



Energising
communities

FATIGUE MANAGEMENT

Oct 2019

The training session will cover:

Identifying and acting upon signs of fatigue

Implementing strategies to minimise fatigue

DRIVER FATIGUE – A MAJOR KILLER



Everyone knows that driving a vehicle under the influence of alcohol or other drugs is a deadly combination. However few people seem to realize the danger associated with driving while fatigued.

In fact, **drivers who become drowsy or fall asleep at the wheel contribute to thousands of crashes each year.**



Fatigue causes workplace incidents/road accidents!

How fatigue contributes to workplace accidents:

- Increases accident rates
- Tendency for risk taking
- Increases errors in judgement
- Increases staff turnover
- Increases sick days
- Reduces decision making ability
- Reduces ability to handle stress
- Reduces communication skills
- Failure to respond to changes in surroundings
- Failure to respond to information provided
- Falling asleep while operating machinery/vehicle

Fatigue is a **loss of alertness that reduces human performance** and may or may not end up in sleep. **Fatigue is one of the leading factors contributing to road crashes.**

Fatigue has the following problematic effects on driving performance;

- Slowed reaction time
- Shorter attention span
- Less effective memory
- Narrowing of attention
- Less effective reasoning and decision making

PREVENT DRIVER SLEEPINESS



One of the most important things employers must do is ensure that their drivers are not at risk of falling asleep at the wheel. Thousands of crashes are caused by tired drivers. They are **most likely to happen**:

- on **long journeys** on monotonous roads, such as motorways
- **between 2am and 6am**
- **between 1pm and 3pm** (especially after eating, or taking even one alcoholic drink)
- after having less sleep than normal
- after drinking alcohol
- if taking medicines that cause drowsiness
- after long working hours or on journeys home after long shifts, especially night shifts

Fatigue

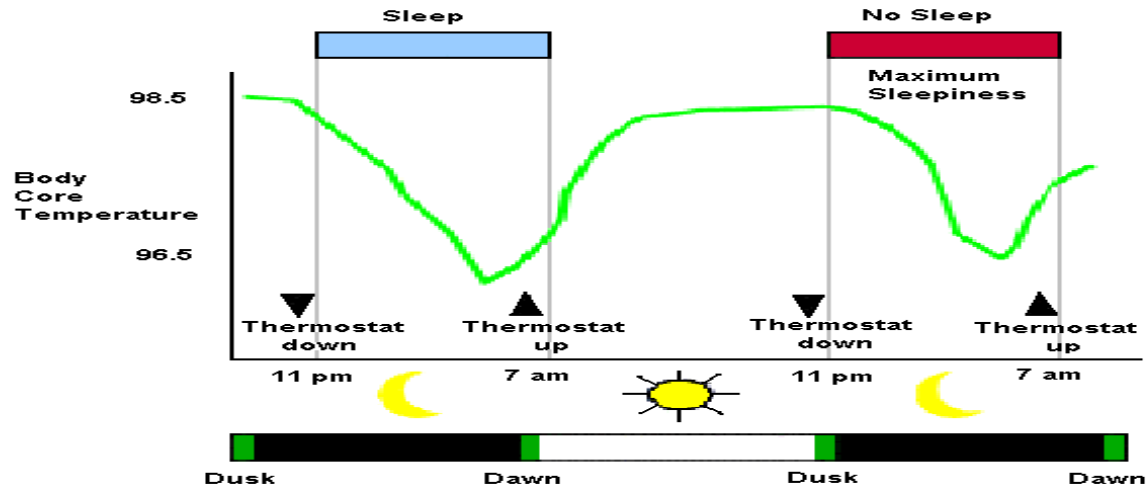
- Fatigue is drowsiness or sleepiness **caused by lack of sleep.**

Common myths (this **will not** cure fatigue!)

- Washing your face or cold air on your face will keep you awake
- Chewing gum will keep you awake
- Willpower will keep you awake
- Having a Coffee or Caffeine drink – can sometimes provide a boost but do not reduce the need for sleep. Once the effect has worn off, the person instantly enters the chronic stages of fatigue and can be dangerous

The only cure for fatigue is SLEEP.

THE BODYCLOCK/CIRCADIAN RHYTHM

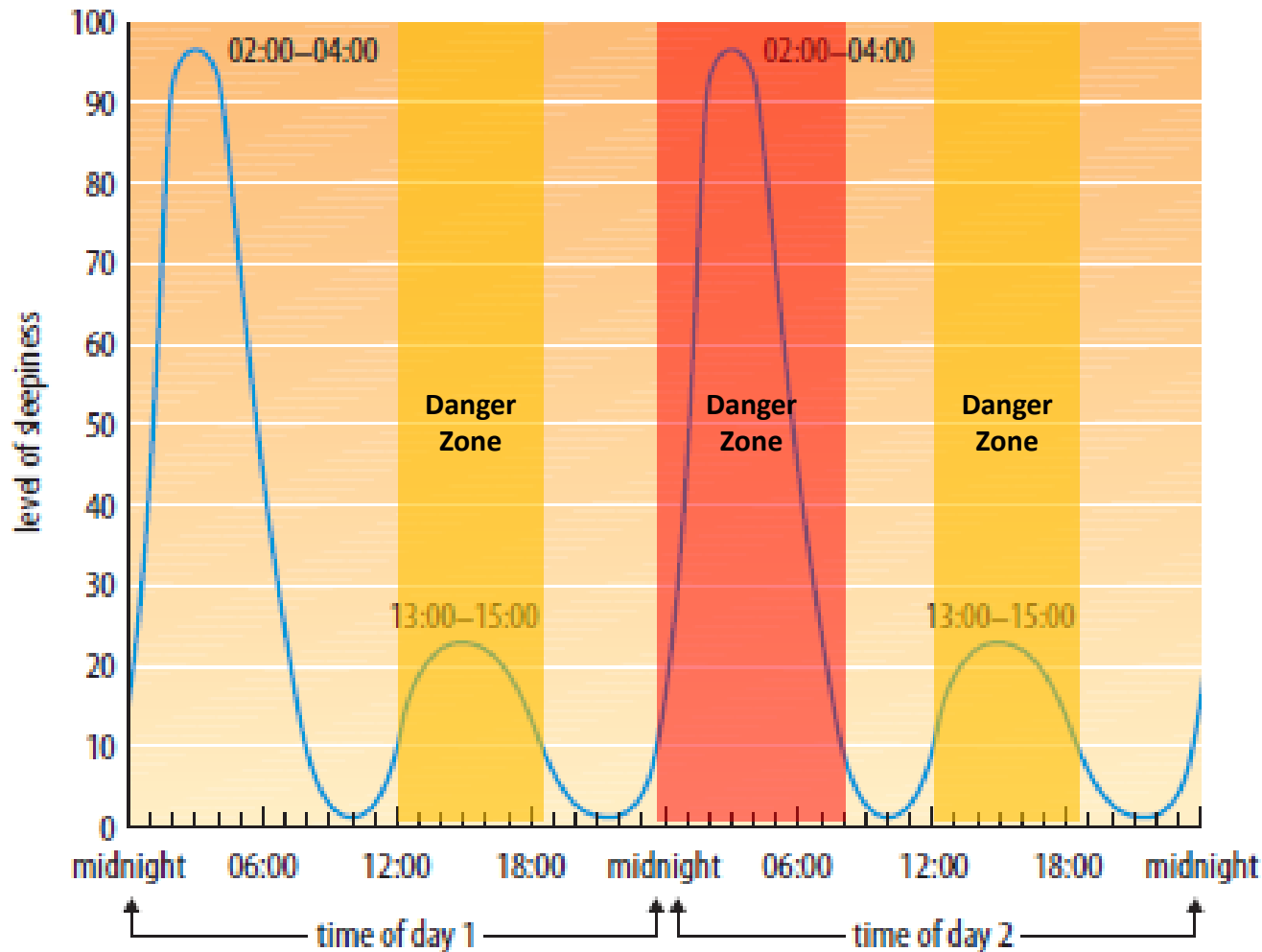


The circadian rhythm is a variety of biological cycles that control the human body. These cycles repeat approximately every 24 hours. This body clock regulates sleeping patterns, body temperature, hormone levels, digestion and many other functions and helps conserve resources.

The body clock **programs you to sleep at night and stay awake during the day.** Your body temperature drops during the night making you sleepy and rises during the day keeping you alert.

Working irregular hours can obviously lead to irregular sleeping times, disrupting your body clock. This in turn reduces the hours of quality sleep you may have because you are trying to sleep when your body is telling you should be awake.

The circadian rhythm in sleepiness



Recent studies have found the risk of accidents involving truck drivers from midnight to the early hours of the morning to be more than double the average of that of daytime accidents



OVERVIEW

Fatigue is evidence of a problem, rather than a specific disorder. People who are fatigued feel tired in both mind and body.

A person suffering from fatigue has slower reflexes and reduced function in normal day to day activities. Excessive tiredness is a **known risk factor in vehicle and workplace accidents**.

Possible causes of fatigue include (but may not be restricted to):

- Lifestyle choices (social activity, diet, commuting, exercise)

- Workplace issues (shift work, long hours)

- An untreated medical condition (sleep apnoea, insomnia, restless legs syndrome)

- Emotional concerns (relationships, anxiety, stress, depression, grief)

- Boredom (doing nothing or the same repetitive thing for long periods of time)

Often it is a combination of more than one of these factors

FATIGUE DANGER SIGNS



Lack of alertness

Inability to concentrate

Reduced ability to recognise and respond

Poor judgement or memory

Making mistakes

Drowsiness, or “nodding off”, at work (including micro sleeps)

Difficulty in keeping eyes open

Needing more frequent naps than usual

Inability to become fully functional within 15 minutes of waking up

Not feeling refreshed after sleep

Excessive yawning

Blurred vision/road hypnosis

Mood changes

Increased irritability

Increased minor illnesses (headaches, colds)



The average amount of sleep required for a healthy human is 8 hours

Heavy meals, warm rooms or enclosures and the monotony of long distance driving unmask the presence of physiological sleepiness but do not cause it.

Sleepiness is effectively a message from the brain that sleep is needed. If ignored for too long people will fall asleep uncontrollably - even if it places them in a life- threatening situation.

SLEEP/REST



“The Only Way to Beat Fatigue is to Get Enough Sleep”

Adults need about eight hours sleep per night and need to take regular rest breaks during working hours. ***Driving for longer than is sensible (and legal) will obviously induce sleep.***

Being awake for 17 Hours is equivalent to having a Blood Alcohol content of 0.05

Being awake for 20 Hours is equivalent to having a Blood Alcohol content of 0.10

A reduction in nocturnal sleep increases sleepiness the next day.

As the week progresses and sleep is broken or disturbed the effects of reduced sleep accumulate. This is known as sleep 'debt'.

Example if a person required 8 hours sleep each night during the working week and was only managing 6 hours, by Friday there would be a debt of 10 hours.

This does not mean the individual requires an extra 10 hours of sleep on the Saturday - it is not necessary to recuperate all the hours lost. Instead, **two consecutive nights of unrestricted sleep are enough to 'pay back' a sleep debt**

Long-term sleep deprivation or accumulated sleep debt causes the brain to eventually disengage from the environment for brief periods.

There is no control over this and the brain slips in and out of 'micro sleeps'. During micro sleeps, a person will not see and may not hear important signals from the situation around them

AT HOME



Go to bed when tired

Don't go to bed if you are still wide awake – you will only condition yourself to lie awake

Don't drink coffee after dinner – a warm, milk-based drink before bedtime however can help induce sleep

Invest in a good mattress

Ensure your bedroom is dark enough (especially if you are a shift worker and need to sleep in daylight hours)

Control the temperature in the room where sleeping

If you can't control noise levels, wear earplugs

Try not to partake in heavy physical activity before you are due to drive a long distance. Sleep caused by sheer physical exhaustion tends to be less restful than normal sleep.

Remember the Preventative Nap!

NAPPING

A nap should be used as a means to stay alert during a busy period or to make up for insufficient main sleep. It should not be used as a reaction to feeling tired. In other words don't wait until you're exhausted before you take a nap.

“Look upon a nap as a maintenance tool for your body”

The Preventative Nap

Taking a nap prior to going out on a night run or before the start of an afternoon shift reduces the chances of feeling sleepy part way through the shift or during the danger time zones.

The Maintenance Nap

As the name suggests this nap enables you to maintain your alertness levels. Generally it is wise to either plan these naps on a long trip or take an offered opportunity (e.g. a delay in unloading/loading)

The Recovery Nap

This is a last resort – when you have pushed yourself over the limit and **must** sleep. You should **never** allow yourself to become this fatigued.

It's a little like pushing your truck until it breaks down before you do any maintenance.

If tired:

- Stop driving immediately
- Park somewhere safe and inform your supervisor
- Take a 30 minute power nap (or longer if required)
- Communicate with your supervisor after the recovery nap
- Confirm if you are fit to continue with the trip. If yes continue with caution. If not, agree alternative arrangements with your supervisor

The Micro-Nap

This is definitely not recommended! These are the naps, sometimes only lasting one or two seconds you have when you are behind the wheel. The value of this nap is that it warns you to stop and rest NOW.

THE TRIP (RISK FACTORS)



TIME OF DAY

- 2-4pm danger zone
- 2-6am danger zone

TYPE OF TRIP

- Long distance/tedium
- Constant heavy traffic

CONDITION OF THE ROAD

- Rural roads
- Road works
- Unmarked roads

TRAFFIC LEVELS

- Peak times (frustration/stress factor)
- Zero traffic (boredom/highway hypnosis factor)

WEATHER CONDITIONS

- Too hot/cold
- Floods
- Black ice
- Heavy rain
- Fog



ON THE ROAD

Take regular breaks when driving

Remember the Maintenance Nap!

Stop, walk around, have a chat to someone – this not only refreshes the body it also refreshes the mind.

Stick to the legal requirements for time on the road - don't be a hero – It is illegal and dangerous.

Keep your mind active when behind the wheel; it will help prevent 'road hypnosis'

Listen and/or sing along to the Radio/CD's

DIET



Eating properly when you are on the road can be challenging but the benefits are many.

A healthy diet will:

- give you more energy making it easier to stay alert on the road

Bonus – you'll feel better

- help control your weight and keep your skin, hair and teeth healthy

Bonus - you'll look better

- reduce the chances of developing lifestyle diseases such as heart disease, diabetes and cancer.

Bonus - you'll last longer

DIET

A healthy diet means:

- More fruit and vegetables
- More wholegrain breads and cereals
- At least 2 serves of fish per week
- Moderate amounts of low fat dairy products
- Fewer cakes and biscuits
- Fewer carbonated drinks and fruit juice drinks (high sugar)
- More water

Eating the wrong food is akin to putting kerosene in your truck instead of diesel. It may start the motor but it won't run for long.

Eat sensibly whenever possible.

EXERCISE



Being physically active everyday is an important part of living better and living longer. Aim for 30 minutes of activity on most days.

Look for opportunities to be active when you're on the road

- During breaks go for a brisk 10 minute walk (aim for 2 a day)
- 10000 steps a day is the accepted minimum for maintaining health. Consider getting a pedometer to keep track of your movement.
- Learn some stretching techniques.

EXERCISE

At home

- Be active with your family and friends
- Go for regular walks, cycle or swim - try for three 30 minute sessions a week
- Play with the kids or walk the dog
- Play sport
- Mow the lawn or do some gardening

Remember: The Human body, with proper care, will last a lifetime!

- Implement a formal night driving ban between 23:00 and 06:00 (all inter-city/long distance routes). **Default position – i.e. no driving between 23:00 and 06:00**
- If operationally required to do night driving – then transporter management to do a risk assessment – prepare risk mitigation plan. Seek approval from Puma to do night driving
- Night driving allowed for metro deliveries, provided the necessary controls are in place (working/driving hour controls, live fatigue monitoring etc.)

CONTROL DRIVERS' HOURS

Set in-house limits for unbroken driving hours, including daily, weekly and monthly limits for all classes of drivers. As a working rule, no driver should be required to drive continuously for more than 2 hours without at least a 15 minute break. The drivers' hours rules for professional drivers are the statutory maximum. Breaks and break locations should be planned for in advance of starting journeys.



- Despatchers to do a fitness to work check on drivers at the start of the shift (formal process to be implemented)
- Transporters to do live fatigue monitoring on long distance trips and any night deliveries
- Fatigue monitoring to be increased between 13:00 and 15:00 and between 23:00 and 06:00 (in cases where night driving was approved)

THREE DRIVING OPTIONS



Three overall methods in which driving tasks are conducted.

They are grouped as follows:

- Single driver - one driver only for the total trip (typically used for metro deliveries)
- Staged drivers - drivers only drive a selected part of the total trip. Fresh driver takes over at designated rest-stop (preferred option for long distance trips)
- Two-up driving - two drivers for a single trip, swapping over when the other driver becomes fatigued (not the preferred option)

SUMMARY: DRIVERS



- Driver fatigue kills
- The only cure for fatigue is sleep
- When tired during a trip – stop immediately and inform supervisor
- No inter-city driving between 23:00 and 06:00
- Adhere to maximum working and driving hours
- Follow the journey plan, i.e. take a break after 2 hours driving (designated rest stops)
- Get 8 hours sleep at the approved overnight rest stops

SUMMARY: TRANSPORTERS



- **Fitness to work check at the start of the shift**
 - Implement formal fitness to work check
- **Enforce driver compliance:**
 - Driver working and driving hours
 - IVMS compliance (speed, rest stops, use of authorised routes, harsh braking etc.)
 - No night driving without written approval from Puma
 - Journey plan compliance
- **Night driving ban**
 - No driving between 23:00 and 06:00 without approval
- **Fatigue monitoring**
 - Implement live fatigue monitoring
 - Increase vigilance between 13:00 - 15:00 and 23:00 - 06:00
- **Apply the safest driving option**
 - Staged drivers for long distance routes
 - Two-up driving not the preferred option. If applied – implement very strict controls/detailed journey plan