

Ways Night Workers can Stay Alert

December 10, 2008 by Fred Hosier

Work shifts that fall significantly outside of 7 a.m. to 7 p.m. can have a negative effect on workplace safety and wreck havoc with employees' sleep schedules. But a new study offers tactics workers can use to be more alert at work, get better sleep and have more normal schedules on their days off.

Participants worked 11 p.m. to 7 a.m. shifts. Subjects worked three nights, had two days off, and then worked four more nights. Their sleep schedule:

- 8:30 a.m. to 3:30 p.m. after the first two night shifts
- 8:30 a.m. to 1:30 p.m. after the third night shift
- 3 a.m. to 12 noon on the two days off, and
- 8:30 a.m. to 3:30 p.m. after the final four night shifts.

Participants also:

- were exposed to five, 15-minute, intermittent bright light pulses each night shift
- wore dark sunglasses when outside, and
- received outdoor afternoon light exposure.

Workers who followed this regimen had increased performance and alertness during nights shifts and were able to work nights while achieving more normal daytime schedules on their days off compared to control subjects.

Conventional wisdom for night workers has been to maintain the same sleep schedule on days off as on work days. However, this meant they couldn't be awake during normal daytime hours and enjoy their days off.

The study was conducted by Rush University Medical Center and appears in the December 2008 issue of the journal [SLEEP](#).

THE NIGHT SHIFT WORKERAND SLEEP

Do you work at times other than the usual "nine to five" business day? If so, you are among the millions of shift workers in



America's workplace. You may work when most people are asleep and attempt to sleep when the rest of the world is awake. Shift workers perform critical functions in hospitals, on police forces and as emergency personnel,

and in the transportation and manufacturing industries. In addition, they are meeting the demand for "round-the-clock" service in an age of global interaction. More than 22 million Americans are shift workers, and that number is growing by 3% each year!

Unfortunately, when it comes to sleep, most shift workers don't get enough. When shifts fall during the night (11 p.m. -7 a.m.), the worker is fighting the natural wake-sleep pattern. It may be hard to stay alert at night and just as hard to fall asleep and stay asleep during the day. Night workers get less sleep than daytime workers do, and the sleep is less restful. Sleep is more than just "beauty rest" for the body; it helps restore and rejuvenate the brain and organ systems so that they function properly. Chronic lack of sleep harms a person's health, on-the-job safety, task performance, memory and mood.

Sleep and the Circadian Clock

Sleep is needed by all animals - even plants appear to have rest periods. The human body naturally follows a 24-hour period of

wakefulness and sleepiness that is regulated by an internal circadian clock. In fact, the circadian clock is linked to nature's cycle of light and darkness. The clock regulates cycles in body temperature, hormones, heart rate, and other body functions. For humans, the desire to sleep is strongest between midnight and six a.m. Many people are alert in the morning, with a natural dip in alertness in the mid-

afternoon. It is difficult to reset the internal circadian clock. It is not surprising that 10-

20% of night shift workers report falling asleep on the job, usually during the second half of the shift. That's why shift workers who work all night may find it difficult to sleep during the day, even though they are tired.



When You Don't Get Enough Sleep

According to a National Sleep Foundation poll, 65% of people report that they do not get enough sleep (most adults need eight hours of sleep). When sleep deprived, people think and move more slowly, make more mistakes, and have difficulty remembering things. These negative effects lead to lower job productivity and can cause accidents. The financial loss to U.S. businesses is estimated to be at least \$18 billion each year! Lack of sleep is associated with irritability, impatience, anxiety, and depression. These problems can upset job and family relationships, spoil social activities, and cause unnecessary suffering. Shift workers experience more stomach

problems (especially heartburn and indigestion), menstrual irregularities, colds, flu, and weight gain than day workers. Heart problems are more likely too, along with higher blood pressure. The risk of workplace and automobile accidents rises for tired shift workers, especially on the drive to and from work.

Getting Ready for Successful Shuteye

There are several steps a shift worker can take to successfully fall asleep and stay asleep. The key is to make sleep a priority! Set the stage for sleep even though it might be broad daylight outside. Prepare your body and mind for sleep. Wear wraparound dark glasses on your way home from work if you are on the night shift to keep morning sunlight from activating your internal "daytime" clock. Follow bedtime rituals and try to keep a regular sleep schedule - even on weekends. Go to sleep as soon as possible after work. At home, ask family and friends to help create a quiet and peaceful setting during your sleep time. Have family members wear headphones to listen to music or watch TV. Ban vacuuming, dish washing, and noisy games during your sleep time. Put a "Do Not Disturb" sign on the front door so that delivery people and friends will not knock or ring the doorbell. Schedule household repairs for after your sleep time.

Seven Tips to a Good Night's Sleep

Want a better night's sleep? Try the following:

- Consume less or no caffeine and avoid alcohol.
- Drink less fluids before going to sleep.
- Avoid heavy meals close to bedtime.
- Avoid nicotine.
- Exercise regularly, but do so in the daytime, preferably after noon.
- Try a relaxing routine, like soaking in hot water (a hot tub or bath) before bedtime.
- Establish a regular bedtime and waketime schedule.

Keep a sleep diary before and after you try these tips. If the quality of your sleep does not improve, share this diary with your doctor.

Tips for Successful Shuteye

Bedtime Rituals

- Take a warm bath or soak in a hot tub.
- Lower the room temperature (a cool environment improves sleep).
- Don't "activate" your brain by balancing a checkbook, reading a thriller, or doing other stressful activities.

Light

- Darken the bedroom and bathroom.
- Install light blocking and sound absorbing curtains or shades.
- Wear eye shades.

Sound

- Wear ear plugs.
- Use a white noise machine, like a fan, to block other noises.
- Install carpeting and drapes to absorb sound.
- Unplug the telephone.

Food

- Avoid caffeine less than five hours before bedtime.
- Don't stop for a drink after work; although at first you may feel relaxed, alcohol disturbs sleep.
- Eat a light snack before bedtime. Don't go to bed too full or too hungry.

Exercise

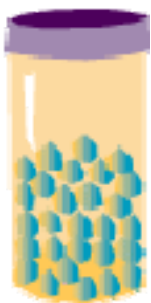
If you exercise at the workplace, do so at least three hours before you plan on going to bed. Otherwise, exercise after you sleep. Because exercise is alerting and raises the body temperature, it should not be done too close to bedtime.

Balancing Life and Work

The shift worker faces special problems in trying to maintain family relationships and social and community ties. It becomes difficult to balance work, sleep and personal time. The need to sleep during the day (or, for the evening worker, to be on the job during the dinner hour and the family-oriented part of the day) means that the shift worker often misses out on family activities, entertainment, and other social interaction. That is why it is important to talk with family members and friends about your concerns. With their help, you can schedule special as well as regular times with spouse, children, and friends. Remember that sleep loss and feeling at odds with the rest of the world can make you irritable, stressed and depressed. As one expert puts it, "Blame the shift work - not your kids!"

Sleeping Pills and Aids

Prescription sleep medications do not cure sleep problems, but may be recommended for short-term use. Be sure to tell your doctor that you are a shift worker. These medications may be helpful for one or two sleep cycles after a shift schedule change. Talk to your doctor about whether this type of medication would be helpful to you. Melatonin is a chemical that is produced by the body to help induce sleep. Melatonin



supplements have been advertised as a sleep aid. However, studies have not shown that melatonin helps shift workers. Also, questions about safety and dosing have not been answered. The U.S. Food and Drug Administration considers melatonin experimental.

Napping

It is important to keep a regular sleep schedule, even on days off and weekends. However, if you can't get enough sleep or feel drowsy, naps as short as 20 minutes can be helpful. Naps can maintain or improve alertness, performance, and mood. Some people feel groggy or sleepier after a nap. These feelings usually go away within 1-15 minutes, while the benefits of the nap may last for many hours. The evening or night worker can take a nap to be refreshed before work. Studies show that napping at the workplace is especially effective for workers who need to maintain a high degree of alertness, attention to detail, and who must make quick decisions. In situations where the worker is working double shifts or 24-hour shifts, naps at the workplace are even more important and useful.

The Ride Home

Driving home after work can be risky for the shift worker, particularly since you have been awake all night and the body needs to sleep. For the evening worker coming home around midnight, the risk of meeting drunk drivers is higher.

People think that opening



the car windows or listening to the radio will keep them awake. However, studies show that these methods work for only a short period of time. If you are sleepy when your shift is

over, try to take a nap before driving home. Remember, sleep can quickly overcome you when you don't want it to.

Follow these steps to arrive home safely:

- Carpool, if possible. Have the most alert person do the driving.
- Drive defensively.
- Don't stop off for a "night cap."
- If you are sleepy, stop to nap, but do so in your locked car in a well-lit area.

Take public transportation, if possible.

For the Employer

There are a number of ways you can make your workplace safer and more productive for your shift workers. Educate managers and shift workers about the need for sleep and the dangers of fatigue.

- Install bright lights in the work areas. A well-lit workplace signals the body that it is time to be awake and alert. Provide vending machines with healthy food choices and a microwave oven.
- Schedule shifts to allow sufficient breaks and days off, especially when workers are re-assigned to different shifts. Plan enough time between shifts to allow employees to not only get enough sleep, but also attend to their personal life. Don't promote overtime among shift workers.
- Develop a napping policy. Encourage napping by providing a sleep friendly space and time for scheduled employee naps. A short break for sleep can improve alertness, judgment, safety, and productivity.
- Be concerned about employee safety going to and from work. Encourage the use of carpools, public transportation, rested drivers, and even taxis.

These steps can make a difference in the workplace and on your bottom line!

Seeking Medical Help

If you have tried some of these tips and your efforts to get enough sleep are not successful, it may be time to seek professional help. If problems persist, talk to your doctor. Remember, when you are not getting the sleep you need, you are at risk... and so are those around you. Inadequate sleep increases your risk for falling asleep at the wheel, accidents on the job, and problems at home. Your doctor can help identify the cause, which can be successfully treated or managed. Your doctor can evaluate your sleep problem and determine whether you may have a sleep disorder. Sleep specialists have additional training in sleep medicine and can both diagnose and treat a variety of sleep disorders. Many sleep specialists work at sleep centers.

Operating Equipment Safely

If you operate heavy equipment or drive a vehicle during your shift work, you must pay careful attention to signs of sleepiness or fatigue. To ignore signals such as yawning, frequent blinking, a sense of tiredness or a failure to make routine safety checks may put you and others at risk. If you feel sleepy or drowsy, stop your work as soon as safely possible. Contact your supervisor and request a break or nap, or have a caffeinated product in order to help increase alertness. Remember, caffeine is not a long-term substitute for sleep.