

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 NSF - National Science Foundation](#), 2007) states that shift workers experience more untoward health effects such as high blood pressure, [menstrual](#) menstrual /men·stru·al/ (men·stoo-al) pertaining to the menses or to menstruation.

men·stru·al or **men·stru·ous**

adj.

Of or relating to menstruation. 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 provider works. On average, the error rate increases 6% after the second night shift, 17% higher the third successive night shift and an [astounding](#) a-stound

tr.v. **a·stound·ed, a·stound·ing, a·stounds**

To astonish and bewilder. See Synonyms at surprise.

[From Middle English *astoned*, past participle of *astonen*,

.... Click the link for more information. 35% higher on the fourth night shift. (Folkard et al., 2005).

The [Circadian](#) circadian /cir·ca·di·an/ (ser-ka'de-an) denoting a 24-hour period; see under *rhythm*.

cir·ca·di·an

adj.

Relating to biological variations or rhythms with a cycle of about 24 hours. 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 (NSF, 2007). The circadian clock controls the body temperature, hormones, heart rate and other body functions; as a result, 10-20% of shift workers report falling asleep on the job (NSF, 2007). The problems often extend into the daylight as many shift workers find it difficult to sleep soundly for adequate periods when returning home.

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 uninterrupted. Following the clues from the circadian clock, nurses can learn to counteract the effects of daylight whenever returning home after working a night shift. The NSF recommends that nurses wear wrap around [sunglasses](#) sunglasses A tinted pair of glasses used to ↓ light arriving at the eye, which are labeled according to the amount of UV light blocked; nonprescription glasses are classified according to use and amount of UV radiation blocked

Sunglasses

..... Click the link for more information. when driving home so the body is less aware that it is daylight.

Rotation Patterns.

Nurses who work in permanent off-shifts can utilize the principle of reentrainment, or training the body to be the most alert during the evening hours and into the night (Berger & Hobbs, 2006).

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](#) circadian rhythm: see rhythm, biological.

circadian rhythm

Inherent cycle of approximately 24 hours in length that appears to control or initiate various biological processes, including sleep, wakefulness, and digestive and hormonal activity. . (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](#) dark·en
v. **dark·ened, dark·en·ing, dark·ens**

v.*tr.*

1.

a. To make dark or darker.

b. To give a darker hue to.

2. To fill with sadness; make gloomy.

3. 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](#) **Do not disturb** usually refers to a status where the subject prefers to be left in solitary.

It can also mean the following:

- *Do Not Disturb* (album), by Joanne Accom
- Do Not Disturb (song), by Bananarama
-

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](#) en-er-gize

v. **en-er-gized, en-er-giz-ing, en-er-giz-es**

v.tr.

1. To give energy to; activate or invigorate: "His childhood the body.

Staying Alert during Work

The National Sleep Foundation (2007) states that people who work night shift tend to be most fatigued at 4 AM, so try not to plan the most monotonous tasks during that time.

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](#) unhealthy food Any food that is not regarded as being conducive to maintaining health; UFs include fats, in particular of animal origin, 'fast' foods—low in fiber and vitamins; 'junk food'—eg, potato and corn chips, pretzels, crackers—high in salt 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](#) *Exteremely Dangerous* is a 1999 four part series for ITV starring Sean Bean as an ex-MI5 undercover agent convicted of the brutal murder of his wife and child who goes on the run to try and clear his name. He sets out to follow up a strange clue sent to him in prison. as well. A 2006 Institute of Medicine report on [Sleep Disorders](#) Sleep

Disorders **Definition**

Sleep disorders are a group of syndromes characterized by disturbance in the patient's amount of sleep, quality or timing of sleep, or in behaviors or physiological conditions associated with sleep. 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](#) com-bat fatigue

n.

Posttraumatic stress disorder resulting from wartime combat or similar experiences. No longer in scientific use. Also called *battle fatigue*, *shell shock*. , but, [according to](#) according to prep.

1. As stated or indicated by; on the authority of: according to historians.

2. In keeping with: according to instructions.

3. the NSF, studies have proven that these methods do not work. In fact, these actions should signal

that one is dangerously fatigued and needs to pull over immediately.

The NSF has offered the following recommendations for driving after shift work:

* [Carpool](#) car-pool

n. also **car pool**

1. An arrangement whereby several participants or their children travel together in one vehicle, the participants sharing the costs and often taking turns as the driver.

2. when possible and keep a dialogue with the person who is driving.

* Take public transportation when 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 wellbeing of nurses and the patients in their care.

References

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Berger, A. M. & Hobbs, B. (2006). Impact of shift work on the health and safety of nurses and patients. *Clinical Journal of [Oncology Nursing](#)* The perspective and/or examples in this article do not represent a world-wide view. Please [edit] this page to improve its geographical balance. , 10 (4), 465-471.

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Institute of Medicine. (2006) Sleep Disorders and [Sleep Deprivation](#) sleep deprivation Sleep disorders A prolonged period without the usual amount of sleep. See Driver fatigue, Poor sleeping hygiene, Sleep disorders, Sleep-onset insomnia. : An Unmet Public Health Problem. Washington, DC: National Academies Press.

The National Sleep Foundation (2007). Shift work. Retrieved September 11, 2007 from www.sleepfoundation.org

by Diane E. Scott, RN, [MSN](#) (1) (MicroSoft Network) A family of Internet-based services from Microsoft, which includes a search engine, e-mail (Hotmail), instant messaging (Windows Live Messaging) and a general-purpose portal with news, information and shopping (MSN Directory).

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