

In Australia, every year more than 200 motorcycle riders and passengers are killed and many more are injured in road crashes. Some of these injuries could be prevented or reduced if all motorcyclists chose the safest helmet and wore the right helmet for their head size.

## What is CRASH?

The Consumer Rating and Assessment of Safety Helmets (CRASH) is a consortium of government agencies and a motorist organisation which share a common interest in improving motorcycle safety. CRASH provides helmet buyers with independent and consistent information on the levels of protection from injury in a crash provided by motorcycle helmets and the comfort level of helmets.

The program is funded by Transport for NSW, NRMA Motoring & Services, and the Transport Accident Commission (TAC).

Visit [www.crash.org.au](http://www.crash.org.au) to find out more information.

## Aims of CRASH

The underlying philosophy of CRASH is to provide motorcyclists with information to help them choose and use the safest motorcycle helmet. It also aims to apply commercial and consumer pressure on helmet manufacturers to market only helmets that perform well beyond the requirements of the Australian/New Zealand Standard 1698: Protective Helmets for Vehicle Users (AS/NZS 1698). The program also intends to provide feedback to the Standards Committee for motorcycle helmets to be used in improving the Standard.

**Helmets decrease the severity of head injuries, the likelihood of death, permanent disability, and the time recuperating from injury.**

## Choosing and using motorcycle helmets

### How to choose the safest helmet for you

Follow the guidelines below to ensure that you are choosing the safest helmet for you and know how to use it correctly.

- ✓ All motorcycle helmets sold and used in Australia must comply with Australian/New Zealand Standard (AS/NZS) 1698 and be labelled accordingly. To see examples of these labels, please visit [www.rms.nsw.gov.au](http://www.rms.nsw.gov.au)
- ✓ Consider the protection and comfort ratings provided in this brochure.
- ✓ Choose a light coloured helmet, preferably with reflective highlights. A lighter coloured helmet may offer better visibility to other vehicle drivers both during the day and at night.
- ✓ You should not purchase a second-hand helmet, as it may have been involved in a crash or have experienced UV degradation. There may be little external evidence that a motorcycle helmet has received a damaging impact.
- ✓ Helmets are produced in a range of sizes to satisfy a mass market. Your head shape and size are unique, so take the time to follow the steps outlined in Helmet Fit section when purchasing your new helmet.

## Helmet Care

Your helmet is the most important piece of safety protection when riding a motorcycle. You never know when your motorcycle helmet may be called upon, so it makes sense to look after it. A motorcycle helmet generally has a life of around five years; three years if used regularly. To get the most out of the protection your motorcycle helmet offers, you need to keep it in the best possible condition.

It is recommended that you always follow the manufacturer's cleaning instructions for the specific helmet you've purchased. If you only occasionally use your helmet we recommend you store it safely in a helmet bag, somewhere where it won't be dropped or knocked. A helmet should be stored with the chin strap facing down, on a hard surface. It should also be kept away from petrol, cleaning fluids, or excessive heat. These factors can result in the degradation of helmet materials, and often the damage goes unnoticed by the wearer.

## Types of helmets

**FULL FACE HELMETS** cover the entire skull and have a protective section over the front of the chin. Such helmets usually come with a visor that generally swivels up and down to allow access to the face. Many full face helmets include vents to increase the airflow to the rider's head.

**OPEN FACE HELMETS** have a rear that covers the back of the head, but lack the lower chin-bar of the full face helmet, and do not necessarily include a visor. An open face helmet provides the same skull protection as a full face helmet, but less protection to the face and chin areas. Helmets without visors allows insects, dust and wind to impact the face and eyes, which may cause rider discomfort or injury unless used with goggles (goggles should meet Australian Standard AS 1609-1981).

**FLIP-UP HELMETS** are a hybrid between full face and open face helmets. They are also sometimes termed "convertible" or "flip-face" helmets. When fully assembled and closed, they resemble full face helmets by incorporating a chin-bar for absorbing frontal impacts. The chin bar usually pivots upwards to allow access to most of the face, as in an open face helmet.

**DUAL PURPOSE HELMETS** are a hybrid of on-road and off-road helmets. They have clearly elongated chin and visor portions, a chin bar and a partially open face to give the rider extra protection while wearing goggles and to allow the unhindered flow of air necessary during this type of riding. The visor allows the rider to dip their head and provides further protection from flying debris during off road riding.



## Helmet fit

Wearing the wrong size helmet can increase your risk of serious injury or death in a crash. A helmet that is too large for your head may be dislodged or knocked off in a crash. To select a helmet that correctly fits your head, follow these instructions:

**STEP 1** Have your head size measured before you try on a helmet. Measure around the largest part of your head just above the ears, taking the measurement at the forehead. The measurement will correspond to a particular size in the model range you are interested in. If you want a particular brand or model, do not be tempted to go for another size if yours is out of stock – wait and get the correct size. You can use the chart as a guide but there is no substitute to actually trying the helmet on.

**STEP 2** Once you have the helmet in the recommended size, place it firmly onto your head. Secure the chin-strap so that you can fit two fingers between it and your jaw. If the helmet has a quick release buckle, take the time to adjust the strap. Once fitted, you should be able to feel the inside of the helmet against all parts of your head. Once you are happy, wear the helmet for a few minutes to make sure it is comfortable.

**STEP 3** Try to rotate the helmet from side to side with the strap secured. Make sure the helmet does not rotate on your head. The cheek-pads should provide a firm, comfortable fit. Next, tilt the helmet forward and back. It should stay in position and not move. If it slips forward or backwards it is the wrong size and you will need to choose a different helmet.

**STEP 4** Finally, check that the helmet won't come off easily in a crash. Tilt your head forward and have someone try to roll the helmet off your head by carefully applying an upward force to the rear of the helmet at its base. If it can be rolled off in the showroom with the chin-strap done up, it is likely come off in a crash.



## Frequently Asked Questions

- **Can I use a helmet I have brought with me from overseas?** No. Helmets purchased from overseas do not comply with Australian Standards. In addition, the Australian Standard for motorcycle helmets is one of the most stringent in the world.
- **When should I replace my motorcycle helmet?** You need to replace your helmet if it has been involved in a crash. If it's been properly taken care of and hasn't been involved in a crash or another impact, it should be replaced approximately once every five years, or every three years if used regularly. The helmet's shells and foam liners are made of materials which will deteriorate with time, heat and humidity in which sometimes the deterioration is not visible for inspection, so don't rely on this. Hair oils, body fluids and cosmetics also contribute to helmet degradation. Petroleum-based products present in cleaners, paints, fuels and other common materials may also degrade materials used in many helmets, possibly degrading performance.
- **Can I buy a helmet online?** It is recommended that you don't buy a helmet online. Good fit is essential to optimal head protection. There is no way to know whether a helmet will fit well based only on your head size. People with the same head size may have different head shapes. Without trying on the helmet, there is no good way to tell.
- **Do I have to replace my helmet if I have dropped it?** Generally the answer is probably not. Frequently dropping a helmet on the ground, or other hard surfaces may degrade the helmet's performance. However, if the helmet falls to the ground at highway speeds when not being worn, you should be aware that some degradation may have occurred. In general, the real damage comes when the helmet contacts an object with a head inside. It is recommended that if you suspect your helmet may be compromised, then replace it. If the helmet has been involved in a crash while in use, replace it immediately. Never re-use a helmet that has been involved in a crash.
- **Is a second hand helmet safe?** Never buy a used helmet or borrow someone else's helmet. Over time the protective foam in helmets will adjust to the contours of a user's head. A used or borrowed helmet may not offer as much protection as a new helmet. It is impossible to tell by visual inspection alone whether or not the helmet has been involved in a crash and whether its protective function is significantly degraded.

**By law, motorcyclists MUST wear an approved helmet when riding a motorcycle. As a rider or passenger, you should choose a helmet that provides the highest available level of protection, as well as ensure it fits your head and is fastened correctly.**

The helmets tested and included in this brochure were those that complied with AS/NZS 1698:2006 at the time of testing. They were selected based on sales or whose performance CRASH considered the public need to be aware of. All the helmets were selected to suit a head circumference of 60 centimetres.

The testing of the helmets and production of this brochure has been conducted by the Centre for Road Safety, Transport for NSW.

For more information about motorcycle helmets, visit: [www.crash.org.au](http://www.crash.org.au)

### Contacts

If you have any questions about CRASH, please contact:

#### NSW

Roads and Maritime Services on 13 22 13 or [www.rms.nsw.gov.au](http://www.rms.nsw.gov.au)

NRMA Technical Advice on 13 11 22 or [www.mynrma.com.au](http://www.mynrma.com.au)

#### VIC

TAC on [www.spokes.com.au](http://www.spokes.com.au)

Other states should contact the Roads and Maritime Services for advice.

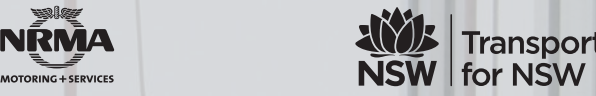


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The information in this brochure is intended as a guide only and is subject to change at any time without notice. It does not replace the relevant legislation.

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# helmet safety ratings

Your guide to choosing and  
buying motorcycle helmets

[www.crash.org.au](http://www.crash.org.au)

DECEMBER 2011 RESULTS

Key to

CRASH TEST RESULTS

- ★

The more stars, the better a helmet performed in protecting the wearer from injury in a crash - out of 5.  
1 star = Meets AS/NZ Standard, 2 stars = Average, 3 stars = Above average, 4 stars = Good, 5 stars = Excellent
- ★

The more stars, the more comfortable a helmet is to use - out of 5.  
1 star = Poor, 2 stars = Average, 3 stars = Above average, 4 stars = Good, 5 stars = Excellent

The helmets were ranked based on their crash protection performance.

Thirty one motorcycle helmets (nineteen full-face, two flip-up, eight open-face and two dual purpose helmets) have been assessed to date. More helmets will be evaluated and information made available as the program continues.

Full Face and Flip-up Helmets		
<div>Model Tested</div>	<div>★★★★★ Protection</div>	<div>★★★★★ Comfort</div>
Shark Evoline - Flip-up	★★★★★	★★★
Rjays SP2 (FF 359)	★★★★★	★★★★
RXT (Kwon Chen) A-683 Atomic	★★★★	★★
Shark RSI	★★★★	★★★★
AGV Stealth	★★★★	★★★
Nolan N62 Genesis	★★★★	★★★
THH TS-4I	★★★★	★★
Rjays Striker (FF344)	★★★★	★★★
Shoei TZ-R	★★★★	★★
HJC CL-I5	★★★★	★★★★
Shoei XR-I I00	★★★★	★★★
JPH Tour-Tech - Flip-up	★★★★	★★
HJC FS-I5	★★★★	★★★★
M2R Int Velocity	★★★★	★★★
THH TS-38	★★★★	★★
Arai Corsair-V	★★★★	★★
AGV K3	★★★★	★★★★
Arai Vector	★★★★	★★★
Arai XD3	★★★	★★
KBC VR-2R	★★★	★★★
Rjays GP2 FF 349	★★★	★★★

Open Face Helmets		
<div>Model Tested</div>	<div>★★★★★ Protection</div>	<div>★★★★★ Comfort</div>
JPH Tomcat OF 545	★★★★	★★★
THH T-37	★★★★	★★
Shoei RJ Platinum-R	★★★★	★★★
THH T-380	★★★	★★★
Nolan N-4I	★★★	★★
Rjays Urban	★★★	★★
Rjays Sturgis	★★	★★★
THH T-70 Shorty	★★	★★★

Dual Purpose Helmets		
<div>Model Tested</div>	<div>★★★★★ Protection</div>	<div>★★★★★ Comfort</div>
Shoei Hornet DS	★★★★★	★★
JPH Dakar MX 422	★★★	★★



- In addition to a helmet, you will need to consider protective clothing to reduce the severity of injuries and time away from work. These include:
- Jackets and pants that are brightly coloured and provide protection against crashes as well as heat, cold and rain while still being comfortable.
  - Gloves with leather at least 1 mm thick with webbing between the little and ring fingers.
  - Footwear that fully encloses the foot and ankle. CRASH recommends proper motorcycle riding boots wherever practicable.