**Sleep**

**What is Sleep**

Harvard University's Division of Sleep Medicine defines sleep as a state that is characterized by changes in brain wave activity, breathing, heart rate, body temperature, and other physiological functions. While the body is at rest, brain activity continues.

There are two types of sleep: Rapid Eye Movement (REM) and non-REM (deep sleep). Your brain can actually be more active during REM sleep than when we are awake, which might be one explanation for our dreams. Your body needs to get enough of each type of sleep in order for you to feel well rested when you wake up. So the number of hours you get total matters, but so does cycling through REM and non-REM.

***What Happens When You Sleep***

Different physiologic changes occur during both REM and non-REM sleep which is one reason why cycling through these types of sleep is important. Some of these physiologic changes actually happen the most when we sleep such as activities related to digestion, cell repair, and growth.

Sleep helps improve some kinds of memory tasks such as the recognition of visual patterns, solving some kinds of math puzzles, and skills like typing. Sometimes, even a nap can help consolidate memories related to habits, actions, and skills practiced during the day.

Getting enough sleep decreases the risk of health problems like obesity, diabetes, and cardiovascular disease. Sufficient sleep also helps prevent illness by supporting the immune system.

***Symptoms of Insufficient Sleep***

* Decreases in grades, attention and memory
* Mood swings
* Anger and irritability
* Depression
* Low energy
* Trouble focusing and/or concentrating
* Slow reaction times

**Sleep Statistics**

***National Data***  
According to the National Sleep Foundation adults aged 18- 64 need 7-9 hours of sleep.

The Centers for Disease Control and Prevention (CDC) reports that 1 in 3 adults get less than 7 hours of sleep.

18-29 year olds tend to stay up later, with weekday bedtimes averaging at 11:52pm and weeknight bedtimes averaging to 12:38am.

35% of Americans report their sleep quality as “poor” or only “fair.”

***University of Tennessee, Knoxville Data***

According to the Fall 2019 American College Health Association – National College Health Assessment III:

In 2019, 30.3% of UT students identified sleep difficulties as an impediment to their academic performance.

In 2019, 51.6% of UT students reported getting less than 7 hours of sleep over the past two weeks on weeknights.

In 2019, only 10.5% of UT students reported getting enough sleep that they felt rested 6-7 days of the past 7 days.

**Causes of Insufficient Sleep**

Many things can cause poor sleep quality including

* Stress
* Anxiety
* Busy schedules
* Napping for longer than 20 minutes and napping too close to bedtime
* Drinking 6 or more cups of coffee
* Drinking alcohol close to bedtime
* Distractions where you sleep

Sometimes not getting enough sleep is due to a sleeping disorder. The most common sleep disorders include

* **Insomnia** – The inability to fall or stay asleep
* **Narcolepsy** – Excessive daytime sleepiness along with sudden muscle weakness
* **Sleep Apnea** – Interrupted sleep caused by periodic gasping, snorting, or momentarily suspension of breathing
* **Restless Leg Syndrome** – An unpleasant sensation throughout the legs that can make it hard to fall asleep

If you think your sleeping habits may be a medical concern it’s important to talk to a doctor or health care provider. Sleep disorders can only be diagnosed and treated by medical professionals.

**Getting Sufficient Sleep**

Because sleep is so vital to our brain function and important physiologic functions, it is important to try and get quality sleep.

***Tips for Getting Sufficient Sleep***

* Try to set aside time relax before going to bed. Turn off electronics and including your phone and laptop.
* If you take naps, limit them to 20 minutes or less and take them earlier in the afternoon.
* Drink caffeine in moderation: 2-3 8oz cups a day. For reference, a Tall Starbucks beverage is 12 ounces.
* If you are hungry, eat a light carbohydrate snack such as graham crackers, or a small lean meat sandwich on whole wheat bread
* Drink a caffeine-free, herbal tea such as chamomile tea.
* Limit the amount of light and noise where you sleep. Black out curtains and using a fan or noise machine can help

***Bedtime Routine Tips***

* Set a fixed time at night where you can begin winding down. This is when you might turn off your tv and put your phone or laptop away.
* Do 1-2 things that relax you. It could be reading a book, a hot bath, working out in the evening, doing yoga or a few stretches before bed.
* Prepare your sleep environment for bedtime. Make your bed comfortable, draw the curtains, and take out your sleep mask or ear plugs if you use them.
* If it’s hard to relax because your mind feels like its “racing,” try journaling, making a to-do list, or listening to guided meditation.
  + Free apps for guided meditation and similar relaxation exercises include (for iPhone and Android, may have in-app purchases)
    - Calm
    - Headspace
    - Omvana
    - Smiling Mind
    - Stop, Breathe, and Think
    - Insight Timer

***Wakefulness Tips***

Just as it's important to go to sleep, it's important to wake up on time.

* Go to bed and wake up at the same time every day, including weekends. The body likes having a regular sleep-wake cycle.
* Set an alarm and do not hit snooze.
* Expose yourself to bright light or natural light as soon as you wake up. Turn on a lamp or open your curtains/blinds. Consider using an alarm that has a light that simulates natural sunrise if it’s still dark outside when you wake up.

***Nap Tips***

Napping can improve alertness after taking one and can be a way to relax and rejuvenate. They can also be very important in avoiding potentially harmful consequences of drowsy driving.

* Keep naps short (20-30 minutes) to avoid daytime grogginess or the inability to go to sleep when you’re ready for bed
* Find a sleep environment that is cool, dark, and quiet
* Take a nap during the middle of the day if you can plan or schedule your naps
* You can nap when you know you will need to stay up a little later, to avoid being sleepier earlier than you want to be
* Emergency napping can be useful when you are too tired to continue an activity you are engaged in

**Fact Sheets**

Caffeine, Food, Alcohol, Smoking and Sleep  
<https://www.sleephealthfoundation.org.au/pdfs/Caffeine_Food_Alcohol_Smoking_and_Sleep-0620.pdf>

Napping  
<https://www.sleephealthfoundation.org.au/pdfs/Napping-0913.pdf>

10 Tips for a Good Night’s Sleep  
<https://www.sleephealthfoundation.org.au/pdfs/Tips-for-a-Good-Night's-Sleep.pdf>

**Resources**

**Student Counseling Center**  
Student Health Building, 2nd Floor  
1800 Volunteer Blvd  
Knoxville, TN 37996  
865-974-2196

The Student Counseling Center provides individual sessions, group therapy, and workshops on stress management.

**UT Medical Center Sleep Disorders Center**   
1928 Alcoa Highway, Suite 119 Building B   
Knoxville, TN 37920  
utsleepdisorders.org   
865-305-8761

The UT Medical Center Sleep Disorders Center staffs trained medical professionals that focus on sleep disorders. (This is an off-campus resource.)

**Sources**

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