



Sleep More Soundly

Why do we need sleep?

- Sleep is crucial!
 - It is mentally and physically restorative
 - Memory retention
 - Sleep triggers changes in the brain that solidify memories
 - Memories are consolidated and learning is synthesized
 - It enhances your ability to concentrate and cope with daily challenges
 - It conserves body energy



A GOOD NIGHT'S SLEEP
IS THE FIRST STEP TO A GREAT DAY.

Sleep and Health

- You need sleep to maintain good health!
 - Sleep helps maintain your immune system
 - During sleep, the brain is able to repair and grow cells, tissues and nerves that regenerate and boost the immune system
 - Helps reduce your risk for cardiovascular disease, high blood pressure, diabetes, depression, and obesity.
 - Contributes to a healthy metabolism and helps regulate hunger
 - Important for mental health



Impacts of Sleep Deprivation

- Negative effects of sleep delays or interruptions include:
 - Sluggishness
 - Low attention span
 - Decreased sociability
 - Depressed mood
 - Decreased caloric burn during the day
 - Increased hunger and decreased feeling of fullness
 - Insulin resistance
 - Decreased performance



Sleep Statistics

- 35% of Americans do not routinely get the recommended amount of sleep of 7-9 hours a night for adults.
- A drowsy driver's impairment is like that of a drunk driver's.
- Drowsy driver was responsible for nearly 100,000 police-reported crashes, 71,000 injuries, and 1,500 deaths in the U.S. in 2015 and nearly \$14 billion in losses

Average Hours of Sleep Per Night

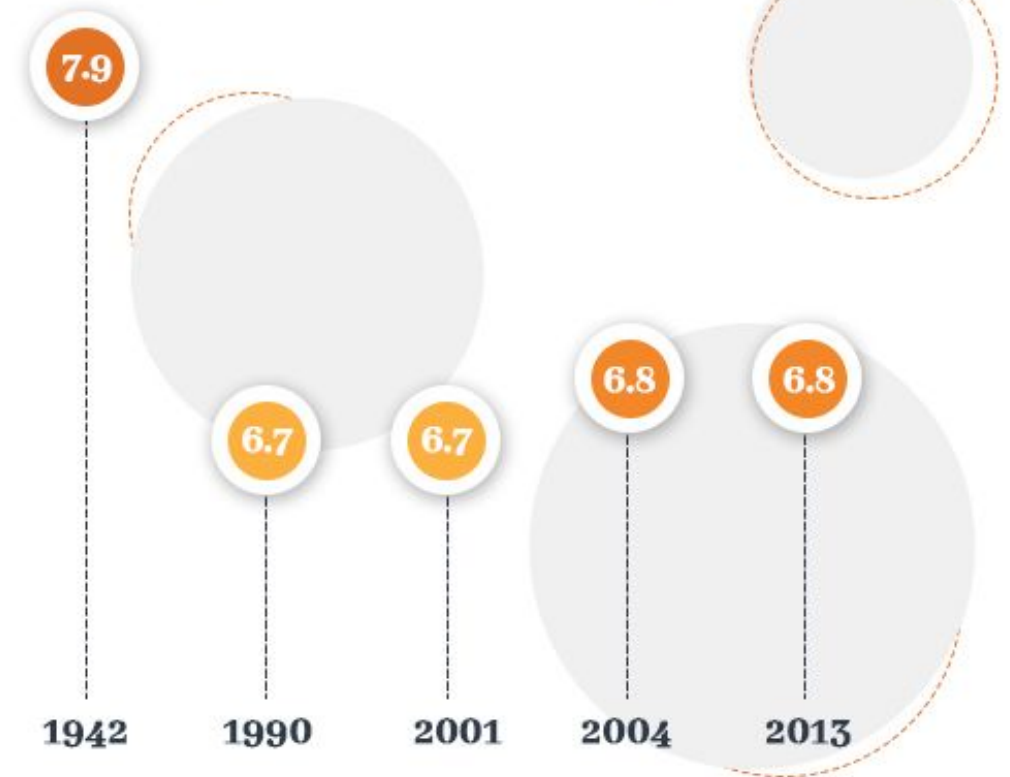


TABLE 4.1 | Adults Reporting Selected Sleep Behaviors in 12 States

Age (Years)	Unintentionally Fell Asleep during the Day at Least Once in the Past Month	Nodded Off or Fell Asleep While Driving in the Past Month
18 to 25	43.7%	4.5%
25 to 35	36.1%	7.2%
35 to 45	34.0%	5.7%
45 to 55	35.3%	3.9%
55 to 65	36.5%	3.1%
>65	44.6%	2.0%



Source: Centers for Disease Control and Prevention, "Insufficient Sleep is a Public Health Problem," September 3, 2015, www.cdc.gov/features/dssleep.

Sleep Disrupters

- Too much food or drink close to sleep time
- Blue light from phone/computer/television screen
- Caffeine and alcohol use
- Stress/anxiety/worry
- Certain noises/sounds
- Temperature (too hot or too cold)
- Lack of daytime sunlight exposure
- Medications and medical conditions
- Bed partner and/or pet



Common Sleep Deprivation Factors

- Why aren't we getting enough sleep?
 - Work
 - Demanding home life
 - Excessive screen time/smart phone use
 - Long-haul driving
 - Drugs and medications
 - Pain
 - Sleep disorders



Circadian Rhythm and Sleep-wake Homeostasis

- Circadian rhythms and homeostasis, your internal biological mechanisms, work together to regulate when you sleep.
- Circadian rhythm
 - This is what controls your sleep timing, causing you to be sleepy at night and the tendency to wake up in the morning without an alarm.
 - They synchronize with environmental cues such as light and temperature, but they contribute even without these cues.
- Sleep-wake homeostasis
 - Keeps track of your need for sleep
 - Homeostatic sleep drive reminds the body to sleep after a certain time. It gets stronger every hour you are awake and caused you to sleep longer and more deeply after a period of sleep deprivation.

Sleep Disorders

- As many as 70 million U.S. adults suffer from sleep-related disorders.
- 2.5 percent have diagnosed sleep disorders, other than insomnia.
- Nearly 29 percent of students say that they have had sleep difficulties in the last year that were traumatic or difficult to handle.
- If you have sleep difficulties, it might be best to see a health care provider who might ask you to keep a sleep diary.

Major Sleep Disorders

- Insomnia
- Sleep apnea
- Narcolepsy
- Restless Legs Syndrome

THE MOST COMMON OF THE **70** SLEEP DISORDERS OUT THERE INCLUDE:



**INSOMNIA, SLEEP APNEA,
RESTLESS LEG SYNDROME
AND NARCOLEPSY.**

Insomnia

- Insomnia is difficulty falling asleep, frequent arousals during sleep, or early morning awakening. It is the most common sleep complaint.
- 68 % of young adults aged 18 to 29 report symptoms of insomnia.
- About 10-15% of Americans have chronic insomnia that lasts more than a month.
- Treatments might include cognitive behavioral therapy (can assist the patient in identifying thoughts and behavior patterns that contribute to inability to fall asleep), hypnotic or sedative medications, or relaxation techniques, including yoga, deep breathing, and meditation.

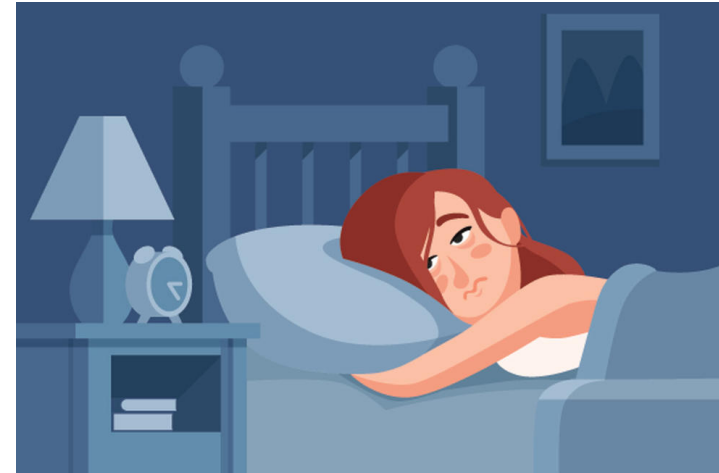
Insomnia

Symptoms:

- Difficulty falling asleep
- Waking up frequently during the night
- Difficulty returning to sleep
- Waking up too early in the morning
- Unrefreshing sleep
- Daytime sleepiness
- Irritability

Causes:

- Stress and worry
- Disrupted circadian rhythms
- Side effect from taking certain medications



Sleep Apnea

- Sleep apnea is a disorder in which breathing is briefly and repeatedly interrupted during sleep.
- *Central sleep apnea* occurs when the brain fails to tell the respiratory system to initiate breathing.
- *Obstructive sleep apnea*, which is more common, occurs when air cannot move in and out of a person's nose or mouth when they try to breathe.
- Treatment often includes lifestyle changes or the use of a breathing assistance device a night.

Restless Legs Syndrome

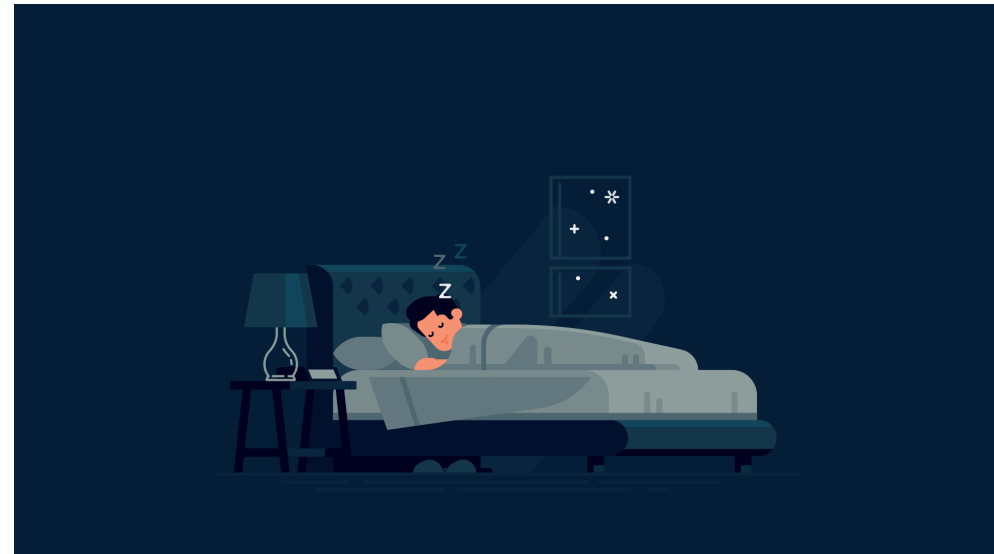
- Restless legs syndrome (RLS) is a neurological disorder characterized by unpleasant sensations in the legs when at rest combined with an uncontrollable urge to move to relieve these feelings.
- Symptoms range from uncomfortable to painful, and the cause of RLS is unknown.
- Treatment can include medications, decreasing tobacco and alcohol use, applying heat to legs, and stretching exercises.

Narcolepsy

- Narcolepsy occurs in about 1 of every 3,000 people.
- It causes people to fall asleep involuntarily during the day.
- There appears to be a genetic basis for the disorder.
- Treatment consists of stimulants, antidepressants, and other medications

Sleep Guidelines

- Infants (4 months to 12 months)
 - 12 to 16 hours a day
- Children (1 to 2 years)
 - 11 to 14 hours a day
- Children (3 to 5 years)
 - 10 to 13 hours a day
- Children (6 to 12 years)
 - 9 to 12 hours a day
- Teenagers (13 to 18 years)
 - 8-10 hours a day
- Adults (19+ years)
 - 7-9 hours a day



Sleep Needs

- Sleep need includes baseline plus debt, but on average you need about 7-8 hours each night.
- Sleep debt is the total number of hours of missed sleep.
- Naps cannot cancel out sleep debt, but power naps during the day can be restorative and help reset your focus and improve mood, alertness, and performance.
 - Sleep inertia, characterized by cognitive impairment, grogginess, queasiness, and a disoriented feeling, can occur after 30 or more minutes of napping.
 - Try to keep them around 20-30 minutes and earlier in the day so it doesn't negatively affect your nighttime sleep patterns

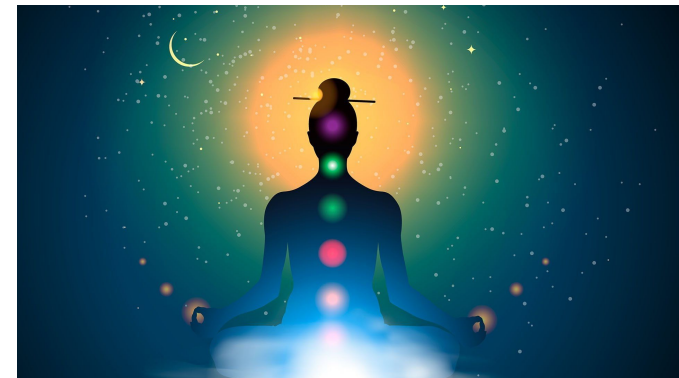
Tips for Better Sleep

- Use bed for sleep only
- Establish regular sleep schedule (same sleep and wake times)
- Minimize/eliminate bedroom noise and lights
- Increase daytime exposure to sunlight
- Eliminate nighttime caffeine and limit daytime caffeine
- Avoid alcohol within 3 hours of bedtime



Tips for Better Sleep (cont.)

- Avoid using electronics before bed
- Eliminate/limit after-dinner and late-night snack
- Maintain a healthy BMI
- Make healthy food choices and stay hydrated during the day
- Move at least every hour during the day
- Meditation



Resources

- American Sleep Association
 - sleepassociation.org
- [Sleepeducation.org](https://sleepeducation.org)
- Apps
 - Headspace
 - Sleep Cycle - Sleep Tracker
 - Calm

