The Rider's Safety Handbook

December 2024

Government of South Australia
Department for Infrastructure and Transport

Build. Move. Connect.

We acknowledge the Traditional Custodians of the Country throughout South Australia and recognise their continuing connection to land and waters.

We pay our respects to the diversity of cultures, significance of contributions and to Elders past, present and emerging.

Using this handbook

This handbook is a guide only to safe motor bike riding techniques.

It includes the key road rules for motor bike riders, but it is not an interpretation of the law.

For more information about the road rules and licence requirements for motor bike riders:

- visit the MyLicence website mylicence.sa.gov.au
- refer to The Driver's Handbook, which can be downloaded from the MyLicence website or purchased from Service SA Customer Service Centres and newsagents.

Other resources for motor bike riders:

- Rider Safe motor bike training course mylicence.sa.gov.au/my-motorcycle-licence/rider-safe-training
- A list of learner approved motor bikes can be found on sa.gov.au
- The Good Gear Guide for Motorcycle and Scooter Riders infrastructure.gov.au/media-centre/publications/good-gear-guidemotorcycle-and-scooter-riders

Acknowledgement

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- Nexefy
- Transport for New South Wales
- VicRoads
- Queensland Department of Transport and Main Roads
- Some images courtesy of Unsplash and Freepix

References

- The Driving Companion (for Learner Drivers)
- Australian Road Rules
- *Road Traffic Act* (1961) and Regulations
- *Motor Vehicles Act* (1959) and Regulations
- Cycling and the Law

Attribution

This handbook has been produced to help you to become a competent, safe motor bike rider. It is based on an approach called defensive riding.

Anyone applying for a South Australian motor bike learner permit or South Australian motor bike licence will find this handbook valuable. So will anyone who wants to be up-to-date with roadcraft and defensive riding – with survival. Whether you are new to motor bikes or coming back after a break, this book is for you.

The handbook is divided into sections covering different aspects of riding and it is highly recommended that you read them all. The information in this handbook will assist you in completing the Rider Knowledge Test.

Road safety is important to all road users, but it is especially important to motor bike riders. In a crash you have less protection than a car driver.

It is important to keep in mind that obtaining your licence, even after all the training, does not necessarily make you a competent and safe rider. Learning to ride in a safe environment, away from the road, can give you skills, but it is not the same as being in real world conditions, with traffic and unpredictable road conditions.

It takes years of practice to learn all the skills and correct riding techniques. As a young inexperienced or novice rider, you are almost three times more likely to be involved in a crash than an experienced rider. In the meantime, this book can be a great help.

When it says ‘must’ in this handbook, it means something that a law specifically requires you to do.

When it says ‘should’, this means it is advisable.

When it says ‘bike’, this means any motor bike (including road, trail, motor scooter and trike). If it is talking about a specific kind of bike (say one with a sidecar) it will use more specific terms. Otherwise, it will simply say ‘bike’ or ‘motor bike’.

When it says ‘rider’ it means any motor bike (including road, trail, motor scooter and trike) rider.

Contents

Ride to survive

Motor bike riders have a higher risk of death or serious injury than all other road users, mainly because they are much less protected than other vehicle drivers.

Riders involved in crashes tend to sustain multiple injuries to the head, chest, and legs, either from direct contact with solid objects or because of crash forces.

Riders have three distinct disadvantages that affect their safety compared to other vehicle drivers:

Vulnerability – motor bikes offer minimal protection.

Instability – two-wheeled motor bikes are less stable than four-wheeled vehicles and are more susceptible to slippery road conditions.

Low visibility – motor bikes are less likely to be seen by other road users because of their relatively small size and low threat in the traffic environment.

This handbook describes the various skills and provides knowledge needed for safe motor bike riding. It provides details about good riding technique, which will enable you to stay alert, ride defensively and cope with hazards. How to ride and safely control a motor bike will be taught to you at the Rider Safe courses. This handbook also includes some of the key road rules for riders.

You are responsible for your own safety on the road. It is up to you to practice, maintain and further develop your safe riding skills. You also need to wear appropriate protective gear. It is important that not only do you know your own, but also your motor bike's capabilities and limitations.

Enjoy your riding, but above all ride to survive.

When are motor bike riders most at risk?

Statistics indicate that serious casualty crashes involving motor bike riders in South Australia:

- are more likely to occur in metropolitan Adelaide.
- are mostly motor bike only crashes.
- occur more frequently on Saturdays and Sundays.
- are more likely to occur if the rider is under the influence of alcohol or illegal drugs.
- are more likely to occur if the rider does not have a motor bike licence.

Research also shows:

- Riders using high powered motor bikes are more likely to be involved in serious injury crashes than riders on other types of motor bikes. High powered bikes are typically ridden at higher than average speeds, which reduces the time available to spot, interpret and react to a hazard, and increases the potential number and severity of injuries.
- A large number of fatal motor bike crashes occur on motor bikes that have been borrowed. Every motor bike handles differently, and it is easy to make mistakes on an unfamiliar motor bike.
- Riding at night, particularly on country roads, is considerably more dangerous for motorcyclists than other road users. The risks of hitting an animal, misjudging a curve or not seeing a change in road surface are all increased at night.

Motor bike licences and the law

How you get your motor bike licence, the laws for motor bike riders and what you need to beware of, are all covered in this chapter.

You need to know about obtaining a motor bike learner permit and licence and the laws that apply to newly licensed riders.

You also need to know about the hazards for riders and ways you can reduce the risks. Remember it will take time to build your skills and experience.

How do I get a South Australian motor bike licence?

The licensing process is designed to make sure that you are a competent and safer rider by the time you get your licence. The various stages, training and assessments are designed to give you basic information and skills. But always remember that there is nothing like experience to make riding safer.

To be issued a motor bike licence you need to successfully complete the following:

- Rider Knowledge Test
- Hazard Awareness Test
- Rider Safe Motor Bike Learners Training courses

On successful completion of all the requirements, you can apply for a learner's permit provided you:

- are 18 years of age; or
- are 17 years of age and hold a provisional licence for another class of vehicle; or
- are 16 years of age and live in a prescribed locality. You will be eligible for a restricted learner's permit and will only be able to ride for the following purposes:
  - to attend tertiary education, vocational education, or training or within the course of tertiary education, vocational education, or training
  - for work purposes
  - to participate in a sporting activity.

If you do not already hold a licence for a different class of vehicle, you will also be required to complete the Learners Theory Test for class car.

After completing all training courses and the licence assessment, and provided you are at least 19 years of age, you can apply for a motor bike licence. You must hold a motor bike learners permit for 12 months before you can apply for an R-Date licence.

You will be required to hold an R-Date licence classification for a period of two years before you will be permitted to ride motor bikes other than those on the learner approved motorcycle scheme (LAMS).

The laws and restrictions for motor bike riders

Motor bike riders must obey the same road laws as other road users. The Driver's Handbook and Road Rules Pocket Guide both have general road law information for all road users. These are both available to download from the My Licence website mylicence.sa.gov.au

There are also some laws that are only for learners or newly licensed riders. While you are a learner rider, the following licencing conditions and rules apply:

- You must only ride a motor bike which is approved under the Learner Approved Motorcycle Scheme (LAMS).
- Zero alcohol / drugs.
- Must clearly display an 'L' plate on the rear of the motor bike at all times.
- Must not exceed speed limit by 10km/h or more.
- Must not ride over 100km/h.
- Must not incur four or more demerit points.
- No pillion passengers or passengers in a side car. This includes a person acting as a Qualified Supervising Driver.
- No towing of any vehicle (i.e., a trailer).
- Must hold a learner's permit for a minimum period of 12 months regardless of your age, or if you hold a full driver's licence for another class, before you are eligible to apply for an R-Date licence classification.
- Restricted to an automatic motor bike if you complete the Rider Safe course or practical driving assessment on a motor bike with an automatic transmission.
- You must not use any type of mobile phone function.
- If you are under 25 years of age, you must not ride a motor bike between the hours of midnight and 5am unless you meet the exemption criteria.
- You must carry your learner's permit card or digital permit when riding and show it to a police officer when asked.
- Must not lane filter.
- Must wear an approved helmet at all times.

Lane filtering

Lane filtering is riding at low speed between stationary or slow-moving traffic travelling in the same direction as you. You can only lane filter if it is safe to do so and as long as you're riding at 30km/hr or less.

Heavy penalties apply for unlawful lane filtering.

You cannot lane filter:

- at a speed of more than 30km/hr.
- between a vehicle and the kerb.
- in school zones during school zone hours.
- if you hold a learner or provisional licence.
- if you are a moped rider who only holds a car licence.

Pillion passengers

You cannot carry a pillion passenger if you are a learner rider.

To carry a pillion passenger, the motor bike must have an approved seat and adequate footrests for the passenger.

For all pillion passengers, they must:

- be at least eight years old and their feet must reach the footrests.
- wear an approved helmet, correctly fitted, and fastened.
- sit astride the pillion seat facing forward and behind the rider.
- not interfere with the rider's control of the motor bike.

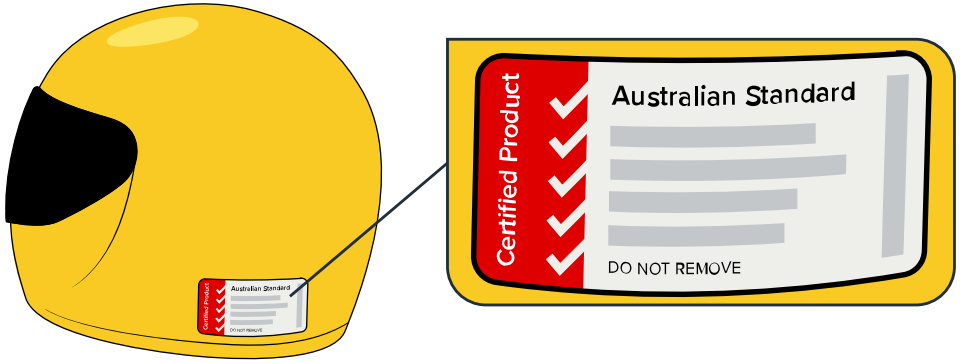
Riding technique with a pillion passenger is explained later in this handbook.

Helmets

Riders and their passengers must wear helmets that are approved to the following standards:

- AS 1698-1988
- AS/NZS 1698:2006 (or any later version of that standard)
- ECE 22.05 (or any later version of that standard).

All helmets must be marked to show that they are certified as meeting the standard.



Example of the Australian standard label.

Bus and Bicycle Lanes

You must not ride your motor bike in bus lanes, bicycle lanes or other lanes designated for special vehicles. Exceptions permitted under the road rules are when entering or leaving the road, avoiding an obstacle on the road, overtaking a vehicle indicating to turn right or where you otherwise have to cross the lane, or where signs indicate you may do so. The permitted distance for a bicycle lane is 50m and for a bus lane 100m.

Protective gear

Wearing the right gear is vital to your safety and comfort – if you aren't comfortable, you aren't safe. But always remember that even the best safety equipment won't protect you from everything. Ride just as carefully as you would if you were out there without it!

MotoCAP

The Motorcycle Clothing Assessment Program is an independent, free resource supported by governments and private road safety organisations across Australia and New Zealand. MotoCAP tests gear using rigorous, scientific methods to provide ratings for motor bike riders to choose the right gear with the best protection and breathability for their ride.

To find out more, visit motocap.com.au

MOTOCAP

Protective gear basics

Full protective gear is the only way to help save you and your skin. Follow these basic rules to protect yourself:

- Cover your whole body.
- Wear gear that suits and is designed for types of riding you will be doing.
- Protect your joints with impact protectors.
- Ensure you have high abrasion resistance and impact protection in your most vulnerable areas.
- Ensure all seams have more than one line of stitching and at least one line of concealed stitching on exposed seams.
- Ensure all fastenings are secure and protected from contact with the road or other surfaces in a crash.
- Use insulation, waterproofing and windproofing to cope with the cold.
- Use ventilation and colours to cope with the heat.
- Don't carry anything in your pockets — falling on hard objects hurts.
- Avoid wearing a backpack. Landing on it in a crash could cause serious spinal injuries.

Helmets

The most essential item of protection for a motor bike rider is a helmet. The law requires all motor bike riders and their passengers (including sidecar passengers) to wear an approved motor bike helmet that meets either the Australian or European standard for helmets and is in good repair and proper working order and condition.

Choosing a helmet

Helmets are available in many different makes and styles.

There are two main types – full face and open face.

Full-face helmets have a chin panel and an integrated visor that offers better face and eye protection than open-face helmets. Around half of all impacts to the head in motor bike crashes occur to the face. Full-face helmets also offer better wind and sun protection. They do not impair peripheral vision.

Light coloured helmets are generally cooler in summer than dark helmets, and brightly coloured helmets are more likely to be seen by other drivers.

Making sure a helmet fits you properly

Helmet sizes vary among manufacturers and models. Most are sold in S, M, L and various XL sizes. The best way to find the right size is to try several on and follows these steps:

1. Put the helmet on:
   - Hold the helmet by the chin straps. The opening of the helmet should face you with the front pointing down.
   - Put your thumbs on the inside of the straps, balancing the helmet with your fingertips.
   - Spread the sides of the helmet apart slightly and slip it down over your head using the chin straps.
   - Be sure it sits squarely on your head. It shouldn't be tilted back on your head like a hat.
   - It should fit firmly and may even feel a bit too tight until it is in place correctly.
2. Before fastening the straps, run these checks:
   - The cheek pads should touch your cheeks without pressing uncomfortably.
   - There should be no gaps between your temples and the brow pads.
   - If the helmet has a neck roll, it shouldn't push the helmet away from the back of your neck.
   - On full-face helmets, press on the chin piece towards your face. The helmet or face shield should not touch your nose or chin. If it does, the helmet is too small.

3. Fasten the straps, then run these checks:
   - Move the helmet from side to side and up and down with your hands. If it fits properly, your skin should move as the helmet is moved. You should feel a slight, even pressure all over your head.
   - A new helmet should be as tight as you can comfortably wear it. Helmets tend to loosen up over time as the comfort liner compresses with use. If your helmet is too large, it will move around when you least want it to, it can let in noise and wind, and, worst of all, it may come off in a crash.
   - With your head straight, try rolling the helmet forward off your head. You should not be able to pull it off. If you can, the helmet is too big.
4. Take off the helmet and run these checks:
   - Look for pressure points on your head or face(indicated by sore places and red marks) which can be uncomfortable and cause a headache during a long ride. If the helmet is exerting any pressure points, try the next largest size or a different brand.
5. If you are still unsure about the fit, put the helmet back on and wear it around the store for a while.

> Make sure the helmet you buy is new and is the right fit for your head. Never buy a second-hand helmet.

Taking care of your helmet

Replace your helmet:

- After a crash or a significant impact.
- If it becomes loose fitting.
- If the straps become worn.

Clean your helmet only with mild soapy water, as some chemicals and cleaners may weaken the shell. Always refer to the helmet's manufacturers guide on how to clean and care for your helmet.

Its important to maintain a clean and clear visor so that you have a clear view of the road and your surroundings.

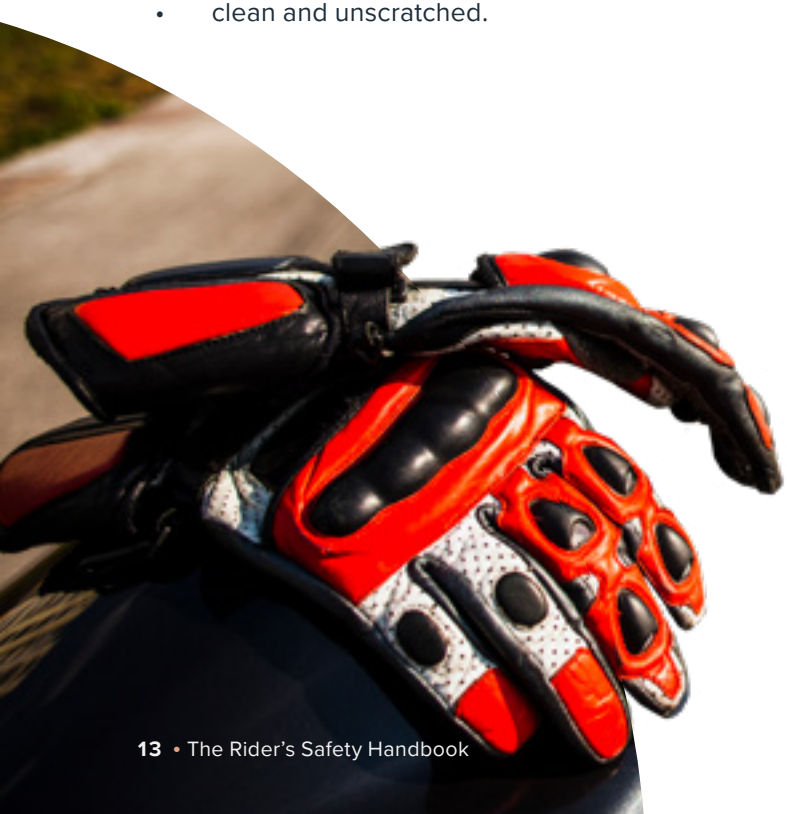
Eye protection

Only helmet visors and goggles can properly protect your eyes from wind, dust, rain, insects and stones thrown up by other vehicles.

Motor bike screens (fairings) do not provide adequate protection for the eyes – you need to wear a visor or goggles as well.

Visors and goggles should be:

- shatterproof, as required under Australian Standard AS 1609.
- equipped with clear lenses for use at night.
- clean and unscratched.



Gloves

Purpose-made gloves are the second most important item of safety gear for motor bike rider after a helmet. Hands often touch down first during a crash and are likely to be seriously injured even at low speeds if a rider is not wearing gloves.

Your gloves should:

- be fully enclosed, covering the whole hand and wrist.
- have a strengthened palm area.
- have armour for your knuckles and wrists.
- overlap your jacket (gauntlet style).
- have fastenings around your wrists.

Jackets and pants (or one-piece suit)

Wearing good quality protective clothing that is specifically designed for motor bike use and made by a reputable manufacturer can significantly reduce injury in a crash, particularly abrasions and lacerations. Rider protective clothing aims to prevent abrasion and provide impact protection to exposed areas such as elbows and knees.

You have a better chance of being seen by other road users if your protective clothing is brightly coloured. Research shows that motor bike riders are less likely to be involved in a motor bike crash when they are wearing high-visibility or fluorescent clothing.

Choose a jacket and pants that:

- are tailored for a riding position.
- completely cover your arms, legs and body.
- are secure around wrist, waist and ankles to prevent sliding up and exposing skin.
- provide impact and abrasion protection for your back, shoulders, elbows, hips and knees.
- are highly resistant to abrasion and tearing.

Footwear

Purpose-made motor bike boots can help prevent your feet and ankles from being crushed during a crash.

Choose boots that have:

- a strengthened instep (between the ball of the foot and the heel).
- ankle and shin armour for added protection.
- a fastener such as zipper or Velcro around the leg to prevent the boot from sliding off.
- a high boot style to overlap the pants.
- a gear change cover to prevent wear.

At a minimum, wear a rugged work or combat style boot with good grip, tight ankle support and a strong sole.

> Never ride in running shoes, or worse, in sandals or bare feet. Avoid shoes with rings or laces as they could easily catch on the motor bike controls and foot pegs. Avoid elastic-sided boots that are not suitably reinforced and slip off too easily.

Wet weather gear

Changes in the weather are unpredictable so it often pays to always carry wet weather gear with you. Waterproof, that lets your body breathe, rather than water resistant clothing, is the best way to keep dry. Waterproof gear lets your sweat out, while stopping the rainwater from getting in.

Other protective gear

You should also consider other protective gear such as:

- back protectors, to protect your spine in a crash.
- kidney belts, to support your organs and reduce fatigue.

Choosing a suitable motor bike

Visibility

Increasing your visibility can greatly reduce your chances of being involved in a crash – if other road users can see you, even in poor light or bad weather, they can avoid you.

Dress to be seen by choosing gear that maximises your visibility – wear light or brightly coloured clothing, a fluorescent vest, or use reflective strips.

Choosing a motor bike is one of the most enjoyable things a rider does. Your motor bike will have a significant impact on how safe you are on the road and how much you enjoy riding. There are many sources of information available to help you choose the right motor bike for you – talk to experienced riders, read up on different bikes, visit your local motor bike dealer or maybe even ask your Rider Safe Instructors questions about the different styles.

When choosing your new motor bike, also consider the various safety technologies now available on many makes and models such as a Motor bike Stability Control (MSC) system and an Anti-lock Braking System (ABS).

These systems monitor wheel speed, lean angle, acceleration and braking pressure to provide greater control in steering and braking application to reduce the severity of a crash.

Learner Approved Motor Bikes

Learners and riders with less than two years of experience (R-Date licence holders) are not permitted to ride high-powered motor bikes capable of unnecessarily high performance and speed.

The changes to the R-Date class of licence, the Learner Approved Motorcycle Scheme (LAMS), were introduced into South Australian law in November 2005 to reduce the incidence of road crashes involving motor bikes that result in death and serious injury.

The power-to-weight ratio of a motorbike is the ratio of the maximum net power output of the engine to the motor bike's weight. The power-to-weight ratio is a measure of a vehicle's performance. It is a better indicator of motorcycle performance than engine capacity alone.

South Australia has adopted a national list of approved motor bikes suitable for R-Date licence holders, allowing R-Date riders to travel to other states that also have a LAMS.

Most models of motor bikes in the category 0-260ml and all motor bikes built before December 1960 with an engine capacity not exceeding 660ml are approved under the scheme, please see the approved list available from mylicence.sa.gov.au for details.

All motor bikes with an electric powered engine and a power output not in excess of 25kw are approved. For other electric powered motor bikes, please refer to the current list of LAMS approved motor bikes available to determine whether a particular model is approved.

In order to meet the definition of a learner approved motor bike, the motor bike must meet all of the following criteria:

- Be a motor bike on the approved list of motor bikes by notice in the Government Gazette.
- Have a power-to-weight ratio of 150kilowatts per tonne or less.
- Have an engine capacity of 660ml or less.
- Be the standard model and variant as specified on the approved list.
- Not been modified in any way that increases its power-to-weight ratio including modifications to the exhaust system.

R-Date class licence holders whose eligibility period has lapsed are no longer restricted to learner-approved motor bikes and can commence riding any motor bike or motor trike. They do not need to apply to have the class upgraded to an R class prior to riding any motor bike or motor trike, provided the eligibility period has lapsed.

Naked

Naked motor bikes are designed for functionality. This is the basic form of motor bike stripped down to its fundamental parts. The term naked refers to road type motor bikes without a fairing to obscure the engine and frame, and normally no screen over the handlebars.

These motor bikes are generally:

- light weight, partly due to the lack of bodywork or fairings
- have an upright seating position with feet under the rider's seat
- slightly higher handlebars

Sports

Sports motor bikes are designed for speed and handling. Also known as performance bikes, the emphasis is on speed, acceleration, and manoeuvrability. These motor bikes are generally relatively light weight with powerful engines, strong brakes, and shaped to reduce aerodynamic drag. Common features include:

- full fairing.
- Forward-leaning riding position with feet back.
- Angular bodywork to reduce wind resistance.

Due to their power to weight ratio, most sports motor bikes are not LAMS approved.

Cruiser

Cruisers are designed for relaxed highway riding. These motor bikes are generally heavy with a low seat and centre of gravity. The riding position places the feet forward and the hands up with the back erect or leaning back slightly.

Cruisers prioritise comfort over anything else, allowing for more relaxed riding. Cruiser motorbikes tend to have:

- a relaxed riding position
- chunky bodywork
- large tyres

Road / trail

Dual purpose motor bikes are designed for use both on-road and off-road. These motor bikes are generally light weight with a high seat height and centre of gravity. The riding position is neutral with feet under the rider's seat, back upright and shoulders above the hips. Off-road trail motorbikes tend to have:

- knobby-tread tyres (not suited for highway / road use unless stated on tyre)
- long-travel suspension
- higher ground clearance

Touring

Tourers are designed for long-distance comfort. These motor bikes are generally heavy with large windscreens and fairings, good passenger seating and creature comforts such as radios, navigation systems and storage. The riding position is neutral with feet under the rider's seat, back upright and shoulders above the hips. Tourers tend to have:

- large windscreens
- generous luggage capacit
- comfortable seating designed for rider and pillion passenger

Mopeds / scooters

Mopeds are small light motor bikes that have an engine capacity of 50mL or less, and a manufacturer's top speed of 50km/hr or less. These motor bikes generally have a step-through style frame, are light weight and have no clutch or gears (automatic). Mopeds can be ridden on a Car licence.

Scooters tend to be larger versions of mopeds with larger engines requiring the rider to hold a motor bike licence or permit. The majority of scooters are automatic.

Which bike is right for you?

You must only ride a bike which is approved under the Learner Approved Motorcycle Scheme (LAMS) whilst you hold a motor bike learner permit and a R-Date motor bike licence.

You should feel comfortable and in control while handling the bike, which means it should not be too tall or too heavy for you.

Riding someone else's bike

It can be risky to ride a borrowed or rented bike. You will be unfamiliar with its controls and responses, and even if it is the same model as your own, it may not be in good mechanical condition. Ideally you should get as much experience on your own bike, before attempting to ride a borrowed or rented bike. If in doubt, don't ride an unfamiliar bike. However, if riding an unfamiliar bike, you should:

- familiarise yourself with the controls and test their operation.
- make all the same safety checks you would make with your own bike.
- adjust to meet your riding need.

Riding off-road

If you go riding off-road (often called dirt riding) in places such as state forests, state parks and national parks, there are some things you need to remember.

- Your bike must be registered and roadworthy, and you must hold an appropriate permit or licence.
- Your learner permit and licence conditions still apply.
- You must wear an approved helmet, and you should wear protective clothing. Bike shops stock this as 'enduro' or 'motocross' (MX) gear.
- If you go off the beaten track, you should advise someone reliable where you are going and when you expect to return.

Getting to know your motor bike

> No matter what motor bike you choose to ride it needs to be set up to suit you. Making the right adjustments from the start will not only make your bike more comfortable to ride, but it will also improve your ability to control the bike. In addition to these adjustments there are several important checks to make every time before you ride.

To maintain control and safety, riders must be able to correctly operate all the controls of the motor bike while continuing to observe the road environment (head and eyes up). It is equally important to have a basic knowledge of the function and operation of each of the controls.

Some bikes allow you to adjust the height of the seat. Set the seat so your feet are comfortably flat on the ground when you are sitting on the bike.

Adjust the gear and rear brake levers up or down so that they are within comfortable reach of your feet. Remember that you need to move the gear lever up and down, not just down like the brake lever. If you are not sure how to do this, refer to the bike owner's manual or ask at your local motor bike repair shop for advice.

If the handlebars are adjustable, set them so they are comfortable. If you can't get them comfortable, consider replacing them or changing the clamps that hold them.

If your bike has adjustable clutch and front brake levers, set them so that they are in easy reach of your fingers.

Motor bike controls

Major controls

To safely operate the motor bike, you must be able to use all of the major controls.

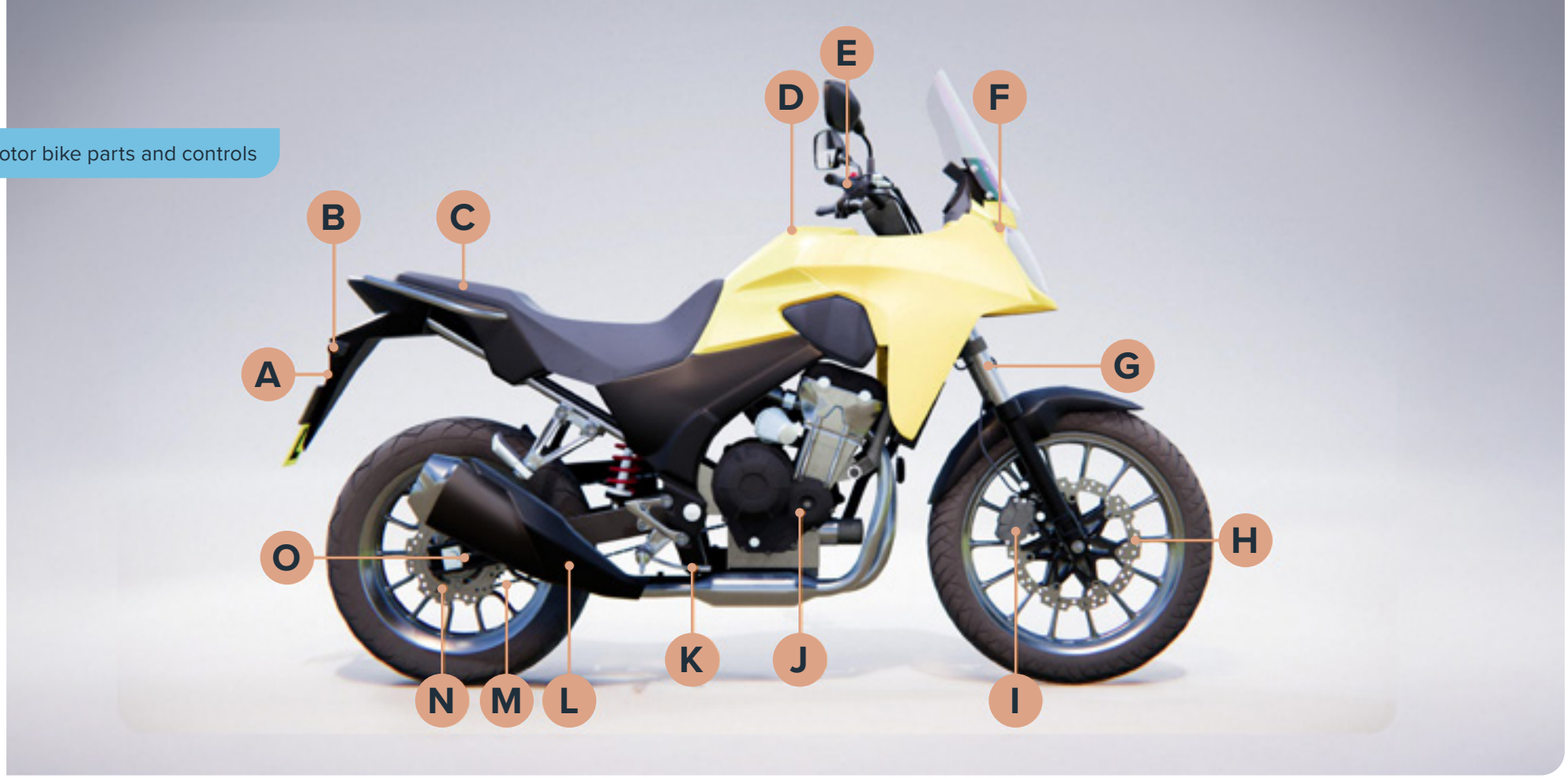
- **Mirrors** – located on either side of the handlebars.
- **Throttle** – located on the right side of the handlebars, it controls the flow of fuel going to the engine (more fuel increases your speed).
- **Front brake lever** – located in front of the grip on the right side of the handlebars, it applies brakes to the front wheel. The front brake is the primary stopping brake, providing the majority of the motor bike's braking performance. It is used with the rear brake when reducing speed.
- **Rear brake pedal** – located in front of the right footrest, it applies brakes to the rear wheel. The rear brake is used with the front brake when reducing speed to stabilise the motor bike and on its own when manoeuvring at walking pace to aid control.
- **Clutch lever** – located in front of the grip on the left side of the handlebars, it connects and disconnects drive from the engine to the rear wheel.
- **Gear lever** – located in front of the left footrest, it is used to select your gear; lift up to change up, press down to change down.

Minor controls

Similar to the major controls, to safely operate the motor bike you must be able to use all of the minor controls.

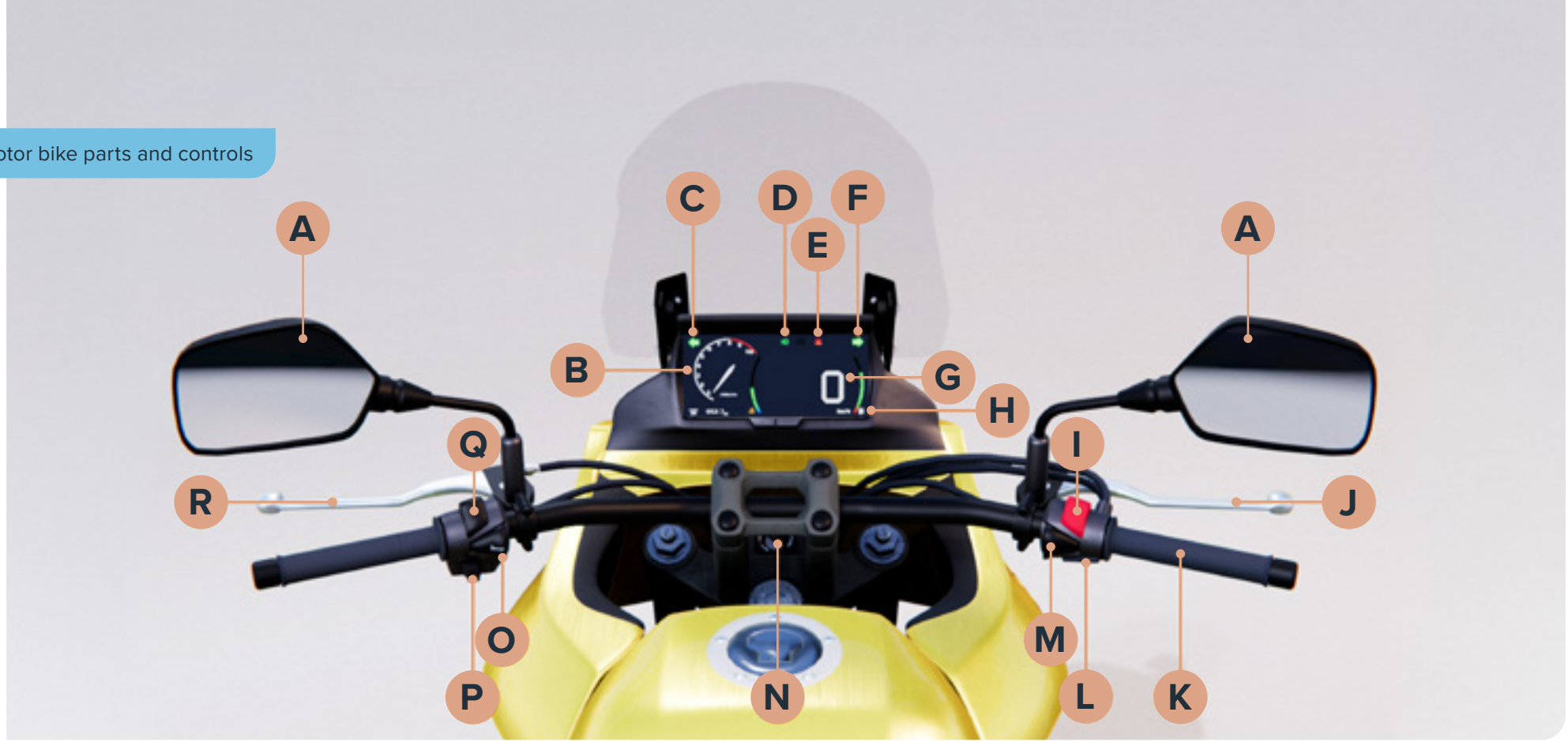
- **Starter** – generally located on the right side switch block on the handlebars, this button starts the engine.
- **Engine stop switch (kill switch)** – located on the right side of the handlebars, it cuts power to the engine.
- **Ignition** – generally located on or near the centre of the handlebars, it must be in the ON position to start the engine.
- **Low/high beam** – generally located on the left side switch block on the handlebars (some motor bikes have a separate flash button to activate high beam) and is operated with the left thumb.
- **Indicator switch** – generally located on the left side switch block on the handlebars. Ensure you know how to cancel the indicator; this isn't automatic on motor bikes (check your manual for instructions).
- **Horn** – generally located on the left side switch block on the handlebars.
- **Choke lever** – generally located on the handlebars, near fuel tap or on the carburettor, it is used to start a cold engine. Ensure you turn the choke off before riding; if left on the choke will affect engine performance.
- **Fuel tap** – (if fitted) generally located under the left side of the petrol tank, it is used to control fuel flow to the engine between the main and reserve tanks.

Motor bike parts and controls



Motor bike parts and controls					
A	Brake light	G	Forks (including front shock absorber)	M	Chain
B	Indicators	H	Front brake disc	N	Rear brake disc
C	Pillion passengers' seat	I	Front brake calliper	O	Swing arm
D	Fuel tank	J	Engine		
E	Handlebars	K	Rear brake pedal (gear shift on left hand side)		NOTE: For additional information, always refer to the owner's manual for your motor bike.
F	Head light	L	Exhaust		

Motor bike parts and controls



Motor bike parts and controls					
A	Rear view mirror(s)	H	Fuel gauge	O	Horn
B	Tachometer	I	Engine stop switch (‘kill switch’)	P	Indicator switch
C	Left indicator	J	Front brake lever	Q	High / low beam switch
D	High beam indicator	K	Throttle	R	Clutch lever
E	Oil light	L	Front brake master cylinder (fluid level glass)		
F	Right indicator	M	Ignition		NOTE: For additional information, always refer to the owner’s manual for your motor bike.
G	Speedometer	N	Horn		

Motor bike safety checks and roadworthiness

Before riding your motor bike, do some basic checks to ensure your safety while riding. It is your bike, so it is your responsibility to ensure your bike is in a roadworthy condition every time you ride.

Registration

Your motor bike must by law be registered. There are severe penalties for riding an unregistered motor bike. In addition, compulsory third party insurance is not valid when a motor bike is unregistered, which means the rider could be held personally liable for financial compensation to any person injured as a result of a crash.

Number plates

The number plates on the motor bike you ride or own must be:

- issued by the department.
- in alignment with the registration papers.
- displayed on the rear of the motor bike.
- clearly visible from a distance of 18 metres.
- clearly readable – not dirty, worn or damaged.
- mounted so that the bottom edge of the plate is at least 300mm above ground level.

The rear number plate must have a light so that it is clearly visible at night. It is an offence to:

- obscure any part of your number plate.
- alter a number plate in any way.
- attach a number plate to any vehicle other than the one to which it is registered.
- use a number plate cover that prevents the plate being visible or photographed at any angle.

Checks to make before each ride

Controls

- The brakes should work smoothly. The front and rear brakes should each stop the bike when fully applied separately.
- The clutch and throttle should work smoothly, and the throttle should snap shut when you let it go.
- Make sure cables are lubricated and there are no visible kinks or broken strands.

Tyres and chain

- Check tyre pressures when the tyres are cold. Correct pressures should be listed on a sticker on the bike (possibly on the swingarm) and in the owner's manual.
- Check that the tread depth is more than 1.5mm all over the tyre tread. Less than this is illegal and very dangerous. The tread wear indicators will help you determine if the tyre is roadworthy. The sidewalls of the tyres should be free of cracks or bumps.
- Make sure that the tyre tread is free of cuts, nails or cracks.
- Check that the chain (if the bike has one) is lubricated and the tension adjusted correctly. The owner's manual will have details of how to do this.

Lights and signals

- Check that all lights and indicators are clean and in working order. Indicators must flash and be bright enough to be seen.
- The headlight must be adjusted properly so that it is not too high or too low. Both low and high beams must work.
- Check that the taillights work, and that the brake light works when you apply the hand and foot brakes.
- Test the horn.

Mirrors

- Clean and adjust the mirrors before you start. It is dangerous to do this when you are moving.
- You should be able to see just past your body, and as much as possible of the traffic next to you and behind you.

Fuel and oil

- Check the fuel level and don't ride with the fuel tap on reserve until it is necessary.
- Check the oil level. The engine needs oil and could seize if the level drops too far. This will do damage to the engine and could lead to a crash.

Yourself!

- Check that you are dressed safely and properly.
- Make sure you are fit to ride and not tired (fatigued) or impaired by alcohol or drugs.
- Make sure you are in the mood and have the right attitude. Riding while angry or in any other high emotional state could make you careless or aggressive.
- Decide when to ride and when not to ride.

Checklist

Before you ride each time check:

- ☐ brakes are working
- ☐ clutch and throttle are working smoothly
- ☐ cables are lubricated
- ☐ tyre pressures are correct and look for tyre wear
- ☐ chain is lubricated and adjusted
- ☐ all lights, indicators, and warning device (horn) are working
- ☐ headlight on (low beam)
- ☐ mirrors are clean and adjusted
- ☐ there is enough fuel and oil
- ☐ you are dressed in the right gear
- ☐ you are fit to ride
- ☐ your mood and attitude are right to ride safely

Maintenance checks

The following items also need to be checked on a regular basis to ensure your bike is safe to ride.

Chain tension

By rotating the rear wheel, you will be able to detect any tight spots in your drive chain. For the correct chain adjustment, you should consult your motor bike mechanic or owner's manual.

Riding with a slack or worn chain can cause the rear wheel to lock. If your motor bike has a shaft drive, check for oil leaks at the seals and hub.

Lubricate the chain

Make sure you apply lubricant to the pivot points and avoid any overspray going onto the tyres or brake rotor. It is best to oil the chain when it is hot. If you are on a long trip over several days, it is suggested that the chain be oiled at the end of every day.

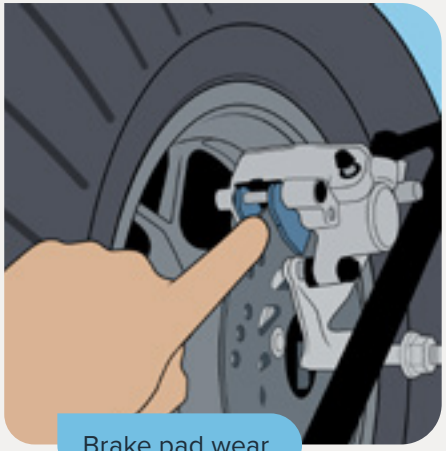
Brake pads for wear

A quick look into the calliper should let you know if there is sufficient material left on the pads. If you are unsure as to their wear level, consult your motor bike mechanic or motor bike owner's manual.

Brake fluid level

Check the level of brake fluid on both the front and rear master cylinder reservoirs. On motor bikes with hydraulic clutches check that the fluid level on the clutch master cylinder reservoir is between the high and the low marks.

Chain tension



Brake pad wear

Brake fluid level

Level of coolant

Check the coolant level in the coolant reservoir tank (liquid cooled motor bikes only). Top up using coolant that meets the bike maker's specifications.

Fork legs

Check the fork legs, especially around the fork seals. There should be no evidence of oil leakage from the seals. Leaking oil can drip onto the tyre or brakes which is a major safety concern.

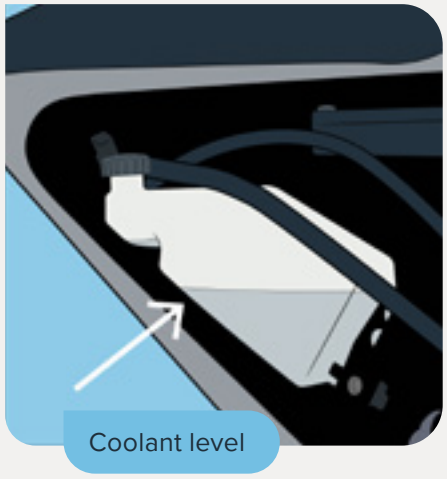
Cables

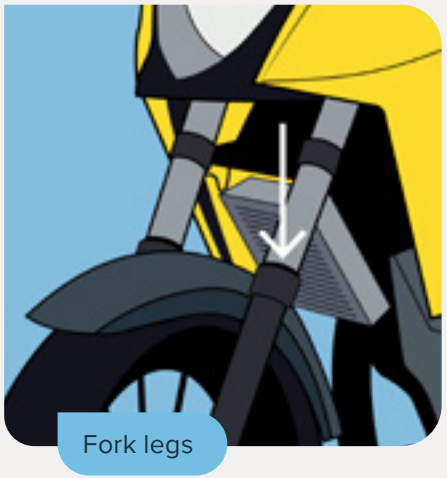
Check cables where fitted e.g., clutch, brakes and accelerator for signs of fraying or wear and lubricate as required with oil or grease where appropriate as per the bike manufacturer's specifications.

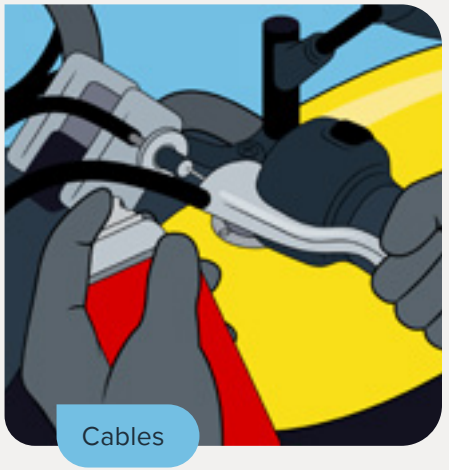
Periodic servicing

In addition to regular checks, all motor bikes need regular servicing. The bike's manual will suggest the service intervals based on time or distance travelled. The service will require specialist knowledge or tools and should be conducted by a professional motor bike mechanic.

> For additional information regarding adjustments, maintenance, and servicing, always refer to your bikes manufacturer or the bikes owner's manual.







Safe riding

Riding posture – setting yourself up

When you first get a motor bike, take the time to adjust the controls to suit your height and build. Correct riding posture reduces fatigue and improves your control of the motor bike.

Keep your back relaxed and support your weight with your stomach muscles.

Sit close enough to the handlebars so you can reach them with your arms slightly bent. You should be able to turn the bars without stretching. This balances the motor bike, enhancing steering and braking performance. Sitting too far back can affect the weight distribution and make steering feel light.

Keep your back relaxed and support your weight with your stomach muscles.

Keep your head up and your line of sight level with the road.

Keep your arms relaxed with a slight bend. This reduces fatigue and improves steering and throttle control.

Hold the handgrips firmly and keep your wrists low with the knuckles at the highest point. This gives you good control of the throttle while making it easy to reach the clutch and brake levers.

Grasp the fuel tank firmly with your knees to balance the bike and keep control when turning, slowing or speeding up.

SAFE RIDING

> Riding a motor bike is never risk free, but you should aim to ride ‘low risk’. A low-risk rider has good observation, speed control, road positioning, gap selection and hazard perception skills.

Being visible is not a guarantee of safety on the road, but it is the beginning of being safer. As a motor bike rider, you need to do as much as you can to help make yourself be seen, but do not assume that being seen is enough. You need to be able to see clearly around you and to anticipate – think ahead and be ready to respond before things happen. Your safety is in your own hands at all times.

Remember that you are sharing the road with others – drivers, riders, pedestrians, cyclists, trucks, buses, and trams. So, ride cooperatively in traffic, and help everyone get to where they are going safely.

Your skills will gradually build with practice and experience as you ride in different conditions and learn to detect and handle various hazardous situations.

The key to good riding technique is smoothness, and the key to smoothness is good preparation, perception and practice.

Tip: Your Rider Safe Instructor is the best person to teach you the basics of starting off, observation, space, using the gears, braking, cornering, and turning. If you are uncertain about anything, make sure you ask.

Looking ahead and being seen

A very large part of road safety is anticipation – being ready to respond to things before they happen. That's not as hard as it sounds; in fact, it is one of the things you learn as you go along. People who have been riding for a while become very good at it, which is one reason why they're usually safer.

You can help yourself with this by looking ahead. Here are a few examples:

- When riding around a corner, try to position yourself on the road so you can see through the corner.
- Lean with your bike while you turn, keeping your head up and line of sight level with the road. Turn your head, look where you want to go and ride smoothly.
- When pulling out from the kerb, position your bike at an angle so you can see the traffic in both directions.
- If you are making a U-turn, have a clear view of traffic in both directions.
- At intersections, don't count on other vehicles giving you the right of way. Approach intersections slowly and carefully.
- Watch the road ahead by looking through or over the top of other vehicles.

Tip: Before moving off from traffic lights, check in all directions to make sure the traffic has stopped.

Road position

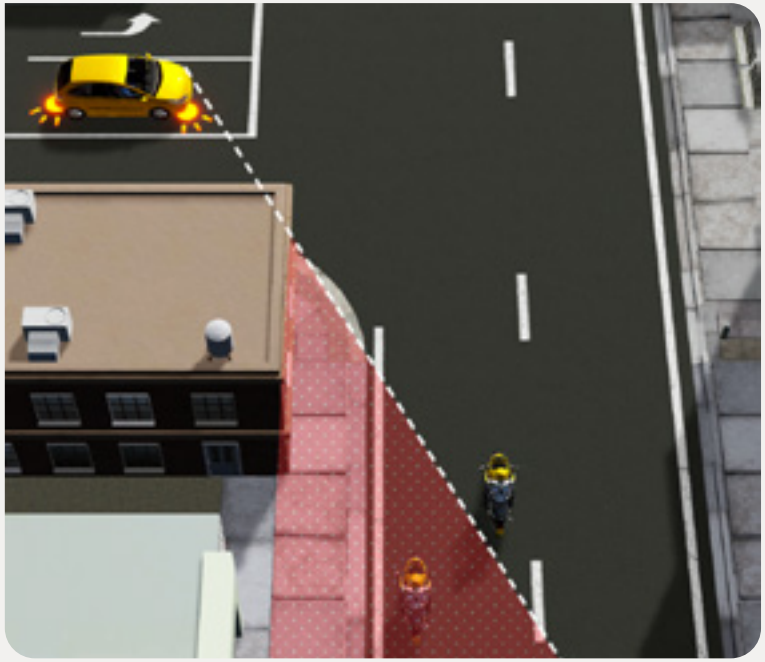
Place yourself on the road where you can see and be seen.

- Ride in the right-hand wheel track of the road, where you can be seen in both the rear vision mirror and the external mirror of the car in front of you. You can also see vehicles coming the other way and be seen by them. This will keep you safe from the oil slick that can form in the centre of the lane or the broken pavement and loose gravel at the edge of the road.
- When riding on a laned road, avoid the centre lane unless there is a median strip, otherwise you will have to watch out for traffic going in both directions. Ride in the right-hand wheel track when travelling in the left lane and the left-hand wheel track if you are riding in the right lane.
- When overtaking on a laned road where there is no median strip with traffic in both directions maximise the distance from other vehicles. Ride in the centre of the lane but watch out for oil slicks.

Blind spots are generally the areas to the back left and the back right side of a vehicle. These are the areas where the driver cannot see clearly by using their mirrors.

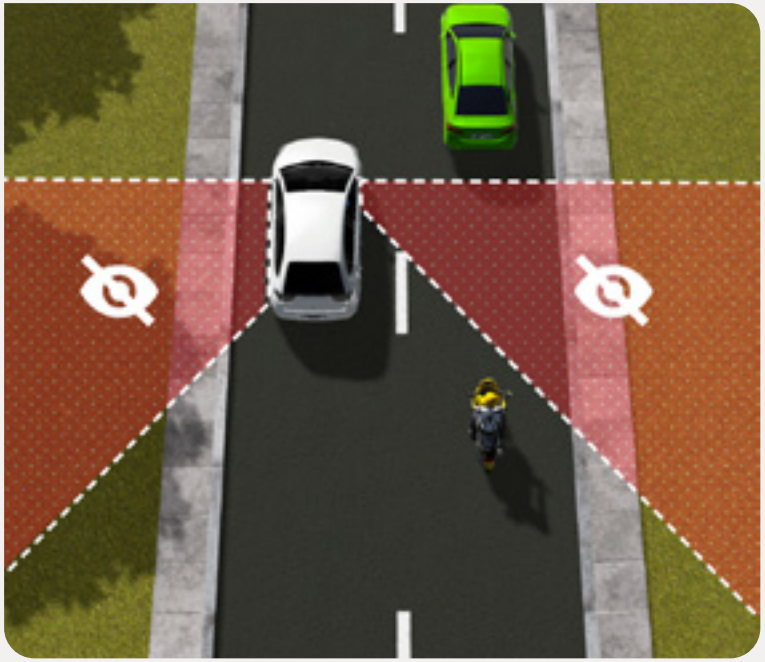
Blind spots can also be created to the front and sides by any object that obstructs the drivers view – buildings, other traffic, vegetation, vehicles body work etc.

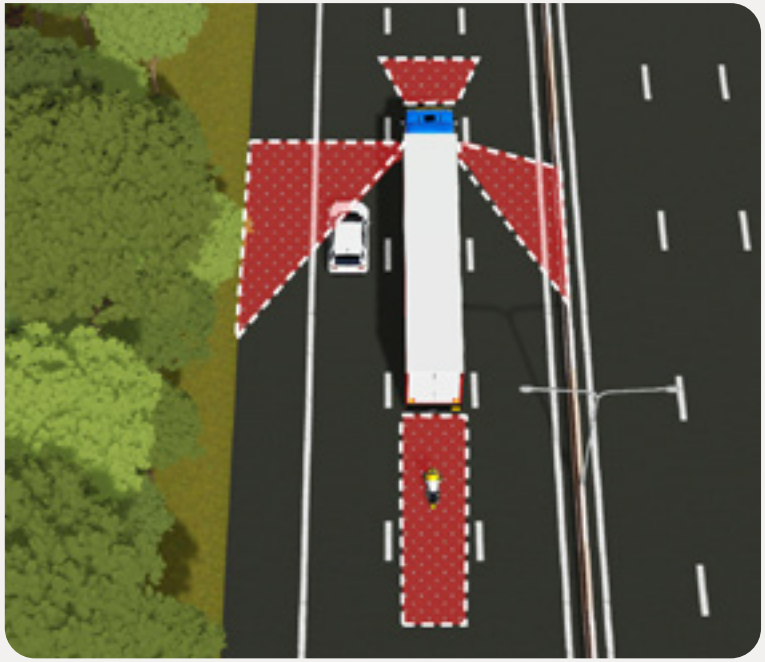
- When approaching an intersection be aware of a driver's line of sight so you can be seen. The rider here should take care, as the driver of the blue car may not be able to see them approaching due to the blind spot created by the green car. The rider should move to where they can be more clearly seen.
- Slow down when there are cars about at intersections. Not all the drivers may be able to see you.
- Be aware of the driver's line of sight being blocked by buildings, vegetation, street signs etc. Anticipate blind spots and move to where the driver can see you.
- Most crashes between a motor bike and other vehicles happen at intersections, so place yourself where you can be seen and have as much room as possible to move.



Positioning yourself where you can be seen

- By positioning yourself where you can see and be seen, you are ‘claiming’ the lane and discouraging drivers from trying to share it. Sharing lanes is dangerous.
- Don’t ride in the blind spots that all vehicles have behind and beside them. Try to ride where you can see the driver’s eyes in the vehicle’s mirror - that means the driver can see you too.
- Remember, heavy vehicles such as trucks and buses along with vehicles towing trailers and caravans have an additional blind spot to the rear of the vehicle. Always use caution when riding behind this type of vehicle. As a general rule, if you can’t see the vehicles mirrors, the driver can’t see you.





Indicators and brake lights

Indicators and brake lights remind other road users that you are there and tell them what you are about to do. They need to be able to look ahead just as much as you do, and this way you give them the information they need.

Before you turn, change lanes, or merge you must use your indicators, even if you can't see another vehicle. Just because you don't see another vehicle, it does not mean it isn't there.

Send clear messages to the other traffic. Turn your indicator off when it is not needed. If you leave it on after you've made the turn you are giving the wrong message, which could be dangerous.

You can also make yourself more obvious to following traffic by braking gently and flashing your brake light, so they know that you are about to slow down.

Be bright, be seen

Consider wearing a brightly coloured or reflective helmet and clothing. Yellow, orange, and red are colours which stand out against most backgrounds.

Reflective tape on your clothing or your bike works well at night, and a reflective vest is more noticeable to drivers behind you than a taillight.

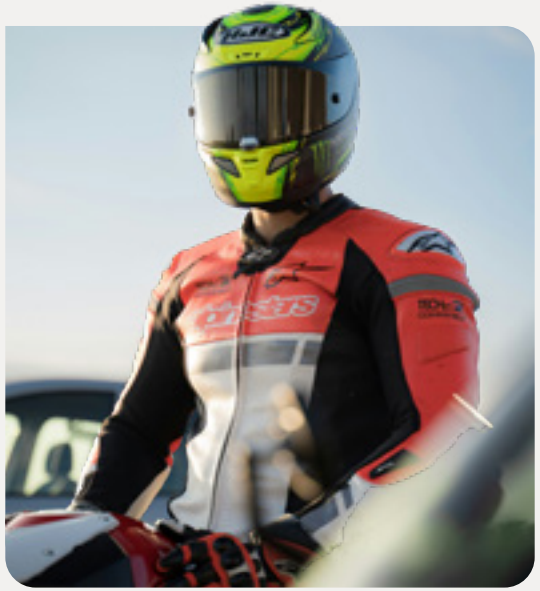
But don't rely on drivers seeing you!

No matter how visible you are on the road, there may still be drivers who simply don't see you, or who don't obey the road rules. You need to keep an eye out for these drivers and be ready to react.

Headlight

Motor bike headlights should be turned on at all times. Riding with your headlight on during the day can greatly enhance your chances of being seen, especially on dull days, but don't rely on the headlight alone. If you have your headlight on during the day, always use low beam.

If you are riding with your high beam on at night, you must switch to low beam when an approaching vehicle is within 200 metres or when the other vehicle's headlight dips, whichever is sooner. When riding 200 metres or less behind another vehicle you must also dip your headlight. Use common sense, and make sure you don't dazzle others with your headlight.



Observation

The road environment is constantly changing. This calls for high levels of observation by the rider.

Scanning

The key to good observation is scanning. Keep your eyes moving constantly, looking at the environment around you:

- in the distance.
- at the road surface.
- to your left and right.
- at your mirrors and instruments.

Mirrors

Check your mirrors every few seconds so you always know what is behind you. In particular check your mirrors:

- before changing your speed or road position.
- when preparing to turn or change lanes, especially if you plan to turn where others may not expect it, such as at laneways, driveways, and side streets.
- when you are stopped behind another vehicle.

Head checks

Like other vehicle drivers, motor bike riders have ‘blind spots’ – the road areas slightly behind you to your left and right that cannot be seen in your mirrors.

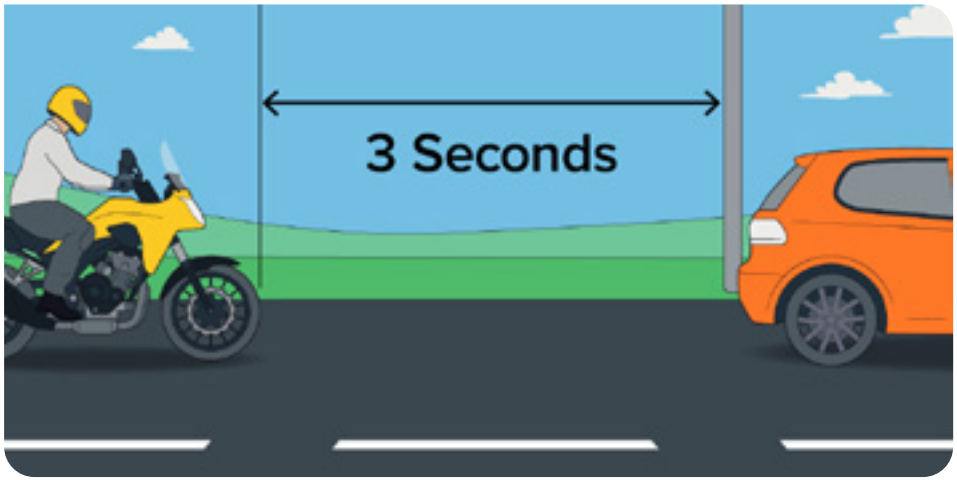
Always do a head check, by turning your head and looking over your shoulder on both sides to see the blind spots, just before you change your position on the road (make a turn, exit a roundabout, move off or change lanes). A head check is the only sure way to see if any vehicles are in your blind spots.

Survival space

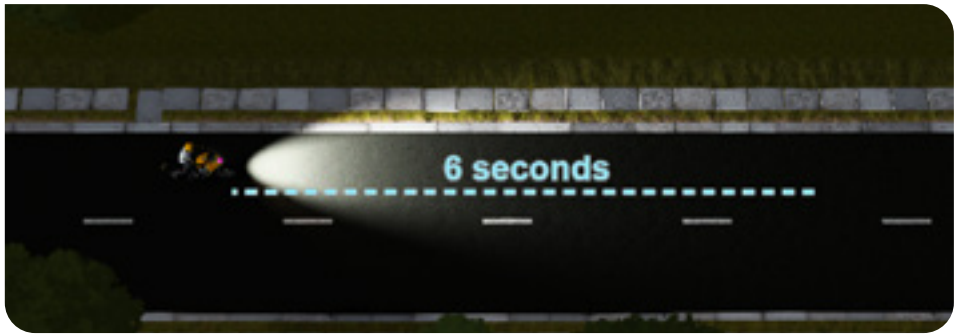
Motor bike riders need to be always prepared in case something unexpected occurs. The faster you ride, the less time you have to react and respond, and the greater are your chances of crashing and of serious injury or death if you do crash.

You need a minimum of three seconds to react and respond to a situation. An alert, experienced rider needs at least 1.5 seconds to observe, perceive and respond to a hazard – a novice rider can require much longer.

Maintain at least a three second following distance to allow you to respond to the unexpected. To calculate your three seconds, as the rear of the vehicle in front passes a stationary object, such as a power pole, tree, or sign, start counting 'one thousand and one, one thousand and two, one thousand and three'. If your motor bike passes the object before you finish the count, your following distance is too small. Slow down and repeat the count again until you get a three second survival space.



In poor conditions such as rain, night, and gravel roads, double your following distance to six or more seconds.



It is difficult to maintain a survival space behind you, as that space is controlled by the driver or rider behind you.

However, if a vehicle is travelling too closely behind you, you can slow down slightly to increase the space available in front of you. This will allow you to brake more gradually if you encounter a hazard, which will allow the following vehicle more time to stop as well.

Tip: When you stop behind another vehicle, leave at least one and a half motor bike lengths between your front wheel and the back of the vehicle in case the vehicle rolls back, or you need to ride around it. Apply the brake but remain in first gear. Watch for any vehicles approaching from behind and be ready to move off if necessary to avoid being hit

Speed Management

Like other road users, riders are required to ride within the posted speed limits. However, as the perception of speed depends on a broad range of factors, it is easy for riders to underestimate the speed. Therefore, riders are advised to check speedometers at regular intervals while riding.

When speed is doubled, braking distance quadruples. In wet and slippery conditions braking distances also increase greatly.

With an increasing speed, the foreground details become blurred, and riders are required to scan the road further ahead to gain more time to assess, plan and react. The speed limits on our roads indicate the maximum permissible speed in various locations. However, this speed is not the same as a safe speed.

The safe speed for a particular stretch of road is determined by the conditions, such as traffic density, weather conditions and visibility.

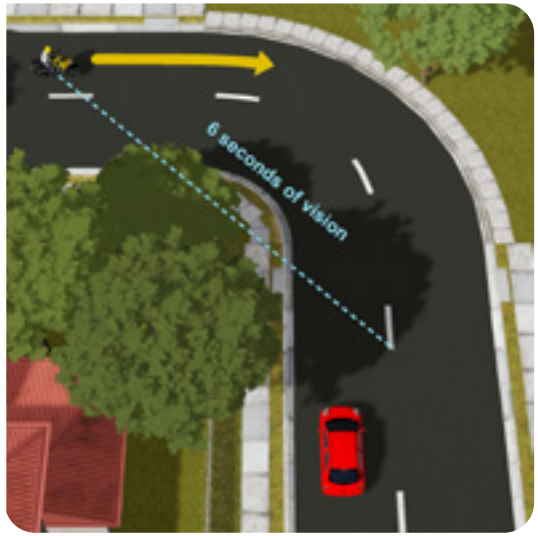
Every rider has their own speed limit; that is the highest speed at which they are safe and comfortable in any given situation. Speed must always be related to the extent of the road you can see to be clear and the ability to stop within this distance by day or night.

The onus is on the rider to select a speed appropriate for the conditions.

At all speeds, low risk riders continually keep a survival space around their motor bikes at all times. In order to determine a survival space, you need to consider:

- your ability.
- characteristics of your motor bike.
- road and road surface conditions.
- traffic conditions and speed limit.
- weather conditions.
- reaction and response time.

You must slow down if you do not have at least six seconds vision of the road ahead. Situations where your vision may be reduced include blind curves, crests, blocked intersections, and poor weather.



Space

As a rider you have very little to protect you in a crash. The more space you create between you and potential hazards the better. Moving away and creating space allows you more time to stop or take evasive action and can increase the likelihood of you being seen. Creating space is also called buffering.
Always choose a position that creates the greatest buffer zone.
Of course, that only works if you keep your eyes open and your mind alert.

In front

This is the distance between your motor bike and the vehicle you are following, and you have control over it. As an inexperienced rider, you should try to keep that three second gap between you and the vehicle in front, so you:

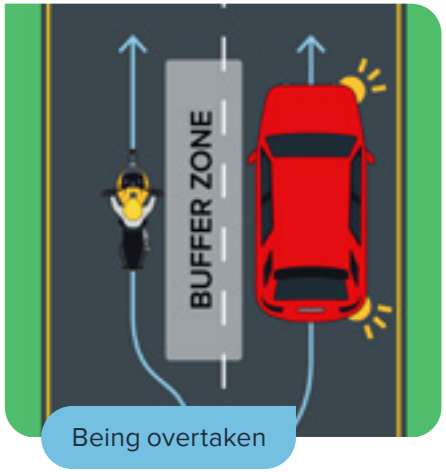
- have more time to stop in an emergency.
- can see much better over the top of and around the vehicle in front of you.
- can see traffic signals, road signs and hazards well ahead.
- are able to avoid potholes and other road surface hazards.
- have more time to plan your response.
- can search, evaluate and execute.
- can start wide and finish tight in curves.

Tip: Never tailgate. A car can almost always out-brake an inexperienced rider in an emergency. More importantly, tailgating does not allow for sufficient reaction time.

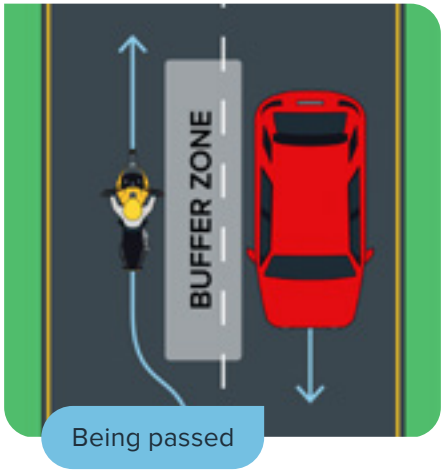
To the side

Motor bike riders have an advantage over car drivers. You can move from one side of your lane to the other to increase distance from other vehicles. Experienced riders move lane position depending on traffic – but they always check their mirrors and do a head check before they do! Consider changing your lane position when:

- You are being overtaken or passed by another vehicle. There is no point in being closer to another vehicle than you need to be. Nearly a quarter of all collisions between bikes and other vehicles involve vehicles coming from the opposite or adjacent direction.



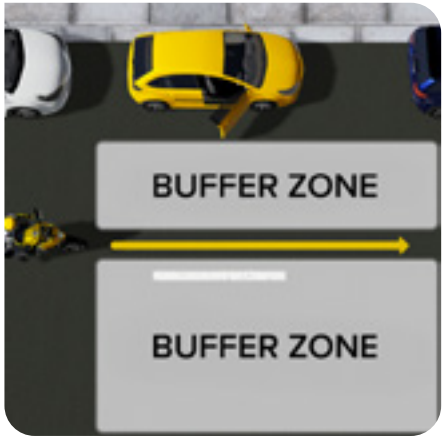
Being overtaken



Being passed

- You are near a large truck or bus. They can cause wind blasts that affect your control.
- You are approaching an intersection. Place yourself where you have the best possible vision and are well clear of other traffic. About half of all collisions between motor bikes and other vehicles happen at intersections. If you see a car that could turn into your path, or pull out on you, assume that it will and be ready for it.

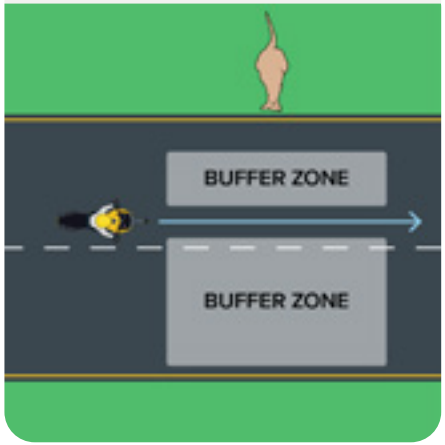
- A driver is pulling out from the kerb. Some people don't check properly if there is traffic coming up, and bikes can be hard to see. The car might do a U-turn instead of just going straight ahead, so approach carefully. Be ready to swerve or stop and to sound your warning device as a warning.
- You are passing parked vehicles, or vehicles waiting to turn left. Keep to the right part of the lane, away from the possibility of doors opening or pedestrians stepping out from between parked vehicles.
- You find yourself sharing a lane. You need a full lane to yourself to be able to move safely if a problem comes up, instead of being trapped in a small space that could disappear.
- It can be a dangerous situation when riding between rows of cars even when one or both rows are stopped. A car door could open, a pedestrian might suddenly appear, or a car might move out from the kerb and close the space you need. To stop vehicles from sharing your lane, position yourself to be seen and so that you are riding with enough space to maintain an adequate buffer zone.



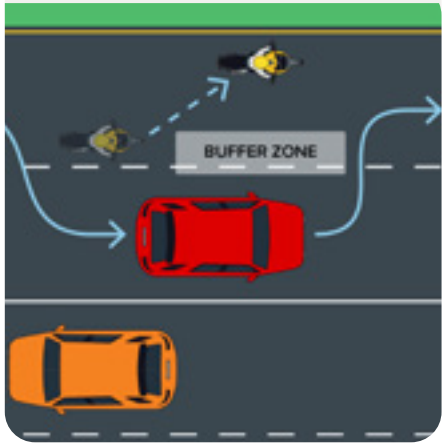
- If there are other vehicles alongside, don't ride next to them if you don't have to – they restrict the space you have to move, and they may move over on you at any time. Move forward or drop back until you are in a free space.

When vehicles are merging, such as freeway entrance ramps, make room for entering traffic by changing speed or changing lanes.

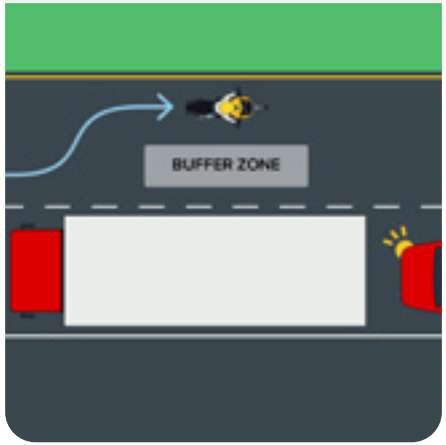
When riding on open roads, create space from the wildlife by riding on the right side of your lane.



When being overtaken by another vehicle, create greater space from the other vehicle by moving to the left of your lane.



Creating space from larger vehicles can improve your vision of the road ahead and make it easier for other motorists to see you.



Behind

Unfortunately the driver behind you has more control over the space between you than you do. If someone is too close (tailgating), drop back yourself to increase the survival space between you and the car in front, then let the tailgater overtake you. Such drivers are better in front of you, where you can keep an eye on them.

Blind crests

Blind crests, like any situation where you can't see the road ahead are potentially hazardous – take care and be prepared to take action.

As you approach a blind crest, slow down and choose a road position to create space from known and potential hazards. This position should also increase your ability to see hazards and be seen early by other road users.

When approaching blind crests, look for clues as to where the road goes. Slow down and select a road position to suit.

Laned roads

Laned roads increase your risk of potential hazards and collisions on the road - vehicles moving between lanes, and potentially into your path, or stopping suddenly are the biggest dangers.

Road users may change lanes without checking for other traffic, or even if they do look they may fail to see you. There are no guarantees other road users will see you – if another vehicle can enter your path, assume it will.

When riding on laned roads be extra vigilant - choose a road position to create space from other vehicles and slow down to maintain a three second following distance.

Overtaking

Overtaking other vehicles is potentially hazardous – take care and never speed when overtaking. Where possible use overtaking lanes that allow you to overtake safely.

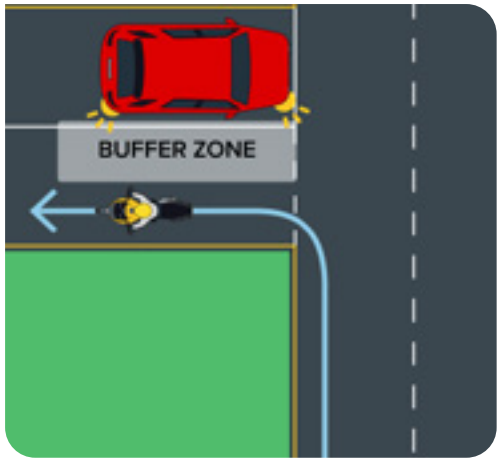
- When overtaking create a buffer from the vehicle you are passing.
- Before overtaking check for side streets and concealed driveways, particularly in country areas.
- Before turning into a street or driveway, perform a head check for vehicles that may be overtaking you.
- Before you start overtaking ensure you have clear vision of the road ahead and sufficient time to complete the manoeuvre.

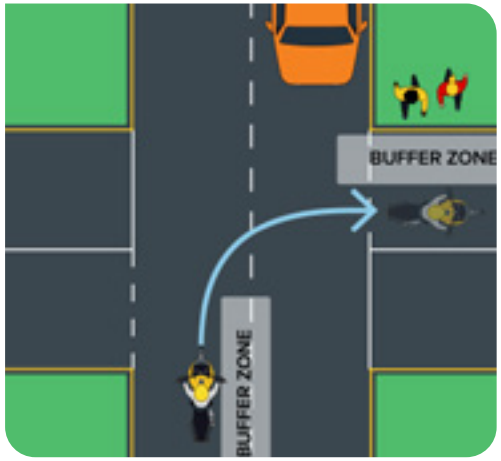
Turns at intersections

Turning left or right at intersections have their own associated risks. Maintaining good observation and creating a buffer zone will help to reduce the risks.

- Before turning into a street or driveway complete a head check for vehicles that may be overtaking you.
- Maintain a buffer from oncoming traffic while you are waiting to turn right.
- When turning left from a single lane, start the turn as near as practicable to the far left side of the road. Buffering hazards as you exit the turn.
- When turning right from an unlaned road, start the turn as near as practicable to the far right of the lane or middle of the road, buffering hazards as you exit the turn.
- When turning left from an un-laned road, start the turn as near as practicable to the left side of the road. Buffering hazards as you exit the turn.

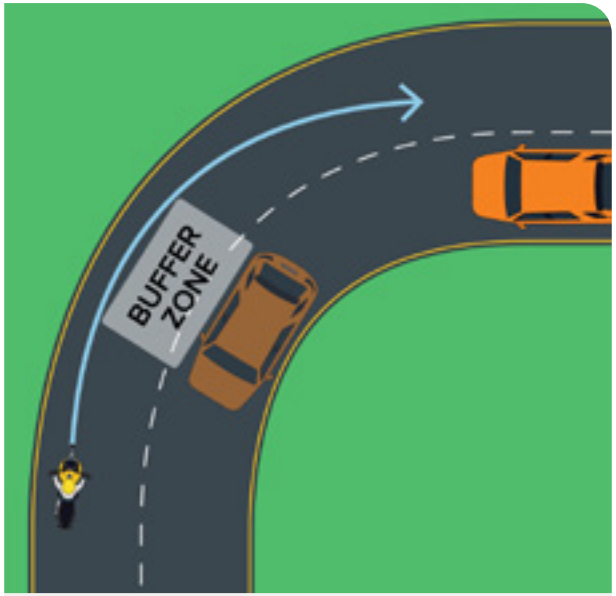
Remember: When turning left or right you must give way to any pedestrians crossing the road into which you are turning.



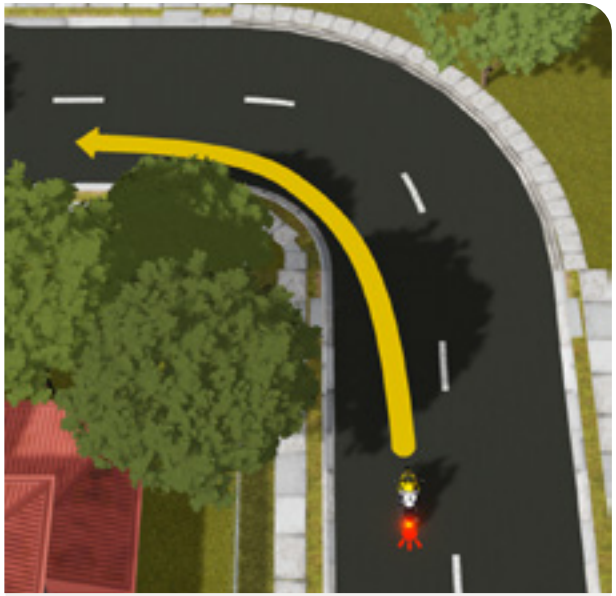


Riding curves and bends

Starting curves wide will improve your vision. Planning to finish them in tight will help you get your speed right and leave you room for slight errors. Most importantly, keep away from the area where oncoming vehicles are likely to cross the centre of the road (the head on zone). Negotiating curves and bends this way will slow you down a little on the approach but will allow you to accelerate out much earlier when you have a clear view.



When negotiating right curves slow down and keep to the left until you see the road is clear of oncoming traffic.



On blind left curves slow down and begin to move left as vision becomes limited.

Remember: Plan to start curves wide for vision. Plan to finish in tight. Keep away from the head-on zone.

Make sure braking is done prior to negotiating the bend so that the motor bike is under control, particularly during inclement weather.

The danger of exiting wide

Many riders try to straighten out of turns too quickly, resulting in the motor bike running too wide on the exit. This is dangerous as it allows no room for error: if the curve tightens up or changes direction, the rider needs to work harder to complete the turn. It also greatly increases the risk of a head-on collision on right curves.

When a rider exits a curve wide there is no room for error.

Turning-in too early will reduce your visibility around the curve and can result in a head on crash or running wide on the exit.

Turning-in too late will mean you end up on the wrong side of the road or running off the road.

> Many crashes happen because riders run too wide or too fast (or both) on the exit of a turn.

Planning a series of curves

Starting curves wide and planning to finish them in tight allows you to link a series of curves together.

By exiting each curve in tight you will be perfectly positioned for the entry into the next curve.

> If you see an oncoming vehicle, remember the importance of creating a sufficient buffer zone.

Hazard Perception and Response (S.E.E.)

When riding, hazard perception is critical to your ability to manage unexpected and potentially dangerous situations on the road.

Your ability to spot hazards depends on your attention, perception, and information processing skills. This is referred to as Search – Evaluate – Execute (S.E.E.). When you have attained these skills, when riding a motor bike (or driving a vehicle) you can:

- **search** – detect any potential hazard,
- **evaluate** – appraise the hazard as a threat that requires you to respond, and
- **execute** – select and apply an appropriate response.

The three second rule can be used in response to hazardous situations, however, there is potential for other vehicles to accelerate or steer into the space. For example, a vehicle in an adjacent street could fail to give way and accelerate out, or a vehicle approaching could turn without warning into an intersection and steer across your path.

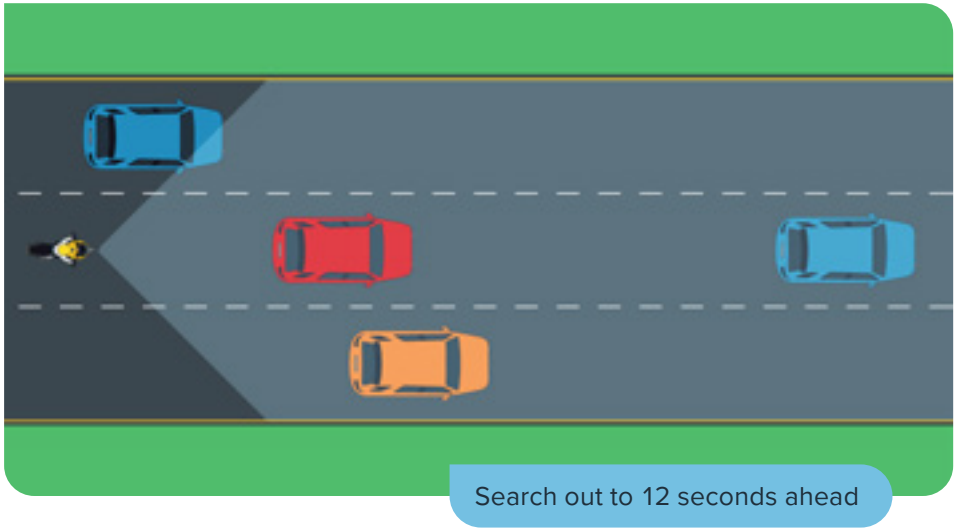
Experienced low risk riders can mentally judge a three second space in front of their motor bike. If there is potential for a hazard to enter this survival space, your response should be:

- slowing down ('setting up' or covering the brake).
- moving away, creating a 'buffer' from the hazard by changing your position on the road or changing lanes.

Search

Search refers to the process of scanning ahead for potential hazards. Searching provides you with the necessary information for you to make good decisions and take proper action. Good searching extends beyond what is immediately in front of you to include everything into the distance, as well as the areas to the sides and behind you. Many motor bikes have convex mirrors that allow the rider to see farther to the sides, but these can also distort your sense of how far away an object actually is. Searching incorporates many of the riding principles previously mentioned.

- Look approximately 12 seconds ahead of the motor bike; scanning to pick up the whole scene.
- Slow down when vision is reduced and always have at least six seconds vision of the road ahead.
- Check mirrors prior to changing speed (slowing down or speeding up).
- Check mirrors and head check prior to changing road position (within your lane or into another lane).
- Check mirrors prior to any situation where you might need to brake, e.g., approaching traffic lights or a hazard such as a vehicle waiting to turn across your path.
- Check mirrors and head check prior to moving off from a stationary position (at intersections do a red light runner head check).



Your search efforts are most effective if you can prioritise the elements of the traffic environment. There are three primary categories of information that should be monitored as part of your search activity:

- Traffic control devices and markings.
- Road environment and surface conditions.
- Other road users – motorists, pedestrians, cyclists etc.

Any one of these three can be more or less important than the others, depending on the situation. Monitor all three of them together, shifting focus as the situation demands, and you will have the information necessary to ride safely.

Remember, the most common area for a crash between yourself and other road users is at an intersection. A common motor bike / vehicle crash at an intersection is caused when an oncoming vehicle turns right into the path of an approaching motor bike. Because of this, using the S.E.E. technique is especially critical at intersections.

Evaluate

To evaluate is to process the information that you gathered using your search patterns. Evaluating means simply to anticipate potential problems and to make plans in your mind to deal with those problems should they come about. Evaluating effectively is a logic puzzle of sorts, a game of figuring out how factors accumulate and interact to create hazards or conflicts.

The fundamental rule of successful evaluation is this: “to get the best results, predict the worst possible outcome”. Though this might sound counter-intuitive, predicting a worst-case scenario will help you to best anticipate all possible outcomes. Predict a green traffic light will soon change to red; predict the curve is sharper than it looks; predict that another vehicle will cross into your path.

Take clues from your surroundings and assemble them into a reasonable scenario. Arrange these clues based on the likelihood that they would contribute to a hazard. Ask yourself:

- How critical is the hazard?
- Might it lead to a crash? If so, how probable is that crash?
- Where would that crash occur?
- What decisive actions (downshifting, braking, swerving) might I have to take to avoid this sort of a crash?
- What are the potential consequences of this hazard?
- How might the hazard – or my efforts to avoid it - potentially affect myself and other road users?

Execute

A skilled rider is a decisive rider. Once you've adequately evaluated a situation and decided on a course of action, execute it. Resist the urge to pause or second-guess. Instead forge ahead with your carefully crafted plan of action. Remember, especially in a critical situation, time and space are at a premium. Act decisively and immediately to maximise your response time and keep your buffer zone as big as possible.

The degree to which you can adjust your lane position or speed depends on how critical the hazard is and on how much time and space you must make these adjustments. Remember to cover both brakes and your clutch, and ready your mind with possible escape routes.

The failure of motorists to detect and recognise motor bikes in traffic is one of the leading causes of motor bike crashes. The driver of the other vehicle involved in a crash with the motor bike did not see the motor bike before the crash or did not see the motor bike until it was too late to avoid the crash.

Learn to S.E.E. better. Gather good information, process that information properly, and make the best decision to ensure your own safety – whether it involves oncoming traffic or not. Take steps to actively manage your situation. Understand completely the importance of timing, positioning, and the use of space. Ride defensively. Assume that you are completely invisible to other motorists and respond accordingly.

> Control your ride – don't let your ride control you.

Basic riding techniques

The key to good riding technique is smoothness, and the key to smoothness is good preparation and practice.

Steering technique

A motor bike can be steered using a number of different inputs. Handlebar pressure, body weight and changes in speed all influence a motor bike's direction of travel. Good riders use a combination of these inputs to achieve smooth and precise turns.

Handlebar pressure

A motor bike can be steered by direct steering or counter steering. With direct steering the motor bike goes in the direction to which the handlebars are turned. Counter steering makes the bike lean; it is the lean of the bike that causes it to corner. With counter steering the motor bike goes in the opposite direction to which the handlebars are turned, for example a slight forward pressure on the left handlebar will make the motor bike turn left. Direct steering is only used for very low speed turns, such as U-turns and turns at intersections. Counter steering has more effect as speed increases.

Body weight

How a rider uses their body weight will have a significant effect on a turning motor bike. Leaning with the motor bike in a curve allows the motor bike to be more upright thereby giving the tyres better grip and the motor bike greater ground clearance. With low-speed turns, leaning out from the turn can help balance the motor bike.

Effect of speed

The faster a motor bike is travelling the harder it is to turn. Reducing speed before turning is essential. Wait until the motor bike begins to straighten before accelerating. Accelerating will stand a motor bike up and too much will make the motor bike run wide.

> During very low speed turns, for example U-turns, a gentle use of the throttle, clutch and rear brake can be used to control speed.

Braking technique

Correct braking is done in two stages:

- put light pressure on the brake pedal and pause (set up the brakes).
- progressively apply the necessary braking pressure (squeeze).

Two-stage braking makes braking more effective, reduces the chance of skidding and gives you better control.

Harsh or excessive braking pressure may cause skidding and a loss of control, particularly on wet or gravel roads.

> Applying the front brake in a curve can make the motor bike run wide.

Foundation skills

The information in this section has provided you with the basic knowledge required to safely control and operate a motor bike. This will prepare you to undertake the Rider Knowledge Test and to attend the required Rider Safe courses.

When you attend the Motor Bike Learners Course, the Rider Safe instructors will teach you all the foundation skills you will require to build on and to become a competent rider. This includes:

- Balance and posture
- Use and operation of all controls
- Steering techniques – turns and corners
- Braking techniques
  - Turns
  - Corners
  - Straight line
  - Emergency
- Slow speed manoeuvres
- Observation
- Correct road position
- Safe riding

Risk factors

> Beware of the risks... There are more hazards out on the road than a beginner can imagine, so it makes sense to try to be ready for anything.

Risk factors

Your beliefs and choices you make will affect how safe you are on the road. Riding requires your full concentration – your survival depends on awareness, anticipation and judgement.

Factors that can increase your risk when riding include:

- Attitude
- Behavioural factors
- Physical factors
- Social context
- Riding environment
- Road surfaces

Attitude

How you think and feel is reflected in how you act and interact with others – the right riding attitude can help to keep you safe on the road.

Riding defensively, anticipating potential hazards, and planning your response, is your first line of defence. You must be focussed on the task of riding – continually evaluating the riding environment and looking for clues about potential hazards.

Anticipating other road users' actions and dangers in the riding environment means you will be ready to respond.

> Expect that other road users will make mistakes – be patient and treat other road users with respect.

As much as you can control your own attitude and behaviour, you can't control the behaviours of other road users.

If you are the target of aggression or inappropriate behaviour don't succumb to the behaviours of others. Remain calm and create space between you and the other road users. Reacting to aggressive behaviour with shouting or offensive gestures may further fuel the aggression and lead to a more unsafe situation.

Behavioural factor

Alcohol and drugs

Don't drink and ride - drinking alcohol impairs your ability to ride safely. Alcohol affects your vision, hearing, reflexes, coordination, balance, mood, judgement, and response time. Even a small amount of alcohol increases your risk due to your reduced riding capability.

You need to remember that it is not just your mistakes that become dangerous. If you have been drinking, you may not be able to respond quickly to others' mistakes.

> All learner, provisional and holders of an R-Date licence classification, irrespective of whether you hold a full licence are restricted to zero blood alcohol concentration (BAC) and zero drug detection.

Many drugs can also impair your ability to ride safely. This includes prescription drugs and over the counter drugs, such as cold or allergy tablets, as well as illegal drugs. These drugs can leave you weak, dizzy, drowsy, or slow to respond.

Drugs affect your vision, reflexes, coordination, balance, mood, judgement, and response time, increasing your risk of a crash.

Make sure you know the effects of any medication you're taking before you ride – check with your doctor or pharmacist and read the label. If it has an effect on your riding, you must not ride.

You must not have any trace of a prescribed drug in your system when riding, including THC (the active component in cannabis), methylamphetamine (speed, ice, or crystal meth), MDMA (ecstasy) or a combination of these drugs.

You may be randomly tested for these drugs and alcohol at any time. Remember, it is an offence if you refuse to take a drug or alcohol test when requested by a Police Officer.

There is no set time for drugs or alcohol to clear your system, so if you have taken drugs don't ride.

The only way to remove alcohol from your system is to allow the body time to process it. Showers, coffee, and fresh air won't reduce your BAC.

Thrill seeking and riding aggressively

Riding can be fun and give you a sense of freedom, but you need to remember that you are also vulnerable – you have little protection if things go wrong. Thrill seeking, speeding and riding aggressively all increase your risk of crashing. Ride to survive by making choices that minimise your risk.

Survival Reactions

When riders are in a situation where they feel a loss of control which may result in a crash, survival reactions can kick in. Loss of control is more likely when riders engage in thrill seeking behaviour. Survival reactions can include freezing and tightening the grip on the handlebars, not steering, and braking incorrectly. Some highly experienced riders believe that by developing high level defensive riding skills such as emergency braking and obstacle avoidance it is possible to overcome the natural tendency to make instinctive skill errors when their survival is threatened.

You can get stuck in a survival reaction when the road environment you're riding in becomes stressful enough to trigger the survival reaction (or two). These survival reactions are:

Chopping the throttle

Letting go of or releasing the throttle quickly. When this happens, the engine acts as a brake and all the weight is shifted onto the front wheel.

Tightening on bars

Also known as a 'death grip', is when your hands effectively become locked to the handlebars. The consequences are that if the bike is bouncing, your right hand will inadvertently bounce on the throttle creating sudden acceleration chopping of the throttle.

Narrowed and frantically hunting field view

This is when you are looking everywhere around you due to an intense amount of traffic or distractions and, as a result, you end up not seeing or focusing on anything.

Fixed attention (target fixation)

Target fixation is focusing your observation onto a single object or point such as a vehicle, or a pedestrian and not using your observation skills to see what is happening around you.

Steering toward the target you are fixated on

This is when your body aligns to the object you are fixated on, and you end up riding towards or straight at it.

Freezing (no steering)

When the panic sets in and your body freezes and does not act or react to the situation.

Braking errors (including under and over braking)

Braking when you shouldn't, not braking when you should, not braking correctly, or not braking at all. Under braking before a corner will result in entering the corner too fast. Over braking can result in locking up one or both wheels resulting in a skid and loss of control.

Research suggests that most motor bike crashes are only partly related to a lack of skill resulting in mistakes by the rider. Other factors such as speeding, dangerous riding practices, poor rider preparation and inattention are commonly reported as causing serious casualty crashes.

Physical factors

Mood

You act and respond differently when you are angry, stressed, or unhappy. Your concentration, judgement, and ability to make good riding decisions can be impaired by a bad mood and you are prone to make mistakes. Improve your safety by not riding when you are angry, stressed or unhappy.

Fatigue

Riding a motor bike is much more tiring than driving a car. Many people associate fatigue with falling asleep at the controls, but a lapse in concentration is as dangerous for riders.

Indicators that you are suffering from fatigue and a lapse in concentration include:

- arriving at a corner more quickly than you expected.
- running wide on a corner.
- rough gear changes.
- failing to see a sign.
- daydreaming.
- yawning and a dry mouth.
- stiff joints (neck, knees and wrists).

> If you feel fatigued, don't ride.

Tips to help manage fatigue on a long trip:

- Get plenty of rest and fluids before starting out.
- Stop about every one-and-a-half hours, or every 150 kilometres – even if you don't feel tired.
- Drink plenty of water to keep hydrated.
- Avoid too much coffee and sweet soft drinks.
- Do not drink alcohol.
- Eat small amounts frequently - simple foods like fruit, nuts, a muesli bar or a little chocolate.
- Avoid fatty foods and large meals before or during a ride.
- In winter, dress to protect yourself from the cold - a drop in your body's core temperature slows decision-making and reaction times. But don't make yourself too warm.

Dehydration

It's surprising how quickly you can become dehydrated when riding. This is particularly true when riding long distances. Dehydration can increase fatigue, impede your judgement, and slow your response times. Help avoid dehydration by:

- stopping and having a drink of water every 1.5 hours, or more frequently in hot weather.
- wearing gear that allows your body to 'breathe'.
- using a hydro-pack.

Social context

Groups

Riding with a group can be fun, but it also brings pressure to conform with attitudes and behaviours of the group. Who you ride with can affect your behaviour and attitude toward risk, positively or negatively, depending on the group.

When you are new to group riding it is easy to get pushed into situations that are beyond your comfort zone or ability. Improve your safety by either not riding in a group, or by only riding with people you trust, who share your motivations and attitudes to riding and will respect your experience level.

Help avoid the potential pitfalls of group riding by:

- choosing a group that respects and protects its members – riding to the least experienced rider's ability.
- planning ahead to ensure you know where the group is heading and some meeting points if you get separated.
- riding to your ability and not taking risks to keep up with the group.

Riding 'single file' allows every rider to buffer hazards and if a three second following distance is maintained, vision is less affected.

Riding 'staggered file' can be dangerous. Riders are unable to buffer hazards and vision is reduced by the other motor bikes in the group.

Carrying a pillion passenger

You must not carry a pillion if you are a learner rider. To carry a pillion your bike will need a seat designed to carry a passenger and footrests for them. The pillion's feet must reach the footrests; keep this in mind if carrying children - who must be aged eight years or older to travel as a passenger.

Pillion passengers who are not used to being on a bike may react unpredictably, so ask them to relax, hold onto the bike's 'grab rail' or your waist and follow your lead when leaning. Pillions should wear the same kind of protective clothing and helmet as riders. If you are going to ride with a – pillion passenger:

- increase your following distance and leave more time to speed up and slow down.
- make changes in direction, speed and braking smooth and easy to predict to help your passenger respond.
- brief your passenger on how to mount and dismount, where to hang on, and how.
- the motor bike must have an approved seat and adequate footrests for the passenger.
- your pillion passenger should keep both feet on the footrests even when you are stationary.

Remember, you cannot carry a pillion passenger if you are a learner rider.

If it's possible, you should adjust the preload of the bike's suspension when you are carrying extra weight. Check your owner's manual for instructions. You may also have to add air to the tyres.

Adjust your mirrors with you and the pillion both sitting on the bike.

Carrying a load

Bikes are not designed to carry large loads, but if you distribute the weight evenly there is no reason why small to medium loads should be a problem.

The owner's manual should give you the total amount of weight the bike is designed to carry, including rider and pillion.

There are many different kinds of luggage available for bikes, including panniers or saddlebags, tank bags and seat bags. You may want to use more than one of these to balance the weight when you load your bike.

Keep the load:

- **Low** – ideally by putting it in the panniers or on the seat. If it is high, it may unbalance the bike. Don't carry anything heavy or unwieldy on your back.
- **Forward** – by placing it above or in front of the rear axle. Anything behind the rear axle can have a serious effect on handling.
- Balanced – by filling panniers evenly or strapping heavy loads onto the seat.
- **Secure** – by putting it in one or more of the bags mentioned above or strapping it carefully to the bike. A loose load or strap could catch in the rear wheel or chain and cause a crash.
- Finally, check the load frequently to make sure that it is still secure.

Riding environment

Night

Riding at night is considerably more dangerous for riders. Riding at night reduces your vision and makes it harder for other road users to see you.

The risks of you hitting an animal, misjudging a curve, or not seeing a hazard on the road surface are greatly increased at night when your vision is reduced. Other motorists' vision is also lower and other lights may make it difficult for them to see your headlight or taillight. They may also have difficulty judging the distance and speed of your motor bike because of the single headlight.

When riding at night take extra care and apply strategies to:

- ensure you can be seen – check that your lights and indicators are working properly and wear reflective or fluorescent clothing.
- maximise your vision – avoid wearing dark, tinted or scratched eye protection, travel on well-lit roads, and use high beam (except within 200 metres of another vehicle).
- give yourself time to respond – slow down to maintain at least six seconds of vision and increase your following distance. You must be able to stop within the distance you can see.

When being approached by an oncoming vehicle, do not look directly at the headlights. Keep to the left of and watching slightly to the left.
If you get dazzled by the vehicle's headlights, slow down or stop until your eyes recover.

> Make sure that any reflectors and all indicators and other lights on your bike are clean. Seriously consider wearing a reflective vest when you ride at night.

Heavy traffic

Riding in heavy traffic increases your risk of a crash due to reduced visibility, more vehicles turning and changing lanes, increased frustration levels, and exposure to fumes.

Heavy traffic makes it harder for you to see and be seen among the other vehicles, and exposes you to potentially poor decisions from fatigued, frustrated, and impatient road users. When riding in heavy traffic apply strategies to:

- ensure you can be seen - wear reflective or bright clothing.
- maximise the predictability of your riding - avoid unnecessary lane changes.
- give yourself time to respond - slow down and increase your survival space.

You are also vulnerable to exhaust fumes when riding in heavy traffic. Over-exposure to exhaust fumes can lead to fatigue and headaches, impeding your concentration and judgement.

Reduce your exposure to fumes by:

- avoiding riding in heavy or congested traffic.
- stopping and resting, away from the road, every 1.5 hours.

Large and oversized vehicles

Large and oversized vehicles need to make wide turns – so be careful when you are travelling near a large vehicle that is turning or negotiating a roundabout.

Do not overtake once the driver has signalled an intention to turn. Keep back from the intersection as it will require more road space to make the turn.

Remember, they need more space than a car when stopping, so be courteous and avoid overtaking and then cutting in at traffic signals, roundabouts, and other locations where traffic queues occur.

> If you can't see the truck's side mirrors, the driver can't see you.

Exposure

Being cold is stressful and tiring - you become less alert, and your response time slows. A drop in your core temperature can even affect your brain's function. Cold riders can become anxious, irritable, or detached from the task at hand.

Insulated, windproof gear helps maintain your core temperature - the insulation keeps a layer of warm air between your body and the shell. Avoid gear that is baggy or too big, as flapping and buffeting may force the warm air out. Pay particular attention to keeping your neck, face, hands and feet dry and warm.

Weather hazards

Weather conditions can vary and change quickly. When riding you should be prepared for a variety of conditions on the road. Below are some conditions you may encounter when riding and hints and tips on how to manage them safely.

- Bright sunshine may cause significant dazzle – be aware that road users in front of you may have difficulty seeing you before they overtake or change lanes.
- Sunrise or sunset will make it hard for you to be seen by other motorists - exercise extreme caution when riding at these times.
- Heat haze can hide approaching vehicles from you – take extra care to ensure the path is clear before you overtake other vehicles.
- Fog reduces visibility and your perception of speed – slow down and increase your following distance to allow yourself more time to respond. Avoid the temptation to closely follow another vehicle to see its lights and path of travel.
- Rain can significantly reduce visibility, and water on the road will affect your braking - slow down and increase your following distance to allow yourself more time to respond. Remember that after a long dry spell the road can become slippery, increasing your stopping distance.
- If spray from other vehicles makes it difficult to see, slow down and drop back until you can see clearly.
- Avoid painted arrows and road markings as they can be very slippery when wet.
- If you have to ride through a deep puddle ride slowly in low gear and after you are clear of the water, test your brakes.
- High winds can cause strong gusts when entering or emerging from under bridges or riding into open country, and can cause vehicles, especially high sided ones, to veer suddenly. Keep your speed down and create space from other vehicles as wind buffeting can affect the handling of your motor bike.

Riding in unfavourable weather conditions is tiring, so watch for the signs of fatigue, and rest if necessary.

Animals

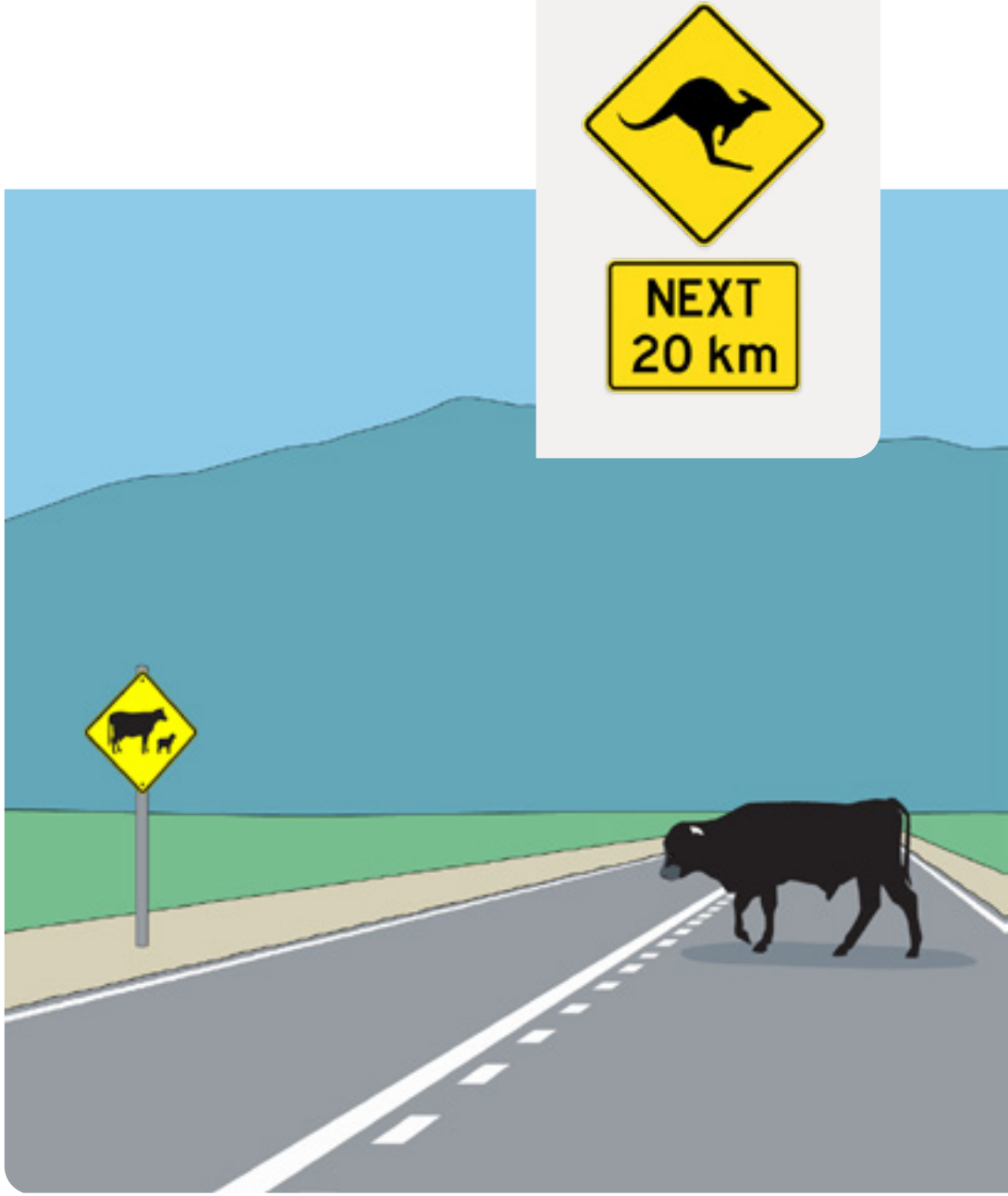
Animals are a difficult problem because they are unpredictable. You should always try to avoid hitting them, but don't leave your lane or run off the road to avoid a small animal. You have a much better chance of surviving an impact with a small animal than with another vehicle or a roadside pole.

Don't try to kick dogs even if they are chasing you. Slow down as you approach them. Be careful that they don't run under your front wheel, then speed up a little when you are past them. They will usually lose interest quickly.

Animals on the road can pose a significant risk for riders. Animals are more active around dusk and dawn and are often confused by the sound of a vehicle, running towards it instead of away.

The most effective way to keep the local wildlife and yourself safe is to try to avoid travelling at the high-risk times of dawn and dusk, and if you have to travel reduce your speed and be aware of the unpredictable nature of animals.

Even if an animal appears stationary near the edge of the road or is moving away, slow down, give them plenty of room and be alert – animals are easily startled and can run in front of your motor bike. If a large animal, such as a kangaroo or cow, suddenly appears on the road in front of you, brake firmly. Do not try to swerve (unless it is unavoidable) around the animal as you are likely to run onto the gravel verge and lose control.



Road surfaces

Consider that the two patches of rubber connecting you to the road surface are about the same size as the palm of your hand. The risk of losing control of a motor bike can increase because of deterioration in the road surface, such as potholes, wheel ruts or grooves, slippery surfaces, and loose gravel.

Just under half of bike casualty crashes involve loss of control.

Always try to be aware of the road surface conditions, and if necessary, adjust your riding technique and speed to suit the conditions.

Uneven road surfaces

Don’t panic

Panic can lead to tension and poor decision-making. If you feel your heartbeat racing, stop, and take a few deep breaths before proceeding. Mentally review the techniques you were taught to successfully face the challenges ahead. Keep your body relaxed – ease your grip on the handlebar and loosen your shoulders.

Don’t overreact

The main challenge of unsealed roads is the lack of traction compared with bitumen roads. You might feel the motor bike moving around a bit underneath you due to the road surface, this is normal. Don’t overreact; go with the flow.

Sharp inputs to steering and braking can work against you on dirt and gravel surfaces. Sudden, jerky movements are more likely to lead to loss of traction and control. Instead, focus on making gentle inputs.

Keep your feet up

Keep your feet on the pegs while you ride. Fight the urge to put your feet down and scoot your boots along the ground. This can be dangerous if your foot gets caught on something in the road. When things get especially rough, it’s a good idea to put more weight on your feet and use your legs to absorb some of the bumps.

Take your time

The chances are there is not going to be a lot of traffic on a dirt road. With less traffic, you are able to slow down and taking your time, which will help you react to obstacles and be extra cautious.

If there is a car behind you, don’t let it pressure you into riding faster than you feel safe or capable of. If necessary, find a place to pull over and let them pass.

Use more rear brake

Since traction is reduced on loose surfaces, the general principle of using mostly your front brake isn’t quite as effective on unsealed roads. Try easing off the front brake and use more of the rear – adjusting your braking times accordingly.

Sloping roads

On a high crowned road, where the centre is much higher than the sides, the slope of the road will try to push you to the edge. This can be a worry especially in right-hand curves. Be aware of it, slow down and maintain your position on the road.

Corner carefully

The basic rules of good cornering – slow, look, lean and roll - are even more important when riding on unsealed roads.

Start slowing down sooner than you would normally, easing off the throttle and using minimal braking inputs. Carefully scan the road ahead to identify your best line and any potential hazards. Lean the bike into the turn by pushing on the handlebar in the direction you want to turn.

However, if a corner is particularly dangerous, shift your weight a little to the inside of the curve. This will keep the bike more upright and lessen the possibility of losing traction as you make the turn.

Finally, gently roll on the throttle as you complete the turn to straighten the bike and get back up to speed.

Unsealed roads

If you keep a few fundamentals in mind, you can safely negotiate and ride along an unsealed road, loose gravel and sand.

Relax

If riding on dirt roads causes you to tense up, you'll have a more difficult time maintaining control. Instead, keep a slightly looser grip on the handlebar, with your arms and shoulders relaxed. The natural unevenness of a dirt road will transmit a little vibration up into your handlebar.

Slow down

Slow down but keep a steady hand on the throttle. Avoid sudden acceleration or braking. Keep your eyes on the road ahead, looking for holes, large rocks, and other obstacles. Avoid them if you can, but not if it means swerving suddenly. Don't override your ability to react smoothly; adjust your speed accordingly.

Large bumps or obstacles

If you have no choice but to ride over a large bump or obstacle, approach it as you would any other; keep the bike as vertical as possible, approach the obstacle head-on, and lift yourself out of the seat a bit to absorb the impact with your knees instead of your spine.

During rain and on wet surfaces

Due to modern tyre technology, riding in the rain is more manageable than ever. There's no reason you can't keep a good ride going just because it starts to rain.

Maintaining traction

The key is maintaining and maximizing traction. Do this by slowing everything down a little, your speed, your hands, and your feet.

Remain relaxed, don't panic and avoid doing anything suddenly. Slowdown gradually and turn at a speed that allows you to keep the bike more upright than usual and then accelerate out of the turn more gently than usual. Remember that you'll need more time and space to stop, so stay extra alert to what's in front of you and apply the brakes as gently and gradually as possible.

Standing water

When you approach standing water on the road, slow down even more as you approach it. Don't brake or accelerate as you pass through the puddle, but don't slow down either. Any input you make will adversely affect traction.

Beginning of a rain shower

The beginning of a rain shower is when the roads are most slippery due to oil and other contaminants washing away from the road. It is worst in the middle of the road, so do your best to stay in the tyre tracks of a vehicle in front of you.

Snow and ice covered roads

This is not something we have to deal with a lot in South Australia. However, if you're planning a trip to the alpine areas of New South Wales or Victoria, you may come across areas of snow and ice on the roads. Snow and ice are best avoided altogether, but there might still be times they take you by surprise. You may even encounter this around your area, the Adelaide hills for example, on cold wet winter days. Icy patches can remain long after the sun has come out – on bridges, in shady spots, and various other places. Traffic signs will provide advice in areas where it may get icy and slippery on the road.

If you can't avoid them, approach these spots just as you would a puddle, slow, steady, and upright, with no steering, braking, or throttle inputs.

Grooved roads

Every now and then you will come to a road that has had grooves cut into it. This is usually to help make it less slippery in the wet - there's a warning already! Grooves are rarely a problem if you stay relaxed, maintain your speed and direction, and just keep riding. Try to slow down as much as is safe before you get to the grooving.

Tram tracks and railway lines

Train and tram tracks and motor bikes don't mix very well, especially when it's wet. The key to crossing tracks safely is to cross as close to 90 degrees (perpendicular) to the track as possible. If the tracks are slanted across the road, slow down as much as necessary to vary your 'angle of attack'. Plan a safe line that crosses any track surfaces at 45 degrees or greater. When crossing the tracks, keep your head and eyes up, the bike vertical to reduce loss of control and maintain a steady throttle to conserve traction.

Crossings

If the rail crossing is in poor condition, approach it as you would any other bump in the road: with your weight on your feet, your bottom lifted slightly off the seat, and your knees flexed to absorb the bumps.

Tracks running parallel to the road

Don't ride on the rails because your bike's tyres could become trapped in the grooves especially where tracks run parallel to the road as you will find in the city and Glenelg. Keep your tyres out of the tracks, especially the V and X grooves where rails join or cross over. These sections of track could easily grab your front tyre making steering difficult.

Don't forget about traffic

It's easy to get focused on the tracks, but maintain your awareness for trams, trains, and other road users. Never attempt to beat a train or tram to the crossing. Where there are controls, such as warning signals or boom gates, the situation is obvious, but there are many country crossings with only a warning sign. It's up to you to be vigilant to avoid a crash.

Road spills

Just about anything can spill out of a truck and create a road hazard: dirt, grain, building debris etc. Most of the time, those big spills will be obvious and avoided easily. It's the smaller ones that you don't see straight away that can cause problems.

Again, many of the same key principles apply to navigating these potentially hazardous areas. Watch your speed,keep a light but steady grip on the handlebar, avoid braking and accelerating and ride straight ahead with your head and eyes up (don't focus on the mud patch).

Different road surfaces

Two wheels aren't as stable as four when it comes to slippery and challenging surfaces on our roads so therefore as a motor bike rider you need to be scanning for these hazards.

Sometimes a steel plate might be used over the top of a temporary hole, and these can be slippery when wet. Service point covers are also hazardous when they are wet. As you know, there's less friction on a wet metal surface than a wet bitumen surface.

Service trenches, where a pipe or cable has been dug up and repaired, are sometimes overfilled to allow for settlement, but can still settle to create a channel where water will remain as a puddle.

Potholes can cause damage to your motor bike's steering and suspension.

Road markings

Many of the road markings on our roads can be slippery. Stop lines, painted direction arrows, lane markings, pedestrian crossings etc can be even worse when the road is wet. Take extra care, control your braking, steering and throttle inputs to maintain as much traction as possible. Avoid them if it is safe to do so.

Speed humps, spoon drains and traffic speed control points

Speed humps, spoon drains and traffic speed control points are usually marked but are sometimes difficult to see at night. If you hit one at speed it can bounce you out of your seat. Treat a speed hump or spoon drain like any other obstacle, approach it with caution and cross at a 90-degree angle. Maintain a steady speed, avoiding any throttle, brake, or steering inputs. Place more weight on your foot pegs lifting yourself slightly out of the seat and absorb any bumps with your knees.

Sudden changes in road surfaces

Some intersections have paved areas aligned to the bitumen. If you're unfamiliar with this type of intersection, take extra care when turning off the bitumen onto the smoother paved area of the road, especially if the road is wet. Slowdown gradually and turn at a speed that allows you to keep the bike more upright than usual and then accelerate out of the turn more gently than usual.

Pulling off the road

If you have to leave the road for any reason, remember to:

- check the roadside surface before you ride on it. Try not to pull off into mud or deep sand and be careful of the edge as you move off the bitumen on to the roadside.
- check your mirrors, do a head check, and give a clear signal to let other road users know what you are doing.
- stop well away from the road. A bike by the roadside can be hard to see. You risk being hit by a car if you are too close to the road.

Being prepared

On the road

When something goes wrong on the road, you may have an emergency on your hands. If you're ready for it, you won't necessarily have a crash, you can prepare yourself for emergencies and learn to cope with them. The key things are anticipation and practice.

Anticipation will become easier with time, but that is all the more reason to be very aware of it when you start out. Keep in mind the many potential dangers outlined in this handbook. Also, you need to find yourself a quiet place with minimal traffic and invest some time in practice. It will pay off every time you ride.

Emergency braking

If you are planning to buy a motor bike to ride on-road, it is recommended that you buy one with an anti-lock braking system (ABS). Emergency braking is the most important control skill needed to avoid a crash. It needs a great deal of practice to do well. The quickest way to stop a motor bike is to:

- make sure you are upright and travelling in a straight line.
- close the throttle.
- apply the front brake, using at least two or more fingers on the brake lever, and the rear brake at the same time.
- pull in the clutch just before you stop.

Be careful not to lock up the wheels, because there is a good chance you will crash if you do. Should either wheel lock up and start to slide, release that brake and apply it again immediately but not quite so firmly.

Your bike may have anti-lock braking (ABS) which will prevent the wheels locking up. Try to ride as if the ABS isn't there; it is intended to take over only in extreme circumstances.

Braking through curves is a special case because the tyres are already using a lot of the available traction for cornering. If you brake too hard while leaning over, there is a good chance that you will fall over. The best thing to do is to complete your braking prior to the curve or bend, but in an emergency that may not be possible.

There are two ways of braking while you are in a corner. The first is the simplest – just brake as you normally would, only more gently. You can continue around the corner, although the bike may want to 'stand upright' and run wide increasing the risk of a skid. This way will not allow you to stop quickly.

The other way means quickly standing the bike up straight so it is travelling in a straight line, and applying the brakes progressive and firmly as you would for any emergency stop. This will stop you quickly but will take you out of your line of travel. Be careful that you don't run off the road or into the path of other traffic.

> The Rider Safe instructors will teach you the basics of emergency braking during your Learners Course.

Skidding

A skid tends to happen very quickly and can be extremely dangerous, so it is important to know how to control it. Here are some points to keep in mind.

- The most common cause of skidding is locking up one or both wheels while braking.
- The front wheel is most likely to skid when you brake too sharply or quickly. If this happens, release the front brake, and immediately apply it again more gently.
- The rear wheel may skid because you have accelerated or braked too quickly or while turning. Ease off the throttle if acceleration was the problem. If it was braking, steer into the direction of the skid and release the rear brake when the bike is travelling in a straight line again.
- If the bike skids for any reason, keep your feet on the footrests while you deal with it. This will give you much better control than putting your feet down.

Object on the road

Sometimes you may have to ride over a small object or through a pothole that's in your way. If the obstacle is flat, like a sheet of cardboard or metal, ride straight over the top and do not brake. If it is bulkier, treat it the same as for a bit of rough road. Here are a few tips:

- If possible, brake before you reach the object, but release the brake before you hit it.
- Hold the handgrips firmly but don't grasp them too hard.
- Keep the bike in a straight line. This makes it less likely that you'll fall over.
- Stop afterwards and check tyres and wheels for damage.

One in the eye

One very good reason for wearing a visor or a good pair of goggles is eye protection. On a bike you will be hit by things like insects and gravel. A visor or goggles will keep them out of your eyes.

If you do get something in your eye, don't rub it or try to get it out immediately. Keep your hands on the bars, try to keep the edge of the road in view, slow down gently and pull off the road., then try to remove the object from your eye.

Blowout

A blowout is a quick puncture. It will usually be caused by a sharp object such as a nail. Replacing your tyres before they become too worn is the best protection against blowouts. Not running over things like timber boards on the road is also important.

If the front tyre goes flat, the front of the bike will flop from side to side rapidly and it will be harder to steer. If the rear tyre goes flat, the back of the bike will slide from side to side. The faster you are going the more likely it is that you will lose control and crash. In any case you will need to react quickly.

- Hold the handgrips firmly and concentrate on steering. Keep your feet on the footrests and try to keep going in a straight line.
- Do not use the brakes, especially on the wheel with the flat tyre.
- If the front tyre is flat, shift your weight as far back as you can to take the load off it. If it is the rear tyre, sit forward on the bike, and pull in the clutch.
- Close the throttle gradually to slow down.
- Once you have slowed, pull off the road and coast to a stop.

> Checking your tyre pressures and the condition of the tyres frequently will help to prevent flats.

Mechanical problems

Bikes can cause emergencies, especially if they are not well looked after.

Wobble

Your bike may begin to wobble or shake from side to side at high speed. Apart from a flat tyre, this could be caused by:

- a heavy load, unevenly distributed.
- a wheel that is bent or out of alignment.
- poorly tightened or worn bearings in the steering head or swingarm.
- a windshield or fairing that has not been fitted properly.
- loose wheel bearings or spokes.
- unsuitable or worn tyres.

If you experience a wobble, make sure you apply both brakes carefully and slow down gradually and then carefully pull off the road.

Work out what was causing the wobble and correct the problem before you continue.

Remember that you cannot always tell from the wobble whether it is being caused by the front or rear of the bike.

Broken chain

You'll know when this happens, because there will be a huge bang from the back of the bike, and it will then either freewheel because there is no more drive to the rear wheel or skid because the rear wheel is locked up. Look after your chain, keep it properly tensioned and lubricated; replace it and the sprockets when they are worn.

If the chain breaks and doesn't lock up the back wheel:

- roll off the throttle.
- gradually apply the brakes and move off to the roadside.

If the chain breaks and locks up the back wheel:

- steer into the skid.
- roll off the throttle.
- when you get your speed down, move off to the roadside and coast to a stop.

Stuck throttle

If you don't maintain your throttle cable properly, or sometimes if there is wear in the carburettor, your throttle may stick while it is on. You will not be able to slow the engine. If this happens:

- pull in the clutch.
- brake gently to a stop and pull off the road.
- turn off the ignition.

Broken clutch cable

If the clutch cable breaks your clutch will remain fully engaged. If you are stopped, keep the brakes firmly applied to stall the engine. If you are riding, slow down, gradually downshifting the gears when speed permits and shifting to neutral before you come to a complete stop.

Seized engine

There is usually some warning before your engine locks or freezes, giving you time to respond. The first symptom may be a loss of engine power or a change in the engine's sound. The oil light may also come on.

If the engine starts to seize:

- pull the clutch in, disengaging the engine power from the rear wheel.
- gradually apply the brakes and move off to the roadside,
- turn off the ignition.

Refer to the motor bike's user manual or contact your nearest motor bike dealer / workshop.

Reduce crash consequences

You should always ride low risk to minimise the potential for being involved in a crash. However, if a crash becomes inevitable there are some things you can do to help reduce the consequences.

- Stay upright for as long as possible and reduce your speed. Tyres and brakes are designed to stop your motor bike, plastic and metal components on the side of your motor bike aren't. Staying upright allows you to most effectively slow down – hitting the ground at 30km/h a bit further down the road is better than hitting it at 60km/h.
- Keep control of your motor bike for as long as possible and steer towards the least hazardous area. Try to avoid a head on crash, sliding into an immovable object or ending up in the path of oncoming traffic.

If you have fallen from your motor bike:

- try to relax and slide to reduce your risk of injury – sliding on your back with feet first is the best position. Avoid tucking into a ball and tumbling as this will increase your risk of broken bones. Wearing the right protective gear is vital in a crash.
- let go of your motor bike – it is likely to travel further than you in a slide so holding on will mean you also travel further.

> Every near miss or on-the-road incident needs to be seen as an opportunity to re-evaluate and improve your riding skills.

Motor bike lane filtering laws in South Australia

What is lane filtering?

Lane filtering is when a motor bike rider travels at low speed between two vehicles, each vehicle travelling in the same direction as the motor bike; and in separate, but adjacent, marked lanes or lines of traffic. It is:

- only permitted at speeds of 30km/h or slower.
- only permitted when safe to do so, and when there is sufficient clearance between vehicles.
- not permitted in a school zone or across pedestrian and children's crossings.
- not permitted next to parked cars, between vehicles and the edge of the road, or on roundabouts.
- not permitted in bicycle or tram lanes.
- only permitted by R and R-Date licensed motor bike riders. Persons with a P1 Provisional or Learner's permit and moped riders with a car licence only must not lane filter.

Why allow lane filtering?

Lane filtering may improve safety for motor bike riders as they have greater control over their exposure to traffic, particularly vehicles following behind.

Moving in between two lanes of stationary or slow moving traffic may reduce a motor bike rider's risk of being hit from behind by an inattentive driver.

Who is allowed to lane filter?

Motor bike riders in South Australia with an R or R-Date licence class (who are not required to display an L or P plate) may lane filter between stationary or slow moving traffic travelling in the same direction, provided they do not exceed 30km/h and it is safe to do so.

This means that it must be done with due care and regard to all other road users.

What about interstate riders visiting South Australia and South Australian rider's interstate?

Riders who are required to display an "L" or "P" plate on their motor bike as a condition of their interstate licence are not allowed to lane filter in South Australia.

If you intend to travel interstate you should check the relevant state's laws about lane filtering, as conditions may vary.

What is the penalty for unlawful lane filtering?

Motor bike riders must abide by the conditions that apply to lane filtering or they risk receiving a fine and three demerit points.

Police can also charge riders with a number of road traffic offences if lane filtering is done in negligent or dangerous manner.

Can moped* / scooter riders lane filter?

Moped and scooter riders are not allowed to lane filter unless they have a motor bike licence class endorsement (R or R-Date). This is because they may not have the riding skills attained by a person who has passed the Motor Bike Licence Assessment to obtain their motor bike licence class.

* A moped is a motor bike (other than a power-assisted bicycle) with an internal combustion engine capacity not exceeding 50millilitres; or a motor other than an internal combustion engine and is capable of a speed not exceeding 50km/h.

Why aren't L and P plate riders allowed to lane filter?

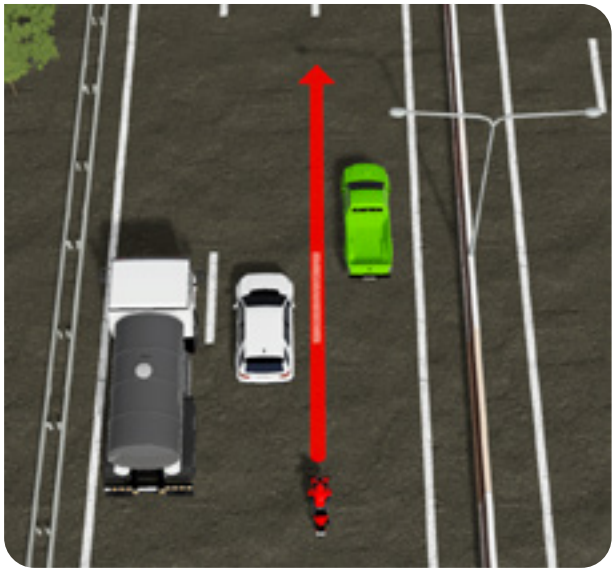
Learner riders may not have the riding skills and experience attained by a person who has passed the licence assessment requirements to obtain a R endorsement.

P1 licence holders are inexperienced road users who may still be developing their hazard perception skills.

More information

The Lane Filtering in South Australia video has been created to provide information on how to lane filter in South Australia.

Motorcycle lane filtering in South Australia (youtube.com)



In case of a crash

Your responsibilities

If you are involved in a crash, you must:

Stop

Stop at the scene of the crash. Failing to stop at a crash you are involved in is an offence. Use your hazard warning lights to alert other road users to possible danger.

Assist

Assist anyone who is injured. Telephone 000 where there is danger such as fire, death and/or serious injury. Telephone 131 444 if non-emergency police assistance is required (e.g. if the road is blocked, or there is a traffic hazard etc.).

Exchange your information

Exchange your information with the other drivers (or that driver's representative) or other persons involved in the crash, including the owner of any property damaged at the scene. The information you provide should include:

- the driver's name and address.
- the name and address of the owner of the driver's vehicle.
- the vehicle's registration number.
- any other information necessary to identify the vehicle and any other information required by a police officer about the crash.

Clean up afterwards

Clear up any debris from the crash, such as broken glass, as soon as it is safe to do so.

> If you see a crash happen or are the first to arrive at the scene of a crash, your actions on these occasions are vital – you might be able to save a life or prevent other vehicles crashing as well.
>
> You may be able to call the Emergency Services and you may be able to provide valuable help as a witness.

Report the crash to police

The driver of a vehicle involved in a crash in which a person is killed or injured must stop and render assistance. The driver must report to a police officer either at the scene or at a police station, not more than 90 minutes after the crash, for the purpose of undergoing alcohol and / or drug testing.

Crashes that don't result in death or injury must be reported to police as soon as possible and, except in exceptional circumstances, no later than 24 hours after the crash, unless the only property damaged is that belonging to the driver or where the damage is less than $3000.

Be prepared to provide:

- your personal details (remember to take your driver's licence with you).
- your motor bike registration.
- the exact crash location.
- date and time of collision.
- the other party's personal details.
- the other party's vehicles registration number.

You will be given a Vehicle Collision Report (VCR) number for future reference.

What should you do if your vehicle needs to be towed away after a crash?

Tow trucks are rostered to remove vehicles from crash scenes in the greater metropolitan area of Adelaide through the Accident Towing Roster Scheme.

By law, only tow trucks operating within this scheme can attend these crashes.

The tow truck driver must provide you with an Authority to Tow form. Read the entire form carefully before you sign it, and make sure you write the place where you want the vehicle taken – before you sign the form. The tow truck driver can provide you with advice, but it is your right to decide where your vehicle is taken.

Blood samples

If you are injured in a crash and attend, or are admitted to hospital, a blood sample will be taken if you are 10 or older.

The blood sample will be tested for alcohol and three drugs, THC (the active component in cannabis), Methylamphetamine (also known as crystal meth, speed, or ice) and MDMA (ecstasy).

Penalties will apply to drivers and riders who test positive for one or more of these drugs or exceed the prescribed concentration of alcohol for their licence class.

Common motor bike injuries

Motor bikes are, for many, an enjoyable form of transport or alternative to a car. However, while cars have a composite structure to protect the occupants in the event of a crash, motor bikes have far less safety features and the potential for a higher risk to the rider. There are no seatbelts to protect against the rider being ejected, or airbags to cushion the blow of an impact in a crash.

The injuries a rider can sustain as a result of any crash can range from minor cuts and bruises to severe and life changing injuries. Having a basic knowledge of the types of injuries that can result from a motor bike crash is necessary to anyone who rides a motor bike or anyone who may come across a motor bike accident. The most common injuries are:

Head Injuries

Head injuries can range from mild concussion to skull fractures and traumatic brain injuries.

Road rash

Road rash is a very painful injury that is suffered by riders who slide across the road surface after a motor bike crash.

Broken bones

This can vary from minor fractures to severe breaks.

Open wounds

Open wounds can be caused by road rash, a broken bone sticking out through the skin or a penetrating object.

Spinal cord injuries

Spinal cord injuries sustained as result of a motor bike crash have the potential to cause partial or total paralysis.

Psychological injuries

Motor bike crashes are a traumatic experience that may have long-term psychological effects on a rider.

First aid

> If the scene of the crash is safe and there is no immediate danger to yourself or other road users, you can attempt to help an injured person involved in the crash.
>
> Do not move an injured person unless they are in danger. For example, if the vehicle is on fire or they are in the path of traffic.

Even if you are not trained in first aid, you can help by applying basic measures to clear a victim's airway and control bleeding. While you wait for an ambulance, you can follow these simple guidelines:

Clear airway by:

- supporting their head and carefully rolling the patient on to their side.
- clearing any obstructions and draining any fluid from their mouth.
- gently tilting their head back to open their airway.

Control bleeding by:

- uncovering the injury.
- applying direct pressure over the wound (use a clean cloth or other clothing, if possible).

Giving further assistance

If you know how, you can also give mouth-to-mouth resuscitation, or CPR, if it is required. Untrained people are often frightened to touch casualties – but early intervention can save lives or decrease the impact of injuries, leading to quicker recovery or lesser injuries for the victims.

These are valuable skills that can help in road crashes, and they are also useful in other accident situations. Courses in first aid are available from a range of providers, including St John Ambulance and the Australian Red Cross Society.

> Removing the helmet from an injured rider may risk causing injuries to the neck or spine.
>
> Only remove the helmet if absolutely essential in order to maintain the person's airway. Open face helmets that allow access to the nose, mouth and throat can remain on.

Basic DRSABCD life support chart

Basic DRSABCD life support chart		
	**D**	**Danger** Ensure the area is safe for yourself, others, and the patient.
	**R**	**Response** Check for response - is the patient alert or unconscious? Ask them their name, lightly squeeze their shoulders. If there is no response – send for help. If there is a response, make comfortable and treat other injuries.
	**S**	**Send for help** Call triple zero (000) for an ambulance or ask another person to make the call.
	**A**	**Airway** Open the patient's mouth and check for foreign material – clear any foreign material from the mouth and airway
	**B**	**Breathing** Check for breathing – look, listen and feel for breathing. If not breathing, ensure ambulance has been called for and commence CPR.
	**C**	**CPR** Begin CPR – chest compressions at the rate of 100-120 per minute. Provide two breaths into the patient's mouth after every 30 compressions if willing and able.
	**D**	**Defibrillator** If available, attach a defibrillator (AED) as soon as available and follow the voice prompts.

Continue CPR until responsive, normal breathing returns or help arrives

Glossary

Accelerate – increasing speed.

Adjacent direction – coming from the left or right, across your path.

Approaching – getting closer to, from any direction.

BAC – blood alcohol concentration given as grams of alcohol per 100 millilitres of blood.

Blind spot (see also head check) – area beside and behind that is not seen in mirrors.

Buffer/Buffering – positioning the motor bike to create maximum space around you, away from hazards.

Certificate of competency – certificate issued on successful completion of a pre-learner or licence assessment training course.

Colliding – crashing into.

Compulsory – necessary, required, must do.

Contact patch (tyre) – the part of the tyre that is in contact with the road.

Covering the brakes – where the rider's fingers are over the front brake lever and their toes over the rear brake pedal without activating the brakes. See also setting up the brakes.

Counter steering – The action of applying slight pressure on the handlebar in the opposite direction of the turn to cause the motor bike to lean into the turn.

Direct steering – the action of turning the handlebars in the direction you want the motor bike to turn.

Fairing – bodywork designed to deflect wind.

Fatigue – the experience of feeling sleepy, tired or exhausted. Fatigue affects your body and your ability to ride safely.

Foot peg – pegs attached to the motor bike to support your feet.

Friction point – where the clutch begins to transmit drive to the rear wheel.

Full face helmet – a helmet fitted with a visor that has inbuilt chin protection and so covers all of the rider's face.

Goggles – eye protection that covers and forms a seal around the eyes.

Hazard – any object or feature, fixed or moving, that contains an element of actual or potential danger.

Head check – looking over the shoulder to the left or right to make sure that nothing is in the blind spot. Also known as a shoulder check.

Intersection – where two or more roads meet or join.

Knowledge test – an online computer based test of the road rules.

Lane – an area of road marked by continuous or broken lines, designed for use by a signal line of traffic.

Laned road – a road with more than one lane in the same direction.

Lean angle – how far the motor bike leans in a corner or turn.

Lean in – the physical movement of the rider's upper body into the turn and slightly forward so that the motor bike lean angle is reduced.

Lean out – the physical movement of the rider's upper body away from the turn to allow the motor bike lean angle to increase and tighten a turning circle.

Lean with – where the rider leans at approximately the same angle as the motor bike.

Learner Approved Motorcycle Scheme (LAMS) – learner and provisional riders must only ride a learner approved motorcycle. A list is published on DIT website. LAMS have an engine capacity of not more than 660ml, a power to weight ratio not more than 150kw per tonne and for electric motor bikes power of up to 25kw.Motor bike pre-learner training course – a training course undertaken in order to obtain a learner permit.

Motor bike pre-learner training course – a training course undertaken in order to obtain a learner permit.

Motor bike pre-licence training course – a training course undertaken in order to obtain a R-date licence.

Glossary

Must – a mandatory requirement.

Oncoming – a vehicle approaching and travelling in the opposite direction.

Overtaking – to pass a vehicle travelling in the sam e direction as you.

Pannier – luggage boxes fitted to the sides of the motor bikes.

Pillion – motor bike passenger.

Potholes – holes in the road surface.

Power to weight ratio – engine power – in kilowatts to weight of motor bike (including fuel weight 10kg and riders' weight 80kg) – in tonnes including the rider.

Pressure (tyre) – the measure of how hard a tyre is inflated.

Protective clothing – clothing designed to reduce rider injury and fatigue.

Rack – carrying tray/frame.

Rev – to increase engine speed.

Revs – engine speed measured in RPM (Revolutions Per Minute).

Road – an area that is opened to or used by the public and is developed for or has as one of its main uses the driving or riding of motor vehicles.

Road related area – includes an area that divides a road, a footpath, nature strip, cycleway, and parking areas.

Road motor bike – motor bike made primarily to ride on sealed roads.

Scanning – moving the eyes to different areas to build up a picture of events.

Screen – windscreen.

Setting up the brakes – the action of taking the free-play out of the front and rear brake levers (see two stage braking).

Should – a recommendation, advice.

Size (engine) – usually measured in millilitres or cubic centimetres.

Skid – when a tyre loses grip on the road surface.

Speed limit – the legal maximum speed for any particular stretch of road, licence, or vehicle.

Speeding – excessive or inappropriate speed, including not adjusting your speed to suit the conditions or speed limit.

Squeeze (brakes) – progressively applying more pressure to the brake levers (see two-stage braking).

Stationary – not moving.

Suspension – front forks, rear shock absorbers, springs.

Swerving – quickly turning in one direction.

Tailgater – someone who follows other vehicles too closely to be safe.

Three-second gap – is the following distance needed for a rider/driver to react and respond to a situation safely and avoid a crash.

Throttle – a control used to vary the motor bike's engine speed.

Traction – grip between a tyre and the ground.

Trail motor bikes – motor bikes built primarily for riding on unsealed roads.

Tread – the pattern of rubber on the surface of a tyre that grips the road.

Two-stage braking – a braking technique consisting of setting up and squeezing the brake levers.

U-turn – a complete change of direction, approximately a 180 degree turn.

Visor – clear, plastic shield on the front of a helmet designed to protect your face.

Wheel track – the mark on the road made by other vehicles' tyres.

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