

Sleep Loss: A Deadly Issue!!

Tina Cummins and Patrick Kirk
Human Factors Researchers



Summary

Increasing pressures on production, and long travel distances to and from the worksite are resulting in many operations now working longer days and introducing shift systems as a means of increasing the available work time and machine utilisation. However, such extended work schedules introduce the risk that sleep will be compromised in the process resulting in workers suffering sleep debt. Sleep debt not only affects the financial side of things through increased error rates and poor decision making, but also the health

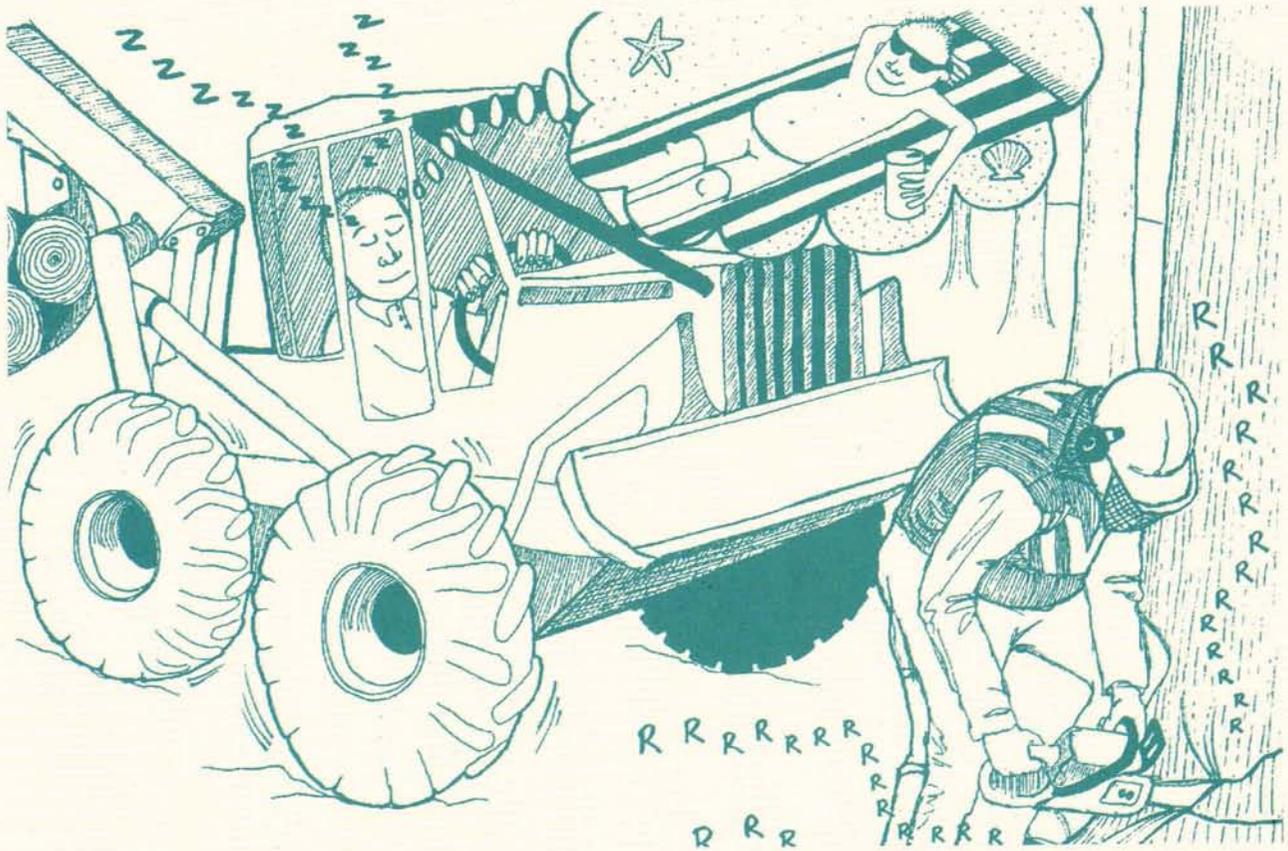
and safety of the affected worker and their workmates. The following report is designed to let you know why you need sleep, what sleep does for your body and mind, and how you can ensure you get a good night's sleep.

 **Liro**
Forestry Solutions

Private Bag 3020, Rotorua, New Zealand
Telephone: +64 7 348 7168 Facsimile: +64 7 346 2886
Email: tina.cummins@fri.cri.nz

What Happens When We Sleep?

Sleep is vital for good health and mental performance. When you cut back on sleep you pay a high price in terms of reduced physical and mental performance and increased risk of accidents. The main reason for this being that the first things to suffer from sleep loss are your reaction time and your ability to see and recognise danger signs in your surrounding environment. Both of these senses are **VITAL** in your day-to-day work within the forest industry.



Sleep loss can accumulate over time and result in a sleep debt which has a similar effect on the body as being drunk. Signs of sleep deprivation include:

- Reduced reaction time
- Susceptibility to minor illness
- Less attention to detail
- Faulty judgement
- Impaired decision making
- Low motivation
- Increased sensitivity to pain
- Increased irritability and lower stress tolerance

Cutting back on sleep due to poor sleep habits or longer working days has a huge impact on your productivity and safety at work.

SLEEP LOSS HAS A SERIOUS IMPACT ON YOUR PRODUCTIVITY AND THE SAFETY OF BOTH YOU AND YOUR WORKMATES

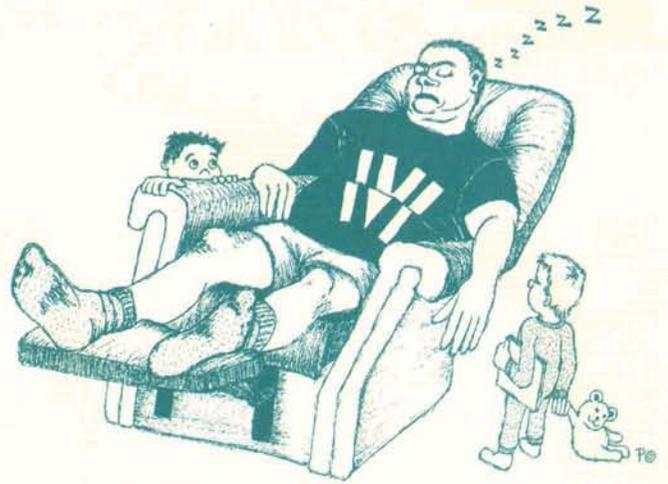
How Much Sleep Do You Need?

While babies sleep about 17 hours, most adults need a minimum of 5 hours of uninterrupted sleep per night to avoid fatigue, irritability and reduced mental and physical performance. Studies have shown that up to 30% of the population has a sleep problem, mainly the result of an overactive mind, tension, stress and bad sleep habits.

Cutting back on your sleep can also have negative impacts on your family and/or social life as you simply do not have the energy to help out at home, play with the kids or go out with friends for the night. All of these social factors play an important role in the overall

wellbeing of a person. Missing out on any of these can increase a person's stress levels and reduce their ability to focus on the job while at work.

MOST ADULTS NEED A MINIMUM OF 5 HOURS UNINTERRUPTED SLEEP PER NIGHT TO AVOID FATIGUE



Types of Sleep

Most people do not realise that they experience several types of sleep during a normal night's sleep. Each type, (or phase), of sleep performs a specific function for the human mind and/or body. There are two different types of sleep, Deep (core), and Rapid Eye Movement (REM).

While you are sleeping, your body cycles between REM/Non-REM sleep four to six times a night, with each cycle lasting about 90 minutes (Figure 1). There are four stages of sleep:

Stage 1: Light sleep or drowsiness

Stage 2: Intermediate sleep (lasts about 20 minutes)

Stages 3 and 4: Deep or core sleep

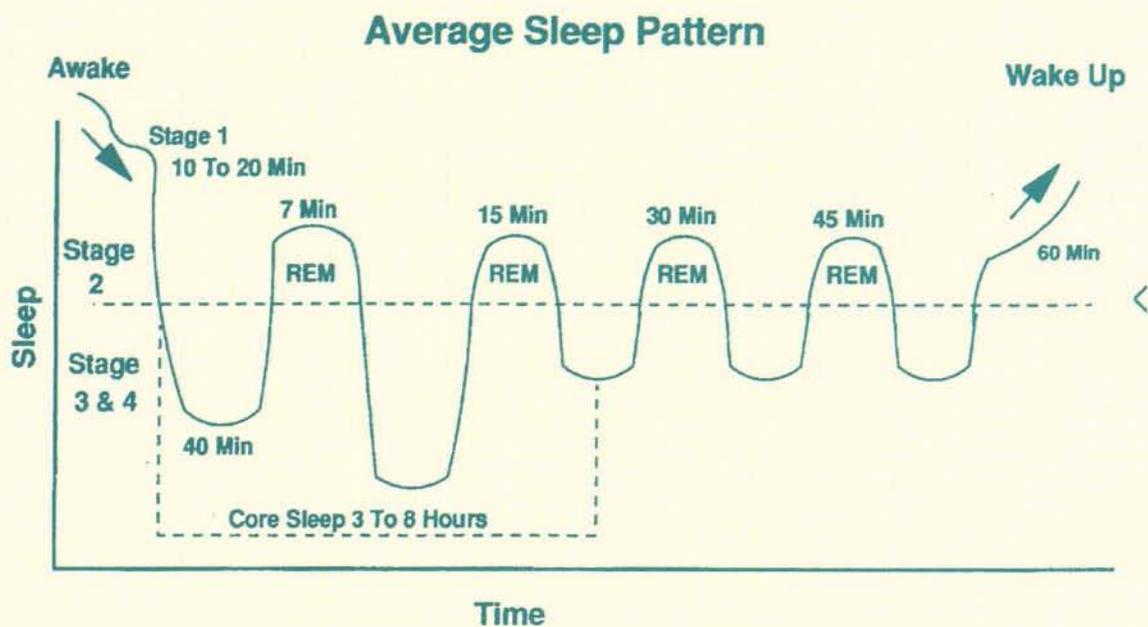


Figure 1- Average sleep pattern

Deep [Core] Sleep

The function of deep (core) sleep is the physical repair of your body. During deep sleep, all growth, reproduction, bowel bacteria activity, and immune system repair happens. Because of the body's self preservation mechanism, the first three hours of your sleep are heavily dominated by deep sleep and are dedicated to physical repair and maintenance, to ensure you can get up and go the next day.

REM Sleep

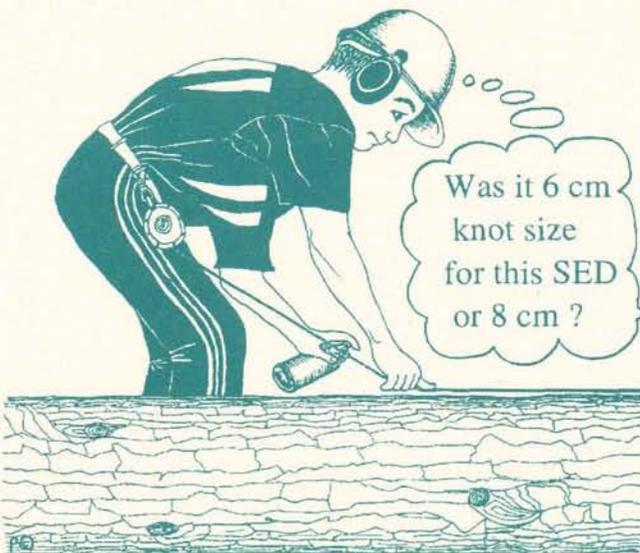
Recovery from mental fatigue occurs during REM sleep. Because your body's self preservation mechanism decides that mental recovery is a lower priority than physical repair, REM sleep dominates the last few sleep hours. If your total sleep time is shortened, the body cuts back on the REM sleep. You will still be able to function, but your mental performance will suffer. You need at least 20% of the REM sleep to be able to function well.

IF YOUR TOTAL SLEEP TIME IS SHORTENED, THE BODY CUTS BACK ON THE REM SLEEP AND YOUR MENTAL PERFORMANCE SUFFERS

Early Summer Starts

Early starts to avoid the heat are common in summer, to reduce the amount of time spent working in the heat. It may be tempting to use the extra spare time you have free in the afternoon to go for a hunt or do some other activity. The problem here is that you are having to get up earlier, but continue to go to bed at the same time you did before the early starts. This shortens your total sleep time and you then risk of becoming sleep deprived.

IF YOU GET UP AN HOUR EARLIER, GO TO BED AN HOUR EARLIER



Power Naps

Power naps are short intensive bursts of sleep that enable your body to pay back the sleep bank during the day. They are effectively used by commercial pilots and other industries where extended

shift lengths and long work days are common. They **do not** take the place of your normal long continuous sleep. They are a neat way to help your body cope if you are running low on sleep.

Power naps are an easy and quick way to effectively recharge your sleep bank. The key to using a power nap is to sleep for no longer than 30 minutes. If you sleep for 20 - 30 minutes and then wake up, you will feel refreshed and alert. If your sleep for longer than 30 minutes, you fall into deep sleep and will wake feeling groggy and drowsy for quite some time.

Power Naps are best taken when you first get home from work and you can catch a quick 20 - 30 minute nap before dinner. They are also good for when you are driving those long distances and are feeling drowsy. Pull over on to the side of the road and take a power nap for 20 - 30 minutes before starting off again. Its far better to be late for a meeting than **DEAD ON TIME!!**



FOR A POWER NAP TO WORK EFFECTIVELY, YOU MUST NOT SLEEP FOR ANY LONGER THAN 30 MINUTES

Food, Drink and Sleep

Foods

L-tryptophan is a naturally occurring amino acid that helps induce sleep. It can be found in its natural form in foods such as bananas, dairy products and fish. A warm milky drink before bedtime works well as the milk contains L-tryptophan.

Caffeine

Caffeine is probably the most widely consumed stimulant drug in the world. It can be found in coffee, chocolate as well as many soft drinks. Caffeine disturbs sleep most during the first three to four hours. It delays sleep, shortens deep sleep and reduces the overall amount of REM sleep. Caffeine also reduces the effectiveness of sleeping pills, creating a temptation to increase the dose.

If you want to increase the chance of having a good sound sleep, avoid caffeine at least 3 hours before bed-time.

Alcohol

Alcohol is the most widely used sleep aid but research has shown that it does not help you sleep well. Alcohol reduces the quality of sleep by making it erratic. It makes you need to get up to go to the toilet, and your body moves less during the night so you are more likely to wake up with a crook neck or sore muscles. Excessive alcohol consumption may permanently disrupt the sleep mechanism.

Nicotine

Nicotine is a stimulant and therefore it makes falling asleep more difficult. Nicotine decreases the amount of both deep sleep, which is important for physical health, and REM sleep, which helps maintain mental health.

Marijuana

The effect of marijuana on sleep depends on the quantity of the drug consumed. Light users experience reduced REM sleep which wears off once drug use stops. Heavy users experience the same effects but more severely and the effects do NOT stop once drug use ends. Once drug use is stopped, heavy users tend to have difficulty falling asleep and experience frequent awakenings during the night resulting in poor performance the following day.



CAFFEINE, ALCOHOL, MARIJUANA AND NICOTINE
ALL HAVE A NEGATIVE IMPACT ON THE LENGTH
AND QUALITY OF SLEEP

Some Solutions [Tools]

There are several simple tools you can use to help you fall asleep and have a good quality of sleep.

- Combat low blood sugar which can lead to insomnia, by having a small mid-evening snack of slow-burning complex carbohydrates like bread or pasta.
- Mild exercise 20 minutes before sleep, or strenuous exercise 2 to 3 hours before, will help stabilise and extend core sleep.
- Keep fit. The more aerobically fit you are, the better you sleep.
- Use "Power Naps" to quickly recharge your sleep bank.
- A warm milky drink before bedtime has been shown to help induce sleep.
- Avoid caffeine at least 3 hours before bed-time.

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