THE ROLE OF SLEEP
IN THE LIFE
OF A TEEN
Did You Know?

- 85% of teens get less than the minimum requirement of 8 ½ hours of sleep
- Less Sleep ≠ More Time
- Shortened sleep impairs learning, performance, health and safety
- 55% of fall-asleep crashes involve drivers 25 years of age or younger
- Almost ¼ of young adults report driving faster when drowsy
What You Will Learn

- What sleep is and why it is important
- How much sleep teens need
- How sleep patterns are different in teens
- How sleep deprivation affects teens
- Signs and symptoms of sleep disorders
- What teens can do to have healthy sleep habits and get a good night’s sleep
The Role of Sleep in the Life of a Teen

- Sleep plays a vital role as adolescents develop and go through the maturation process.
- Adolescence is a time of increased responsibility, peer pressure and busy schedules.
  
  As a result......

  SLEEP,

  a vital component of your life,
  is often compromised.
Why is Sleep Important?

- **Food for the brain** – produces alertness, enhances memory and our ability to learn
- **A biological requirement** – helps us perform effectively and safely
- **Essential for development** – particularly during growth and maturation
- **A key to our health** – as important as good nutrition and regular exercise

*Getting sleep helps prevent illness.*

*Good sleep is associated with good health.*
What is Sleep?

- A basic human drive regulated by two biological systems:
  - **Sleep/Wake Homeostasis**
    
    *The drive to sleep that increases the longer we are awake*
  
  - **Circadian Rhythms**
    
    *The internal clock in our brain that regulates when we feel sleepy and when we are alert*
Sleep is Regulated by a Biological Clock in the Brain

- The internal mechanism that regulates when we feel sleepy and when we feel alert
- Resides in the brain and is affected by light and dark
Sleep Occurs in States and Stages

**States and Stages of Sleep**

- **STAGES**
  - Stage 1: Initial light sleep
  - Stage 2: Deeper sleep
  - Stage 3: Deep sleep (slow-wave sleep)
  - Stage 4: REM sleep

- **HOURS IN SLEEP**
  - 0-8 hours

- **REM**
  - Rapid eye movement sleep

**Awake**

- 0-1 hour

The graph illustrates the progression through these stages over the course of sleep.
During Sleep:

- Body temperature lowers
- Hormone levels rise and fall
Teens are Chronically Sleep Deprived

• Teens need 8 ½ – 9 ½ hours of sleep.
• 85% get less than the minimum requirement.
• Teens often have poor sleep habits and irregular sleep patterns – trying to make up for sleep on weekends.
• Teens regularly experience daytime sleepiness.
Teens Experience a Shift to a Later Sleep-Wake Cycle

- The biological clocks of children shift during adolescence, which drives them to a later bed time schedule (around 11:00 pm) and a natural tendency to wake later in the morning.

- This delayed phase syndrome can place them in conflict with their schedules – particularly early school start times.
In order to get to school on time, many teens must wake before 6:30 am and shorten their sleep time.
A Teen’s Lifestyle

- Academics
- Sports and Extracurricular activities
- Part-time after-school jobs
- Computer/Internet use
- Watching TV
- Socializing

*All of these activities compete with a teen’s sleep time.*
Trying to Get Enough Sleep

Adolescent Vicious Cycle

- Afternoon napping
- LATE BEDTIME
- Cumulative sleep debt
- Problems w/ daytime alertness
- Sleep late on Weekends
- Sleep restricted during school week
- Reinforces circadian delay
- Difficulty initiating sleep

"Graphic Courtesy of Helene Emsellem, MD, Medical Director, Center for Sleep and Wake Disorders, Chevy Chase, Maryland"
Consequences of Sleep Deprivation

• Cognitive, social and behavioral performance become impaired.
• Poor school performance and lower grades
• Tardiness and absence from school
• Difficulty remaining alert and paying attention
• Reduced ability to concentrate, problem-solve, remember and have a positive attitude
Consequences of Sleep Deprivation (cont.)

• Irritability and impaired moods
• Problems controlling emotions and getting along with others
• Greater risk for hyperactivity, depression and possibly violence and substance abuse
• At risk for injuries and drowsy driving accidents

*Overall, daytime sleepiness reduces enjoyment and quality of life.*
Drowsy driving is similar to drunk driving
Signs and Symptoms of Sleep Disorders

Sleep Problems are a Serious Threat to Your Health, Safety and Well being

Snore loudly.

Snoring occurs when there is a partial blockage of the airway. Snoring has been linked to increased blood pressure and may be a sign of sleep apnea.

You or others have observed that you stop breathing or gasp for breath during sleep.

Observed pauses in breathing, often accompanied by snoring, are a symptom of a serious condition known as sleep apnea. These breathing pauses reduce your oxygen levels, strain the heart and circulatory system, and contribute to daytime sleepiness.

Feel sleepy or doze off while watching TV, reading, driving or engaged in daily activities.

Sleepiness during the day or at times when you should be awake and alert is a sign that you may be suffering from sleep deprivation, a sleep disorder, or another condition. Drowsiness can impair your mental abilities, emotions, and judgment.

Take both of these handouts with you to your visit.

Check If any of the following apply to you:

☐ Snore loudly
☐ You or others have observed that you stop breathing or gasp for breath during sleep
☐ Feel sleepy or doze off while watching TV, reading, driving or engaged in daily activities
☐ Have difficulty sleeping 3 nights a week or more (e.g., trouble falling asleep, wake frequently during the night, wake too early and cannot get back to sleep or wake unrefreshed)
☐ Feel unpleasant, tingling, creeping feelings or nervousness in your legs when trying to sleep
☐ Interruptions to your sleep (e.g., nighttime heartburn, bad dreams, pain, discomfort, noise, sleep difficulties of family members, light or temperature)

NRSA fact sheet calling for greater awareness of sleep apnea and its diagnosis and treatment options.

Interruptions to your sleep can lead to the onset of depression and emotional outlook, social relations, and quality of life.

Sleep apnea can cause fatigue, weight gain, and other health problems. Untreated sleep apnea can increase your risk of heart disease, stroke, and other serious health conditions.

If you have any of these symptoms, you should discuss this with your doctor or health care provider.

Consulting with a doctor can help you determine if you have sleep apnea and the best treatment options for you.

If you have other questions or concerns about your health, contact your health care provider or local health department.

There are several treatment options for sleep apnea, including lifestyle changes, medical treatments, and surgery.

Consulting with a doctor can help you determine the best treatment options for you.

For more information, visit the National Sleep Foundation's website at sleepfoundation.org.

This handout is provided by the National Sleep Foundation.
Complete NSF’s **Teen Sleep Diary**

**Teen Sleep Diary: About Me, My Sleep and Dreams**

**Why a Sleep Diary May be Helpful**

Sleep is vital to your health, setting and overall performance. A sleep diary can help you see patterns in your sleep and day-to-day activities. How do you know if you are getting enough good sleep? Tracking healthy sleep habits can help you see how you are doing and improve your sleep pattern. By keeping a sleep diary, you can track your sleep and make habits and see how your sleep affects your mood, energy, and performance.

**How to Use This Diary**

Write in this diary every day. Make copies for additional weeks. You can use this as a daily diary about you and your activity, but also to see how much sleep you are getting. You can then compare how much good sleep you get and how you feel during the day. It may suggest you to have more sleep effects than you did during the day. These are the ways to improve your sleep habits.

**We wish you sweet dreams and healthy sleep!**
Sleep Problems/Disorders are Common and Treatable

- Snoring
- Sleep Apnea
Sleep Disorders (cont.)

- Restless Legs Syndrome
- Excessive Daytime Sleepiness
- Narcolepsy
- Insomnia
Advocacy Issue: SCHOOL START TIMES

- High school and middle school start times tend to be early - interrupting adolescents’ sleep patterns - and making it difficult to wake up and be alert:
  > particularly in the morning; and
  > often living with the consequences of sleep deprivation throughout the day.
Advocacy Issue:  SLEEP CURRICULUM

- Educators, parents, many health care providers and others receive little training about the physiology and importance of sleep.
- Very few schools offer sleep information to their students or include it in health or science curriculum.
Helping Schools Become Sleep-Friendly

• Many schools across the country are establishing later start times to get in sync with a teen’s sleep schedule
• NSF has developed a national initiative and sleep for TEENS toolkit
• Several studies cite the positive outcomes of “sleep-friendly” school start time policies
Positive Outcomes from Minnesota Schools

- Teachers report more alert students.
- Students report less sleepiness and better grades
- Fewer students seeking help from school counselors or nurses
- Parents report more “connect time” and teens easier to live with
- Tardiness and sick days declining
Recent Longitudinal Study of Minneapolis Public Schools

Students sleep, on average, one hour more.

They do not stay up later and get 5 more hours of sleep per week compared to students at schools with earlier start times.
What YOU CAN DO… in your Community

• Present this important information to your parents, teachers, local school board and community groups.

• Organize persons/groups to share their thoughts, concerns and ideas with those who have authority to consider policy changes.

• Encourage your local schools to include sleep in their curriculum.
What YOU CAN DO… for Yourself

Sleep Tips to Promote Sleep and a Healthy Lifestyle

Establish a regular sleep schedule

During the day:

• Expose yourself to light in the morning
• Avoid caffeine, alcohol and nicotine
• Exercise, but not too close to bedtime
• Avoid lengthy or late naps
What YOU CAN DO… for Yourself

Sleep Tips (cont.)

Establish a regular bedtime routine

*About one hour before going to bed:*

- Engage in a relaxing, non-alerting activity
- Do not drink or eat too much
- Maintain a quiet, dark and preferably cool, but comfortable sleep environment
  
  = TV, computers, etc. OFF
What YOU CAN DO… in your Home

• Learn about sleep, the consequences of sleep deprivation and the signs of sleep problems or disorders.
• Be a model for healthy sleep habits in your home and create a sleep-friendly environment.
• Be aware of your sleep needs and discuss the importance of getting sufficient sleep relevant to your goals and needs.
• Prioritize your activities and establish a regular sleep-wake schedule – even on weekends.
References

- Diseases and Conditions: Sleep Apnea. National Heart, Lung and Blood Institute, National Institutes of Health.
- Sleep, Sleep Disorders and Biological Rhythms. National Institutes of Health curriculum supplement.
BE SLEEP SMART

Learn all you can about sleep
Practice healthy sleep habits

Use NSF’s sleep for TEENS Toolkit and visit our Web site at:
www.sleepfoundation.org

Waking America to the Importance of Sleep