



DROWZLE™

# ***WAKE UP TO A HEALTHIER LIFE***

A Guide to Better Sleep

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# 1

## WHO NEEDS SLEEP?

Too many Americans aren't getting enough sleep. In fact, a lot of us seem to take pride in our so-called ability to function on little to no sleep. But lack of sleep is not a positive quality or personality trait. And even if you think you are managing fine, too little sleep is disrupting your body in ways you may not realize, but that will have long-term consequences for your health and well-being.

The truth is everyone needs sleep to keep themselves healthy and functioning at their best. Why is no sleep an issue? What are the dangers and problems that are connected to chronic lack of sleep? How much sleep is enough? Could you be suffering from obstructive sleep apnea or another condition that needs to be discussed with your health care provider? We'll answer all these questions and more.

### No Sleep, So Many Problems

Your grandma may have talked about needing her beauty sleep, but a good night's rest is about so much more than looking your best—although it certainly helps that, too. Let's take a deep dive into why lack of sleep is so bad for you.

Not sure why no sleep is an issue? Sleep deprivation will put you off your game the next day or cause you to have trouble focusing. But that's not all. There can be real issues connected to lack of sleep that are bad for you physically and mentally.

A variety of sleep disorders can affect your performance, mood and attitude.

### Three common indications of poor sleep quality include:

- ① Drowsiness when driving or operating machinery
- ② Difficulty concentrating or focusing at work
- ③ Behavioral or learning problems in children

## Driving While Sleepy

It only takes a second of being distracted while driving to cause a serious, or even, fatal accident. Drivers that are sleepy have a more limited reaction time than a fully rested and aware driver. Basically, driving without enough sleep is the same as driving while drunk.

And don't think that cranking the music or rolling down your window will be enough to keep you awake and focused. Even if you don't actually fall asleep while driving, you are more prone to taking risks or making a bad judgment when driving sleepy.

### Check for these three warning signs that you aren't awake enough to get (or stay) behind the wheel:

- ① Your eyes won't stay focused or open.
- ② You are repeatedly yawning.
- ③ You have forgotten driving the past few minutes or miles.

**Any of these signs indicate that you and others will be safer the sooner you get off the road.**

## Sleep Disorders

The issues that affect people's sleep are no joke, although the first thing that probably comes to mind is someone loudly snoring when issues with sleep are mentioned. To start with, there are actually more than 70 different disorders that impact people's quality of sleep. At least 40 million Americans are affected by one of these problems, totaling an estimated \$16 billion in medical costs. Not only is a bad night's sleep costing us in terms of quality of life, but also it is quite literally costing us a lot of money.

### Of those 70-odd disorders, the biggest and most prevalent are insomnia, obstructive sleep apnea, restless leg syndrome and narcolepsy.

#### Insomnia

When it comes to insomnia, everyone has suffered from this disorder at one time or another. Every American has had a night (or more) where they have struggled to fall asleep and/or stay asleep. Sometimes the cause is stress in your life that keeps you up. Other times it can be linked back to such behaviors as exercising too close to bedtime or having too much caffeine late in the day. It can also be traced to other health conditions such as depression or a thyroid condition. The reality is anywhere from 30 to 40 percent of adults have an issue with insomnia at one point in a given year.

Chronic insomnia is when you have symptoms three nights a week or more for at least a month. This condition affects around 10 to 15 percent of people.



**An estimated \$16 billion  
in medical**



**40 million Americans  
are affected**



**More than  
70 different disorders**



## Obstructive Sleep Apnea (OSA)

Another serious sleep disorder that affects 25 to 28 million Americans is obstructive sleep apnea (OSA). This condition happens when the soft tissue in the back of your throat collapses and partially or completely closes your airway. The result is you stop breathing for anywhere from 10 to 120 seconds at a time, and this can happen as many as dozens of times per hour or hundreds of times per night. When breathing resumes, OSA sufferers typically make a gasping, choking or loud snorting sound. That's why snorers are often linked to OSA, but not all those who snore have the disorder. About 80 percent, or 18 to 22 million, of those adults with OSA need treatment but haven't sought help. No matter which figure you focus on, the problem is big, and as baby boomers age and as many Americans become heavier, the problem isn't going away.

is bad, obviously, but the effects of OSA go even deeper. For instance, the constant breathing/not breathing cycle causes people with OSA to miss out on the deeper stages of sleep (**See Chapter 3 - Sleeping Is Easy, Right? for more on the stages of sleep**). And we already know that interrupted sleep on a regular basis impacts your ability to drive safely. But there's a lot more. OSA has been linked to mood and behavior problems, headaches, trouble concentrating and issues with memory. The dips in blood-oxygen levels that happen when you stop breathing can also cause the release of stress hormones, which wreak havoc on your blood pressure and heart rate. As a result, those with untreated OSA are at a higher risk of heart attack, stroke, congestive heart failure, obesity and diabetes.

### The top 10 reasons why you should want to treat OSA:

- ① You will feel better if you're treated.
- ② You will feel better if you're treated.
- ③ You will feel better if you're treated.
- ④ You will live healthier.
- ⑤ You will probably live longer.
- ⑥ Your bed partner will very likely be happier.
- ⑦ Your sex life will benefit from treatment.
- ⑧ Everyone else will be safer, because you will be less likely to cause an accident.
- ⑨ Most OSA treatments involve some effort, but are not painful and those who use them adjust well.
- ⑩ You will feel better if you're treated.

## Restless Leg Syndrome (RLS)

What many people refer to as Restless Leg Syndrome or RLS is really Periodic Limb Movements in Sleep or PLMS. People with PLMS experience brief, abrupt limb movements (usually leg or foot) during sleep. They may not notice any problems while awake, but the condition will disrupt sleep. PLMS is more common as people age and can occur on its own or be associated with other conditions such as Parkinson's Disease and obstructive sleep apnea. In fact, PLMS can reveal cardiovascular disease in adults and can also indicate brain iron deficiency in children.

PLMS is often associated with RLS. Ever noticed an uncomfortable sensation in your legs that gave you the urge to move? That was likely RLS and the sensation can be relieved by moving or massaging your legs. Somewhere between 5 and 15% of Americans have RLS and about three-quarters of those also have PLMS.

## Narcolepsy

Like snoring, narcolepsy has long been the butt of many jokes in movies and on television. But the reality is this condition, which causes people to fall asleep at inappropriate times during the day for anywhere from a minute to half an hour, make it extremely difficult for sufferers to have a normal life. While daytime sleepiness is what most people think of when they hear narcolepsy, there are three other symptoms of the sleep disorder: sudden muscle weakness, sleep paralysis and vivid dreams.

### How Much Is Enough? How Much Do I Need?

The answer to that question does vary with age, but research on sleep has shown us that the average adult needs at least 7 to 8 hours a night. Babies, children and teenagers will need even more—16 to 18 hours a day for newborns, 11 to 12 for preschoolers and 10 hours a night for school-age kids and teenagers.

Think about it this way, before our ancestors had electricity to keep them awake after dark or other forms of technology and media constantly grabbing their attention, adults averaged 9 hours of sleep a night. People at the turn of the 20th century weren't lazier than we are today, they just had fewer distractions tempting them.

## KIDS' GROWTH AND DEVELOPMENT

Finally, a lack of regular, quality sleep can be bad for the development and growth of children. Several important growth hormones are released during deep sleep. So, while drinking coffee won't actually stunt your growth as a child, lack of sleep just might. In children (as well as adults) these same hormones that are released while we sleep help to repair cells and tissue, as well as boost muscle mass. Sleep can also affect the release of hormones related to puberty and fertility. A good night's sleep on a regular basis may help you fight off infections, no matter what age you are. Cytokines are a cellular hormone that is created during sleep that aids your immune system in its fight against infections. But it isn't just growth and development that become a problem for children not getting a good night's rest. Lack of sleep can have serious, detrimental effects on a child's ability to learn and may even lead to a misdiagnosis of ADHD. Instead of acting tired, children who don't get enough sleep often seem to be hyperactive and unable to focus. As a result, grades suffer.

About 7 million kids in the US have been diagnosed as having ADHD, but it is possible that as many as half of those children, or 3.5 million, have pediatric obstructive sleep apnea in addition to or instead of ADHD. Just as it does in adults, OSA causes kids to stop breathing, briefly, multiple times throughout the night. An incorrect diagnosis could mean that many children are receiving unnecessary medications instead of addressing the underlying sleep problem. Pediatric OSA can result in behavior issues and can cause attention, learning and memory deficits. What's more, if left untreated, OSA in kids can cause a higher risk of high blood pressure and increased rates of diabetes or heart disease when they become adults.





# 2

## ***SLEEPING IS EASY, RIGHT?***

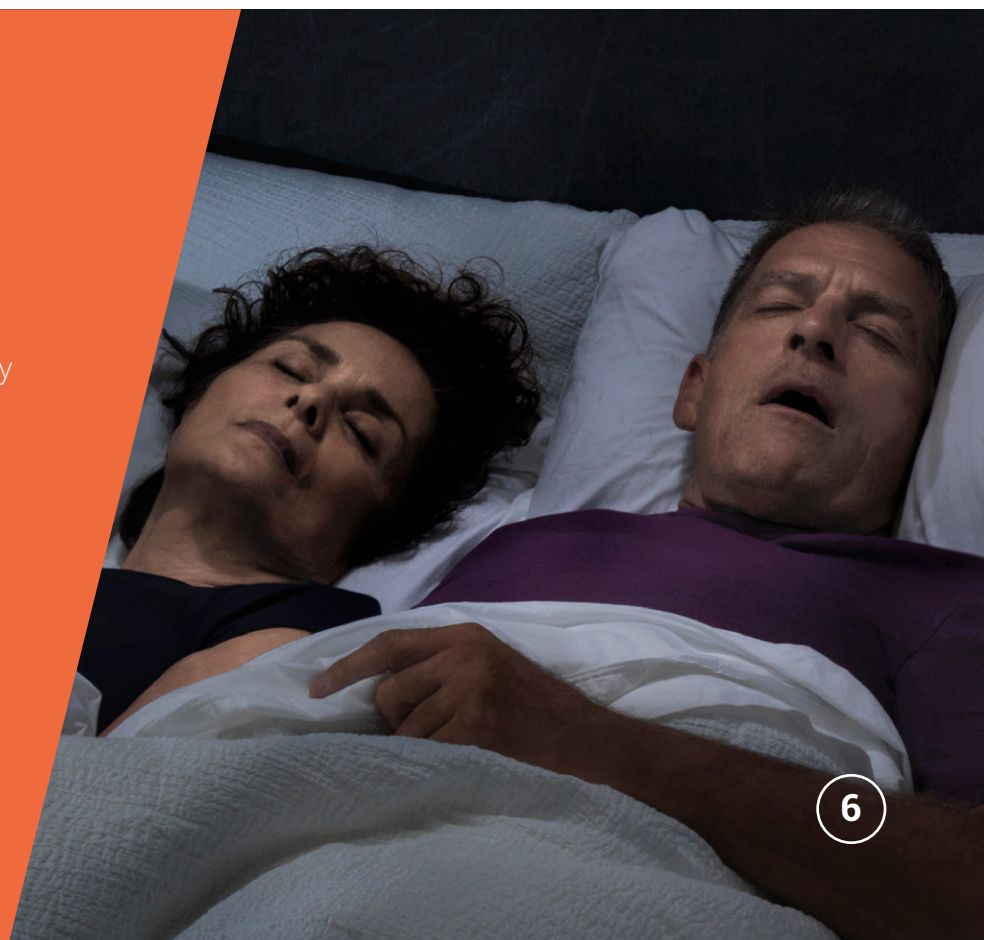
Understanding why sleep is important includes an understanding of what exactly sleep is, including the two types of sleep - rapid eye movement (REM) sleep and non-REM sleep, which consists of three stages. Each stage of sleep can be distinguished by brain waves that are specific to that stage.

### **Non-REM Sleep**

Sleep begins with stage 1 of non-REM sleep. During this period, your muscles relax, your breathing slows and your eyes will move slowly. You may even experience body twitches. This is a time of lighter sleep, and you can be woken quite easily. Stage 2 of non-REM sleep is typically where you will spend half of your sleep time. This period is marked by slower brain waves, with occasional bursts of rapid waves. Eye movement stops during stage 2. The next, and final, non-REM stage is when the brain waves slow even more. This is the deepest stage, and it is when children experience sleep walking or bed wetting. It is extremely hard to wake someone during stage 3 of non-REM sleep. Your muscles are relaxed, and your heart and breathing rates have slowed.

### ***HOW SLEEP HAPPENS***

You can try to fight off your feelings of sleepiness, but your body has its own way of forcing you to pay attention. There are two hormones that your body produces that are connected to not only making you feel sleepy, but also why a lack of sleep will catch up with you.



## REM Sleep

The second type of sleep is REM sleep, named for the rapid movement of your eyes that occurs. This type of sleep typically happens within 90 minutes of you first falling asleep and will reoccur throughout the night in a cyclical pattern with the three stages of non-REM sleep. REM sleep is when you dream and have temporary paralysis of your arms and legs. In addition to the rapid eye movement, you will experience irregular breathing, heart rate and blood pressure.

## How Sleep Happens

You can try to fight off your feelings of sleepiness, but your body has its own way of forcing you to pay attention. There are two hormones that your body produces that are connected to not only making you feel sleepy, but also why a lack of sleep will catch up with you.

The first hormone, adenosine, builds up in your blood during the day. Then, during sleep, your body breaks down this hormone. While there are several complex factors at play, adenosine is the reason why your body won't adjust to less sleep than it needs. Without the right amount of sleep for your body, your daily buildup of adenosine won't be broken down and will instead build up, creating a sleep debt.

Melatonin is the other hormone your body produces that is linked to sleep. Its role is to make you feel sleepy at night. It is part of your body's biological clock that is in charge of your sleep patterns. This internal clock regulates the production and release of melatonin to indicate to your body that it is time to sleep. Light is an external cue that triggers your body to release melatonin, which is why you may feel sleepy when it is dark, but your body naturally has a surge of melatonin in the late afternoon, between 1 p.m. and 4 p.m., as well as between midnight and 7 a.m.

## Fighting Your Biological Clock

Yes, your biological clock is real, and it has a lot to do with sleep. It is what controls your alertness, making you more "with it" during the day and less so as night approaches. Your biological clock is the reason why, whether you think you are a "day" person or not, most people function better when it is light outside.

Despite this, there are instances where disrupting your biological sleep clock happens. For instance, if your work night shift or when you travel across time zones.

Approximately one quarter of people work a shift that doesn't fall into regular daylight hours. What's more, two thirds of those workers with non-daylight working hours suffer from sleep difficulties or problems. Normal sleep cues, like light, must be ignored by night shift workers, which is why many major industrial accidents can be partially traced back to over-tired individuals working during the night. The likelihood of a night shift worker having a car accident is also higher (**See Chapter 1 - Driving While Sleepy for more on how lack of sleep is dangerous while driving**). It is also believed that many night shift workers' health problems, such as heart disease, digestive issues, infertility and even emotional problems, may be rooted in their disrupted biological sleep clock.



# 3

## ***MORE SLEEP BANG FOR YOUR BUCK***

By now, hopefully, you are catching on to the fact that sleep is important to your health and well-being, and that a lack of sleep can be downright dangerous in many ways to you (and others!). But there's actually even more ways your health can be impacted by a lack of sleep, from heart disease to diabetes, memory issues to erectile dysfunction.

First, and maybe foremost to those you encounter daily, a good night's sleep simply makes you a nicer person. Irritability and bad moods are reported more by people who have not had a restful night. A chronic lack of sleep can be connected to an increased risk of depression. This is particularly evident in new parents whose sleep is disrupted by their newborn. In fact, some experts believe there may be a link between postpartum depression and the lack of sleep that comes with caring for a baby.

Second, your parents probably advised you growing up to get a good night's sleep before taking a big test. While you probably wanted to ignore them at the time, they were on to something important. Studies have shown that people can better grasp a new task when their sleep is not compromised. Regular sleep has also been shown to aid in memory. We have yet to determine why this is so, but some researchers believe the pathways between brain cells are strengthened during our sleep.

Not only can irregular sleep impair our ability to learn new information, retain knowledge and remember things, but it has also been shown to lead to a higher risk of dementia or Alzheimer's disease. Disruptions to normal REM sleep were linked to this increased risk.

Next, sleep contributes to your physical health in a host of ways, such as giving your vascular system a chance to rest with the corresponding slowing of heart and breathing rates and reduced blood pressure. Lack of sleep can cause your body to release more of several hormones, including adrenaline and cortisol, which can put additional stress on your heart resulting in cardiovascular disease (i.e. hypertension, strokes, heart attacks and hardening of the arteries).

There is also a potential link between increased rates of obesity and diabetes and irregular sleep habits. During sleep, your body produces two hormones that regulate your appetite - leptin (an appetite suppressor) and ghrelin (an appetite stimulant). While you sleep, leptin production should increase, while ghrelin decreases. However, disrupted sleep can interfere with this process, potentially resulting in weight gain.

During sleep, there are other hormones that are released to control how your body uses energy. Blood sugar is tied to the four stages of sleep, as well. Disrupting the stages of sleep has been shown in studies to impact insulin and blood sugar levels, increasing your chances of developing diabetes later in life. Another health concern linked to disrupted sleep is erectile dysfunction in men. Lower testosterone is one side effect of sleep deprivation, resulting in decreased libido and erectile dysfunction.

## ***DISRUPTIVE SLEEP***

Irregular sleep patterns can cause possible risk of diabetes. A lack of sleep increases cortisol, hunger hormone, and decreases growth hormones, serotonin and leptin – all increasing the risk of weight gain.



## ***IRRITABILITY***

After a sleepless night, you may be more irritable, short-tempered, with repeated awakenings all because of sleep deprivation. Once you sleep well, your mood often returns to normal.

# 4

## ***WHAT YOU THINK YOU KNOW ABOUT SLEEP***

Although much time and effort has been spent researching sleep, there is much we still do not know about what happens to our bodies when we are at rest. What's more, there are still many myths and untruths that people believe about sleep. Here are the top 10 sleep myths that need to be debunked:

### **Myth No. 1 / Your body, brain and organs shut down while you sleep.**

There are no signs that any of our major systems or organs stop functioning while we sleep. If anything, some systems actually have a surge of activity. Several hormones, for example, increase their release during sleep, while memory and learning pathways in the brain are more active (**See Chapter 1 - Who needs sleep? for more on the role of sleep on the release of hormones, particularly as it pertains to the growth and development of kids**).

### **Myth No. 2 / One hour less of sleep per night has no effect on you .**

The loss of one hour's sleep on a given night will probably not noticeably affect you the next day, but it can affect how quickly you respond or think and, potentially, it can lower your body's ability to fight infection. Of course, should one night's loss of an hour turn into a regular thing, your risk of long-term health consequences, as well as issues functioning during the day, increases.

### **Myth No. 3 / Adapting to a different sleep schedule is a breeze.**

Your body is specially calibrated, via your biological clock, to have you sleep at certain times. While it can be adjusted, say for those that work night shift or when you cross time zones, it can take a week or more to adjust to a big sleep change.

### **Myth No. 4 / The older you are, the less sleep you need.**

While older people may find they are getting less sleep, or the quality of their sleep isn't as good, they actually still need the same amount of sleep. They just have an increased risk of sleep issues and problems.

### **Myth No. 5 / More sleep will make up for a bad night's sleep.**

Yes, the amount of sleep you get is important, but the quality of your sleep also matters. Sleep disorders, like OSA, can disturb the quality of your sleep, even if you are getting 8 or more hours a night. If you are experiencing frequent issues with sleep, a 10- to 12-hour night of sleep isn't going to correct the daytime sleepiness and other side effects you will have as a result.



### **Myth No. 6 / Any sleep you miss during the week can be made up on Saturday and Sunday.**

While it's a nice idea that sleep is a bank that you can deposit and withdraw from at will, the reality is that regular, quality sleep is best for everyone. Not only does trying to catch up on sleep on the weekend not offset any sleep loss during the week, but also you can disturb your biological clock by alternating between less sleep on the weeknights and then more on the weekends.

### **Myth No. 7 / Naps don't help.**

No naps can't truly make up for a bad night's sleep or a regular issue with sleep such as OSA or restless leg syndrome, but they can temporarily offset some of the side effects of a bad night's sleep. The key is following some good nap etiquette. Don't nap for longer than 20 minutes; don't nap later than 3 p.m. or you could interfere with your ability to fall asleep at night; and if you are taking more than one or two planned or unplanned naps during the day, you may have a more serious sleep disorder that needs to be addressed.

### **Myth No. 8 / Everyone snores, and there's nothing wrong with it.**

Yes, snoring happens, but if you snore loudly and often, it could be a sign of a more serious condition like Obstructive Sleep Apnea (**See Chapter 5 - Get the perfect night's sleep if you are concerned that you may have a sleep disorder such as OSA**). Snoring can increase your likelihood of developing diabetes or heart disease. Even in children, frequent snoring can affect their behavior and performance at school.

### **Myth No. 9 / Lack of sleep in kids will make them sleepy during the day.**

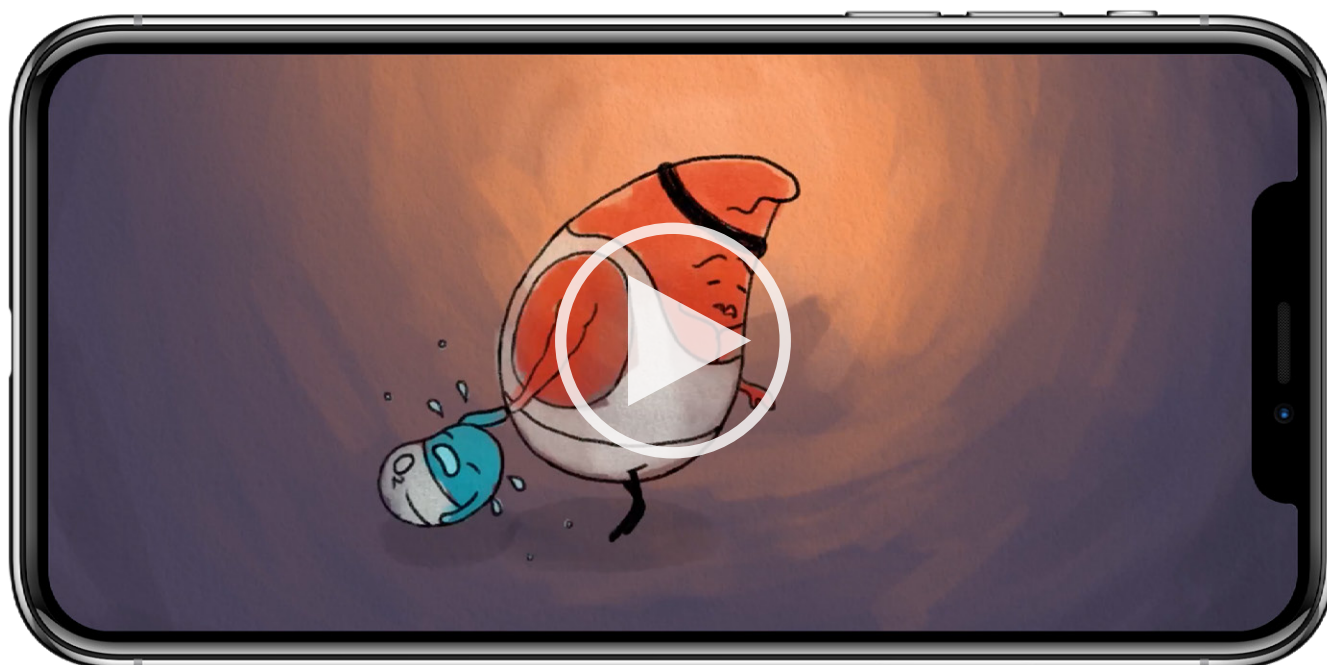
In actuality, children will exhibit the opposite behavior when they aren't getting enough sleep. Too little sleep makes kids more likely to be hyperactive, inattentive or irritable during the day. It can also affect their growth (**See Chapter 1 -Who needs sleep? about the release of hormones during sleep that affects kids' growth**).

### **Myth No. 10 / Can't sleep? Stop worrying.**

Too often, issues with insomnia are linked to worry and anxiety. Certainly, stress can cause trouble sleeping, but prolonged issues with not enough sleep or bad quality sleep is most likely linked to another cause. Some medications, as well as certain disorders, can affect sleep, as can several medical conditions from depression to asthma.

**Want to learn more about what happens to your body when you don't get enough sleep?**

***CHECK OUT THIS FUN VIDEO FOR MORE INFO!***



## ***WHAT'S KEEPING YOU AWAKE?***

If you aren't sleeping at night, what's the cause then? One area that affects many people's sleep is stimulants such as caffeine, nicotine and even certain medications. While many people use caffeine to get them going in the morning, the effects of a cup of coffee or a soda can take up to 8 hours to leave your body. Nicotine can not only keep you awake because it is a stimulant, but also if you are a heavy smoker, you may wake up because of withdrawal.

Alcohol also can interfere with a good night's rest. Despite initially helping you fall asleep, it prevents your body from entering into the deeper stages of sleep, making for a lower quality of sleep and an increased chance of waking up throughout the night. In fact, this problem is called 'sleep rebound': When a person drinks too much alcohol, or drinks too close to bedtime, then wakes up after a few hours and can't fall back asleep.

Multiple prescription and over the counter medications can impact the quality and quantity of sleep as well. For instance, beta blockers taken by those with high blood pressure can make it harder to fall asleep and even wake you up at night more frequently. Even decongestants can impact your sleep. Anything from arthritis to asthma can have a detrimental effect on your rest. For women, their menstrual cycles and later the experience of menopause, both with their shifts in the release of certain hormones, may cause sleep disruptions.

In addition to physical conditions, psychological disorders such as schizophrenia or anxiety disorders have been known to impact a person's quality and quantity of sleep. There is also a strong connection between depression and insomnia and vice versa.

Last but not least, lifestyle choices may be keeping you from a good night's rest. Eating too much or exercising too vigorous right before bed are some of the lifestyle factors that could affect your ability to fall asleep.

## ***STIMULANTS THAT COULD AFFECT YOUR SLEEP***



***MEDICATION***



***ALCOHOL***



***CAFFEINE***

# 5

## GET A PERFECT NIGHT'S SLEEP

We've covered the problems that can be impacting your ability to enjoy 8 hours of unbroken rest - the amount most people require a night. Now what can you do to ensure that you are setting the stage for the best possible night of sleep? We've got 10 tips that you can follow to create the ideal sleep environment.

### TIP 1

**Stick to a sleep schedule.** Your biological clock is happiest when you are going to sleep and waking up at the same time, even on weekends. Exposure to natural light can help as well, so use bright lights to wake up in the morning and then dim the lights in the evening as it gets closer to time to sleep to trigger your biological clock.

### TIP 2

**Schedule your exercise.** Regular exercise can help you sleep, but it is best to give yourself two to three hours after a workout to wind down before trying to fall asleep.

### TIP 3

**Skip caffeine, nicotine and alcohol before bed.** All of these can impact your ability to fall asleep or stay asleep, so it's best to lay off of them before bedtime.

### TIP 4

**Eat earlier in the evening.** A huge meal before bedtime can interfere with your ability to fall asleep. A small snack close to bed is ok, but not a full dinner.

### TIP 5

**Avoid medications that are affecting your sleep.** If you have noticed that prescriptions or over the counter remedies are impacting your sleep, talk to your doctor about other options or if you can take the medications earlier in the day to lessen your sleep disruption.

### TIP 6

**Nap only before 3 p.m.** While a nap can be a good idea, especially if you did have a bad night's sleep, taking one after 3 p.m. could actually make it harder for you to fall asleep that evening.

### TIP 7

**Create a good sleep environment.** Start by ridding your bedroom of any distractions, whether it's your cellphone or the TV. Be sure the temperature at night is lower, which can foster a better night's sleep, too.

### TIP 8

**Relax and unwind.** Finding a way to decompress before bed, such as a hot bath or reading, or simply ensuring that you aren't active right up until bedtime, can help.

### TIP 9

**Get up if you can't sleep.** Lying in bed awake after 20 minutes is not going to help you fall asleep. The best plan of action, should this happen to you, is to get up, engage in a relaxing activity, like reading, until you feel sleepy. Then return to bed.

### TIP 10

**Seek medical help if your problem persists.** If you have tried all the tips, and continue to struggle with sleep issues, it is time to seek the help of your doctor to determine if there is another, underlying issue that is causing you to have insomnia or if you may have a sleep breathing disorder such as obstructive sleep apnea.



# SLEEP APNEA RISK SURVEY

This screener is generally known as the "STOP-Bang" Questionnaire for determining if you might be at risk for OSA. This is simply a screener for awareness.

## For general population

### OSA / Low Risk /

Yes to 0 - 2 questions  
\_\_\_\_\_

### OSA / Intermediate Risk /

Yes to 3 - 4 questions  
\_\_\_\_\_

### OSA / High Risk /

Yes to 5 - 8 questions  
\_\_\_\_\_

or **Yes to 2 or more of 4 STOP questions** + male gender  
or **Yes to 2 or more of 4 STOP questions** + BMI > 35kg/m<sup>2</sup>  
or **Yes to 2 or more of 4 STOP questions** + neck circumference  
17 inches / 43cm in male or 16 inches / 41cm in female

## THINK YOU HAVE AN ISSUE?

If you are concerned that your sleep is being compromised as a result of OSA, this quiz can help you decide if you should seek medical help.

- 1 S/Snoring**  
Do you snore loudly (loud enough to be heard through closed doors or your bed-partner elbows you for snoring at night)?  
**Yes**  
**No**
- 2 T/Tired**  
Do you often feel tired, fatigued, or sleepy during the daytime (such as falling asleep during driving or talking to someone)?  
**Yes**  
**No**
- 3 O/Observed**  
Has anyone observed you stop breathing or choking/gasping during your sleep?  
**Yes**  
**No**
- 4 P/Pressure**  
Do you have or are you being treated for high blood pressure?  
**Yes**  
**No**
- 5 B/Body Mass Index more than 35 kg/m<sup>2</sup>?**  
**Yes**  
**No**
- 6 A/Age older than 50?**  
**Yes**  
**No**
- 7 N/Neck size large?**  
For male, is your shirt collar 17 in/43cm or larger? For female, is your shirt collar 16 in/41cm or larger?  
**Yes**  
**No**
- 8 G/Gender male?**  
**Yes**  
**No**

**VISIT THE NIH  
WEBSITE TO  
CALCULATE  
YOUR BMI**



If you are concerned you may have OSA,  
print this out and share with your physician.



# DROWZLE™

The crucial first step is to understand your sleep breathing health, and what it can tell you about the risks your body may be taking during sleep. If you fear that you may have a sleeping disorder, please consult with your physician about proper screening, diagnosis and treatment.

The end result will leave you feeling and performing better.

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## ***SLEEP WELL!***

***FOR MORE INFORMATION VISIT / [WWW.DROWZLE.COM](http://WWW.DROWZLE.COM)***

