

Injuries in Canada: Scope and Solutions, Sports and Recreation Injuries

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Parachute

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Overview

About Parachute Injuries in Canada Proven Solutions & Resources



About Parachute

- National charity focused on preventable injuries
- Vision – An injury-free Canada with Canadians living long lives to the fullest
- Knowledge mobilization
 - Program development
 - Partner networks
 - Policy change

Injuries in Canada



What is an Injury?

- Injuries are defined as bodily harm resulting from a sudden transfer of energy that exceeds the human body's capacity for resistance. The energy transferred is most often mechanical (e.g., fracture), but it may also be thermal (e.g., burn), electrical (e.g., electrocution), chemical (e.g., intoxication) or radiant (e.g., sunburn). Note that injuries can also be the result of a sudden loss of energy or vital element (e.g., chilblain, drowning, strangulation)

Why is it Important?

- Injuries are a major public health problem with those aged 1-44 years more likely to die from a preventable injury than any other cause
- Certain populations are at higher risk for injury
 - Children and youth
 - Seniors
 - Indigenous Peoples

By the Numbers

Injury Deaths	Hospitalized Treatment	Emergency Room Visits	Permanent Partial Disability	Permanent Total Disability	Total Economic Cost of Injury
15,866	231,596	3,492,148	55,717	4,425	\$ 26.8 billion

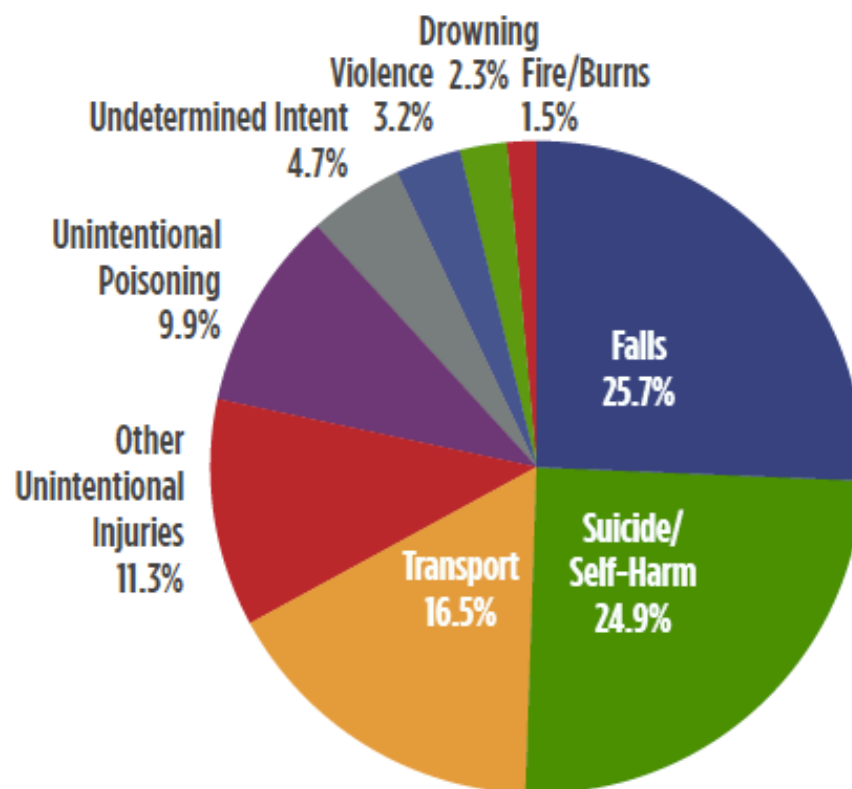
Every hour, 427 people in our country suffer a preventable injury as a result of a fall, a motor vehicle crash, a fire, poisoning, drowning, or other activities.

Costs of Injury

- **Falls** were the leading cause of overall injury costs in Canada in 2010.
- Falls account for **\$8.7 billion**, followed by transport incidents **at \$4.3 billion**, other unintentional injuries at **\$5.5 billion** and suicide/self-harm at **\$2.9 billion**.

Causes of Death

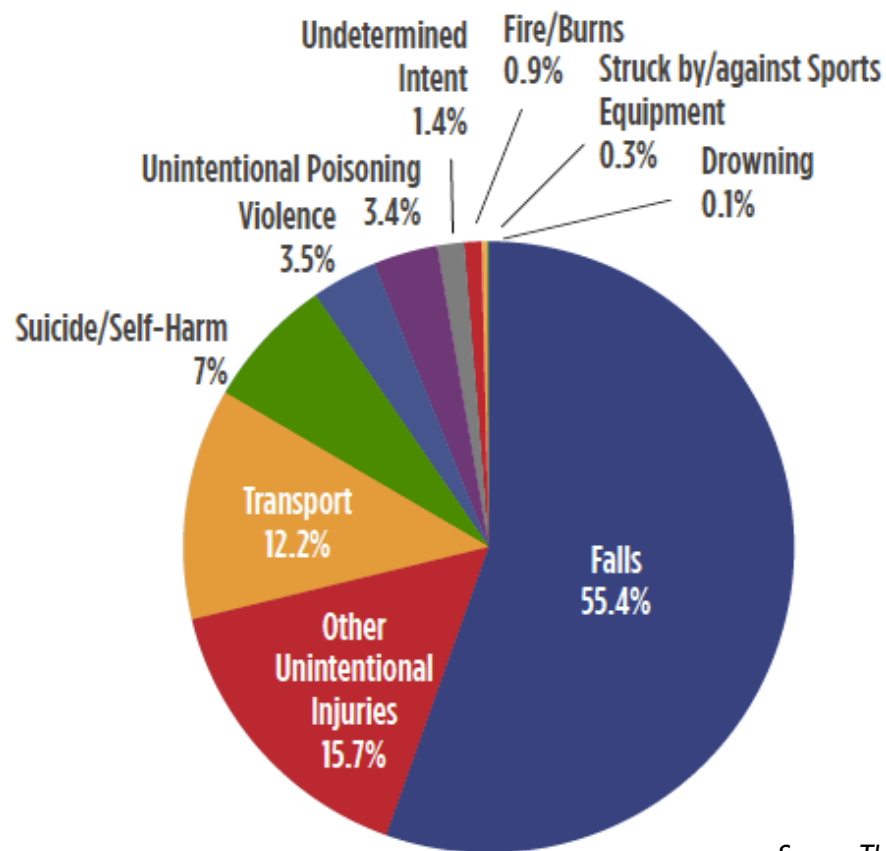
Figure 5
Injury deaths by cause, Canada, 2010



Source: *The Cost of Injury in Canada Report (2015)*

Causes of Hospitalization

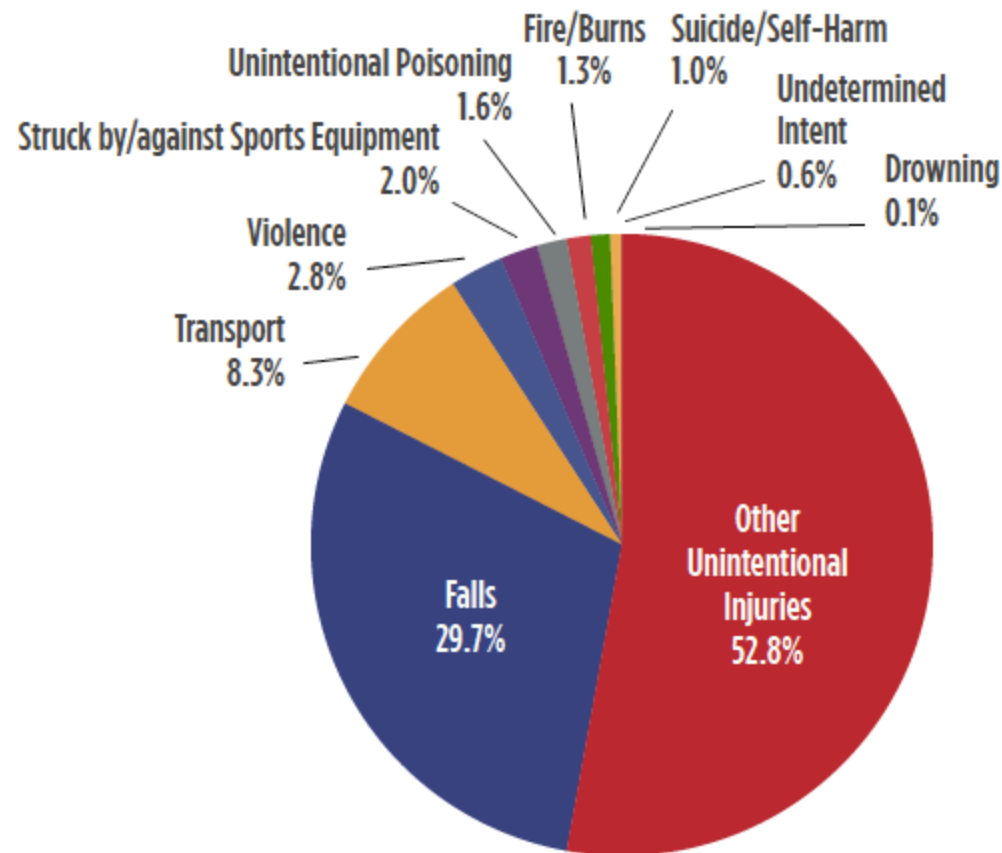
Figure 6
Injury hospitalizations by cause, Canada, 2010



Source: *The Cost of Injury in Canada Report (2015)*

Causes of ER Visits

Figure 7
Emergency Room Visits by Injury Cause, Canada, 2010



Source: *The Cost of Injury in Canada Report (2015)*

Falls

Table 8

Number of injury deaths, hospitalizations, and emergency room visits for falls, Canada, 2010

Description	Deaths	Hospitalizations	Emergency Room Visits	Permanent Partial Disability	Permanent Total Disability
On the same level	327	37,660	330,199	7,235	532
From skates, skis, boards, blades	15	4,189	64,597	1,384	106
From furniture	281	7,794	61,863	1,107	93
In playgrounds	<5	1,713	23,870	583	39
On stairs	393	12,404	130,747	2,968	287
From ladders/scaffolding	68	3,771	23,106	1,022	90
Diving	<5	194	3,156	56	10
Other	2,985	60,664	398,540	8,882	812
Total	4,071	128,389	1,036,079	23,236	1,969

Source: The Cost of Injury in Canada Report (2015)

Transport Injuries

Table 12

Number of injury deaths, hospitalizations, and emergency room visits for transport incidents, Canada, 2010

Description	Deaths	Hospitalizations	Emergency Room Visits	Permanent Partial Disability	Permanent Total Disability
Pedestrian	369	2,902	17,725	673	76
Pedal Cycle	92	4,112	59,815	1,240	113
Motor Vehicle	1,119	14,437	161,977	3,534	360
ATV, Snowmobile	190	4,311	21,107	1,043	88
Other Transport*	850	2,588	30,159	714	61
Total	2,620	28,350	290,782	7,204	699

* Other Transport includes, for example: railway, animal rider, streetcar, agricultural vehicle, watercraft and air transport (V80 - V85, V87 - V89, V91, V93 - V99).

Source: The Cost of Injury in Canada Report (2015)

The human impact, on individuals, families and communities is immeasurable, and is exacted through diminished health, wellbeing, and potential to live long lives to the fullest.

Concussion

- A concussion is a **functional** brain injury caused by: a direct blow to the head or indirect impulsive force (to the neck or body) transmitted to the head
- Symptoms include:
 - Physical – headaches, sensitivity to light & sound, nausea, loss of consciousness (in some cases)
 - Behavioral – irritability / depression / anxiety
 - Cognitive – difficulty concentrating, remembering, feeling in a fog
 - Sleep disturbances – Drowsiness, Insomnia



Concussion in Sports Children and Youth

- Sports and recreational activities are the third leading cause of traumatic brain injury admissions to Canadian hospitals. (Impact, 2013)
- 754 children and youth aged between 5-19 years of age were hospitalized for a intracranial injury in 2010. (PHAC 2016/ HMDB)
- 9263 children and youth aged between 5-19 years of age visited an ED for a intracranial injury in 2011. (PHAC 2016/ NACRS)

Concussion in Sports Children and Youth

- Emergency department surveillance shows that among,
 - 5-9 year olds - playground equipment is a common source of head and brain injuries for both boys and girls;
 - 10-14 year olds - ice hockey is most frequent for boys and soccer most common among girls (PHAC 2016/ CHIRPP)

Proven Strategies & Resources

Risk & Protective Factors

Intrinsic Factors

Modifiable

- Protective equipment
- Skills to minimize risk of injury/impact
- Fair Play Practice
- Knowledge

Non-Modifiable

- Genetic factors
- History of Concussion

Extrinsic Factors

- Culture of Safety
- Education & Awareness
- Legislation & Policies
- Physical environment modifications

What Works?

For the Athlete

- Wear protective equipment and wear it correctly
- Practice fair-play to reduce exposure to risk
- Adjust skill level
- Recognize & seek help
- Follow treatment protocol

Coaches/Trainers

- Promote fair-play
- Recognize symptoms
- Remove & monitor players with suspected concussion
- Refer to medical professional with concussion expertise

Management

Return to Play

STEP 1*: No activity, only complete rest.

STEP 2*: Light aerobic exercise.

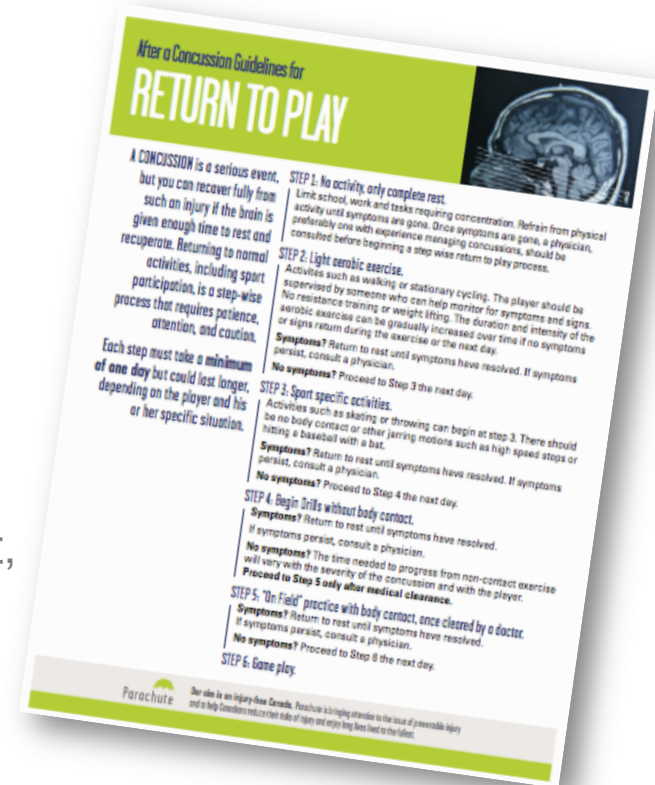
STEP 3*: Sport specific activities.

STEP 4*: Begin Drills without body contact.

STEP 5*: “On Field” practice with body contact, once cleared by a doctor.

STEP 6*: Game play.

* Should be completely symptom-free for at least 24hrs before proceeding to next step



Resources

Parachute's Horizon

Parachute's Horizon is an online repository of evidence-based injury prevention solutions

Resources on Horizon include:

- E-learning
- Guidelines
- Reports
- Legislation

Visit horizon.parachutecanada.org to find more resources on concussion

Parachute's Horizon: Collections



COLLECTION

Concussion resources for Parents



COLLECTION

Concussion guidelines

This collection contains guidelines for important key audiences interested in learning more about prevention, recognition, and management of concussion.



COLLECTION

Concussion resources for the Sports community

[<horizon.parachutecanada.org>](http://horizon.parachutecanada.org)

Parachute's Horizon: Tools



TOOL

Concussion – e-learning courses

Concussion is an invisible brain injury that cannot be seen by an x-ray, MRI, or CT scan. Coaches, teachers, parents, [...]

Pocket CONCUSSION RECOGNITION TOOL™

To help identify concussion in children, youth and adults



TOOL

Sport concussion recognition tool

Use this card on the field, at the rink, or on the school group, to help identify concussion in children, youth, and adults.



VIDEO

Educational video: Smart hockey

This educational video aims to educate young hockey players about concussion.

[<horizon.parachutecanada.org>](http://horizon.parachutecanada.org)



Thank you

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