

## ▶ TAKE THIS BROCHURE HOME

If you work shifts you will be sleeping different hours from others at home. Sharing this brochure with them will help them understand your sleep needs.

## ▶ FURTHER INFORMATION

Think you might have a sleep problem? See your doctor who can refer you to a sleep clinic.

The Maritime New Zealand website: [www.maritimenz.govt.nz](http://www.maritimenz.govt.nz) has a wide range of information on fatigue, including tests to help assess if you have a sleep problem, are a morning or evening type, a list of sleep clinics and links to further information about fatigue.

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### » How much sleep?

Most people need 7-8 hours sleep per night to be fully rested. Maritime New Zealand recommends a minimum of 6 hours continuous sleep per 24 hours. Even with 6 hours sleep, fatigue will accumulate. As a general rule try to get:

- › in a 7-day period, a minimum of 77 hours off duty and
- › 2 consecutive nights of sleep at least once every 2 weeks, better if once per week. (Sleep between 10.00 pm and 8.00 am, so you get the best quality sleep.)

Splitting sleep into two or more sessions over the day will leave you less restored physically and mentally than when sleep is in one period.

If you work an extra long day, try to get extra time off to recover. Your risk is particularly increased if you are already short of sleep.

### Napping

Napping helps manage fatigue when you are short of sleep. Best napping times are mid-afternoon and after 9.00 pm.

About every 90 minutes during sleep, you cycle through lighter sleep, deeper sleep and dreaming. Waking from deep sleep leaves you groggy (sleep inertia). To minimise sleep inertia allow yourself either 30-40 minutes for a nap, or about 2 hours, or about 3.5 hours. A cell phone or alarm clock can be used to time the nap.

### Sleep environment

The sleeping environment (at work and at home) has a large effect on the quality of your sleep. Poor-quality sleep does not restore you as well, so putting effort into the sleeping environment is worthwhile.

- › Block out as much light as possible.
- › If noise cannot be blocked, sometimes a "white noise" helps, especially when the noise keeps changing. A radio off-station or a fan as background noise can help.
- › Use a sleep mask and ear plugs if necessary.
- › If your bed is uncomfortable, ask for something better.
- › Keep the temperature of your sleep area cool rather than hot.
- › At home turn off alarms, phones and doorbells if trying to sleep during the day.

### A sleep routine

Trouble sleeping? A sleep routine helps. Stick to a new routine for a few weeks, to give it a chance of working.

- › Pre-sleep routine – have a set pattern of activities leading up to sleep time, so your body learns to wind down and relax. (Shift workers may need a routine for each shift.)
- › Go to bed at the same time each day.
- › The bedroom needs to be a safe, comfortable place that encourages sleep. Watch television, play video games and write somewhere else.
- › Avoid large meals shortly before going to bed. If hungry, have a light snack.
- › Avoid alcohol as a sleep aid – overall your sleep will be worse as alcohol disturbs the second half of a sleep.
- › Avoid caffeine at least 4 hours before going to bed.
- › Avoid heavy exercise before going to bed.

### Shiftwork

Daylight and daily activities cue people so their body clock doesn't adjust well to shiftwork. For those working nights this usually means 2-3 hours less sleep per 24 hours. The following hints may help you cope with shiftwork:

- › When finishing night work, try to get to sleep as soon as possible. If driving in early morning sunlight, wear dark glasses.
- › Nap where possible (discuss with your employer if napping seems like a good strategy for you).
- › During the night shift, light food is better than heavy food.
- › During the middle of the night, where possible, avoid dangerous and complex tasks.
- › Social interaction and light exercise helps maintain alertness if your environment is not stimulating.
- › People vary in how they respond to shiftwork; there are morning and evening types, some fall to sleep easily, others don't; with age sleep becomes more disturbed.

## ▶ Understanding Fatigue



# UNDERSTANDING FATIGUE

This brochure covers what is fatigue for seafarers and how to manage it, including:

- ▶ the importance of sleep
- ▶ what causes fatigue
- ▶ your legal obligations
- ▶ strategies for getting enough sleep.

## WHAT IS FATIGUE?

### Mostly it is lack of sleep

Most accidents caused by fatigue follow a lack of sleep or poor-quality sleep. Poor-quality sleep is when your sleep is disturbed, eg by light, noise, motion, alcohol or drugs.

Fatigue accumulates when you do not get extra sleep to make up for lost sleep. The answer to fatigue that builds up over a few nights (cumulative fatigue) is easy – sleep. There is no other answer.

Other conditions, like heat or long physical work, can make fatigue caused by lack of sleep worse. But accidents are usually linked with lack of sleep.

## WE NEED TO SLEEP

Understanding how the body's need to sleep works is the starting point for managing fatigue. The need to sleep is built into our bodies in two ways:

- › the need for recovery after being awake for a while
- › our body clock.

People are designed to spend about a third of their lives sleeping. Scientists don't really know much about why we need to sleep so much, but they do know that if we don't sleep our performance and health can suffer.

### The need for recovery

After being awake for a while, our bodies and brains do not function as well. Sleep is needed to recover from all the things we do when we are awake.

Most people sleep about 8 hours a day when they have the opportunity to do so. So, after being awake about 16 hours we are naturally ready to go to sleep. While we can continue to stay awake, the chances of something going wrong increase, as time passes.

### Our body clock

Our body clock naturally programmes us to be asleep at night. There is also a natural tendency to not be so alert in the middle of the afternoon. At other times we are programmed to be alert.

### Times of high alertness

- › Mid-morning to early-afternoon
- › Around 6.00 pm – 9.00 pm

*Sleep is almost impossible at these times. Your body clock gives you an alertness kick. You will feel more alert and capable. But if you have been working long hours, in reality your performance will not be up to scratch.*

### Times of high sleep need

- › Around 3.00 am – 5.00 am (highest need)
- › Around 3.00 pm – 5.00 pm (siesta time)

*It is easy to make mistakes and fall asleep at these times.*

Regular night shift workers may find these times vary a little.

## CAUSES OF FATIGUE

### Environment

The maritime work environment is stressful on seafarers and can make fatigue from lack of sleep worse. Common environmental stressors on seafarers are:

- › cold
- › heat
- › ship's motion
- › vibration
- › noise
- › diet – what, when, how much.

### Job design

Common features of job design that lead to fatigue are:

- › A long work day – made worse by working extra hours.
- › Physical work – especially long spells of hard work.
- › Boring or repetitive work, eg watchkeeping at night.
- › Few or no breaks.
- › A pay system that encourages long hours.
- › Not allowing enough time for sleep.
- › Unpredictable work schedules. Predictable work makes it easier to fit your life to work demands.
- › Sleep opportunities during natural times of high alertness.
- › Mentally demanding tasks, eg controlling a fishing vessel when looking for and catching fish.

### Lifestyle and home

Seafarers have to balance work, lifestyle/home and sleep. Often lifestyle and home demands come ahead of sleep, making them a cause of seafarer fatigue. Common lifestyle and home demands are:

- › commuting
- › time with family
- › time with friends
- › family routine disrupting sleep
- › jobs around the house
- › another job
- › time to do your own thing
- › alcohol (which makes the second half of sleep of poor quality)
- › stress
- › medication.

**Ongoing effects of inadequate sleep include increased risk of obesity diabetes, and heart disease, as well as increased risk of accidents (at work and while driving).**

# MANAGING YOUR FATIGUE

## Legal obligations

Under the Health and Safety in Employment Act 1992, fatigue is a hazard that must be managed. Crew (both those on wages and those who are self-employed) must take all practicable steps to ensure that nothing they do at work harms themselves or any other person. You are responsible for taking sensible safety precautions – like letting your employer know if you are having sleep problems and ensuring that you get enough sleep during rest periods.

Employers and skippers must take all practicable steps to make sure the boat is safe. Employers must involve employees in the management of hazards. This is a good opportunity for you to raise any concerns you have about fatigue as a hazard.

## Planning your time and sleep

Seafaring can be demanding, leaving little time for other activities. Family and friends need time, seafarers often commute and there is still a need to sleep. Sleep time is often traded off for time with family and friends. Often this happens because others do not understand your need for sleep when you are working shifts or long hours. To get the best sleep deal, you should plan with others how they can help you protect your sleep period.

Activities that are hard to change

- › working – if doing extra work, discuss the effects with your employer
- › commuting

Activities that are often traded for sleep

- › eating, showering, etc
- › spending time with the family
- › doing jobs around the house
- › spending time with friends, socialising
- › other jobs
- › doing your own thing

*Work with family and friends to plan how they can help you get the sleep you need. They can only do this if you share your problem with them.*

Continued