



## THE IMPORTANCE OF SLEEP

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### Background

Intensive care presents significant challenges in maintaining normal sleep patterns. In addition to the effects of overnight rostering, the unpredictability of the clinical workload, travel demands, high stress load and other external life factors such as parenthood can contribute to this problem.

There is little in our training covering good sleep strategies despite it being a common and disruptive problem affecting many aspects of an intensive care practitioner's life. This will hopefully serve as a resource for intensive care practitioners when considering their own and their colleagues' (including trainees) sleep practices.

### Risks

Sleep hygiene is an important part of managing personal health. Poor sleep hygiene presents risks to individuals and potentially others due to fatigue related consequences such as:

- **Personal risks:** effects on mood, relationships, stress levels, personal health/immunity, resilience, increase in motor vehicle accident rate and safety at work (eg. increased needle stick injuries)
- **Professional risks:** effects on work relationships, decision making, effectiveness, error rate and procedural competence

### Sleep strategies

There are a number of considerations and actions that can improve sleep hygiene:

**Physical environment** - Ideally the bedroom should be a dark, quiet room with appropriate temperature control. It should be associated with sleep and other activities like watching TV or using a computer should ideally be done elsewhere. Exposure to daylight should be minimised before sleep. This may be assisted by wearing sunglasses on the way home after a night shift.

#### **Personal habits**

- **Exercise** - Regular exercise aids sleep but should not be within four hours of sleeping.
- **Food, alcohol and drugs** - Eating within two to three hours of bed time is discouraged, as is caffeine or nicotine within six hours. Alcohol reduces the quality of sleep architecture. Sleeping tablets are not recommended for impaired sleep. They can be addictive and have a hangover effect and certainly should never be self-prescribed. Usually attending to the advice given here on sleep hygiene should prevent the need for sedatives to solve sleep problems and, if not, expert advice should be sought.
- **Routine** - It is useful to try to have a routine associated with sleep if possible. If it is difficult to get to sleep it is better to get up and try to distract yourself (ie. read quietly or relaxing music) or offload tasks by writing them down for the next day rather than trying to force sleep.

**Sleep debt** - We require, on average, approximately eight hours sleep per 24 hours. This may vary between individuals. Less than five hours sleep is associated with increased motor vehicle accidents and impaired vigilance. Ongoing sleep debt is cumulative over time and should be repaid as soon as possible. It can reduce mood and performance and have adverse health consequences

and so awareness of reduced sleep hours and a strategy to reduce sleep debt should be considered an important personal health strategy.

**Wakefulness** - Prolonged periods of wakefulness can also lead to impaired performance. It has been shown that a period of greater than 17 hours of wakefulness has neurocognitive effects equivalent to a blood alcohol of 0.05%. Greater than 24 hours is equivalent to blood alcohol 0.1% which is the drink driving limit in many countries. Before commencing a night shift, it is recommended you have a nap in the late afternoon or evening to reduce the risk of prolonged wakefulness. It is also recommended you nap after completing a night shift or prolonged period of wakefulness to prevent this problem. If prolonged wakefulness occurs, then consideration should be made as to how to get home safely to rest and alternatives to driving are recommended.

**Napping** - Napping is a useful strategy to staying refreshed when on night duty. A short nap (even 20-45minutes) may reduce fatigue symptoms and increase alertness. However, it is important to understand that there may be a short period of sleep inertia upon waking, particularly after longer naps (>45mins) which should be allowed for if napping is incorporated into clinical night duties.

**Time of day** - The circadian nadir is between 3-6am when the body is designed to be least active. This should be understood and, where possible, napping should be incorporated at this time when covering the intensive care unit overnight. The body will be ready to sleep rather than work. If clinical work is required, then you should be aware that this is a high-risk time of day for procedures, vigilance and decision making.

### **Conclusion**

Overall, there are a number of strategies here that can be employed to improve sleep hygiene for intensive care practitioners. This resource does not comment on environmental/systemic factors that can affect sleep quality and quantity as it is a personal health guide. However, undoubtedly there is a need for intensive care units to consider their strategies for sleep and fatigue management.