



Department of Local Government,  
Industry Regulation and Safety



# Managing driver fatigue

## Driver study guide

April 2026



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## Reference

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# Introduction

This Guide has been written to assist persons conducting a business or undertaking (PCBUs) to fulfill their 'duties' under the *Work Health and Safety Act 2020* (WHS Act) and the *Work Health and Safety (General) Regulations 2022* (WHS Regulations) when managing driver fatigue.

A duty is a legal requirement which must be fulfilled. Key duties include:

- PCBU
  - ensure the health and safety of workers and others in the workplace. This is done through measures such as the provision and maintenance of a work environment without risks to health and safety and having safe systems of work
- Officers
  - ensure that the PCBU complies with their duties and obligations
- Workers and others (such as visitors)
  - take reasonable care for the worker's own health and safety and that of other persons in the workplace
  - comply with any reasonable instruction that is given by the PCBU to allow them to comply with this WHS Act
  - cooperate with any reasonable policy or procedure of the PCBU that has been notified to them.

Information on work health and safety (WHS) duties of those in the workplace can be found in the [How to manage work health and safety risks: Code of practice](#).

## Important work health and safety terms

The WHS Act recognises that not all risks can be addressed in the same way. The WHS Act requires duty holders to manage WHS in each situation 'as far is reasonably practicable'. This includes considering weighing up factors such as:

- the likelihood of the hazard or the risk concerned occurring
- the degree of harm that might result from the hazard or the risk
- what the person concerned knows, or ought reasonably to know, about the hazard or the risk and ways of eliminating or minimising it
- after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of this, including whether the cost is grossly disproportionate to the risk.

More information can be found in WorkSafe's [How to determine what is reasonably practicable to meet a health and safety duty: Interpretive guideline](#).

The words 'must', 'requires' or 'mandatory' indicate a legal requirement exists that must be complied with. The word 'should' is used to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

Additional information can be found in WorkSafe's [Overview of the WHS Act](#), and [Overview of the WHS \(General\) Regulations](#).

## Other legal requirements

Under Western Australian law, the following categories of drivers are required to have a 0.00% blood alcohol concentration (BAC):

- vehicles exceeding 22.5 tonne gross combination mass (GCM)
- vehicles carrying dangerous goods (when such goods are being carried)
- buses (while carrying passengers where the vehicle is equipped to carry more than 12 adults including the driver)
- small charter vehicles (when carrying passengers for hire or reward)
- taxis (when carrying passengers for hire or reward).

As can be seen, these laws cover some categories of commercial drivers which may result in driver fatigue.

Heavy Vehicle National Law (HVNL) commenced on 10 February 2014 in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria.

The HVNL applies to Western Australian heavy vehicle drivers when they cross into one of the states or territories where the HVNL applies. The driving and rest periods under the WA WHS Regulations are different to those under the HVNL. Drivers operating within WA must follow the WA laws.

Under Department of Transport rules, you must carry and complete a National Driver Work Diary (NDWD) if you drive:

- a vehicle or vehicle combination weighing more than 12 tonnes or a bus fitted to carry more than 12 adults including the driver; and
- outside of Western Australia and the Northern Territory.

You must record your work and rest details of all trips more than 100 kilometres from your driver base.

# Fatigue

## What is fatigue?

Fatigue is a general term used to describe the feeling of being tired, drained or exhausted, which is accompanied by poor judgement, slower reactions and decreased skills.

Fatigue is a serious safety risk for commercial vehicle drivers. The chances of death or serious injury in a fatigue-related incident are very high. In the transport industry, crashes caused by fatigue are often more severe because a tired driver's reaction time is slower, leaving less time to avoid a crash. Understanding the causes of fatigue can help you plan and manage your daily routines.

Fatigue indicators include:

- not feeling refreshed after sleep
- extended or more frequent sleep during days off or leisure hours
- persistent sleepiness or a tendency to fall asleep while at work
- increased errors and reduced concentration at work.

Fatigue can result in:

- slower reactions
- reduced ability to process information
- memory lapses
- absent-mindedness
- decreased awareness
- lack of attention
- underestimation of risk
- reduced coordination.

## What are the causes of fatigue?

The main causes of fatigue can be broken into four groups. These are:

- body clock factors
- work factors
- health factors.

### ***Body clock factors***

The human body runs on a natural biological cycle of 24-26 hours. This is called the Circadian Rhythm (circadian means 'about a day'). The Circadian rhythm is often referred to as your 'body clock'. This internal clock helps synchronise bodily functions and conserve energy. When this rhythm is disrupted, fatigue can occur

The body clock is influenced partly by light and dark and partly by your daily routine. For instance, your energy levels drop at night making you sleepy and rise through the day making you more alert.

For example, if you normally work from 9 to 5 the body clock will respond to external signals such as:

- making you more alert is response to morning light
- maintaining alertness during the morning
- reducing alertness in the early afternoon
- increasing it again in the late afternoon and early evening.
- responding to darkness by reducing alertness in preparation for sleep
- reducing body temperature and alertness through the night so the body is recovering between 1 am and 6 am. At this time all your body functions are at their lowest level.

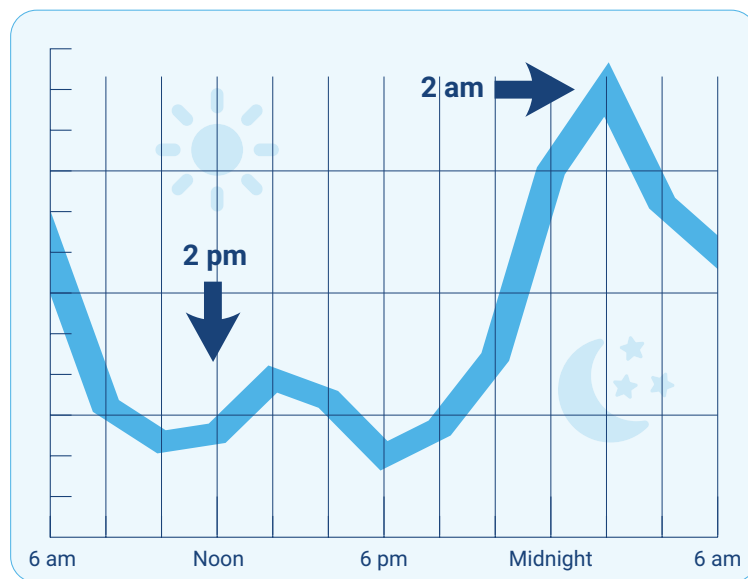


Figure 1: Commercial diver crash rate by time of day

If you drive regularly at night, your body clock will change slightly so that you get some sleep during the day and work reasonably well at night.

### **Work factors**

Long working hours can lead to fatigue. Work shifts should be structured to allow at least 7 hours of continuous sleep, preferably at night, including enough time for other essential daily activities.

Lack of sleep from extended hours can cause fatigue in several ways:

- it prevents adequate rest and sleep
- it increases the risk of drowsiness during early morning hours when natural alertness is low
- it can lead to disinterest and sleepiness during repetitive tasks.

If work shifts are poorly scheduled and you consistently lose sleep, you will accumulate a sleep debt which is the difference between the sleep you need for optimal alertness and the actual sleep obtained.

Fatigue can be influenced by the type and amount of work performed. Work factors influencing fatigue include:

- jobs that are repetitive
- slow-paced,
- mentally challenging
- require high concentration
- require you to be awake when you would normally be sleeping or vice versa. For example, shift work.

### **Health factors**

There are several health factors that can hinder good quality sleep. If you get enough sleep but still feel tired and drowsy during the day, consider seeing your doctor, who may refer you to a sleep specialist.

Some health disorders that can disrupt your sleep include:

- **Sleep apnoea.** Sleep apnoea is a serious condition where breathing stops and starts repeatedly during sleep, causing you to snore loudly and feel exhausted even after a full night's sleep. It is often worse if you are overweight. While occasional snoring is common in people over 50, sleep apnoea can be a severe issue.
- **Narcolepsy.** Narcolepsy is a chronic sleep disorder affecting your ability to stay awake during the day. People with narcolepsy may experience excessive sleepiness and can fall asleep suddenly, even during activities. Narcolepsy can be treated.
- **Other medical conditions.** Uncontrolled diabetes can lead to persistent fatigue. This condition occurs when blood sugar levels are not properly managed and can affect anyone. Although diabetes is manageable, it requires careful attention to diet and medication.
- **Effect of alcohol on sleep.** Alcohol has effects similar to fatigue. It can make you feel tired and exacerbate feelings of fatigue. Consuming large amounts of alcohol before sleep disrupts the sleep cycle, preventing deep sleep and causing more frequent awakenings as the alcohol's effects diminish. This disruption can lead to daytime drowsiness.

Driving under the influence of alcohol is extremely risky. Even a single can of beer after lunch can greatly increase the likelihood of dozing off while driving, and small amounts significantly raise the risk of an accident.

# Signs of fatigue

Drivers often have a limited ability to predict when they will fall asleep. Continuing to drive when feeling sleepy greatly increases the risk of a serious crash for both the drivers and others. It is crucial not to ignore these early warning signs.

Signs of fatigue when driving include physical, mental and emotional responses.

## Physical

- yawning
- slowed blinking, blurred vision, eye-rubbing
- headache, migraine
- aching muscles
- head droops
- poor hand-eye coordination
- microsleeps: Brief periods of sleep lasting a few to several seconds, during which a driver may doze off without realising it.

## Mental

- difficulty concentrating
- reduced judgement and slow decision making
- judgement errors, such as:
  - drifting over the centre line or on to the side of the road
  - missing road signs or exits
  - gear-shifting mistakes
  - unintentional speed reductions
- trouble recalling the last few kilometres driven
- hallucinations, seeing things that are not there.

## Emotional

- increased irritability or bad temper
- moodiness
- lack of energy
- decreased motivation to perform tasks well.

# Fatigue management

## ***Body clock***

Work schedules that demand night shifts or extended hours can disrupt your natural sleep patterns, leading to increased fatigue and decreased alertness and performance.

Many commercial vehicle drivers operate at the riskiest times for fatigue between midnight and 6 AM. Night shifts pose a unique challenge because they align with the body's lowest natural alertness levels and often lead to insufficient sleep.

Your circadian rhythm naturally induces sleepiness twice a day: during the early morning (2 AM to 5 AM) and late afternoon (1 PM to 4 PM). These dips in alertness vary from person to person but are generally more pronounced when you are sleep deprived.

If your work schedule is demanding or you're behind schedule, getting enough sleep can be challenging. If you feel the need for a nap due to afternoon sleepiness, it's important to take scheduled breaks to rest.

## ***Routine***

To feel more alert and get better sleep, try to keep a regular schedule for sleeping, eating, and activities every day, even on your days off. This will improve your sleep quality and your alertness when you are awake.

## ***Sleep debt***

Sleep debt is the difference between the sleep needed for optimal alertness and the actual sleep obtained. Research indicates that accumulating sleep debt significantly reduce alertness and impairs your ability to drive safely.

Losing 2 hours sleep each day for 4 days will make you nearly as fatigued as losing one whole night of sleep. Plan your time off so you have enough sleep to cancel the debt. Avoid being tempted to go to parties and engagements if they will eat into the time when you should be repaying the debt.

To manage sleep debt, plan enough sleep during your days off and resist participating in activities that reduce your recovery time. It's helpful to explain the importance of sleep to family and friends to gain their support.

To optimise your sleep environment at home, especially if you work night shifts, consider these tips:

- minimise noise and light in your bedroom
- use blackout curtains, eye masks and ear plugs, or white-noise devices if needed
- avoid caffeinated drinks and foods close to bedtime
- keep consistent sleep and wake times, even on your day off.

The following tips will be useful for drivers while on the road:

- find a quiet truck bay
- use dark curtains or liners in your sleeper cab to block out light
- make sure your sleeping berth has good ventilation
- carry earplugs and a sleep mask to help you sleep
- silence your phone and radios
- change out of your work clothes before sleeping, as you would at home
- drink enough water during the day but avoid too much right before sleep
- when staying in motels, choose rooms away from roads or noise.

### **Trip planning**

The WHS Regulations set the laws for the key elements of trip planning. These involve a combination of 'work time' and 'non-work time'.

Work time includes –

- time spent doing work incidental to the driving
- if the commercial vehicle is plant, time spent operating the mobile plant
- time spent operating mobile plant transported on the commercial vehicle
- a break from driving, mobile plant operation or incidental work lasting less than 30 minutes

Non-work time means more than 30 minutes time off at home, away from the vehicle or, if on a trip in the vehicle, includes sleep in an appropriate sleeper berth. It does not include driving and work incidental to driving covered in the definition of 'work time'.

The combination of work time and non-work time for trip planning vary for solo drivers and 'two up' operations with 2 drivers. However, there is a base set of trip planning hours which applies to all commercial drivers.

An example of a 4 day trip in Western Australia is shown at Appendix 1 (page 12).

<b>Operating standard for solo driving</b>	
Minimum continuous non work time in any 24 hours	7 hours
Minimum non work time in any 72-hour period	27 hours
Maximum time between major rest breaks (7 hours or longer)	17 hours
Minimum 24-hour continuous periods of time not working in any 14 days	2 periods
Minimum 24 hours continuous periods of time not working in any 28 days	4 periods
<b>Operating standard for two-up driving</b>	
Minimum non work time in a 24-hour period	7 hours
Minimum continuous non work time in any 48 hours (must be in a stationary vehicle or away from the vehicle)	7 hours
OR	
Minimum continuous non work time in any 7-day period (must be in a stationary vehicle or away from the vehicle)	48 hours
<b>All commercial vehicle drivers</b>	
Maximum continuous work time (driving and non-driving work time)	5 hours
Minimum break from driving for each 5 hours of work	20 minutes
Minimum break from driving to be taken after 5 hours of work	10 minutes
Maximum work time in any 14 days (unless working to 28 day roster, then it is reduced to 144 hours)	168 hours

Table 1: Trip planning work and non-work hours.

## Acting on signs of fatigue

### **Staying alert**

Even if you have had adequate sleep, the monotony of driving can still reduce your alertness. Factors like a hot vehicle and a repetitive route can make it easy to lose attention. However, you can mitigate the risk of fatigue by ensuring the cabin is comfortable and well-designed, offering adequate space and support for the driver.

It is a legal requirement that a vehicle operating *north of the 26th Parallel (Shark Bay in Western Australia) between 1 October and 31 March* should be air-conditioned. Additionally, maintaining a commercial vehicle's ventilation system should be a routine part of its upkeep.

Driving on straight or uniform terrain increases the likelihood of a fatigued driver becoming inattentive. Even drivers who have had sufficient sleep can experience drowsiness under these conditions. You can develop some mental games and habits to help keep alert.

### **Power nap**

A short sleep or nap can provide a powerful boost to alertness. A nap supplements the main sleep when it is insufficient or when extended operations are required. Napping is considered any sleep of up to three hours in duration. A short sleep is between three and five hours.

Napping can be an effective strategy to reduce fatigue immediately. When driving, a nap is most beneficial if taken before dangerous drowsiness occurs.

Power naps as short as 10 to 15 minutes are known to be beneficial. In general, the longer the nap, the more beneficial it will be in terms of recovery and improvements in alertness. Naps shorter than 10 minutes are not thought to be beneficial.

Taking a nap is not a sign of inability to cope with fatigue or being a poor driver. It is good fatigue management practice. When any opportunity to nap and rest occurs, take it.

### **Sleep inertia**

Sleep inertia is the feeling of grogginess felt upon waking. This sensation diminishes over time, with the most significant effects within 30 minutes.

It can impair your ability to perform simple tasks and reduce alertness to levels unsafe for driving. The impact is more severe if you are also dealing with sleep debt.

Sleep inertia is particularly risky for those who drive early in the morning or shortly after waking. It is advisable to wait at least **20 minutes** after waking from sleep or a nap before driving, ensuring the effects of sleep inertia have passed and you are fully awake and alert.

To mitigate sleep inertia, consider these strategies:

- plan your wake up time
- repay sleep debt
- avoid waking during your main sleep
- limit naps to under 30 minutes
- caffeine may help to reduce sleep inertia after a nap
- listen to music after waking or a brief nap may help to reduce sleep inertia.

### ***Diet, water and exercise***

Consuming a high-calorie, fatty diet can make you feel sleepy even after sufficient rest. Opting for a low-fat, high-protein diet can help maintain alertness. Consider fish, poultry, and lean cuts of red meat, or vegetable proteins such as beans, lentils, and greens like broccoli and peas. Ensure you eat healthy foods and drink plenty of water to stay energised.

If you do not drink enough water, you may become dehydrated, feeling lethargic and sluggish, which can increase fatigue.

Signs of dehydration include:

- feeling thirsty or dehydrated
- feeling light-headedness or headaches
- observing dark yellow or orange urine, instead of pale yellow.

Regular exercise improves overall health and blood flow. Benefits of physical activity include:

- improved sleep
- decreased fatigue
- increased energy levels
- reduced stress
- improved muscular tone and strength
- reduction in body fat
- greater flexibility
- improved circulation with better digestion and body functioning.

Driving for long periods involves extended inactivity. Use rest stops to stretch or take short walks to stimulate circulation and reduce fatigue.

### ***Stimulants***

Avoid stimulants while driving. If you feel the need for stimulants, it may indicate that you require more rest, and your schedules or rosters could be overly demanding.

Use mild stimulants sparingly and be cautious of stronger ones. Caffeine, found in coffee, cola, and energy drinks, is a mild stimulant that can ward off drowsiness but can lead to tolerance if used frequently. Relying on stimulants is not a solution to fatigue.

Do not use stimulants at times when their effects could impair your driving. Over-the-counter medications designed to increase alertness, such as caffeine-based tablets and the decongestant pseudoephedrine, can enhance alertness and reduce fatigue symptoms. However, these can also have serious side effects, potentially delaying sleep and impairing judgment.

### ***Health***

Regular health checks are crucial, especially if you frequently experience fatigue. These checks help ensure you do not have a sleep disorder or other medical conditions that could impair your ability to drive safely.

A thorough health assessment can identify any underlying issues affecting your driving capacity.

# Appendix 1: Example 4 day journey in Western Australia

Day 1	Start time	End time	Kms	Work time	Breaks	Non-work
Commences work in the Kewdale depot, carries out pre-start checks	16:30	17:00	–	30m	–	–
Departs Kewdale depot to Bindoon	17:00	18:20	78km	1hr20m	–	–
Tyre check at Bindoon stop	18:20	18:30	–	–	10m	–
Proceeds from Bindoon to Wubin	18:30	20:30	188km	2hr	–	–
Meal break	20:30	21:00	–	–	–	30m
Departs Wubin and arrives at Mt Magnet	21:00	24:00	299km	3hr	–	–
Tyre check (break from driving)	0:00	0:10	–	–	10m	–
Proceeds from Mt Magnet to Cue	0:10	1:00	80km	50m	–	–
Takes a seven-hour long break (night's sleep)	1:00	8:00	–	–	–	7hr
Day 2	Start time	End time	Kms	Work time	Breaks	Non-work
Departs Cue and drives to Meekatharra	8:00	9:10	115km	1hr10m	–	–
Tyre check (break from driving)	9:10	9:20	–	–	10m	–
Proceeds from Meekatharra to Kumarina	9:20	11:20	193km	2hr	–	–
Tyre check (break from driving)	11:20	11:30	–	–	10m	–
Proceeds to Kumarina to Newman	11:30	14:00	250km	2hr30m	–	–
Takes meal break at Newman	14:00	14:30	–	–	–	30m
Unloading	14:30	15:30	–	1hr	–	–
Departs Newman and drives through to Auski Roadhouse	15:30	17:30	192km	192km	–	–
Tyre check (break from driving)	17:30	17:50	–	–	20m	–
Departs Auski and drives to Port Hedland truck stop	17:50	20:30	257km	2hr40m	–	–
Spends 30 minutes at truck stop (meal break)	20:30	21:00	–	–	–	30m
Departs truck stop and drives to depot in Port Hedland	21:00	21:30	–	30m	–	–
Unloading at Port Hedland	21:30	23:00	–	1hr30m	–	–
Takes a seven-hour long break (night's sleep)	23:00	6:00	–	–	–	7hr
Day 3	Start time	End time	Kms	Work time	Breaks	Non-work
Departs Port Hedland to Auski	6:00	9:00	266km	3hr	–	–
Takes a meal break at Auski	9:00	9:30	–	–	–	30m
Departs Auski to Newman	9:30	11:30	192km	2hr	–	–
Loading in Newman Depot	11:30	12:00	–	30m	–	–
Drives from Newman Depot to Capricorn Roadhouse	12:00	12:30	15km	30m	–	–
Takes a meal break at Capricorn	12:30	13:00	–	–	–	30m
Departs Capricorn and drives to Meekatharra	13:30	17:00	420km	4hr	–	–
Take a meal break at Meekatharra	17:00	17:30	–	–	–	30m
Departs Meekatharra and drives to Mt Magnet	17:30	19:30	195km	2hr	–	–
Tyre check (break from driving)	19:30	19:40	–	–	10m	–
Departs Mt Magnet and drives to Wubin	19:40	22:40	297km	3hr	–	–
Take a long break (night's sleep)	22:40	6:00	–	–	–	7hr20m
Day 4	Start time	End time	Kms	Work time	Breaks	Non-work
Departs Wubin and drives to Kewdale	6:00	9:30	266km	3hr30m	–	–
Refuelling and completing paperwork	9:30	10:00	–	30m	–	–
Ceases work at 10:00 hours						
<b>TOTAL</b>				<b>40hr</b>	<b>1hr10m</b>	<b>24hr20m</b>



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