



## Good Practice Guidelines on Road Safety Education

# Young Childhood (6 to 11 years)

### Why are children vulnerable road users?

Using the road safely requires a range of skills to make highly complex decisions. These decisions relate to a person's ability to pay attention to their environment and to process information in order to identify and respond to hazards on and around the roads.

We are not born with these abilities; instead they are acquired continually from childhood and into adulthood as the body and brain mature. Many of these skills are learned through experience, education and the application of advanced cognitive (brain-based), sensory and physical capabilities.



As a result, children and young people may not have the experience or cognitive maturity required to safely respond to the dynamic and changing interactions around roads. Exposure to traffic situations which exceed the capabilities of children places them at greater risk of road-related injury.

When providing road safety education, it is important to understand the specific risk factors of each age group that increase the likelihood of being involved in a serious road crash.

### What does the research say about the risks for children?

As a child transitions from the early childhood stage, they continue to rapidly develop cognitively and physically. Although a child's ability to grasp abstract ideas such as road safety develops during this age, their developmental immaturity, relative to adults, means that road and traffic dangers can exceed a child's skills and abilities. At the same time, children encounter new challenges, especially as their social environment changes.



Key risk factors facing young and primary-school aged children include:



#### Cognitive risks

- Brain development during this period means that a child's ability to grasp abstract ideas, process information, and manage their attention increases.<sup>1</sup> Children within this age group are able to better assess risk due to their cognitive development and are better able to understand the importance of road safety education. This increase is only relative to that of a pre-schooler, and children of this age group still need significant adult assistance and supervision as they are unable to manage the risks in the traffic system by themselves.
- Children are at a greater risk of being involved in a road incident as they may not be able to always effectively manage their impulses (impulse control) and any visual, cognitive and auditory distractions.<sup>2</sup>
- Children have usually developed their visual and auditory capability by the age of eight. Up until this has occurred, a child's depth perception and peripheral vision is impaired, and therefore their ability to identify hazards on the road is still poor (including their ability to judge distance and speed appropriately).<sup>3</sup>



#### Physical risks

- The small physical size of a child is still a factor in their vulnerability in and around traffic.<sup>4,5</sup> Young and school-aged children may be difficult to spot by drivers due to their small size, especially when vehicles are reversing. This increases the risk of run-over incidents.
- Children of this age group are still also physically vulnerable as a passenger in a car, resulting in increased risk when in a crash. As such, it is critical that they are in an appropriately fitted child restraint suited to their height and size.



#### Social Environment

- Adults significantly influence a child's road safety beliefs and behaviours during this age and remain responsible for active supervision when children are on or around roads.<sup>6</sup>
- Children within this age group commonly start walking to school, and therefore have increased exposure to traffic, especially when crossing roads. As their means of transport changes, children become increasingly exposed to the road environment, creating a greater risk of being involved in a road incident.<sup>7</sup> Distraction can also become a factor in unsafe pedestrian behaviour, especially if children are using smart phones or other electronic devices, listening to music, or otherwise performing other tasks when walking.
- For this age group, many children will use bicycles, scooters or skateboards. These forms of transport expose children to a range of new road safety risks, especially if ridden on streets and roads or around vehicles. Although children of this age group are generally able to use a bicycle or other wheeled form of transport, they may not have other skills required to safely navigate within traffic. This includes the ability to keep their attention on other road users and respond appropriately to safety hazards.<sup>8,9</sup>





### What does this research mean when teaching road safety education for children?

#### Children start to comprehend road safety more

Children in this age group quickly gain the ability to understand the critical importance of road safety in comparison to younger children. At this age, children begin to have a much more sophisticated understanding of the risks within the traffic system. Road safety education is therefore critical for this age group, as children begin to grasp the complex decisions involved in practicing safer road behaviours.

#### Children still require active supervision and positive role modelling

Young children become increasingly aware of the traffic environment and the importance of making decisions to manage their safety. Children's cognitive and physical maturity remains low in comparison to adults. For this reason, children of this age group continue to require close supervision from adults (that is, active supervision when riding a bike, when walking, or playing on the street). Parents also play an important role in modelling good behaviour, such as:

- actively explaining the need to be a good pedestrian (for example, not walking when distracted) or bike/scooter rider, and behave in predictable ways for drivers and other road users

- explaining the need to continue using a child seat when in the car, and ensuring all passengers are buckled up or restrained before starting to drive
- ensuring that children exit from the car with an adult's assistance only on the 'safety side' (curb-side door), and
- emphasising the importance of being a good pedestrian, including avoiding crossing the road unsafely and making eye contact with stationary drivers when crossing at the lights.

#### Increased independence may increase exposure on the roads

As children become active transport users through cycling, scooter riding, or walking, it is recommended that education reinforce safe usage in off-road environments and under adult supervision, especially when under the age of 12.

#### Children still need to be in approved child restraints and wearing helmets when using scooters or bikes

Parents and carers also need to understand the benefits of children wearing a properly fastened and adjusted Australian Standard (AS) approved bicycle helmet. When in the car, children of this age group still need to be in approved Australian Standards child restraint and should not be graduating to a regular seatbelt without a booster seat until they are of an appropriate age, height and size.\*

\* For further information on child restraint laws in Queensland, please visit: <https://www.qld.gov.au/transport/safety/rules/children>

# References



1. Committee on the Science of Children Birth to Age 8 (2015): *Deepening and Broadening the Foundation for Success*; Board on Children, Youth, and Families; Institute of Medicine; National Research Council; Allen LR, Kelly BB, editors. Washington (DC): National Academies Press (US).
2. Meir, A., Parmet, Y, & Oron-Gilad, T. (2013). *Towards understanding child-pedestrians' hazard perception abilities in a mixed reality dynamic environment*. Transportation Research Part F: Traffic Psychology and Behaviour, vol. 20: 90-107. Retrieved from: <https://doi.org/10.1016/j.trf.2013.05.004>
3. Congiu, M., Whelan, M., Oxley, J., Charlton, J., D'Elia, A. & Muir, C. (2008). *Child pedestrians: Factors associated with ability to cross roads safely and development of a training package*. Monash University Accident Research Centre.
4. Corben, B., D'Elia, A., & Healy, D. (2006). *Estimating pedestrian fatal crash risk, conference proceedings of the 2006 Road Safety Research, Policing and Education Conference*.
5. Peden, M., & World Health Organization. (2008). *World report on child injury prevention*. World Health Organization. Retrieved from: <https://apps.who.int/iris/handle/10665/43851>
6. Muir, C., Devlin, A., Oxley, J., Kopinathan, C., Charlton, J. & Koppel, S. (2010). *Parents as role models in road safety*. Monash University Accident Research Centre.
7. Hobday, M. & Meuleners, L. (2018). *Child and adolescent pedestrians and cyclists in Western Australia: how safe are they?*. Curtin-Monash Accident Research Centre. Retrieved from: <https://www.rsc.wa.gov.au/RSC/media/Documents/Child-pedestrian-and-cyclist.pdf>
8. Lenton, S. & Finlay, F. (2018). *Public health approaches to safer cycling for children based on developmental and physiological readiness: implications for practice*, British Medical Journal, vol. 2(1).
9. Muir, C., Devlin, A., Oxley, J., Kopinathan, C., Charlton, J. & Koppel, S. (2010). *Parents as role models in road safety*. Monash University Accident Research

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## Contact

The Community Road Safety Grants support Queensland communities with the development and delivery of effective road safety education and awareness initiatives. Further information on the grants please visit:

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