



PURINO\SHUTTERSTOCK

Injury Insight

“Kids Bounce Back” After Injury

Injury is the leading cause of death among children in Canada.¹ In BC, there is an average of 79 injury deaths per year among children and youth ages 0 to 19 years,² with a further 5,485 hospitalized for acute care.³ Common causes of unintentional injury resulting in hospitalization during childhood vary with age and developmental stage, and include:³

- Falls
- Transport-related injury
- Sport-related injury
- Unintentional poisoning

To better understand the impact of childhood injuries—ranging from mild to severe—Dr. Mariana Brussoni and colleagues followed otherwise healthy children for one year following their injury.⁴

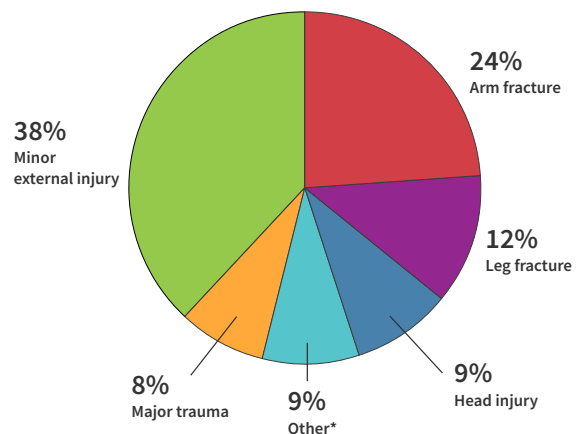
Children and youth 0 to 16 years of age seeking treatment for an unintentional injury were recruited from the emergency department and hospital wards at BC Children’s Hospital.

Researchers found that older children and children who were hospitalized had a steeper recovery process, but by four months post-injury, there was no difference in health-related quality of life between children who were hospitalized versus those seen in the emergency department. There was also no difference after four months post-injury between older and younger children with regards to health-related quality of life.

The Study

Quality of life was measured for each study participant at the time of hospital visit and at 1, 4, and 12 months following injury. Health Related Quality of Life covers a wide range of aspects of well-being, including physical, social, and spiritual.⁵ Parents and guardians completed surveys on behalf of their child to measure the impact that nonfatal injury had on their lives.

FIGURE 1: Type of injury sustained by children and youth, ages 0-16 years



*Other = major burn, hand/foot amputation, head trauma, ingestion/choking, internal organ injury, spinal fracture.

- 204 participants completed baseline and at least 1 follow-up: 91% completed 1-month follow-up; 83% at 4-month; 79% at 12-month follow-up; 73% completed all follow-up surveys.
- 71% were recruited from the emergency department.
- 62% were male.
- 41% 0-5 years; 32% 6-10 years; 27% 11-16 years.
- 31% were engaged in sport and 32% in leisure activity at the time of injury.

By four months post-injury, there was no difference in health-related quality of life between older and younger children.

Results

Overall, quality of life scores returned to normal four months after injury for most of the participants; higher scores represent higher quality of life.

Average Health Related Quality of Life Scores:

- Baseline pre-injury = 90.7
- 1-month = 77.8
- 4-month = 90.3
- 12-month = 91.3

Quality of life scores at baseline and at 12-months were not affected by participants' sex, age, income level or type of injury.

Discussion

Very few injuries have a long-lasting impact on children. Hospitalized children may have experienced a greater impact 1-month after injury than children seen in the emergency department because:

- They have more time away from school and friends;
- Their injuries may have had a greater impact on daily activities (e.g., bathing, dressing, etc.).

Children older than 5 years of age may have experienced a greater impact at 1-month following the injury due to a greater loss of independence, as they are able to do more for themselves than younger children can.

Physical Activity and Injury Risk

Is there a trade-off between the benefits of living a physically active lifestyle versus the potential impact resulting from childhood injuries? In this study, 63% of children were engaged in leisure or physical activity at the time of their injury.⁴ Evidence suggests that while injuries do happen, they are relatively rare during physical activity.⁶

Furthermore, it has been found that increasing physical activity is unlikely to lead to an increase in severe injury, although some individuals can expect to



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experience minor injuries.⁷ However, when these injuries do occur, most children recover quickly and are back to normal within 4 months.⁴

Overall, the rapid recovery of most child and youth injuries encourages children's participation in active healthy lifestyles.

The Value of Physical Activity

Regular physical activity is beneficial among children and youth.⁸ It plays a direct role in the prevention of chronic diseases such as heart disease, diabetes, cancer, obesity, depression and osteoporosis.^{8,9} Research has shown that the more physical activity children and youth engage in, the more health benefits they experience,⁸ and that physical activity in a natural outdoor 'green' setting may provide greater health outcomes.¹⁰

Furthermore, outdoor 'risky play', where children engage in activity that is exciting and has an element of risk, such as play including heights, speed, tools, water, and areas to hide or disappear, has been shown to promote physical health as well as social health and healthy child development.¹¹

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Take Action to Reduce Hazards

FALLS¹²⁻¹⁶

- Active supervision of infants and toddlers who may climb on furniture; children around heights such as stairs, balconies and open windows.
- Do not leave small children on high surfaces, such as kitchen counters.
- Discourage play on or by stairs.
- Use baby gates according to their instructions.
- Use window guards or fasten windows to open no wider than 10 cm.
- Use bath mats.

TRANSPORT-RELATED¹⁷⁻¹⁸

- Use an appropriate certified restraint system when riding in a vehicle: infant seat, rear-facing seat, forward-facing seat, booster seat, or seat belt.
- Children under 12 years of age should ride in the back seat whenever possible.
- *Pedestrian safety*: model good pedestrian behaviour for children—cross in designated crossing areas, stay alert, check for traffic in all directions, wear reflective clothing at night.
- *Cyclist safety*: model good cycling behaviour for children—wear a properly fitted bike helmet, ride on bike-designated roads and pathways whenever possible, obey the rules of the road, use lights, and wear reflective clothing.

SPORT-RELATED¹⁹

- Get the right gear for each sport, make sure it fits, and make sure kids wear it properly every time they play.
- Correctly fitted equipment is the key to preventing injury.
- Warm-up and stretch before every practice and game.
- Ensure the league provides adequate practice time.

Practice builds skills and conditioning, as well as gives kids time to learn to play safely.

- Remove all jewelry before playing, including watches, rings, earrings, and necklaces.
- Coaches and parents should inspect the playing grounds and equipment before each practice or game to make sure everything is safe.

UNINTENTIONAL POISONING²⁰

- Have a Poison Control emergency number handy in case of emergency.
- Keep dangerous products out of sight and out of reach of children.
- Keep medicine and cleaning products locked up.
- Never call medicine “candy” and do not take medicine in front of a child because he or she might copy you.
- Avoid the use of cleaning products when children are close by.
- Keep all cigarettes, butts, and ashtrays away from children.
- Keep products in their original containers. Make sure they are clearly labelled.
- Ensure that visitors to your home place their purses, bags, etc. out of reach of children.
- Learn to identify poisonous household plants. Keep plants off the floor and away from crawling or walking children. Label each plant in your home with the exact name.
- Place safety latches on all drawers or cabinets containing harmful products and use products that have child-resistant safety caps. Be aware that child-resistant caps are not child-proof.
- Never administer Ipecac without instructions from a doctor or the Poison Control Centre.
- Install Canadian-certified carbon monoxide (CO) detectors in your home and have gas appliances serviced regularly to prevent CO exposure.

LIMITATIONS:

- 30% success rate for recruitment of eligible participants.
- Participants who dropped out had a lower average Health Related Quality of Life Score at baseline.

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P.2 TREE IMAGE DESIGNED BY FREEPIK