bed.

This can be explained by the stages of sleep. There are two main stages that your body goes through.

- REM rapid eye movement
- NREM non rapid eye movement
- The NREM stage can actually be divided into more stages.

During the REM stage of sleep your muscles are quiet and not moving. The only exception to this are your eyes. They move rapidly and if you wake up during this stage, you will note that you were dreaming. About 20 to 25 percent of your sleep is done in this stage.

The NREM stage of sleep has been subdivided into 3 stages:

- N1 Sleep
- N2 Sleep
- N3 Sleep

The N1 stage is the point where you are in a light sleep. Any sudden noises may wake you. People often report that they feel awake when sleeping at this stage.

When you reach the N2 stage your body is truly asleep. This is where you spend most of your time sleeping, it accounts for 40 to 50 percent of your sleep.

The N3 sleep is known as the deep sleep stage. It is often referred to as Delta or Slow Wave sleep.

When you sleep, you sleep in 4 to 5 cycles each night. Each one can last anywhere from 90 minutes to 120 minutes. The cycles work in the following fashion.

Being awake and entering into N1 stage, then going through N2 and N3 stages. These two stages then reappear and are followed by REM sleep. All of this takes place during the first part of the night. During the second part of the night the N2 and REM sages alternate.

When this sleep pattern is disrupted sleep disorders and issues can occur. As you age your sleep cycles change. The deeper stages of N3 slows down in frequency while the lighter sleep stage of N1 increases.

This accounts for why many older people find they wake up easily during the night. Research has shown that seniors do still need lots of sleep, the reason they cannot always sleep, is due to the change in their sleep cycles.

The Signs of Sleep Deprivation

If you are not just getting enough sleep your body eventually starts showing outward signs. One of the first signs of being deprived of your sleep is feeling tired during the day.

Another sign is if you are able to lie down in the evening and fall asleep in 5 minutes or less. While many people think this is great, being able to fall asleep so quickly. It often means that you are lacking in sleep big time!

Microsleeps is a condition where you experience short bursts of sleep in a person that is asleep. These short bursts are extremely short, we are talking a fraction of a second or up to 30 seconds at a time. You may feel as though you don't know what just happened or that you weren't really there for that brief time.

Many people who are deprived of sleep often find that alcohol really affects them. They are more susceptible to feeling the effects of drinking more than when you are well rested.

If you turn to drinking caffeine beverages and other types of drinks to keep you awake products, you will find that they do not work very well for you. This is because your Sleep Debt is so high.

Sleep Debt is the number of hours of sleep your body is lacking due to not sleeping enough. This number actually increases each night you do not sleep properly. On the good side you can reduce your Sleep Debt numbers and catch up and restore your sleep patterns.

Other symptoms of sleep deprivation include snoring, suffering with leg cramps or experiencing those tingly feelings. You may find that your breathing changes when you are asleep. You feel as though you cannot breathe properly.

Insomnia is where you spend more hours awake than asleep and if you are dealing with this, then you should really seek advice from your doctor. It can be helpful to start a sleep journal or diary. This way you can track when you experience a good night's sleep and when you just can't sleep. Professionals recommend keeping a diary for a two week period, this way you can get a good overview of how well you are, or are not, sleeping.

The best advice for anyone who is having trouble sleeping is to get help and advice. If you do not your health can really be affected and you could end up with a serious health concern.

The Negative Effects of Napping

As much as you may enjoy your daily afternoon nap, a nap is not always a good thing. A nap can leave you feel more sleepy and groggy and this can put you into a foul mood. The worst thing a nap can do is to disrupt your regular sleeping pattern at night.

If you want to have a good nap you need to have the ability to fall asleep anywhere. If you can only sleep in your bed, napping is not going to work very well for you. If you enjoy sleeping on the couch or in an armchair, then go ahead and take a nap.

So why do people nap?

That's a great question and there can be many different reasons for this. You may simply have trouble falling asleep and staying asleep. You may suffer from a sleeping disorder and the only way to deal with this is by napping.

Shift workers often nap to compensate for working through the night. It can be difficult to get a good solid sleep in the day. Taking a nap before going to work can help rejuvenate them and allows them to stay alert while working.

The downside to napping is that people often view you in a different light, just because you take a nap. Most people associate napping with young children, seniors and people who are sick. You may be viewed as lazy or lacking in ambition because you take daily naps.

Research has shown that people who nap often have an increased risk of heart problems. This may be due to not sleeping for a solid 6 or 7 hours at one time.

If you like to nap you want to ensure that your nap does not last more than 30 minutes. When you allow yourself to nap for longer periods, you are increasing your chances of falling into a deeper sleep. When you waken from a deep sleep you may experience that groggy and moody feeling.

You are much better off to nap for about 10 minutes at a time. This length of time has been shown to improve your mood and restore your energy levels.

If you enjoy and benefit from napping, then continue to do so. But, if you wake up feeling moody and tired you may want to look at making changes to your lifestyle.

The best sleep pattern is still one that allows you to sleep, uninterrupted for 7 or 8 hours each night.

The Benefits of Sleep

Sleep is a natural bodily function just as breathing, eating and drinking are. What you may not realize is just how beneficial sleep is for you and why. Did you know that you will spend a third of your life sleeping?

Everyone recognizes the importance of sleep. You know you feel tired and have no energy when you miss sleep, plus your moods and general well being change.

A ton of research has gone into understanding the benefits of sleep. Sleep has been shown to help improve immune function, your metabolism, memory as well as your ability to learn. Sleep is required so that your body can run and perform at optimal levels.

Sleep has been shown to help your learning and memory function. There are two main benefits connected with this and sleep. The first one is quite simple and that is a person who is deprived of sleep just cannot focus properly, so they will not learn effectively. The second benefit is that after learning something new your memory consolidates this information while sleeping. So studying just before going to bed is a good thing.

Getting adequate sleep has been linked with living longer. Research shows that people who slept under 5 hours per night were more likely to die early. This does not mean that you want to oversleep either, too much sleep is also connected with a shorter life span.

Your health can also be affected by the quality of your sleep. People who sleep less than 6 hours a day often suffer with health issues such as arthritis, diabetes, suffering from a stroke and heart disease.

This has been linked to them having more inflammatory protein levels in their blood. When these issues are treated and more sleep is accomplished the protein levels have been shown to decline.

Your creativity levels, athleticism and school grades can all improve by sleeping more. It was discovered that many children with ADHD were actually sleep deprived. It is recommended that young children get more than 8 hours of sleep per night.

If you are trying to lose sleep has additional benefits. Dieters who sleep more find that they can lose weight quickly. This is because your metabolism and sleep are controlled by the same areas of your brain. If losing weight is your goal, then try and get a good night's rest every night.

As you can see sleep really does have a major impact on your life. If you are having difficulty sleeping then look for ways to improve this.

Sleep Apnea

Sleep apnea is a sleeping disorder that is connected to a reduction in your airflow while sleeping. This condition is most normally seen in adults, and obese adults are the most often group afflicted with this disorder.

You are considered to have sleep apnea when your breathing is reduced to less than 25% of the normal rate, or your breathing actually stops for 10 seconds or more. Some people with sleep apnea suffer with a complete stoppage of their airflow.

A blood test can show if you are dealing with sleep apnea. Your oxygen levels are measured and when there is a 4% drop this shows that you could be dealing with this sleeping disorder.

This is strictly a condition that occurs while you are sleeping and is due to poor oxygen levels in your blood. Sometimes a person will actually wake up when the apnea occurs. But an apnea can also occur when you move from one sleep stage to another, usually a lighter sleeping stage.

A person is tested for this condition by having the apneas measured over a two hour period. The severity of the condition is calculated by simply dividing the number of occurrences by the number of hours slept. This results in a number known as a AI - apneas per hour. The higher the number the more severe your case is.

Apneas can be classified by severity. A hypopnea shows up as a decrease in your breathing, but is not classified an apnea. A hypopnea can still disrupt your sleep pattern and is linked to a decline of 26 to 69% in your breathing. Hypopnea's are measured on an HI and are calculated in the same way as apneas.

Apnea's and hypopnea's can be combined and this is calculated on a index known as AHI. The resulting number is a combination of both disruptions.

The other index measurement that is used is the respiratory disturbance index or RDI. It is measured in the same way as the other methods.

To be diagnosed with sleep apnea you need to have at least 15 episodes per hour on the apnea/hypopnea index. This usually works out to be one episode every four minutes.

You may not even be aware that you have sleep apnea, quite often your partner may notice that you stop breathing during the night. Or you make wake up feeling tired and restless and start wondering why. If you are in any doubt whatsoever then speak to your doctor about getting tested for sleep apnea.

