After going through this lesson, you will be able to:

- Identify factors that can either prevent or promote good sleep;
- Define delayed sleep phase syndrome and identify its consequences;
- Identify what to do if you experience insomnia; and
- Recognize common signs of a sleep disorder.

Sleep is not an isolated event separate from the rest of our lives.

How well we sleep certainly impacts us throughout the day and can have even more far-reaching effects. Similarly, what we do throughout the day impacts how much and how well we’ll sleep that night.

Let’s explore a variety of factors that can prevent or promote good sleep, such as:

- Sleep patterns
- Daytime habits
- Evening routines
- Stress levels, and
- Environment

What makes it hard to maintain a consistent schedule?

Video Transcript

Tonya: My classes are at different times, so I wake up at different times. And depending on if I have a test coming up or what I have going on in classes, I normally don’t go to bed ’til later in the night. Sometimes earlier, sometimes later. So it kind of just depends on what’s going on.

Jamee: My homework mostly. How much time I have to spend on homework depends on how late I stay up. And how late I stay up dictates how early I get up.

Shawna: I guess it’s never really been a priority; unless I’ve got something big the next day, I try to go to bed early. But it just never really comes about.

Nikki: Classes in the morning sometimes are early, sometimes it’s late. Sometimes I work in the morning, sometimes I don’t. So if I get the opportunity to sleep in, I try to.
What makes it hard to maintain a consistent schedule? Video Transcript Cont'd…
Zanea: What makes it difficult is my work schedule. It’s random throughout the weekdays. It’s not consistent. So some nights I work overnight. Sometimes I work mornings.

Many people assume that they can make up for lost sleep during the work or school week by sleeping in late on weekends.
Unfortunately, it’s not that easy. Sleep debt accumulates, and it’s difficult to make up for what’s been lost after several nights of little or poor sleep. Also, due to our natural circadian rhythm, our bodies can’t adjust quickly to different sleep schedules. Therefore, sleeping later on the weekends can actually interfere with our biological clock and make it harder to get up throughout the week, contributing to poorer sleep quality and increased sleepiness and defeating the initial purpose of sleeping in in the first place.

There’s actually a name for this: delayed sleep phase syndrome. It’s characterized by progressively later wake-up times on weekends, leading to poor job and academic performance and excessive sleepiness during the week. Twice as many college students as people in the general population report symptoms of this syndrome.¹ Even students who sleep 8 hours nightly but shift their sleep-wake cycle by 2 hours on any given day experience increased irritability and feelings of depression, poor attention and concentration, less ability to reason, and psychomotor difficulties.²

So it’s ideal to maintain a consistent sleep schedule. As much as possible, try to go to bed and get up at the same time every day, even on weekends. Consistent daily rise time is particularly important, so even if you have to go to bed a bit later than usual on any given night, try to get up around the same time the next morning.³ Then, perhaps take a late morning or early afternoon nap if necessary, or go to bed a bit earlier than usual the next night.

You may have heard that naps are a bad idea. This isn’t entirely true. Although naps can’t substitute for a good night’s sleep, they can help ensure that your body gets sufficient rest in a 24-hour period. The trick is to time them right. Naps
can be problematic if they take place in the late afternoon or evening, or if they last longer than an hour, because that can make it hard to wake up fully after the nap or fall asleep later that night. For this reason, some studies include naptime of greater than 1 hour as an indicator for poor sleep quality. In fact, research among college students has shown that students who take longer naps during the daytime are more likely to report awakenings during the night and poorer overall sleep quality.\(^4\)

**Napping**

**Video Transcript**

Carlos Schenck: I think an undergraduate student really has to deal with a major challenge in regards to good sleep and I think one part of your daily structure should be, can I take a nap? Napping can be very helpful for most people. The nap should not be too long. People that nap more than 30 to 45 minutes or at most an hour then you run the risk of having what's called sleep inertia. Now there are people who cannot nap for two reasons. One is if you nap during the daytime that can interfere with falling asleep at night. Or also if you nap even 15 minutes, you may have the sleep inertia. Find out if you can tolerate a nap, what the optimal time is. You need to know yourself if you're a morning person or a night person. When do you feel that you're on top of your mental game, physical game? Study during the optimal times. Take a nap. Recharge your batteries. Study after that.

**Where on campus is a good place to nap?**

**Video Transcript**

Rob: That would really depend on someone’s ability to sleep. There are very comfy places and some very comfy chairs, and in the summer you can sleep outside in the grass.

Shawna: Basically anywhere you can find a bench. I have been known to sleep wherever I could find somewhere comfy.

Linda: Or my car. The backseat of my car or something, which isn't really comfortable. But sometimes if you can just close your eyes for a few minutes, it helps.

James: I would often nap in the theater lobby. I'd just pull up a backpack and use a jacket as a pillow.

Michael: In the student lounge. Just pull up one of those comfy chairs and lay back.

Josh: I'm pretty particular about where I nap. I like comfy areas, so I usually stick to my futon or my bed.
In addition to going to bed and waking up at about the same time from day to day, other social rhythms like meal times and work schedule appear to have important implications for sleep. A study among college students found that those who maintained a more consistent pattern of social rhythms had better sleep compared to those with irregular schedules. Students with more varied schedules day to day were more likely to experience disturbed sleep. Further, the “good” sleepers in this study got out of bed earlier, consumed their first beverage of the day earlier, went outside for the first time earlier, and went to bed earlier than did the “poor” sleepers.³

So, as much as possible, we suggest trying to create a consistent daily routine. For example, try to start class at about the same time throughout the week. If you don’t have much choice due to limited class offerings, then still get up around the same time everyday; perhaps you could exercise or get in some extra studying on mornings when your classes start later. Similarly, try to create a routine for eating meals and being active.

An inactive, sedentary lifestyle is related to poor sleep quality, whereas regular daily exercise is associated with better sleep.⁵,⁶ People who exercise in the morning, compared to those who exercise at different times of the day or not at all, experience the best sleep quality. So, if your schedule allows, it’s ideal to be active early in the day. Historically, it was thought that exercising intensely within several hours of bedtime was likely to interfere with one’s ability to fall asleep, but it’s since been demonstrated that evening exercise is not actually associated with disturbed sleep. The important thing is to exercise sometime throughout the day, even if that’s before bed, because not exercising is associated with poorer sleep quality.⁷

Being socially active is also positively correlated with getting good sleep. Research has found that people with limited social interactions or unsatisfactory social relationships are more likely to have poor sleep quality compared to those who are more socially involved and satisfied with their relationships.⁸,⁹,¹⁰ Building and maintaining a supportive social network appears to be important in promoting good sleep.

Community Resources
University Recreation and Wellness
Campus Student Activities Office or Programs
Do you consider yourself a morning person or a night person?
Similar to sleep duration, optimal timing of sleep varies slightly from person to person. Maybe you’re someone who really can’t go to sleep until 2 a.m. If that’s the case, then it’s probably not a good idea to schedule an 8 a.m. class. It’s better to recognize your natural preferences and work with them than it is to constantly fight them.

However, keep in mind that the circadian rhythm is guided by light and darkness and typically makes people feel most tired between midnight and 7 a.m. Some strategies for optimizing this natural cue for sleep are to:

- wake up with the sun, if possible;
- use bright lights in the morning; and
- get outside in natural sunlight for at least 30 minutes each day.

It’s also a good idea to avoid screen time, such as watching TV or using a computer, tablet, or smartphone right before bed; the bright flashing lights can trick the internal clock into thinking it’s still daytime, making it hard to fall asleep.

Working the night shift certainly goes against the body’s natural cues for sleep, but if you have to work the night shift, consider trying these strategies for improving your sleep.

- Eliminate sound and light distractions in your bedroom.
- Lengthen the amount of time you allot for sleep during the daytime and take naps when you can.
- Talk to your supervisor about installing bright lights in your workplace and minimizing how often you have to work different shifts.
- If you feel the need to have caffeine, drink it only during the first part of your shift.
- Only if all else fails and you’ve talked with your doctor about which medication is right for you, use a short-acting sleeping pill to help you sleep during the day.
Jet lag is common when traveling across time zones, particularly in an eastbound direction since that shortens the day as opposed to lengthening it. Jet lag generally results in feeling sleepy and a little confused, maybe even irritable or nauseated.

Fully adjusting to a new time zone may take several days, so if you’re traveling for just a few days it may be better to stay closer to your normal sleep and wake times. However, if you are traveling across time zones for an extended period of time, here are some tips for minimizing the effects of jet lag and adjusting to the new time zone.

- Several days before you travel, gradually shift your sleeping and eating times to coincide with those at your destination; expose yourself to especially bright lights for several hours near the time that you will want to wake up.
- Upon arrival, try to spend as much time as possible outdoors. This will help your body adjust to the new light cues.
- Avoid alcohol and caffeine since they can prevent you from sleeping or interrupt how well you sleep.

Caffeine in coffee, tea, soda and other products fools the body into thinking that it’s more awake than it really is.

It can take up to 8-14 hours for the effects of caffeine to completely wear off. Drinking an energy drink or other caffeinated beverage late in the afternoon or in the evening could make it hard to fall asleep that night, and having caffeine in the system can interfere with quality, deep sleep, too. It’s true that caffeine can increase concentration, alertness, and energy, but these effects are brief in people who consume high amounts of caffeine on a regular basis.11

Similarly, nicotine can prevent good, deep sleep.12

If you smoke or use other products containing nicotine, this is a good reason to quit. If you are in the process of trying to quit and cravings wake you up in the middle of the night, you might want to try putting on a nicotine patch at bedtime.13

In addition to drinking caffeinated beverages too late in the day, eating a large meal just before bed can make it hard to fall asleep.

On the other hand, if you’re someone who tends to wake up hungry in the middle of the night, having a small bedtime snack could help you sleep better.
and stay asleep throughout the night. In general, it’s a good idea to stay away from chocolate, which has caffeine in it, and other high-sugar foods, and to avoid eating too much. Here are some good options:\textsuperscript{14,15}

- a few whole grain crackers with peanut butter, cheese, or cottage cheese;
- a glass of milk—some people like it warm;
- an ounce of nuts;
- A slice of whole grain bread or toast with peanut butter or a hard-boiled egg;
- a cup of popcorn;
- a banana and low-fat milk smoothie; or
- a cup of warm soup—ideally broth-based.

**Community Resource**

*Smoking Cessation Resources at the University of Minnesota Twin Cities*

**Contrary to popular belief, having an alcoholic drink before bed—often referred to as a nightcap—won’t help someone sleep better.**

Although alcohol is a depressant drug and may help someone fall asleep, it prevents the deep stages of sleep that promote learning and memory processing as well as energy restoration and tissue repair. Thus, alcohol actually inhibits the good sleep that our bodies need, and it’s been shown to negatively impact next-day alertness and performance.\textsuperscript{16}

According to research, students who drink more frequently and consume more alcohol have later sleep schedules and greater delays between weekday and weekend bedtimes. Regular heavy drinking is associated with overall shorter sleep duration, resulting in sleep deprivation.\textsuperscript{17}

**Sleep & Alcohol**

**Video Transcript**

Carlos Schenck: You really want to avoid alcohol within two or three hours of falling asleep, particularly if you have any kind of sleep issues. It’s notorious for interrupting your sleep multiple times throughout the night.
The menstrual cycle also impacts sleep quality. Many females report poorer sleep during the week before their periods—the premenstrual phase—and during the first several days of menstruation. This is due, at least in part, to shifts in hormones that alter body temperature and circadian rhythm. Taking oral contraceptives can also impact sleep; those who take them don’t generally notice subjective changes in their sleep quality, but research has shown that the hormones in oral contraceptives have an effect on melatonin rhythms, body temperature, and sleep composition—for example, how much time is spent in REM sleep.18

Resource
Six Sleep Problems That Occur During Your Period (And What To Do To Make Them Go Away)

Not surprisingly, medical conditions such as chronic pain, asthma, and depression—to name just a few—negatively impact sleep quality. The higher the number of medical problems one experiences the greater the risk of sleep problems. The challenge with some of these conditions is that, even when they are controlled by medications, those medications can interfere with sleep quality.19,20

Many medications, both prescription and over-the-counter, contain ingredients that hinder sleep. For example, many pain relievers have caffeine in them. Other common ingredients that disrupt sleep include decongestants and steroids.19,20 If you’re taking a medication, it’s important to know just what you’re taking; check the label and talk to a pharmacist or other trusted healthcare provider to see how it could be impacting your sleep. If possible, avoid medications that might delay or disrupt your sleep.

Some people try over-the-counter sleeping pills like Tylenol PM® if they are having a hard time sleeping. These may work for some, but they can leave others feeling groggy and unrested the next morning. Other people have tried over-the-counter supplements like melatonin. Again, they appear to work for some but not others. If you’re experiencing sleep difficulties so severe that you want to try one of these products, we suggest that you talk with a trusted healthcare provider.
about what might work best for you, particularly if you’re taking other medications.

**Resource**

*Relationship between various diseases and sleep*

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**Sleep Medication**

**Video Transcript**

Carlos Schenck: Most people do not need medication for falling asleep—either over the counter or prescription. If you have a family history of insomnia and you practice all the proper rules and still cannot fall asleep then you may be in the minority of people that truly do need a sleep-enhancing medication. You may need to see a sleep specialist and be evaluated for the right kind of medication.

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**Stress and anxiety are common barriers to a good night’s sleep.**

Some of us struggle to turn our minds off when we close our eyes. We think about things over and over again. We worry. We can’t relax. Then we worry even more, and the cycle continues. It can be very frustrating. To make matters worse, feeling stressed decreases the amount of time spent in the restorative stages of sleep.21

Oftentimes, the worry leading to sleepless nights stems from preoccupation with work—for example not being able to stop thinking about what has to get done. If you haven’t already, you may experience one of these nights. College can be stressful—exciting, but stressful. Some good ways to avoid such sleepless nights are to avoid working right up until you go to bed and make a list of what you need to do the next day before you get ready for bed; this can help you release it from your mind because the list will serve as a reminder the next day.

We live in a fast-paced society and our minds are often over-stimulated. It’s important to disengage yourself from the day and prepare yourself to engage in sleep, even if you aren’t under a great deal of stress. For some, this can be achieved through quiet meditation or massage. For others, doing an enjoyable activity or taking a hot bath can be relaxing. How do you relax? There’s bound to be something that will work for you.
Resources

Mindfulness-Based Stress Reduction Videos
90:10 The Single Most Important Thing You Can Do For Your Stress (Video: 11 min)
Sleep Tight playlist

Sleep Quality Quiz
Return to page 18 of the online lessons or take this short quiz directly assessing the quality of your sleep directly.

Preparing for Sleep
Video Transcript
Carlos Schenck: There are a lot of people who really focus on stressful activities in the evening. You know look at your bills. Worry about your job status or if you're a student at a university, will you get a job after you graduate? And you really have to kind of put that aside until the next day. Most people need to have a wind down process. Some people read before they go to sleep. They lay in bed. Relaxing music. It's a ritual that is conducive to toning down your nervous system preparing yourself in every aspect to go to sleep. You cannot take sleep for granted. You have to prepare for it. Find out what is most user friendly for you to help relax your mind and your nervous system. There's yoga. There's transcendental meditation. There's learning some hypnosis. You can drink tea, anything that you can associate with a relaxed state. Light is an activating type of agent. It's almost like a drug. It could be a good drug in the morning to get you going. In the evening if you have any kind of sleep issues light could be a bad drug, so to speak. So you really want to tone down the amount of light surrounding you in the evening because that helps your brain realize it's kind of getting dark, which means it's preparation for sleep. Also if you have roommates that have loud music you need to talk to them. Say, "Look, you know, this is a time for preparing for sleep, you know, if you want to have loud music put on your headphones or go somewhere else." The key thing is to learn how to feel relaxed in preparation for sleep.

If you do experience one of those nights where you can't shut off your mind—maybe you're worried about an upcoming paper deadline or exam—don't just lie there!
Continuing to toss and turn and worry will just make it worse. If you’ve been in bed for more than a half hour and still can’t fall asleep, it’s recommended that you get up and do something relaxing—read a pleasurable book, play with your
pet, listen to soft music. Just be sure to keep the lights dim. When you feel sleepy again, go back to bed.

**Clock Watching**

**Video Transcript**

Carlos Schenck: Many people do toss and turn during the night. They can’t get to sleep. They look at the clock. One of the sleep hygiene rules is turn the clock away from you. There are people who literally look at the clock every five minutes and say, “My god, it's 1:15! My god, it's 1:20! I'm not asleep.” And that activates you. That has the exact opposite effect. So part of the sleep hygiene rules is don’t look at the clock. Don’t have a clock ticking near you. Also, if you cannot fall asleep within half an hour, the sleep hygiene rules really advocate: get out of bed, get out of the bedroom, do something non-stimulating—some light reading, listening to relaxing music. Then once you think you’re ready to cross that threshold into sleep, go back to the bedroom. Again, if you don’t fall asleep in 20 to 30 minutes, get up and get out of the room. The bed should be for sleep when the time comes.

**A good sleeping environment is one in which distractions have been minimized.** The bedroom is for sleeping and should be relaxing. Thus, it’s recommended not to multitask in the bedroom. For example, fold laundry in the laundry room. Study at the library. Along these same lines, it’s recommended not to have a TV or computer in your bedroom. Depending on your living situation, this might not be realistic for you, but you can at least turn your TV and computer off before bed, and your cell phone, too—particularly if you have friends who frequently call or text you in the middle of the night.

Many college students told us that noise is a major barrier to getting good sleep, particularly when living with roommates. You can try earplugs to block the noise or use a white noise machine or fan to cover it up. Another common distraction is light. For example, maybe there’s a street light close to your window. You can hang dark curtains or wear a sleep mask to block the light. You can also experiment with the room temperature to see what’s most comfortable for you. Generally, a cooler temperature promotes better sleep. If you don’t have air conditioning or otherwise can’t control the temperature in your room, a fan...
might help. Another part of creating a good sleep environment is making sure
that you have a comfortable mattress and pillow.

Finally, if you have roommates, talk to them and discuss how you can work
together to create an environment that’s respectful of everyone’s sleep needs.

**Resources**

- Mattresses, Pillows and Sheets
- Choosing a Mattress: Everything You Need To Know
- Pillow Comparison
- Roommate Agreement
- Assertive Communication Skills Tips
  - “Your Perfect Right: Assertiveness and Equality in Your Life and Relationships” by Robert Alberti and Michael Emmons

As you can see from the previous pages, getting good sleep, in many ways,
comes down to maintaining a consistent schedule and practicing effective time
management.

The better we can manage the way we spend our time, the more likely we are
to get enough sleep—and the less likely we are to spend that time tossing and
turning due to something that we wanted to get done, but didn’t.

**Effective time management is a challenge for many people.**

It can be quite difficult to balance everything in our lives, especially as we get
older and gain more freedoms and responsibilities. Many of us have the
tendency to overbook ourselves. Unfortunately, it’s usually our sleep that suffers,
not only because the amount of sleep gets cut short but also because we fail to
allow ourselves adequate time for relaxation before we go to bed. Our bodies
and minds need time to wind down and prepare for sleep; it’s not as simple as
flipping off the light switch.

Unfortunately, society’s expectations
don’t always fit our natural sleep
tendencies or promote good sleep
habits, but we can do a variety of
things to enhance our sleep quality.
We each make choices everyday,
and those choices impact our quality
of life. Practicing effective time
management strategies will help you
through college and beyond—not
just to get a good night’s sleep—and
reap the physical and emotional
benefits—but to successfully balance school, work, family, and friends.
How do you keep a consistent sleep schedule?

**Video Transcript**

Mary: Well, generally I make sure that I have everything done before I go to bed. And if I know that I have things to do in the morning, I make a to-do list. That way I’m not scattered in the morning.

Anders: Wake up at a certain time; try to go to bed at a certain time. It’s sometimes hard with homework, but try to just keep a schedule and go to bed when I’m tired, and not stay up too late.

Rob: I try to set alarms on my iPod or my phone to remind me about the time so I know I should be getting to bed.

Celina: I just kind of force myself to. I know that I have to get a certain amount of sleep, otherwise I get crabby, irritable, and sometimes very emotional. So I have to force myself to go to bed at a certain time.

Brittany: My body is just like, "I'm tired." It's usually around the same time every night. It's kind of annoying, but kind of good at the same time.

Jessica: I try to get as much of my homework done during the day while I'm at school so I don't have to leave it until later in the evening.

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Honest Assessment

**Video Transcript**

Carlos Schenck: Look at the mirror and be honest with yourself about possible bad habits. If you're questioning whether you have good sleep or not, determine first of all if you have regular sleep hours. You need to look at the timing of your meals, for example, the timing of your exercise. Are you engaged in stressful activity in the evening that could interfere with falling asleep in a timely fashion? Is there too much volume in your life? Not just the auditory volume but too much light, too much stimulation in general, computers, all sorts of other electronic devices. How do you feel when you wake up in the morning? Do you feel rested? Do you feel you have good energy? And throughout the daytime can you sustain good energy? Now we all have a natural dip in the early afternoon. But apart from that little dip in the early afternoon, can you sustain pretty good mental and physical function throughout the daytime? If you can’t, that’s the smoking gun that maybe you have a sleep problem.
Honest Assessment Video Transcript Cont’d…
Carlos Schenck: …If you have three nights in a row of poor sleep don’t jump to the conclusion that you have a sleep disorder. Our stomachs may be upset for three days in a row that doesn’t mean we have gastroenteritis or some kind of major gastroenterological disorder.

It’s normal to have some sleep disturbance during times of stress, during times when you have to burn the midnight candle at both ends or during travel. Those are called transient insomnia episodes. But if you have a persistent problem not feeling rested in the morning, not functioning well during the daytime, tossing and turning at night or being told by a roommate or bed partner that your sleep is very restless, that you’re up a lot during the night, all those are signs that you may have a sleep problem that needs more formal attention through your personal physician. The transient insomnia can be explained. It will go away. But something that goes on for weeks at a time or even longer, that is a problem and that’s really exerting a major adverse toll on your life.

If you consistently have trouble sleeping or experience excessive daytime sleepiness despite following the suggestions made throughout this lesson, you may have a sleep disorder that can be treated.

Common signs of a sleep disorder include:

- It frequently takes you more than 30 minutes to fall asleep at night.
- You awaken frequently in the night and then have trouble falling back to sleep.
- You awaken too early in the morning.
- You frequently don’t feel well rested despite sleeping 7-8 hours or more per night.
- You feel sleepy during the day and fall asleep within 5 minutes if you have an opportunity to nap, or you fall asleep at inappropriate times during the day.
- You snore loudly, snort, gasp, or make choking sounds while you sleep, or your breathing stops for short periods.
You have creeping, tingling, or crawling feelings in your legs that are relieved by moving or massaging them, especially in the evening when you try to fall asleep.

You have vivid, dreamlike experiences while falling asleep or dozing.

You have episodes of sudden muscle weakness when you are angry or fearful, or when you laugh.

You feel as though you can’t move when you first wake up.

Your legs or arms jerk often during sleep.

You regularly need to use stimulants to stay awake during your day.

If you experience one or more of these signs on a regular basis, and it disrupts your quality of life, we suggest that you talk to a doctor or other trusted healthcare provider.

Resources

American Academy of Sleep Medicine
Minnesota Regional Sleep Disorders Center
National Institute of Neurological Disorders and Stroke
The London Sleep Centre Online Sleep Assessment
NPS Medicine Wise Sleep Quality Quiz
Sleep efficiency calculator
Quizzes related to sleep disorders

Sleep Problem Quiz
Please return to page 27 of the online lessons or take this short quiz directly to assess if you have a sleep problem.

Lesson Resources

National Sleep Foundation
Sleep Cycle Tracker Application
My Sleep Bot Tracker Application

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11 American Academy of sleep Medicine. (2013, August 1). *Sleep and Caffeine*.


20 UCLA Sleep Disorders Center (n.d.). *Sleep and health*.