



Public Health
Agency of Canada

Agence de santé
publique du Canada

Canada

Français	Contact Us	Help	Search	Canada Site
Home	Centres & Labs	Publications	Guidelines	A-Z Index
Child Health	Adult Health	Seniors Health	Surveillance	Health Canada



In this issue

Public Health Agency of Canada (PHAC)

CHIRPP NEWS

Canadian Hospitals Injury Reporting and Prevention Program

Issue 12

November 1997

A comparison of injuries on various types of playground equipment

by Janet Brown,
Analyst,
Child Injury Division

Playground equipment injury records make up an important proportion of the CHIRPP database: nearly 10% of injuries sustained by children between the ages of five and nine are related to playground equipment. These injuries also account for 6% of injuries to two-to-four-year olds and 2% to 10-14-year olds included in the database. The number of playground equipment injuries is in the same range as the number of bicycle injuries in the CHIRPP database.

This article compares and contrasts injuries associated with the five most common types of playground equipment specified on the CHIRPP forms in 1996: monkey bars, slides, swings, play structures and see-saws. These records represent 90% of playground equipment injuries when the CHIRPP record specified type of equipment. Only injuries to children between 2 and 14 years of age were examined. There were too few injuries to children younger than two years old and adults older than 15 years old to analyze separately, and they were not similar enough in injury pattern to collapse into the nearest age group.

Age and sex

See-saws were the only type of playground equipment that led to more girls being injured than boys (55% versus 45%). Monkey bar injuries were evenly distributed among girls and boys. For the injuries associated with the other types of playground equipment, boys outnumbered girls (55-60% versus 45-55%, roughly the same proportions as in the entire CHIRPP database).

The type of equipment involved in the injury varied by age. Injuries involving slides were the most common playground injury among two-to-four-year olds, monkey bars among five-to-nine-year olds and swings among 10-14 year olds (see Table 1).

Table 1 Type of equipment involved, by age group, 1996			
	2-4 years	5-9 years	10-14 years

	(n=864)	(n=1764)	(n=451)
Monkey bars (n=883)	14.6%	37.4%	21.7%
Slides (n=846)	40.1%	22.9%	21.5%
Swings (n=763)	25.4%	22.1%	34.4%
Play structures (n=495)	16.9%	15.1%	18.2%
See-saws (n=92)	3.1%	2.6%	4.2%
Total (n=3,079)	100.0%	100.0%	100.0%

Circumstance of injury

The Top three circumstances for injuries were falls (67%), being hit by or hitting against equipment (12%), and being pushed or pulled by another person (6%). The ranking remained fairly constant among equipment type, but the proportions varied. For example, while falls were the number one cause for all playground injuries, a higher percentage of monkey bar injuries (87%) were due to falls than of see-saw and slide injuries (52%).

Here are some highlights of the circumstances surrounding equipment injuries:

- 10% of slide injuries were due to a bad landing at the base of the slide.
- 9% of swing injuries occurred after the child jumped off the swing.
- 3.5% of swings broke or were reported to be defective. This circumstance was reported no more than 0.3% of the time for any other type of equipment.
- 8% of see-saw injuries were due to sudden (unexpected) drops.

Nature of injury and body part injured

Fractures (43%) were the most common injury for all types of equipment, and were most likely to occur on monkey bars (55%) and least likely on see-saws (26%). Forearms (33%), upper arms (9%) and hands (7%) made up half of the injured body parts. Head injuries (including to the face) were also common (31%).

Treatment provided at the emergency room

Injuries associated with monkey bars and slides accounted for the highest proportion of hospitalizations (14% and 9%, respectively). Although monkey bars had the highest proportion of hospitalizations, this may be in part influenced by the age of the children being injured on monkey bars. Five-to nine-year olds were most often injured on monkey bars and also tended to have a slightly higher percentage of hospitalizations on all types of playground equipment.

Conclusion

Not surprisingly, the profile of injury depended on the type of equipment used (Table 2).

For summary information of playground equipment injuries in general, please refer to the [CHIRPP Sampler](#). A general report of all 1996 playground equipment injuries and several individual reports by equipment type are

available from the Child Injury Division (tel.: (613) 941-9918). Special thanks to Caren Uhlik who undertook the enormous task of examining each of these playground equipment injury records individually and preparing the CHIRPP reports.

Table 2			
Summary of injuries, by type of playground equipment, 1996			
Most common age group	% Fractures	% Serious head injuries*	% Hospitalization
Monkey bars (5-9)	54.9%	1.1%	14.2%
Slides (2-4)	40.1%	1.6%	9.3%
Swings (10-14)	39.8%	2.0%	7.5%
Play structures (10-14)	37.0%	2.0%	6.1%
See-saws (10-14)	25.6%	1.1%	6.5%
* includes concussions and fractures to the head only			

[\[Previous\]](#) [\[Table of Contents\]](#) [\[Next\]](#)

Last Updated: 2001-02-16



[Important Notices](#)