

ADVENTIST HEALTH PORTLAND

# The Getting to Sleep Guide

From the sleep experts at Adventist Health Portland



Adventist Health  
Portland

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# Sleep: The foundation of good health

Quality sleep is as essential to life as food and water. It is as important to good health as eating well and getting regular exercise. For anyone who strives for whole-person health — integrating the mind, body and spirit — quality sleep isn't a luxury. It's a necessity.

“Many patients are surprised to learn how much sleep affects their overall health. Without good sleep, it's almost impossible to manage other health conditions.”

Dr. C. Cameron Hagen  
Sleep Medicine Physician

## Sleeping well can help you:

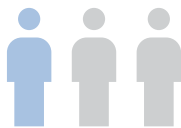
- Lose weight
- Eat better
- Fight depression

## Without enough quality sleep, you are more likely to experience chronic diseases such as:

- Hypertension
- Diabetes
- Depression
- Obesity

Up to half of people with heart disease, for example, have sleep apnea, a disorder that causes them to stop breathing or take shallow breaths during sleep.

Yet, for all of sleep's research-backed benefits, 30% of Americans simply don't get enough of it, according to surveys by the U.S. Centers for Disease Control and Prevention (CDC). For too many of us, our fast-paced world — as well as our own physical challenges — are keeping real rest out of reach.



**30%**  
of U.S. adults report  
not getting enough sleep

The Getting to Sleep Guide can help. In this comprehensive guide from the sleep experts at Adventist Health Portland, you'll learn why sleep is so important and what happens inside our bodies when we don't get the sleep we need.

We'll walk you through common sleep disruptions — like daylight saving time — and more serious sleep disorders including insomnia and sleep apnea. Many of these can be managed or resolved through lifestyle changes or medical treatment.

Most importantly, we'll give you practical tools and tips for getting better sleep.

# Spring forward/ fall back: Daylight savings time



Every spring and fall we turn physical clocks forward or back, then expect our internal body clocks to follow suit.

This mere hour of change in either direction can make a big impact on the quality of our sleep and affect other areas of our lives, from our meals to our moods.

## **Make the time change easier with a few steps in advance:**

- Start from a healthy and consistent sleep schedule. Avoid tobacco, caffeine and alcohol at least four hours before bedtime.
- Start the change gradually. Go to bed about 15 minutes later and wake up 15 minutes later for each of the four days leading up to the fall time change. If it's spring, shift your sleep/wake times 15 minutes earlier on those four days.
- Use bright light early in the morning to tell your body it's time to be awake.
- Consider using a melatonin supplement 60 to 90 minutes before the time you want to go to sleep.
- Avoid bright light in the hours before you go to bed.



# Why sleep is important



1/3

portion of our lives we spend sleeping

We hear a lot about the importance of eating well and getting enough exercise if we want to live long, healthy lives. Quality sleep is equally important as a “vital sign” of good health, yet it hasn’t always gotten the attention it deserves.

Until the 1950s, most people thought of sleep as a passive, inactive part of our daily lives. We now know our brains are very busy during sleep. Our bodies are designed to do important work while we rest, processing the day’s events and restoring our energy.

The sleep we get at night affects how we function during the day. And over time, the sleep we get (or don’t get) each night influences our long-term physical, mental and emotional health.

## How sleep happens

We spend about one third of our lives asleep. But what internal systems cause us to sleep? And what’s really going on inside our bodies after we shut our eyes?

Two forces are at work in our bodies, at the same time, that control when and how much we sleep: sleep drive and your internal clock. Light also plays an important role.

**Sleep drive.** We each have an internal sleep drive that tells us a need for sleep is accumulating. The sleep drive increases the longer we stay awake. It also helps us stay asleep at night, to make up for our hours of being awake. Sleep drive and sleepiness, however, aren’t the same thing.

**Internal clock.** We each also have an internal circadian biological clock that regulates the timing of when we feel sleepy or wakeful over a 24-hour period. This internal clock produces an alerting signal that increases throughout the day, at the same time that our sleep drive is decreasing. This signal causes us to feel more alert at certain points in the day – even if we have been awake for hours, and even if our sleep drive would otherwise make us feel sleepier.

# How light affects our internal clock



## cir·ca·di·an

/sər'kādēən/ ·

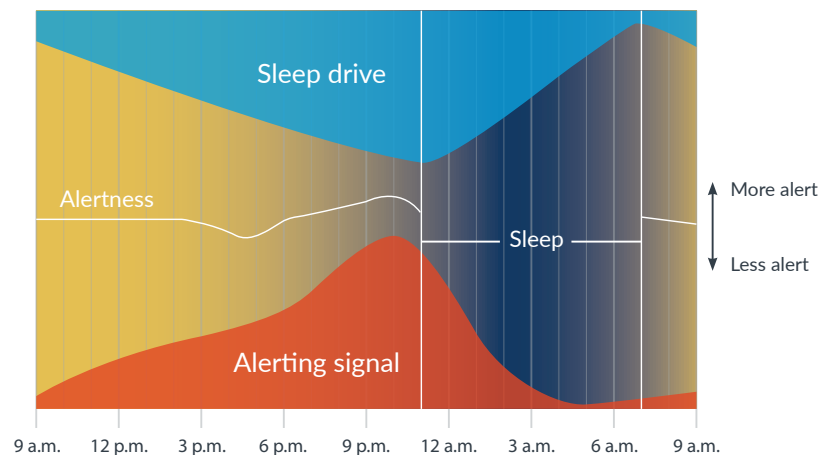
adjective

Describes a daily rhythmic activity cycle, based on 24-hour intervals, that governs certain biological processes, including sleep. Formed from the Latin for “about” (circa) + “day” (dies).

Normally, light serves to set our internal clock to the appropriate time, by telling our brain whether it is daytime or nighttime. Problems arise when our exposure to light changes — for example, when we travel across time zones and experience “jet lag” — because there is a mismatch between our external environment and our internal clock.

Under normal conditions, our sleep drive and internal clock counterbalance each other, allowing us to remain alert when we want to be alert, and to sleep when we want to sleep.

When these systems are in sync, sleep is able to perform a variety of important jobs inside the body: reenergizing cells, clearing waste from the brain, and supporting learning and memory.



Source: [healthysleep.med.harvard.edu](http://healthysleep.med.harvard.edu)





# When we don't get enough sleep



## Less than 6 hours

sleep per night reported by 30% of U.S. adults

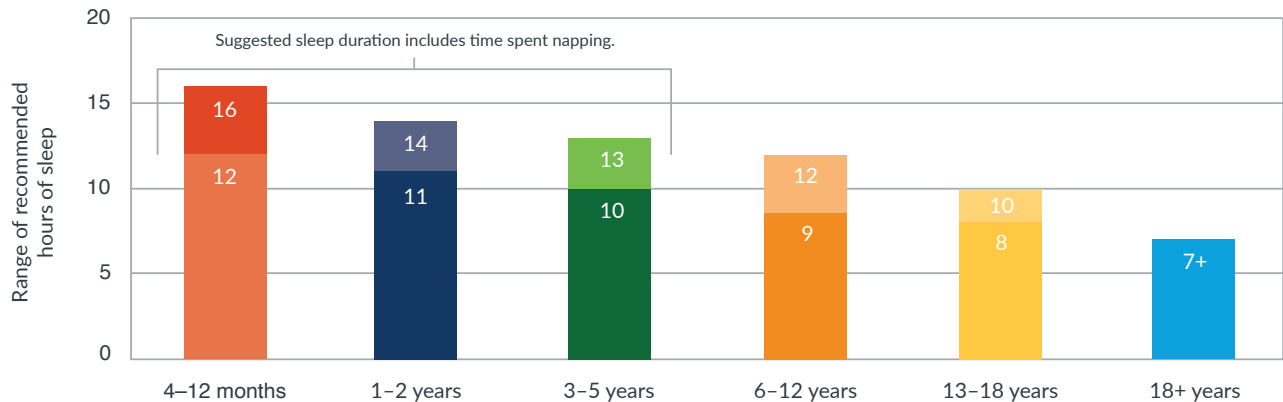
According to the CDC, an estimated 50 to 70 million U.S. adults have a sleep or wakefulness disorder – a broad category that includes snoring, sleep loss and insomnia, among other problems.

Healthy sleep promotes physical and mental well-being and boosts our daytime performance. When we don't get sufficient quality sleep, our bodies suffer real consequences.

Sleep deprivation can make it hard to think and concentrate, increase anxiety, and lead to weight gain. Over time, inadequate sleep increases your risk of chronic diseases including heart disease, diabetes and cancer.

### Healthy sleep duration

The American Academy of Sleep Medicine recommends that you get the following hours of sleep on a regular basis for optimal health at each stage of life (see graph below).



Source: [sleepeducation.org](http://sleepeducation.org)

# HOW SLEEP AFFECTS YOUR HEALTH

## Sleep deprivation

### Impaired cognition

Lack of sleep impairs memory and your ability to process information.

### Higher levels of anxiety

Lack of sleep raises the brain's anticipatory reactions, increasing overall anxiety levels.

### Stroke risk

When you sleep six hours or less a night, your chance of a stroke increases 4x.

### Increased risk for diabetes

Lack of sleep increases cortisol and norepinephrine, both of which are associated with insulin resistance.

### Increased symptoms of depression

A lack of sleep disrupts neurotransmitters to the brain which regulates mood.

### Increased risk of breast cancer

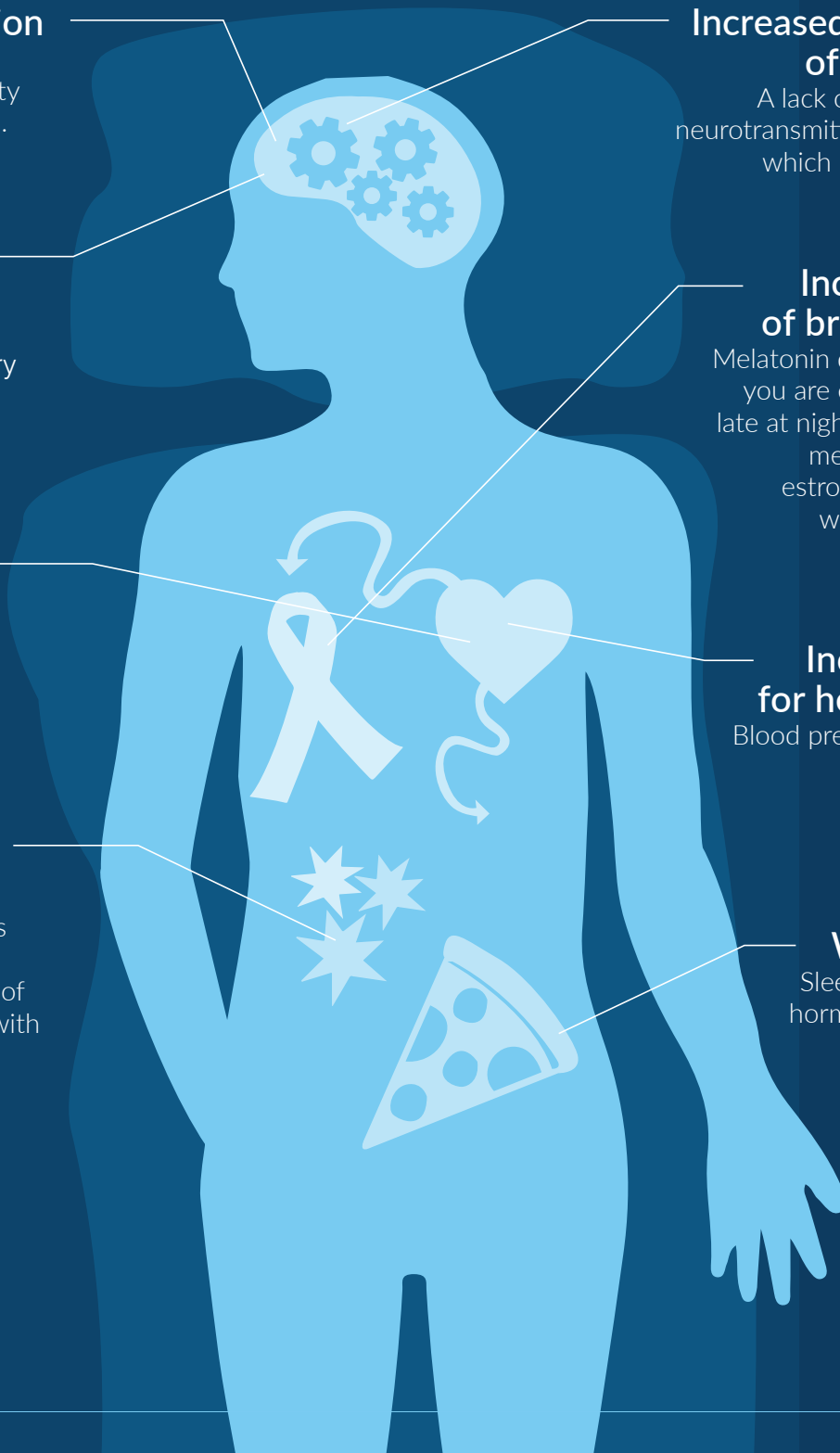
Melatonin decreases when you are exposed to light late at night. A decrease in melatonin disrupts estrogen production, which can lead to breast cancer.

### Increased risk for heart disease

Blood pressure decreases when you sleep.

### Weight gain

Sleep helps balance hormones that make you feel hungry and full.



## Poor sleep and diabetes



People who get poor sleep also tend to have very high insulin resistance, which increases their risk for type 2 diabetes.

Poor sleep also cues the body to produce certain hormones that lead to weight gain and further increase diabetes risk:

- Cortisol – a stress hormone that triggers weight gain
- Leptin and ghrelin – “hunger hormones” that trigger hunger and appetite, prompting you to eat more and more often and to crave salty and high-carbohydrate foods.

## Poor sleep and heart disease



Poor sleep causes your body to release stress hormones during the night, which raise your blood pressure and put stress on the heart. This is the case for people who suffer from sleep apnea, which causes repeated pauses in breathing while sleeping.

Normally during sleep, your blood pressure should dip down. When people have untreated sleep apnea, this “dip” doesn’t occur. This can result in increased stress on the heart over a long period of time.

Left untreated, sleep apnea can lead to hypertension, coronary artery disease, heart failure, arrhythmias, heart attacks and stroke. But early detection and treatment of sleep apnea can actually prevent and in some cases reverse the cell damage that leads to heart disease. (See page 17 for more on sleep apnea.)

## Poor sleep and depression



People with insomnia are  
**10x**  
more likely to develop depression  
vs. people who sleep well.

Poor sleep can cause chemical changes in the body that trigger mood disorders, including depression. Conversely, people with depression often suffer from insomnia. If you're struggling with depression, healthy sleep is an important part of the solution.

The healthy sleep habits described later in this guide (page 22) can help you fall asleep and stay asleep. If your sleep issues persist or you think you may be depressed, it's important to get checked out by a doctor.

### Common symptoms of depression:

- Insomnia
- Feelings of hopelessness, helplessness and sadness
- Thoughts of death or suicide
- Loss of interest in things that were once pleasurable
- Concentration problems
- Forgetfulness
- Loss of libido
- Changes in weight and appetite
- Daytime sleepiness
- Loss of energy

# How sleep disorders affect your heart

Untreated sleep disorders can have long-term effects

## Atrial fibrillation

**50%** of people with atrial fibrillation are likely to have sleep-related breathing disorders. Treatment improves the likelihood that your rhythm will stay regular into the future.

## Congestive heart failure

**76%** of people with congestive heart failure are likely to have sleep-related breathing disorders.



## Coronary heart disease

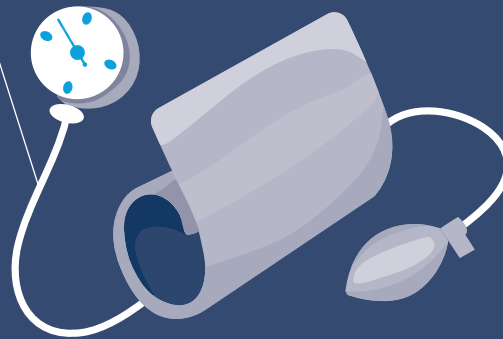
**30%** of people with coronary heart disease are likely to have sleep-related breathing disorders. Untreated obstructive sleep apnea (OSA) worsens the blockages that cause heart attacks, it also affects the metabolism, worsening cholesterol and sugar levels.

## Nighttime heart attacks

**91%** of people with nighttime heart attacks are likely to have OSA. If left untreated, apnea increases the risk of heart attacks.

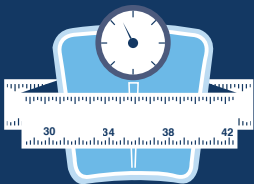
## Drug-resistant hypertension

**80%** people with drug-resistant hypertension are likely to have sleep related breathing disorders. Weight loss and using a CPAP mask make a difference.



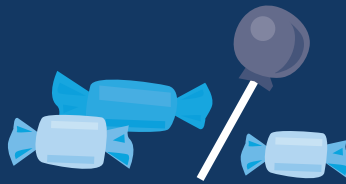
## Hypertension

**35%** of people with hypertension are likely to have sleep-related breathing disorders. Undiagnosed and untreated sleep apnea can result in high blood pressure.



## Obesity

**77%** with obesity are likely to have OSA. Obstructive sleep apnea is often associated with being overweight, and losing weight can be a cure.



## Diabetes

**72%** of people with diabetes are likely to have OSA. Struggling for air may make your body release stress hormones that can raise blood glucose levels.



## Pacemakers

**59%** of people with pacemakers are likely to have OSA. Heart patients with pacemakers have a high prevalence of undiagnosed sleep apnea.

## Why you can't sleep



**50-70 million**

U.S. adults have a sleep or wakefulness disorder

There are around 90 distinct sleep disorders that prevent people from getting the quality sleep they need to live healthy, happy lives.

These include serious conditions that require medical attention and treatment, as well as lesser sleep disruptions that you may be able to resolve on your own, using proven strategies and lifestyle adjustments.

Among the most common and serious sleep disorders are insomnia, sleep apnea, and restless legs syndrome. Sleep apnea and restless legs syndrome are often confused for or mislabeled as insomnia because symptoms are similar.

### **How do you know if you have a sleep disorder?**

You may have a sleep disorder if you or your partner complain about:

- Snoring
- Holding your breath while asleep
- Gasping, choking or snorting

### **Or if you have:**

- Difficulty falling or staying asleep
- Restless legs
- Sleep attacks during the day

# Sleep disorders

## Insomnia

A person with insomnia has one or more of the following:

- Difficulty falling asleep
- Difficulty staying asleep
- Wakes up too early
- Doesn't feel rested, even after a full night's sleep

To qualify as true insomnia, one or more of the above conditions must:

- Persist for at least six months
- Cause problems for you during the day such as fatigue, depressed mood, or decreased alertness and concentration AND
- Occur in an environment that offers adequate opportunities for good sleep

For example, if you're being kept awake by loud noises in your neighborhood, that's not insomnia. But if the noises stop and your sleeping environment is quiet and otherwise conducive to sleep, and you still can't get any rest, insomnia may be to blame.

A note about sleepiness vs. fatigue: Sleepiness is having the sensation that you could actually fall asleep in that moment. Fatigue, in contrast, is having low energy. If you have insomnia and feel sleepy, this can be suggestive of another distinct sleep problem that is triggering the insomnia.

People who have trouble sleeping and assume they have insomnia sometimes turn out to have restless legs syndrome or periodic limb movement disorder – where the inability to sleep is a symptom of their condition, rather than the core problem.

## Restless legs syndrome

A person with restless legs syndrome has trouble falling and staying asleep because of an overwhelming urge to move their legs, which is usually worse at night. This makes it difficult to get comfortable enough to fall asleep. People with restless legs syndrome often describe the sensation as burning or itching inside your legs. The feeling subsides with movement but returns when the legs are still.

If you move your legs or get up and walk around, these symptoms may go away. The discomfort may return when you try again to go to sleep. You may finally get to sleep but later kick yourself awake.



## Periodic limb movement disorder

Some people experience disruptive leg movements that occur after they go to sleep. If you notice that your bedsheets have been moved around significantly, or your bed partner reports seeing you kick your legs while asleep, periodic limb movement disorder may be the cause.

Restless legs and periodic limb movement disorder share triggers that can worsen the problem, including alcohol, caffeine, tobacco, antidepressants and antihistamines. All of these substances can cause restlessness in the legs. In fact, antihistamines are an active ingredient in many over-the-counter sleep medications — so instead of helping you to sleep, these pills can make the situation worse. Medical issues such as anemia, kidney disease or thyroid disease also can worsen restlessness in the legs.

People experiencing restless legs and periodic limb movement disorder can reduce their symptoms by avoiding the triggers. Ask your doctor if you may also benefit from medication for these disorders.

## Narcolepsy and hypersomnia

Some people, despite getting enough sleep and not having another sleep problem, continue to feel excessive daytime sleepiness. This can be a disease called narcolepsy, which can lead to poor work performance, relationship problems and safety issues related to driving. Narcolepsy usually appears between childhood to early adulthood. People suffering from narcolepsy are often mislabeled as “lazy” or “depressed.”

Hypersomnia is a disorder often grouped with narcolepsy. A person with hypersomnia is sleeping for an excessive amount of time during the day, having trouble staying awake during the day, or both.





## Sleep apnea: When snoring is dangerous



Sleep apnea is an extreme form of snoring that happens when an individual's airway narrows or fully closes during sleep.

As we sleep, muscles in the throat relax. In some people, this causes tissue at the back of the throat to narrow or block the airway. When the airway is blocked many times during a night of sleep, leading to pauses or shallow breaths and repeated awakenings, the condition is called sleep apnea.

In someone with severe sleep apnea, the airway may become blocked hundreds of times per night. These pauses can last from a few seconds to a few minutes. When breathing pauses or becomes shallow, you'll often move out of deep sleep and into light sleep. This could be why, the next day, you're falling asleep at a 10 a.m. meeting, even after what felt like a full night's rest.

### Sleep apnea and chronic disease

Sleep apnea does more than make you sleepy; it increases the risk of heart disease and stroke. Untreated sleep apnea can also lead to diabetes, high blood pressure, obesity, erectile dysfunction, depression and hypertension. Men are more likely to have sleep apnea. For women, the risk of experiencing sleep apnea increases if they are overweight and after menopause.

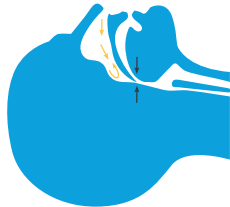
### Sleep apnea and weight: Perpetuating the cycle

When you gain weight, you gain it everywhere, including the tongue. Your airway, however, doesn't change in size. If you gain too much weight, your tongue gets bigger, which can block the airway and lead to sleep apnea and related sleep loss.

When you lose sleep, your body releases hunger hormones that make you crave salty, sweet and fatty foods. These cravings often lead to weight gain...which can contribute to sleep apnea and worsen your sleep...perpetuating the cycle.



Normal airway



Obstructed airway

# Do I have sleep apnea?



There are several effective treatment options for sleep apnea. But the condition is underdiagnosed because symptoms can be hard to detect. You may have sleep apnea if you snore or if you feel tired even after a full night's sleep.

## Consider seeing a doctor if you:

- Snore loud enough to disturb the sleep of others or yourself
- Experience shortness of breath or choking during sleep
- Can't seem to shake your daytime drowsiness

## Sleep apnea in kids

Children with sleep apnea are sometimes mislabeled as having ADHD, a learning disability or behavior problems. This is because children who are not getting sufficient sleep are more likely to engage in hyperactive or disruptive behaviors, than appear sleepy.

Treating a child's sleep apnea in a timely manner — usually by removing the tonsils or adenoids (tissue behind the nasal cavity) — is important for a child's developing brain and can resolve these learning and behavior issues.

## Sleep apnea symptoms

- Snoring
- Pauses in breathing
- Insomnia
- Frequent nighttime urination
- Daytime sleepiness
- Fatigue despite getting enough sleep
- Frequent leg movements during sleep



30/hr

number of times someone with sleep apnea can wake briefly during the night

## Other sleep disruptions

“Though sleep is called our best friend, it is a friend who often keeps us waiting.”

Jules Verne

Fortunately, disrupted sleep can be temporary — for example, when it’s difficult to sleep after the time change caused by daylight saving time (see page 4). These and other sleep challenges can be addressed by adjusting your daily or bedtime routines, your lifestyle or your environment.

Next we’ll cover other common sleep disruptions:

- Basic snoring, page 20
- Shift work sleep disorder, page 19
- Jet lag, page 21
- Social jet lag, page 21

## Shift work sleep disorder

Some people must work the graveyard shift (covering the hours between midnight and 8 a.m.). If you’re one of them, protect your sleep with a few extra steps:

- Avoid bright light after getting off of work in the morning. Consider wearing UV-blocking sunglasses, even if the weather is cloudy.
- Keep your bedroom dark and consider blackout shades.
- Silence your phone and make sure your family knows to not bother you.
- Avoid getting tasks accomplished just because everyone else is awake. This is your sleep time.
- Try to maintain the same sleep schedule on your days off to avoid feeling “jet-lagged” when you return to work, from the change in your sleep timing.
- Take a 30-minute nap before your shift starts.
- Use a lightbox when you get to work.

## Basic snoring



**37 million**

Americans are affected by snoring on a regular basis

**45%** of all adults snore occasionally

**25%** habitually snore

While sleep apnea is an extreme form of snoring, basic snoring can also be disruptive. Snoring is obstructed breathing. It is the sound that occurs during sleep when flow of air is obstructed in the area where the tongue and upper throat meet the soft palate and uvula. Snoring noises occur when these structures vibrate against each other during breathing. Snoring is more common in males and people who are overweight, and worsens with age.

In addition to disturbed sleep patterns and sleep deprivation, other serious health problems may result. Snoring may also be a symptom of other medical conditions.

Heavy or chronic snoring may require medical care. If you snore loud enough to disturb the sleep of others or yourself, you may need to see a doctor about your snoring.

Mild or occasional snoring can be prevented, with certain steps:

- A healthy lifestyle that includes exercise and proper diet
- Losing weight
- Avoiding tranquilizers, sleeping pills and antihistamines before bedtime
- Avoiding alcohol at least 4 hours before bedtime
- Avoiding heavy meals at least 3 hours before bedtime
- Establishing regular sleeping patterns
- Sleeping on your side
- Tilting the head of the bed up about 4 inches

## Jet lag



Anyone who has traveled across several time zones by plane has experienced jet lag. It occurs when your body's internal clock is out of sync with the current time zone.

Symptoms of jet lag may include excessive daytime sleepiness, nighttime insomnia, headache, loss of appetite, gastrointestinal problems and irritability or mild depression.

In the weeks leading up to your trip, you can begin to ease the transition to a new time zone by gradually moving your wake-up time closer to your target wake-up time at your destination. Even partially shifting your sleep schedule can ease the transition and help you be more alert so you can enjoy your trip.

During your flight, avoid consuming alcohol and stay hydrated.

After you have arrived at your destination, your body's internal clock will reset at a rate of about one hour (or time zone) per day. Environmental cues can help nudge this process along. These cues include exposure to light in the first few days following travel, being active, and eating meals and sleeping at appropriate times in your new time zone.

### Social jet lag

After a busy week, it's normal to feel like sleeping in on the weekend to "catch up" on sleep. But those extra hours in bed can represent a big shift in your regular sleep schedule — and cause you to suffer the effects of "social jet lag."


Social jet lag is the result of following a different sleep schedule during the work week (when we sleep less) versus the weekend (when we sleep more). As little as two hours of difference between weekday and weekend sleep schedules are enough to cause noticeable sleep disruption.

One of the key impacts of social jet lag: weight gain. People who experience two hours or more of social jet lag on a regular basis put on extra pounds, research has shown. When they shifted their weekend sleep schedules to better align with their workday schedules, the weight came off.

How can you avoid the Monday grogginess and potential weight gain that may come with social jet lag? Simply maintain your weekday sleep schedule throughout the weekend.

# Sleep for life

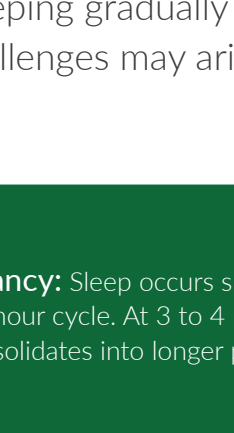
As we age, the amount of time we spend each day sleeping gradually declines and age-specific sleep challenges may arise.



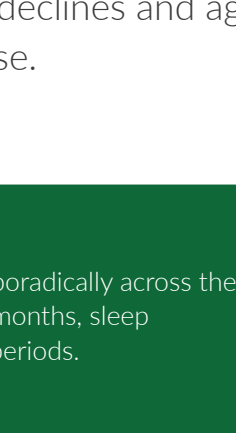
**Infancy:** Sleep occurs sporadically across the 24-hour cycle. At 3 to 4 months, sleep consolidates into longer periods.




**Early childhood:** Sleep occurs in a solid nighttime session plus two or more daytime naps. By age 6 or 7, naps decrease or stop entirely.



**Adolescence:** Developmental changes affect the body's internal biological clock, delaying the preferred times for waking and sleeping. This leads to many high school students going to bed relatively late at night (and struggling to wake up for school the next morning) because their internal clock prevents them from feeling sleepy until later.



**Women at menopause:** One year after menstrual periods stop, a woman reaches menopause, on average around age 50. Major hormonal, physical and psychological changes can trigger sleep problems such as hot flashes, mood disorders, insomnia and sleep-disordered breathing, often accompanied by depression and anxiety.



**Over 65:** Sleep occurs in shorter periods; older people need slightly less sleep than when they were younger. Insomnia and disrupted sleep are common side effects of many chronic conditions such as arthritis, congestive heart failure, depression and gastroesophageal reflux disorder (acid reflux).



# How to sleep better

“We are such stuff as dreams  
are made on; and our little life is  
rounded with a sleep.”

William Shakespeare



No matter what your health goal is, you are more likely to reach it if you take a balanced approach that incorporates good nutrition, regular physical activity – and sleep. Sleep is key to keeping your life in a healthy balance.

Sleep helps your body, mind and spirit return to their strongest and most stable states. Once restored after a night of good quality sleep, you'll be ready to tackle the challenges of the day ahead.

There are many steps you can take, starting from the moment you wake up, to improve your sleep. Turn the page for tips.

**Dr. Chloe Manchester, a sleep medicine specialist at Adventist Health Portland, has four principles to sleep by:**

1. Reduce your time in bed. Reserve your bed for sleep only – no reading or computer work.
2. Get up at the same time every day of the week. Consistency is key.
3. Don't go to bed unless you're sleepy. If it's "bedtime" but you don't feel tired enough to sleep, don't force it.
4. Don't stay in bed unless you are asleep. After 20 minutes or so, move out of your bed to another dark, quiet place.



# Breaking it down: Tips for healthy sleep

## In the morning



Get up at the same time every day.



As soon as you can, expose yourself to natural light — ideally, for about 20 minutes. Raise your window shade, eat your breakfast outdoors if possible or, if you have time, take a walk.

## During the day



Avoid foods or drinks with caffeine or alcohol.

“Earn” your sleep through exercise. Regular exercise helps establish the natural rhythms that tell your body it’s time to sleep at night. Regular exercise combined with quality sleep will help you sleep better at night while giving you more energy to be active the next day.



Quit using tobacco, nicotine or other stimulants.



## In the evening



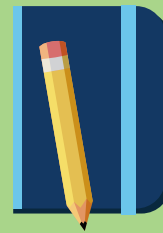
As the natural light fades, think about how much you're exposing yourself to artificial light from smartphones, computer screens and TVs. Our bodies are designed to sense darkness and begin important biological sleep-related work.



Eat dinner at least two to three hours before going to bed.

## As bedtime approaches

At least one hour before bed, power down your computer, TV, tablet and smartphone.



Free your mind. If you struggle with stress and anxiety, get a notebook and write down your thoughts before bed. Over time, this can help you let your worries go and fall sleep more quickly.



Keep your bedroom dark, quiet and cool.



Go to bed at the same time each day.

If you're following these guidelines and you still can't sleep, it may be time to visit a sleep specialist.

## Ways we wake up



**Caffeine.** While not necessarily bad, caffeine can become a problem when you have too much or have it too late in the day. Stick to no more than 1 to 2 cups per day, but not after 3 p.m.



**Naps.** Many cultures around the world make a 20- to 30-minute nap part of their regular workday. Just make sure that, if you do take naps, you take them consistently and always before 3 p.m.



**Exercise.** When you start to feel tired in the early afternoon, a short walk can trigger the alerting signals in your body that keep you awake and will make you more tired at the end of the day.



**Light.** Going outside for that walk exposes your body to light, another trigger to wake up. Sitting near a special kind of light, called a lightbox or light therapy box, first thing in the morning, can achieve the same benefit. Lightboxes can be purchased in stores or online and in some cases are covered by insurance. Avoid using a lightbox after 3 p.m.

## Wearable sleep trackers: are they worth it?



Sleep-tracking devices, whether standalone or as components of wristband trackers that monitor overall fitness, are increasingly popular. But are they worth the price?

Perhaps, says Adventist Health Portland's Dr. C. Cameron Hagen, as long as you understand what the devices can and can't do.

Wearable trackers do not reliably tell total sleep time because the monitor registers body movements, not actual sleep. However, if your tracker indicates you make excessive movements during sleep, that may be evidence of an underlying sleep disorder that needs treatment.

Wearable trackers can help you set goals for physical activity during the day. Being overweight is a risk factor for some sleep disorders. Increasing physical activity can help you achieve and maintain a healthy weight and reduce the incidence of sleep problems, including insomnia.



# Sleep resources

**Ask the expert:** If I'm struggling to sleep, is it better to get up or just stay in bed?

"After about 20 minutes, if you haven't fallen asleep, get out of bed and find someplace comfortable and dark. Sit on the sofa or in a comfortable chair and just relax, listen to music or meditate. Avoid looking at your phone. Once your eyes start to feel heavy, head back to bed."

Dr. Chloe Manchester  
Sleep Medicine Physician

## Sleep information

- [Sleep Care – AdventistHealth.org/PortlandSleep](https://www.adventisthealth.org/PortlandSleep)
- [Sleep.org](https://www.sleep.org) – from the National Sleep Foundation
- [Sleepforkids.org](https://www.sleepforkids.org) – from the National Sleep Foundation
- [HealthySleep.med.harvard.edu](https://www.healthy-sleep.com) – from the Division of Sleep Medicine at Harvard Medical School and WGBH Educational Foundation
- [SleepEducation.org](https://www.sleepeducation.org) – from the American College for Sleep Medicine
- [Sleep and Sleep Disorders, CDC.gov/sleep](https://www.cdc.gov/sleep) – from the U.S. Centers for Disease Control and Prevention

## Adventist Health Portland locations

Adventist Health Portland has three facilities that offer sleep-related care: the Adventist Health Sleep Clinic, Sleep Disorders Lab and the Adventist Health Portland Lung Clinic.

### **Adventist Health Sleep Disorders Center and Sleep Disorders Lab**

At the Adventist Health Sleep Disorders Center, we offer comprehensive and integrated management of sleep disorders in an efficient and timely manner. We evaluate and manage patients in the center. Sleep testing is done in our Sleep Disorders Lab, conveniently located at Adventist Health Portland, across the street.

Services for patients and providers include:

- Evaluation and treatment of sleep disorders, including sleep apnea, complex sleep disorders, insomnia, parasomnias, sleep-related movement disorders, hypersomnia, narcolepsy and circadian rhythm disorders.
- Complete sleep evaluation and all ongoing follow-up care as necessary.
- Billing to most insurances including private payers, Medicare and Medicaid.
- Insurance prior authorizations for sleep studies and equipment.
- Evaluations for commercial driver's license and perioperative testing, including bariatric, cardiothoracic and other surgeries.
- Coordinated scheduling of inpatient and home sleep tests at our Sleep Disorders Lab.

Adventist Health Sleep Disorders Lab is fully equipped to handle the most challenging cases and is also located on the Adventist Health Portland campus. We are an American Academy of Sleep Medicine-accredited sleep testing lab with certified sleep technicians.

Our sleep test lab is managed by an experienced sleep manager, and we strive to maintain the highest standards for all our sleep testing. All sleep studies are interpreted by our board-certified sleep physicians, and patients are notified of their results and next steps soon after completing the sleep testing.

### **Adventist Health Portland Lung Clinic**

The Adventist Health Sleep Disorders Center has a close relationship with Adventist Health Portland Lung Clinic, which is located in the same building. A team of experienced and respected pulmonologists is available to consult on challenging sleep cases for patients with pulmonary disease.

### **Adventist Health Sleep Clinic**

Professional Building 3  
10201 SE Main Street, Suite 29  
Portland, Oregon 97216  
503-261-4475

### **Sleep Disorders Lab**

10000 SE Main Street  
Portland Oregon 97216  
503-261-4475

### **Adventist Health Portland Lung Clinic**

Professional Building 3  
10201 SE Main Street, Suite 11  
Portland, Oregon 97216  
503-253-2248

## Meet our team



Stephanie Dewes, PA-C  
Sleep Medicine



C. Cameron Hagen, MD  
Sleep Medicine



Chloe Manchester, DO  
Sleep Medicine

# Appendix

## Assessing your sleep

### Ask yourself about your sleep behaviors.

Are you getting regular exercise?

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Do you use your bed only for sleep?

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Are you moderating your consumption of alcohol, caffeine or other substances such as tobacco or marijuana?

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Are you reducing exposure to light the hour prior to bed (TV, smartphone or computer)?

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Are you taking steps to reduce worries and anxiety?

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Are you getting bright light exposure within the hour that you are waking up?

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Are you keeping the time that you wake up consistent on all days of the week?

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### Set your time

Choose a realistic and consistent time that you can wake up and get out of bed every day of the week:

- If you have difficulties with insomnia, move the time you are going to bed later by 30 minutes every week, while keeping your wake time the same.
- Stop moving the time later when it takes you 20–30 minutes to fall asleep and when you have less trouble returning to sleep after waking up in the middle of the night.

Source: Rocky Garrison, PhD, CBSM

## STOP-BANG questionnaire for sleep apnea

Use this screening to determine if you need to talk to your doctor about sleep apnea.

STOP	YES	NO
Do you <u>S</u> NORE loudly (louder than talking or loud enough to be heard through closed doors)?		
Do you often feel <u>T</u> IRED, fatigued or sleepy during daytime?		
Has anyone <u>O</u> BSERVED you stop breathing during your sleep?		
Do you have or are you being treated for high blood <u>P</u> RESSURE?		

BANG	YES	NO
<u>B</u> MI more than 35kg/m <sup>2</sup> ?		
<u>A</u> GE over 50 years old?		
<u>N</u> ECK circumference > 16 inches (40cm)?		
<u>G</u> ENDER: Male?		

### If you answered:

Yes 5–8 times: High risk of obstructive sleep apnea

Yes 3–4 times: Intermediate risk of obstructive sleep apnea

Yes 0–2 times: Low risk of obstructive sleep apnea

Source: Chung F et al Anesthesiology 2008 and BJA 2012



**Adventist Health Portland**

10123 SE Market Street

Portland, Oregon 97216

Tel: 503-261-4475

[AdventistHealth.org/PortlandSleep](http://AdventistHealth.org/PortlandSleep)



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**Adventist Health  
Portland**