

Fatal factors on the road

The impact of speed

Speed is a major contributor to death and serious injury on WA roads. It increases the risk of a crash and can also impact the outcome should a crash occur.

Physics shows that the faster you travel, the longer it takes to stop, which results in an increased speed and energy released upon impact. In a crash, occupants absorb kinetic energy (produced by the speed and mass of colliding objects) but they can only absorb a limited amount before death or serious injury occurs. For unprotected road users such as pedestrians and cyclists, the risk of death or serious injury is far greater, and the energy released becomes intolerable at speeds greater than 30 kilometres per hour.

Driving at a safe speed is about more than just driving within the speed limit

Speed limits state the maximum speed drivers may travel under ideal conditions. If the conditions are poor, it is important all drivers adjust by reducing their speed. For example, if the roads are wet and you need to break, it will take longer for you to slow the vehicle to stop. If it is dark and there are people or animals on the road, your visibility may be impacted - slowing down will be a safer choice to minimise the chance and impact of a crash. As a driver, it is your responsibility to drive safely and to drive to suit the conditions of the road. As a guide, the Department of Transport Drive Safe handbook recommends you should drive slower if:

- » The road is busy - look out for other road users, parked cars or changing traffic lights
- » Road conditions are poor - be aware of potholes, gravel, sand, and road works
- » Visibility is poor - slow down if you can't see clearly because of the light or weather conditions
- » There are pedestrians and cyclists - pay attention at all times, especially near busy streets, shopping centres and schools.



Reaction time

The time it takes from when you spot the hazard to step on the brake.



Braking distance

The time it takes from when you step on the brake to when you come to a complete stop.



Stopping distance

The total distance to stop when you combine your reaction time and braking distance.



For the better

Did you know?

Increasing your speed, even by just a few kilometres an hour, increases your braking distance and can significantly increase your risk of a crash resulting in death or serious injury.

For example, on a 10 kilometre journey in a 60 kilometre per hour zone, increasing your speed to 65 kilometres per hour only saves you 46 seconds in time, but doubles your risk of being involved in a crash.

The default speed limit in built-up areas is 50 kilometres per hour. Speed limit signs are not displayed on all roads, so in the absence of any signage, the default speed limit of 50 kilometres per hour applies.

Who sets the speed limits?

The agency responsible for determining speed limits in Western Australia is Main Roads WA. They do so based on a number of factors including Australian standards, transport efficiency, urban density and road design. Speeds are enforced on our roads for several reasons such as maximised road capacity, reduced crash risk and to ensure drivers travel within the limit to enable traffic flow.

Facts and figures



From 2015-2019, approximately one in three fatal crashes recorded driving above the speed limit or at a speed inappropriate for the conditions as a contributing factor.



The fatality risk for pedestrians being hit at 50 kilometres per hour is approximately double that of being hit at 40 kilometres per hour and approximately five times as great as being hit at 30 kilometres per hour.



The chance of death or serious injury for vehicle occupants rapidly increases for speeds above 50 kilometres per hour in side-on collisions and 70 kilometres per hour in head-on collisions.



In 2019 alone, 45% of fatalities occurred in 110 kilometres per hour speed zones, followed by 15% occurring in 60 kilometres per hour speed zones.

Taking action on the impact of speed

- » Drive within the limit and to the road conditions as this decreases the chances of a crash and reduces the severity of a crash should it occur.
- » As a passenger, be aware of the speed limit and the road conditions around you. If you feel the driver is traveling at an unsafe speed, speak up!
- » When driving, keep a safe distance from the vehicle in front of you. In clear conditions, you should drive at least two seconds behind the vehicle in front of you but when it is darker or the road is wet, you should increase this distance.
- » Travel at a legal speed and ensure you can observe the road and surrounding environment. Make sure you can anticipate and react safely to any unexpected or dangerous situations.

Useful links

Road Safety Commission WA - rsc.wa.gov.au

RSC Road Rules - wa.gov.au/organisation/road-safety-commission/driver-behaviour

RSC Safety Game / Physics of speed - wa.gov.au/organisation/road-safety-commission/road-safety-games

RAC advocacy on Safer Speeds - rac.com.au/about-rac/advocating-change/safer-speeds

RSC - Consequences and Speeding - wa.gov.au/organisation/road-safety-commission/speeding



Contact us at
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RAC's School Education is committed to delivering road safety education in Western Australia. We have designed programs to keep students safe on the roads by influencing risk reduction, increasing resilience and encouraging responsible behaviour. We deliver free interactive road safety workshops in schools and a youth road trauma awareness event in metropolitan Perth (RAC bstreetsmart) and regional WA (Project Road Smart).