First Responder Training for Providers:
Shift Work and Sleep Irregularities

Presented by:

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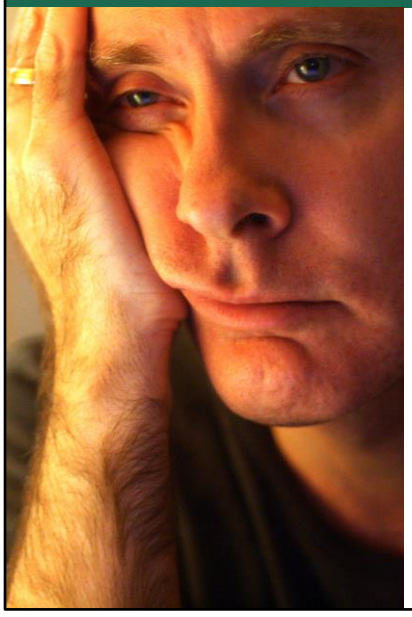
A National Business Psychology Firm

Safety Hazards of Sleep Deprivation



- Delayed reaction time
- Impaired judgment
- Poor quality vision
- Decreased performance and motivation
  - Lack of focus and concentration
- Increased moodiness and aggression
- **Similar to being intoxicated!**

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Safety Implications

- Accidents
- Fatalities
- Injuries
- Errors
- Absenteeism

Safety: Case Study One
Exxon Valdez

When the supertanker ran aground in Alaska in 1989, destroying wildlife and spilling 258,000 barrels of crude oil in the process, third mate Gregory Cousins was allegedly sleeping at the helm, leaving him unable to turn the boat back into the shipping lanes in time to avoid disaster. The crew had just put in a 22-hour shift loading the oil onto the ship, the Anchorage Daily News reported, and Cousins had reportedly only had a "catnap" in the last 16 hours leading up to the crash.

http://www.huffingtonpost.com/2013/12/03/sleep-deprivation-accidents-disasters_n_4380349.html

Safety: Case Study Two
Three Mile Island

Considered to be the most serious nuclear incident on U.S. soil, the accident at Three Mild Island in Pennsylvania was attributed to human error due to sleep deprivation. Between 4 and 6 a.m. on March 28, 1979, shiftworkers didn't notice as the plant lost coolant, eventually resulting in the overheating of the reactor's core, according to the United States Nuclear Regulatory Commission. Officials discovered later that about half of the core had melted, yet there were minimal effects outside of the plant.

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Safety: Case Study Three
American Airlines Flight 1420 Crash

On June 1, 1999, American Airlines Flight 1420 overshot the runway at Little Rock National Airport, killing 11, including the captain, and injuring the first officer, the flight attendants and 105 passengers. Only 24 passengers were not injured. Severe thunderstorms played a role, but the National Transportation Safety Board also determined that "impaired performance resulting from fatigue" was involved.

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Safety: Case Study Four
Chernobyl

When the nuclear power plant in Ukraine exploded, creating what some have described as the world's worst nuclear disaster, the engineers involved had been working for 13 hours or more, MSN reported. Two plant workers died that night. Nearly 240 people were originally diagnosed with radiation poisoning, and 134 cases were later confirmed. Of those confirmed cases, 28 people died during the following few weeks. The number of deaths attributed to the explosion over the next 15 years proved difficult to quantify. "In reality, the actual number of deaths caused by this accident is unlikely ever to be precisely known," the World Health Organization wrote in a 2006 report

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Safety: Case Study Five
Challenger Explosion

The space shuttle exploded just seconds after its January 1986 launch, killing all seven crew members. According to a 1988 report, certain managers involved in the launch had only slept two hours before arriving to work at 1 a.m. that morning. The Presidential Commission on the accident admitted the danger of this deprivation in its June 1986 report, writing, “The willingness of NASA employees in general to work excessive hours, while admirable, raises serious questions when it jeopardizes job performance, particularly when critical management decisions are at stake.”

What Challenges Do You Have Here Related to Sleep and Safety?

Personal Safety/Health Implications Of Sleep Deprivation

- Increased risk for chronic illnesses such as heart disease, gastrointestinal diseases
- Missing family and social events…relationship stress
- Increase Stroke Risk
- Lead To Obesity
- Up Diabetes Risk
- Fuel Memory Loss

More Personal Safety Implications Of Sleep Deprivation

- Damages Bones
- Increase Cancer Risk
- Hurt Your Heart
- Can Kill You
- Lack of Sleep Kills Sex Drive
- Sleepiness Is Depressing
- Lack of Sleep Ages Your Skin
- Sleep Loss Impairs Judgment, Especially About Sleep

Safety Tips

FACT: Six Signs It's Time to Stop What You Are Doing and Nap

1. Frequent blinking or yawning
2. Feeling restless or irritable
3. Daydreaming
4. Missing details
5. Trouble keeping your head up
6. Drifting into another lane or pathways

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SAFETY TIP

FACT: Common Medications Can Trigger Drowsiness

Many common medications, such as those used to treat colds, allergies, or motion sickness, can hinder alertness at work or on the road. If the bottle lists drowsiness as a side effect or warns against operating a motor vehicle, it's best not to get behind the wheel. Even small amounts of alcohol can amplify the fatigue associated with these medications. **Combine this with sleep deprivation and the consequences could be lethal**.

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FACT: A Short Nap is the Best Solution

According to the National Sleep Foundation, pulling over for a short nap is the most effective way to restore alertness on the road. Park in a safe, well-lit area. Set your watch or phone to wake you up in 15 to 20 minutes. Longer naps can increase grogginess and disorientation. If you plan to nap longer than this don't drive or go back to work.

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MYTH: Only Old People Fall Asleep Behind the Wheel

More than half of fatigue-related crashes are caused by drivers younger than 25. Others who are at the highest risk: men, people with sleeping disorders, adults with children, and shift workers. Working the night shift increases your risk by nearly six times. Rotating shifts that disrupt your sleep cycle and working more than 60 hours a week can also set you up for fatigued driving.

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FACT: Drowsy Driving Can Be Lethal

Driver fatigue causes at least 100,000 police-reported crashes and more than 1,500 deaths each year, according to government estimates. The actual number may be higher, considering more than a third of respondents to a National Sleep Foundation poll (103 million people) say they have fallen asleep at the wheel.

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Most people are aware of the dangers of driving drunk, but they may not take sleepiness seriously. That's a mistake. Researchers have found that going 18 to 24 hours without sleep is similar to being legally drunk, when it comes to driver impairment. Like alcohol, sleepiness and fatigue lead to poor judgment and reaction time, not to mention the risk of dozing off.

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Strategies for Better Sleep

•Avoid long commutes and extended hours.

•Take short nap breaks throughout the shift.

•Work with others to help keep you alert.

•Try to be active during breaks (e.g., take a walk, shoot hoops in the parking lot, or even exercise).

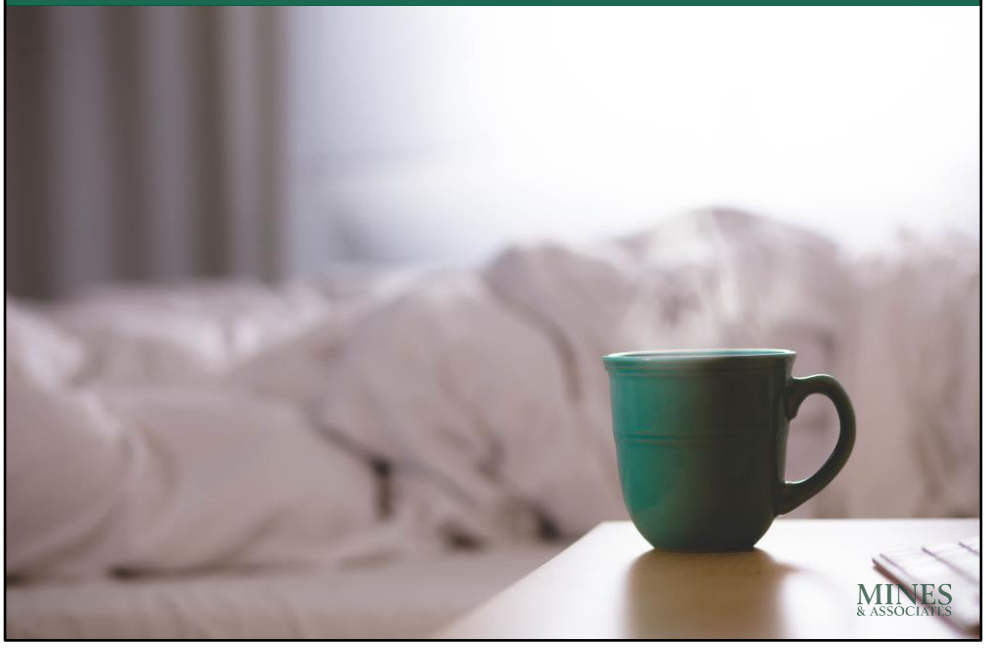
•Drink a caffeinated beverage (coffee, tea, colas) to help maintain alertness during the shift.

•Don't leave the most tedious or boring tasks to the end of your shift when you are apt to feel the drowsiest. Night shift workers are most sleepy around 4-5 a.m.

•Exchange ideas with your colleagues on ways to cope with the problems of shift work. Set up a support group at work so that you can discuss these issues and learn from each other.

•For some shift workers, napping is essential. It can be extremely effective at eliminating fatigue-related accidents and injuries and reducing workers compensation costs. What is your policy on naps?

More Sleep Strategies



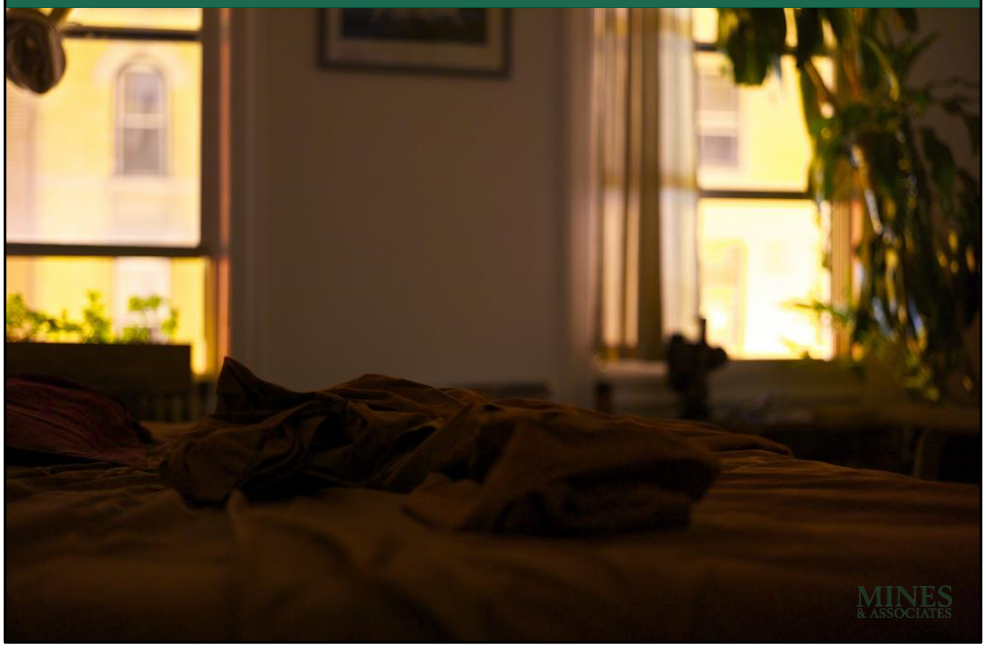
Work clockwise

If you work rotating shifts, **ask your manager to schedule succeeding shifts so that a new shift starts later than the last one**, recommends the American Academy of Sleep Medicine. If you've just finished a 3:00 to 11:00 p.m. shift, for example, you'll be more alert and sleep better if the next shift you work is 11:00 p.m. to 7:00 a.m.

Get outdoors

Once you wake up, get outside. Take a walk and sit in the sun. **The sun will cue your biological clock that it's time to be alert.**

Tips for Sleeping During the Day



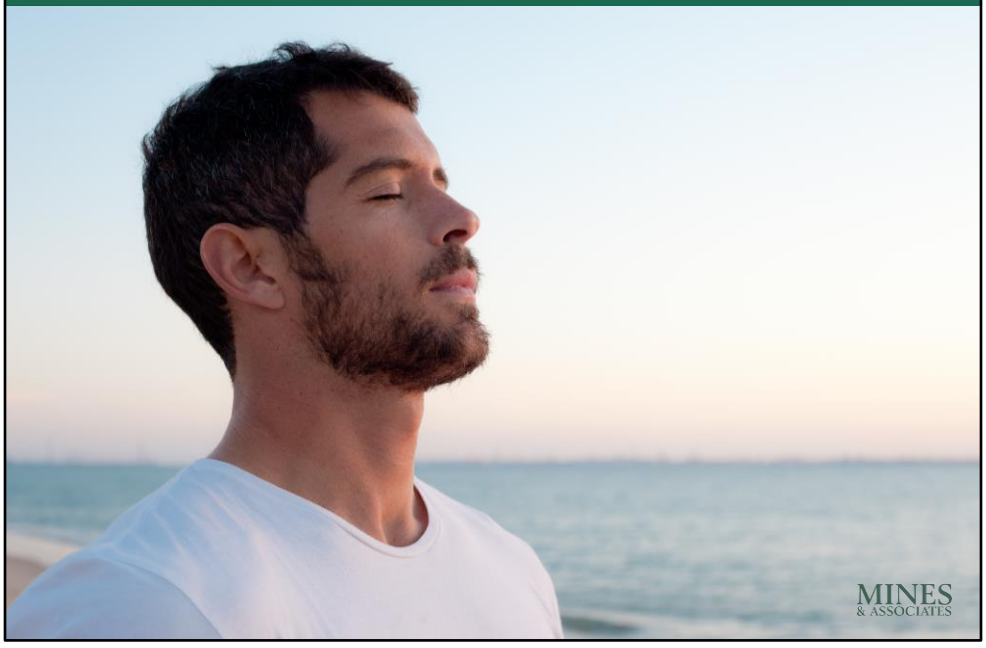
1. Wear dark glasses to block out the sunlight on your way home.
2. Keep to the same bedtime and wake time schedule, even on weekends.
3. Eliminate noise and light from your sleep environment (use eye masks and ear plugs).
4. Avoid caffeinated beverages and foods close to bedtime.
5. Avoid alcohol; although it may seem to improve sleep initially, tolerance develops quickly and it will soon disturb sleep

Your Sleep Environment

1. Comfortable
2. Blackout Shades
3. Sleep Eye Mask
4. Cool
5. Quiet!

1. Wellness is Multifaceted
2. Nutrition
3. Exercise
4. Stress Management
5. Attitude

Final Thoughts to Consider



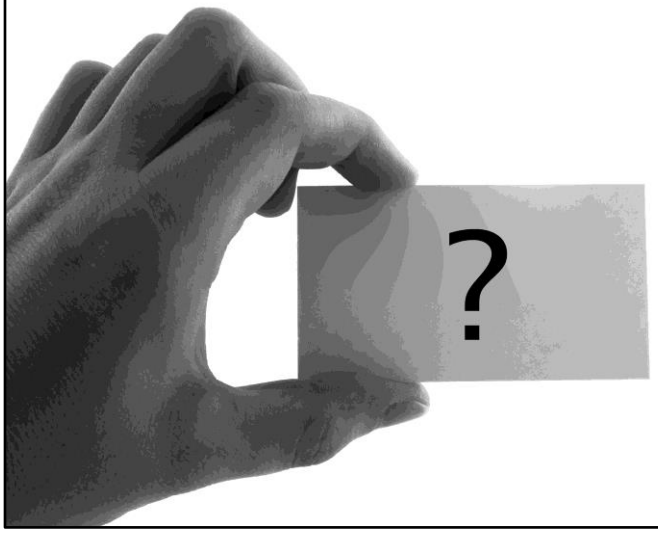
Determine a structured schedule that will work for you and your family. Include exercise, meal planning and sleep pattern.

Create a healthy sleep environment.

Work towards eliminating one unhealthy behavior.

Questions or Comments?

Contact providerinfo@minesandassociates.com for more information, comments, questions, or requests for resources mentioned in this presentation.



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THANK YOU!!!

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