

Head restraints

QFleet driver safety fact sheet

Effective head restraints are designed to reduce the rearward motion of the head in a rear end crash and decrease the chances of occupants sustaining whiplash neck injuries. Head restraints are commonly referred to as head rests.

What is a whiplash injury?

When a vehicle is struck from the rear, it is accelerated forward along with the body of any the vehicle's occupants. While this is occurring, the occupant's head extends backward from the torso continuing in this direction until the normal extension limits of the neck are exceeded. This action is immediately followed by the head being suddenly accelerated forward from the neck. The sudden and violent movement of the head in this backward and forward direction is similar to that of the tip of a whip, which is where the term 'whiplash' originates.

The extreme movement of the head being thrown backward and forward over-extends the normal movement range of the neck, affecting the ligaments and muscles of the neck and shoulders, resulting in potential injury.

Common symptoms

Common symptoms of whiplash injury are neck pain from mild muscle strain or minor tearing of muscles and/or ligaments. Minor whiplash neck

injuries are usually associated with pain and limited motion of the head and neck. In more severe cases, this type of neck injury may include nerve damage, disc damage, and in the most severe cases, ruptures of ligaments in the neck and fractures of the neck bones.

Preventing injury with properly adjusted head restraints

In the event of a rear end crash, correctly adjusted head restraints limit the backward and forward motion of the occupant's head and help to minimise whiplash injury. To aid in the prevention of whiplash, the head rest should be positioned at least as high as the head's centre of gravity (i.e. eye level or higher), or about 9 centimetres below the top of the head. The headrest should be adjusted so that it is almost touching the back of the head or the gap between the head is as small as possible. The angle of the seat back may need to be adjusted to move the head rest closer to the back of the head. Gaps of more than 10 centimetres have been associated with increased symptoms of whiplash injuries in crashes. A well-adjusted head rest is a very useful piece of safety equipment in a vehicle.

Further information

The vehicle owner's manual contains information regarding the adjustment of headrests. For more information, visit [howsafeisyourcar.com.au](https://www.howsafeisyourcar.com.au).

For the full suite of QFleet
Driver Safety Fact sheets
visit qfleet.qld.gov.au