

SHIFT WORK



Shift Work: *The body has a natural rhythm which helps you sleep at night and stay alert during the day. When you work shift work you must struggle against this. Long shifts or insufficient daytime sleep lead to tiredness and accidents.*

The invention of the light globe, for all the advantages that it brought, allowed people to work after normal daylight hours. In the newly industrialised nations this meant that the expensive equipment could be operated 24 hours a day, and shift work was created. Unfortunately everyone who works at night is working against their normal body clock and changing from daytime function to night-time function is not an easy. Not only does this impact on the shift worker but also on society as accidents are more likely to occur when people are tired.

Shift workers sleep more poorly than others. Night shift workers have difficulty staying asleep in the daytime and workers who start in the early hours of the morning have difficulty in getting to sleep in the evening. The reduction in sleep may be as much as four hours per day but is more likely about one hour. The quality of sleep is also poor with a lot more awakenings. Although this may improve as the worker adapts to a shift, it never returns to normal and shift workers accumulate a large "sleep debt" over time.

Shift workers are more tired than others. Tests have shown that shift workers are more tired both during and after shifts than daytime workers. This can cause poorer work performance. The resulting daytime tiredness and need to catch up on sleep impacts significantly on social aspects of the shift worker's life, leading to increased irritability and moodiness, forgetfulness, decreased concentration, lack of energy for family activities and ultimately to marital problems.

Shift work causes other health problems. In addition to the problems of tiredness and mood, studies have found shift workers suffer from more colds and flu, more gastro-intestinal problems such as indigestion or ulcers and more cardiovascular disease such as heart attacks. Reasons for these health problems include increased stress, poor diet during shift work and increased smoking and caffeine consumption.

Being tired causes accidents. It has been estimated that the United States loses over \$56 billion and 25,000 lives each year because of accidents which result from sleepiness. Most of these involve traffic or industrial accidents and some of them have broader consequences. Many significant accidents happen in the early hours of the morning when workers are tired. Some that have been attributed to shift work include the grounding of the *Exxon Valdez* (at 12.30 am), the *Three Mile Island Nuclear Plant* (at 4.00 am) and the *Chernobyl Nuclear Accident* (1.30 am).

Shift workers and driving. One of the most concerning effects of sleep deprivation is "driving drowsy". People who are tired and trying to drive are a hazard to both self and others. Road accident statistics show that at least one in six crashes are mainly the result of driver inattention or lapses. In single vehicle accidents on country roads up to one quarter of deaths are the result of the driver falling asleep. In Australia the cost to the community of road crashes involving drowsy driving is estimated to be \$2 billion per year. Research from the Centre for Sleep Research in Adelaide has shown that after 17 hours without sleep you drive as poorly as if you had a blood alcohol level of 0.05 and after 24 hours without sleep it is the same as a level of 0.10. Shift workers are at a high-risk for a sleep-related accidents because at the end of their shift they may have been awake for 16 or more hours. Studies have found up to 30% of shift workers have had a fatigue related driving mishap in the previous year.

Employers need to understand the effects of shift work. To minimise the effects on the health of the worker it is very important that the employer attempts to devise "sleep friendly" shifts. Quick shift changes should be avoided, shifts should rotate forwards (ie day to evening, evening to night) and schedules that involve a large number of consecutive shifts followed by several days off have been shown to be a problem. The structure of work within the shift might also be changed to accommodate heavy or demanding work when workers are most alert. If the work allows, a scheduled opportunity for a nap may also assist.

Shift workers must take responsibility for getting enough sleep. There is simply no substitute for sleep. Workers must be responsible for ensuring that they get enough sleep and must accept that shift work will impact on their ability to have a normal day-time social life.

Tips for getting a good "days" sleep. Paying particular attention to sleep hygiene issues is vital to sleeping well in the day. Some considerations are:-

- Make time for adequate sleep. Don't fall into the trap of trying to lead a normal social life during the day and work at night.
- Try to go to bed at the same time every day.
- Make sure all distractions, phone calls and lights are screened out.
- Make sure people know you should not be disturbed.
- Keep the bedroom cool.
- Avoid caffeine, sleeping pills, alcohol or nicotine before going to bed.
- If you are in a noisy household, use foam ear plugs, insulate your bedroom with heavy drapes and carpets, and muffle noises with a fan or "white noise" machine.
- If possible sleep before you work rather than earlier in the day and if this is not possible, consider taking a nap before you go to work.

A "power nap" may get you out of a difficult situation. If your shift work involves driving or operating machinery and you are drowsy, it may be possible to take a nap break in the middle of the shift. If driving pull over to a quiet spot, recline the seat and take a nap of about 15 minutes, not longer. After the nap get out of the vehicle and walk around for 5 minutes before continuing.

Where to go for more help. A number of services specialise in working with employers to design better shift schedules. Your local specialist Sleep Clinic may be able to point you in the right direction.

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