



INJURY RISKS BY STAGE OF CHILD DEVELOPMENT

Stages of Child Development

Research has identified specific developmental features that can increase a child's risk of injury in the home.¹² Young children between 0-4 years are particularly susceptible to injury because of their lack of experience, strength and physical skill. A child's small body size means that a hot cup of coffee/tea, once spilled, may cover the entire body resulting in 3rd degree burns or that several swallowed Panadol tablets represents a nearly fatal dose.^{12, 24}

In an environment designed for adults, young children has a poor understanding of the risk of danger, a natural uneducated curiosity, a restricted ability to handle more than one stimulus at a time, inability to make an informed choice and are powerless to delay indulgence.³³ Young children also have a unique sense of taste that allows them not only to initially try, but continue ingesting substances that older children and adults find unacceptably bitter or sour.¹²

A child's developmental stage is the key to identifying which types of injuries are of greatest risk to him/her. This was analysed further in a Canadian study that investigated the conditions of childhood injuries in the home and found that the frequency and type of home injuries were directly related to the child's stage of development.³⁴ Preschool children tended to get hurt when they fell during running and jumping. School children experienced more injuries while playing with objects, as indicated by their being struck, cut or pierced.¹²

As indicated above, the location and type of injuries that typically occur among children vary, depending on the child's stage of development. Following is a description of the different injury risks for each of the age groups listed below.

- Infants (Birth to 6 months)
- Infants (7 months to 1 year)
- Toddlers (1-2 years)
- Toddlers (2-3 years)
- Preschoolers (3 to 5 years)
- Primary School Children (6 to 12 years)
- Adolescents (13 to 15 years)

Infants (up to 1 year)

Serious in-home injuries including falls from heights such as a change table, cot or bench top are common because the caregiver often places the infant at a convenient height with no barrier or restraint.¹² Suffocation or choking is common as children become increasingly mobile; airways are small and easily blocked (objects that fit into a 35mm film canister are not suitable for this age group). Burns from water, drinks or food, and drowning in bathtubs through lack of the motor skills for keeping their heads above water or for getting out of water (Infants only need 5cm of water to drown - just enough to cover mouth & nose).¹²

Programs to reduce injury in this age group are usually targeted at parents & caregivers.

Infant (Birth to 6 months) ^{35, 36}		
Developmental Activities	Hazards, Risks	Prevention Tips/Strategies
<ul style="list-style-type: none"> Swimming reflex 	Drowning, water, stress	Baby swim classes, always keep one hand on your baby while it is in the bath, use a baby bath/sink. Never leave a baby unattended near water
<ul style="list-style-type: none"> Restricted mobility 	Fire, smoke dangers; Scalding	Place smoke alarm near infant's room; lower temperature of hot water system to 50°C; never hold a child when consuming hot beverages
<ul style="list-style-type: none"> Rolling over 	Falls, rolling off table	Use appropriate bathing facilities, restraints, safe changing area/floor, padded floor
<ul style="list-style-type: none"> Attempts to sit up 	Flipping out of infant seat (3 months)	Keep child restrained in infant seat, always use harnesses with prams, etc.
<ul style="list-style-type: none"> Sucking and mouthing objects 	Ingestion, aspiration, strangulation from strings on dummies, bibs etc.	Keep toys clean, avoid letting child mouth keys
<ul style="list-style-type: none"> Motor excitement 	Slipping in bath	Always keep at least one hand on a child when in a bath
<ul style="list-style-type: none"> Reaching for objects 	Burns, cuts	Keep dangerous items out of reach or locked away

Infant (7 to 12 months) ^{35, 36}		
Developmental Activities	Hazards, Risks	Prevention Tips/Strategies
<ul style="list-style-type: none"> • Crawling, pulling to stand, cruising 	Burns; falls down stairs, into bath, onto sharp edges	Block stairs; discourage baby walkers; cover sharp table corners
<ul style="list-style-type: none"> • Increased curiosity 	Ingestions (medicines, plants chemicals, household cleaners)	Lock medicines, cleaning products & poisons up & away; remove poisonous plants; know Poisons Information Centre Number 13 11 26
<ul style="list-style-type: none"> • Pincer grasp 	Aspiration of small objects, eg marbles and toy parts, pills, seeds, plants	Keep older child's toys and other small objects out of reach
<ul style="list-style-type: none"> • Putting everything in mouth 	Biting electric cord	Keep cords out of reach
<ul style="list-style-type: none"> • Going after hidden objects 	Aspiration, strangulation (cords)	Look under tables, chairs beds for dangers; replace looped curtain cords with single rods or strands, alternatively wind up excess cord
<ul style="list-style-type: none"> • Pulling objects down 	Hot liquid burns, objects on tables	Put heavy & hot objects out of reach, don't use table cloths

Toddlers (1 to 2 years)

Toddlers have locomotor capabilities but limited communication skills. They often suffer injuries in the home due to their behaviour - increased curiosity, activeness and interest in exploring their surroundings.¹² Toddlers have the most risk for unintentional and repetitive poisoning. At this age, the child's mobility increases, curiosity exceeds ability to assess risks, an ability to reach, climb and manipulate, gives them access to a wide range of objects on which to choke or become entrapped.¹²

Programs to reduce injuries among toddlers are targeted at caregivers & parents as injuries usually result from a lack of judgement, inadequate supervision or lack of knowledge on the adults' behalf. Product standards & safety¹² regulations provide a guide to ensure a child's environment is also safe.

Toddler (1 to 2 years) ^{35, 36}

Developmental Activities	Hazards, Risks	Prevention Tips
<ul style="list-style-type: none"> • Walking, running 	Traffic accidents	Restrict child access to the street
<ul style="list-style-type: none"> • Loves to be chased (18-24 months) 	Running away, into streets	Block doors, walkways, entry into kitchen; use automatic gate locks; provide a secure play area at home
<ul style="list-style-type: none"> • Climbing (tables, desks, benches) 	Ingestions, falls, burns	How are medications stored? "Locked up and Away" out of reach; put chairs away from tables
<ul style="list-style-type: none"> • Going after hidden objects 	Ingestions, electrocution	Don't keep medications in purse; cover power outlets
<ul style="list-style-type: none"> • Curiosity and increased independence 	Ingestions, burns, drowning	Restrict access to pool

Toddler (2 to 3 years) ^{35, 36}

Developmental Activities	Hazards, Risks	Prevention Tips
<ul style="list-style-type: none"> • Expanding world (backyard, garage) 	Ingestions	Is there access to garage, backyard, ensure play equipment is safe
<ul style="list-style-type: none"> • Imitating behaviour 	Climbs, follows older children, ingest pills	Keep medications locked up and out of reach; be a positive role model
<ul style="list-style-type: none"> • "Swim" classes 	Drowning, drinking pool water	Be sure of full parent participation; do not expect child to be drown proof; always supervise your child
<ul style="list-style-type: none"> • Introduction to adult foods 	Aspiration	Avoid access to nuts, popcorn & chewing gum
<ul style="list-style-type: none"> • Resisting constraints (eg. Car seats) 	Car accidents	Possess, install correctly and use car seat
<ul style="list-style-type: none"> • False maturity leading towards less parental supervision 	All accidents	Keep under constant observation; be good role model

Preschoolers (3 to 5 years)

While falls from windows, off high furniture or down stairs still occur, preschoolers are more likely to experience falls outside the home, such as from playground equipment¹². Since fantasy is critical to preschoolers' development, choking and suffocation typically occur in new settings - the abandoned refrigerator becomes a ship; the blanket box becomes a playhouse. Children this age are at risk with appliances they wish to master but are too young to manage safely¹² - for example stoves, or curling irons. Preschoolers are also attracted to matches and lighters.³⁴

Programs to reduce injury among this age group can be targeted at either the caregiver, children directly, or through child care centres & preschools.

Preschooler (3 to 5 years) ^{35, 36}		
Developmental Activities	Hazards, Risks	Prevention Tips/Strategies
<ul style="list-style-type: none"> Improved motor development: reaching high 'safe' places 	Ingestions, burns, falls	Supervise play
<ul style="list-style-type: none"> Bikes with training wheels, big wheels 	Spoke injuries, traffic accidents	Provide safe places to play
<ul style="list-style-type: none"> Expanded world (playgroups, kindy, neighbourhood) 	Car accidents, falls	Teach traffic safety
<ul style="list-style-type: none"> Continued drive to discover world 	Burns (matches/lighters)	Discuss fire safety
<ul style="list-style-type: none"> Role playing, superhero imitations 	Burns, ingestions, falls	Keep play areas safe; regularly supervise; discuss role models
<ul style="list-style-type: none"> Resisting constraints (eg. Car seats) 	Car accidents	Possess, install correctly and use car seat

Primary School Children (6 to 12 years)

By school age, many children can swim well enough to keep their heads above water for a short time, but should still not be left unsupervised. Since older children spend more time out of the home, fall injuries usually occur outside during play. A child's curiosity and eagerness to do "grown-up" things such as using lighters or matches can lead to burns, household fires.³⁴ Although older children are less likely to choke or aspirate, they are still at significant risk for suffocation, such as buried in tunnels/forts they have constructed or may suffocate in grain bins on the farm.¹²

Programs to reduce injuries for school-aged children target either the caregivers or the children directly. Schools usually deliver the child-directed programs.¹²

Primary School (6 to 12 years) ^{35, 36}		
Developmental Activities	Hazards, Risks	Prevention Tips/Strategies
<ul style="list-style-type: none"> • Independence, spending time away from home 	Bike, skateboard, road accidents; drowning	Child should wear helmet, wrist, elbow & knee pads; use skateboards etc off street & hills; swim in groups under supervision; take swimming lessons
<ul style="list-style-type: none"> • Organised sports 	Sports	Use safety equipment, mouthguards; don't specialise in one activity until over 10 years
<ul style="list-style-type: none"> • Unsupervised activities 	Burns	Talk & communicate with child

Adolescents (13 to 15 years)

The majority of injury risks to young adolescents are outside the home environment with a few exceptions.¹² The home responsibilities and first job opportunities for many adolescents may involve food preparation, which carries a high risk for burns. By early adolescence, the risk of intentional or unintentional self-poisoning from drugs and alcohol increases as children assume more adult-like attitudes and behaviours.¹²

Once again prevention programs targeting unintentional injuries for early adolescents are targeted directly at the students.¹²

Adolescent (13 to 15 years) ^{35, 36}		
Developmental Activities	Hazards, Risks	Prevention Tips/Strategies
<ul style="list-style-type: none"> • Increased risk taking behaviour 	Road accidents, drug & alcohol exploration	All parties should be supervised; apply reasonable restrictions & curfews; communication