Get on the Road to Better Health
Recognizing the Dangers of Sleep Apnea
You Will Learn About

- The importance and benefits of sleep
- Sleep deprivation and its consequences
- The prevalence, symptoms, and treatments for major sleep problems/disorders
- Tips for healthy sleep
- Information on sleep apnea and commercial driving
- Where to obtain additional materials and information
Objectives

- Increase driver and industry awareness about sleep apnea and other sleep disorders, including associated dangers, risk factors, symptoms, and treatments.
- Encourage drivers and others in the trucking and motorcoach industries to seek medical help if they are experiencing symptoms of sleep apnea or other sleep disorders.
- Ease driver and industry fears around sleep apnea by communicating that treatment will help reduce crash risk.
Why is Sleep Important?

- Key to our health, safety, performance, and quality of life
- As essential to well-being as good nutrition and exercise
- As necessary for human existence as water, air, and food
Sleep is Regulated by Two Body Systems

- **Sleep/Wake Restorative Process**
  *Balances Sleep and Wakefulness*

- **Circadian Biological Clock**
  *Regulates Timing of Sleep and Wakefulness*
We Need Consolidated Restorative Sleep for:

- Functioning in a safe, efficient, and effective way
- Cognitive, social, and physical performance
- Emotional enhancement and relating well with others
- Learning and memory consolidation
- Optimal health and prevention of health problems
Your Sleep Need

The average amount of sleep you must obtain on a daily basis to maintain alertness and avoid building a sleep debt—

- Each hour of lost sleep is added to your sleep debt.
- Your sleep debt can be reduced only by getting extra sleep—but you may not be able to reverse the long-term effects to your health.
Chronically Sleep Deprived

- The average American sleeps less than 7 hours on weeknights.
- 74% of adults experience at least one symptom of a sleep disorder a few nights a week or more.
- 37% of adults say they are so tired during the day that it interferes with daily activities a few days a month or more.
Why Aren’t We Sleeping?

- Volitional sleep deprivation (work, lifestyle)
- Poor sleep habits
- Circadian factors (e.g., shift work)
- Environmental disruptions
- Untreated sleep problems/disorders

We don’t take sleep seriously!!!
Safety is Compromised

- 27% report being sleepy at work at least 2 days a week.
- 19% of adults report making errors at work.
- 2% report being injured on the job due to sleepiness.
- The majority of workers say that being sleepy makes work tasks (concentration, making decisions, solving problems) more difficult.

NSF 2000 Sleep in America Poll
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Drowsy Driving

Percent Reporting Their Experiences While Driving During the Past Year (% Yes)

- Driven a vehicle while feeling drowsy:
  - 2005: 57%
  - 2004: 42%
  - 2003: 48%
  - 2002: 51%
  - 2001: 51%
  - 2000: 51%
  - 1999: 53%
  - 1998: 62%

- Dozed off while at the wheel of a vehicle:
  - 2005: 23%
  - 2004: 17%
  - 2003: 17%
  - 2002: 17%
  - 2001: 19%
  - 2000: 21%
  - 1999: 27%
  - 1998: 27%

- Had an accident because they dozed off or were too tired:
  - 2005: 1%
  - 2004: 12%
  - 2003: 10%
  - 2002: 12%
  - 2001: 17%
  - 2000: 19%
  - 1999: 23%
  - 1998: 27%

- 2003* Parents who drive
- 2004* Adults 55-84

0% 20% 40% 60% 80% 100%
The Effects of Sleepiness and Fatigue

- Impaired reaction time, judgment, and vision
- Problems with information processing and short-term memory
- Decreased performance, vigilance, and motivation
- Increased moodiness and aggressive behaviors
- More “microsleeps”—brief (2–3 seconds) sleep episodes
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Health Consequences of Inadequate or Poor Sleep

- Body systems associated with major diseases (such as diabetes) function less effectively.
- Hormonal changes can accelerate the “paunch process” and lead to obesity and diabetes.
Recognizing Sleep Problems & Disorders

- Sleep problems/disorders can be serious.
- Symptoms and experiences of sleep problems should be discussed with a doctor.
- Insomnia, snoring, sleep apnea, and Restless Legs Syndrome are all treatable.
Insomnia

- Inadequate or poor quality sleep
- Difficulty falling asleep
- Frequent waking during the night
- Waking too early and being unable to go back to sleep
- Unrefreshed or non-restorative sleep
Prevalence of Insomnia

- Approximately 40% of American adults experience occasional insomnia; 10–15% experience it on a chronic basis.
- Those most at risk:
  - Women
  - Older adults
  - Depressed persons
## Causes and Types of Insomnia

<table>
<thead>
<tr>
<th>Cause</th>
<th>Type</th>
<th>Duration</th>
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| **Change:** acute illness; jet lag, emotional stress | Acute | **Transient:** few nights a week  
**Short Term:** 1–2 weeks |
| **Stress:** loss of loved one or job | | |
| Variety of physical, medical, psychiatric, or environmental conditions | Chronic | > 1 month (at least 3 nights a week) |
| Not associated with underlying or known cause | Primary | > 1 month |
| Chronic stress, hyperarousal, or behavioral conditioning may contribute | Chronic | |
Treatment of Insomnia

● Pharmacological Treatment
  – Over-the-counter medications
  – Prescription medications

● Behavioral Management
  – Stimulus response
  – Sleep restriction
  – Cognitive behavioral therapy
  – Relaxation training
Restless Legs Syndrome

- Affects about 12 million Americans
- Unpleasant, tingling, creeping feelings or nervousness in legs during inactivity and sleep with an irresistible urge to move; 80% may have involuntary jerking of limbs
- A neurological movement disorder leading to daytime sleepiness; can be associated with other medical conditions/problems
Snoring

- Partial blockage of airway causing abnormal breathing and sleep disruptions
- 90 million snore; 37 million experience it on a regular basis
- Most at risk: Males, those who are overweight and have large neck size
- Loud snoring can be a symptom of sleep apnea and can be associated with high blood pressure
Sleep Apnea

- Pauses in breathing due to obstruction in airway that causes gasps and sudden awakening from sleep
- 18 million; mostly males, those who are overweight and/or have high blood pressure, and persons with upper airway physical abnormality
- Lowers blood-oxygen levels, puts a strain on the heart, and is associated with cardiovascular problems and daytime sleepiness
The Prevalence of Sleep Apnea Among Commercial Drivers

Research sponsored by the Federal Motor Carrier Safety Administration and American Trucking Associations found:

- Almost one-third (28%) of commercial truck drivers have some degree of sleep apnea
- 17.6% have mild sleep apnea
- 5.8% have moderate sleep apnea
- 4.7% have severe sleep apnea
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Treatment of Sleep Apnea

- Behavioral Therapy
  - Avoid alcohol, nicotine, and sleep medications
  - Lose weight if overweight
- Physical or Mechanical Treatment
  - Continuous positive airway pressure
  - Dental appliance
- Surgery
Diagnosing and Treating Sleep Disorders

For Diagnosis:

- **Polysomonomography** measures brain waves, heart rate, body movements, and breathing in an overnight sleep study
- **Multiple Sleep Latency Test** measures daytime sleepiness

For Treatment:

- Behavioral therapy
- Medications
- Devices or appliances
- Surgery
What Should a Driver with Sleep Apnea Do?

● The driver and the diagnosing practitioner should contact the medical qualifying examiner to determine the driver’s fitness to operate a commercial motor vehicle (CMV).
What Level of Sleep Apnea Disqualifies a CMV Driver?

- A medical examiner must qualify and determine a driver’s fitness to operate a CMV safely.
What are the Obligations of a Motor Carrier?

- A motor carrier may not require or permit drivers to operate a CMV if the drivers have a condition, including sleep apnea, that would affect their ability to operate the vehicle safely.
Tips to Promote Sleep

- Maintain regular bedtime and wake time schedule, including weekends.
- Establish a regular, relaxing bedtime routine.
- Create a dark, quiet, comfortable, and cool sleep environment.
- Sleep on a comfortable mattress and pillow.
- Use your bedroom only for sleep, not work or other stressful activities.
Tips to Promote Sleep (cont’d.)

● Finish eating at least 2–3 hours before your regular bedtime.
● Exercise regularly. It is best to complete your workout at least a few hours before bedtime.
● Avoid caffeine, nicotine, and alcohol close to bedtime. They can disrupt sleep later in the night.
● Avoid napping if it will disrupt your sleep later that night.
Summary

● Sleep is a basic biological need that is essential to our health, performance, safety, and quality of life.
● Sleep deprivation has serious negative consequences.
● Establishing healthy sleep practices prevents sleep problems and promotes optimal sleep.
● Signs and symptoms of sleep difficulties need to be identified and discussed with a doctor.
● Most sleep disorders can be treated successfully and need not affect your job.
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For More Information

www.fmcsa.dot.gov/sleep-apnea
www.sleepfoundation.org
www.drowsydriving.org