

# fact sheet | rear vs forward facing

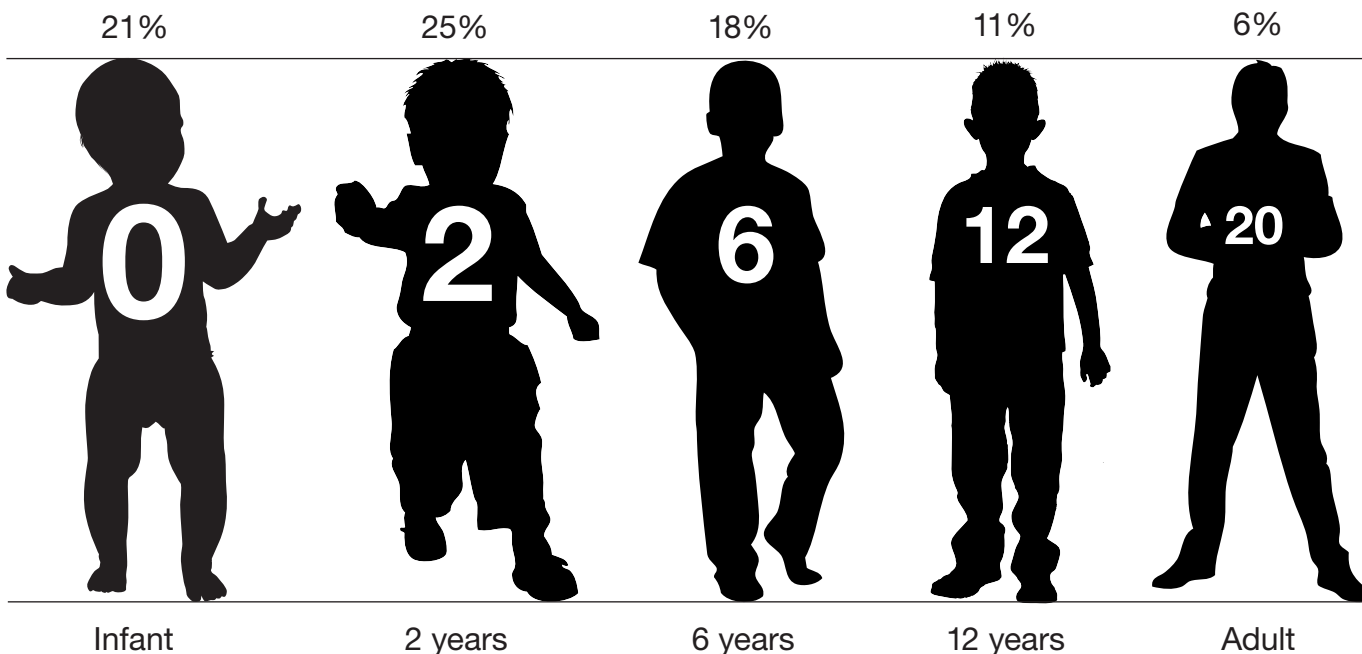


## Rear facing or forward facing – what should I do and when?

As children grow the proportions between their head and the rest of their body changes considerably.

The head of a newborn child makes up a fifth of the child's total body weight and a fourth of the total body length. In adults, the weight of the head only constitutes a 16th of the total body weight and a seventh of the total body length. The illustration below shows the head's size and weight in relation to the total body size and weight at different ages.

### Weight of head as a percentage of total body weight.



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## What are the risks?

As the head of a child is proportionally larger and heavier, the child's centre of gravity will be located higher up on the body, in comparison to the centre of gravity of an adult. This means that a child involved in a crash is very vulnerable to head injuries.

In a crash, a child in a rearward facing restraint experiences forces spread over their back, head and neck. A child in a forward facing seat with their body restrained by the harness, thrusts forward violently with nothing to restrain their head.

This puts an enormous strain on their spinal cord, so much so that it can stretch the spinal cord. If it stretches too far it can tear, resulting in paralysis or death.

Young children have poorly developed ligaments and muscles and the vertebrae are not strong enough to protect the spinal cord.

Research conducted by Kathleen Weber at the University of Michigan showed that around 12 months of age the injuries seem to lessen from severe consequences to moderate consequences. Her recommendation is to keep children rearward facing until at least one year of age.

The Australian Standard for child restraints requires all child safety seats to be fitted with a top tether strap.

These top tethers on forward facing child restraints assist in reducing the amount of head excursion in a crash and minimise the risk of neck injury to forward facing children.

RAA recommends keeping children rear facing until they reach the maximum rear facing rating for their restraint. All of the convertible restraints recommended by RAA accommodate children rear facing up to approximately 12 months of age.

**For more information on child restraints contact the RAA Safety Centre on 8202 4592 or e-mail [childrestraints@raa.com.au](mailto:childrestraints@raa.com.au).**

