

Surviving Shift Work

By Diane E. Scott, RN, MSN

"We were working night-shift together as usual: just three nurses on a busy rehab department. One morning, my co-worker was driving the short distance to her home and fell asleep behind the wheel of her car. She suffered multiple fractures and her life was never the same again." Susan, RN, Pittsburgh, Pennsylvania.

Regrettably, countless nurses who have worked shifts can relate to this true story. Shift work, generally described as working outside daylight hours, is difficult physically and mentally but is inherent to many healthcare positions. Approximately 30% of the nursing population is employed in shift work (Hughes & Stone, 2004). However difficult, shift work is preferred by numerous nurses. Some nurses prefer shift work for the flexibility of their home lives, while others count on the monetary benefits that often accompany working in the evening and during the night.

Regardless of the reason why a nurse chooses a position that requires shift work, working non-daylight hours can be detrimental to a nurse's health. The National Sleep Foundation (NSF) states that shift workers experience more untoward health effects such as high blood pressure, menstrual irregularities, colds and weight gain more than day shift workers.

Patient Safety

The correlation between medical errors and shift work is beginning to demand national attention. In a recent study by Dr. T. Akerstedt, over 50% of shift workers report severe decreased alertness when on the job (2005). Nurses who work successive night shifts are particularly at risk for medical errors. Findings compiled from several research studies state that the risk of medical errors compounds with each successive off shift a healthcare worker works. On average, the error rate increase 6% after the second night shift, 17% higher the third successive night shift and an astounding 35% higher on the fourth night shift. (Folkard et al., 2005).

The Circadian Clock

Nurses need to learn as much as they can about the physiology of sleep. Learning to survive shift work starts by understanding sleep and the methods to counteract the negative affects of working while the rest of the world is asleep. Understanding the circadian clock is the first step.

The circadian clock is the human body's natural tendency to follow a 24 hour cycle. This internal pattern is strongly regulated by light and dark with most people yearning for sleep between the hours of midnight and 6 AM. The circadian clock controls the body temperature, hormones, heart rate and other body functions. As a result, according to the National Sleep Foundation, 10-20% of shift workers report falling asleep on the job. The problems often extend into the daylight as many shift workers find it difficult to sleep soundly for adequate periods when returning home.

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Taking Control of Sleep

The first step to taking control of sleep is to learn to make sleep a priority. Shift working nurses need to teach their bodies how to fall asleep and remain sleeping for long periods of uninterrupted times. Following the clues from the circadian clock, nurses can learn to counteract the affects of daylight whenever returning home after working a night shift. The NSF recommends that nurses wear wrap around sunglasses when driving home so the body is less aware that it is daylight.

Rotation Patterns

Nurses who work in permanent shifts can utilize principle of reentrainment to alter their lives at home and work so their body is accustomed to being the most alert during the evening hours and into the evening. Reentrainment may take weeks to develop and social activities may be difficult as the majority of society is awake during the daylight, not at night (Berger & Hobbs, 2006).

When scheduling shifts that rotate, nurses should consider working forward rotating shifts whenever possible. Working in a pattern of daylight, evening then nights or, in the case of 12 hour shifts, working daylight shifts prior to nighttime shifts helps to maintain the body's circadian rhythm. (Berger & Hobbs, 2006).

The following are tips that help set the stage for sound sleep even during daytime hours.

Bedroom Design. Design the bedroom to accommodate daylight sleeping.

- Install room darkening shades to cover all windows.
- Decrease the room temperature.
- Consider earplugs to block outside noises and eyeshades to decrease light sources.
- Place a "do not disturb sign" on the outside of the bedroom door and front door.
- Create guidelines for families to eliminate noise and interruptions during sleep such as television watching and noisy outside playing.
- Unplug the telephone.

Food and Exercise

- Avoid caffeine for at least five hours prior to sleeping. Consider all sources of caffeine, including chocolate, energy drinks, gum and sodas.
- Choose nutritious food to eat during the shift to avoid large fluctuations in blood sugar.
- Do not eat a heavy meal prior to bedtime.
- Avoid alcohol prior to sleep.
- Do not plan exercise prior to sleeping as it raises the body temperature, heart rate and tends to energize the body.

Staying Alert during Work

The National Sleep Association states that people who work night shift tend to hit their most tired period at 4 AM, so it can be helpful to plan the most stressful activities around that time.

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The following tips can be done to encourage alertness during night shift:

- Schedule short breaks as often as possible throughout the shift.
- Exercise when feeling fatigue, such as climbing a set of stairs or taking a walk to the cafeteria.
- Avoid unhealthy foods during the shift.
- Develop a system to monitor the fatigue levels among the members of the team.
- Never rely on dangerous medications to enhance alertness.
- Develop a partner system that serves as a check and balance when completing tasks during periods of fatigue.

The Drive Home

The dangers of driving under the influence of alcohol is well known throughout the world, however, driving after shift work can be extremely dangerous as well. A 2006 Institute of Medicine report on Sleep Disorders and Deprivation stated that almost 20 percent of all serious car crash injuries in the general population are associated with driver sleepiness, independent of alcohol effects. Many nurses will open the car windows and turn the volume of the radio up to combat fatigue, but, according to the NSF, studies have proven that these methods do not work. In fact, these actions should signal that one are dangerously fatigued and need to pull over immediately.

The NSF has offered the recommendation for driving after shift work:

- Carpool if possible and keep a dialogue with the person who is driving.
- Take public transportation if possible.
- Drive defensively
- Don't stop for a night cap.

Ignoring fatigue signs can be dangerous. Taking deliberate steps to understand and control the bodies natural rhythms is essential to the health and well being of nurses and the patients they care for.

References

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The National Sleep Foundation. www.sleepfoundation.org

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