

Direction de la santé publique

Injury Prevention Series

INJURIES FROM FALLS IN CREE COMMUNITIES OF EYYOU ISTCHEE, QUÉBEC, CANADA: A TEN YEAR STUDY

Were you aware that falls are one of the top causes of serious injuries among the Cree? Over a ten-year period, 195 Cree went into hospital for injuries received in a fall and 2 persons lost their lives. This is just the tip of the iceberg. For every Cree who has to go into hospital for a fall, there are two or three others who are laid up and recovering at home.

Many people used to think that falls were “accidents” that just “happen”. This old view is changing. Now we know that falls and other injuries are health problems that can be measured and prevented. This is no different from the way that poor diets can be studied and changed to prevent heart attacks, or that the reasons that young people start smoking can be studied to prevent lung cancer and many other diseases.

To prevent injuries from falls, we need to build and make our homes and communities “user-friendly”. This is the responsibility of all of us: homeowners, parents, building contractors, home handymen, architects, public health officers, band councilors and you who are reading this.

In order to make our communities user-friendly to prevent falls, we need to know:

- which groups of people are at risk;
- what activities are involved;
- where the falls happen;
- what could be changed in homes and other locations to make them safer.

This report was prepared to help provide this information.

In 1992, the Cree Board of Health and Social Services and the Injury Prevention Module of the Montreal Public Health Department began to study how Cree had been hurt from injuries during the period 1982 to 1992. The project was done as the first step leading to recommendations to help prevent future injuries among the Cree. The study obtained information from the Québec Health Ministry's records on hospital use, individual hospital files, interviews with family and friends of victims, and coroners' reports. This material was used to prepare a detailed report of the circumstances of falls

among the Cree that had resulted in a hospitalization or death. This paper is a summary of the longer report.

Cree people are hospitalized as often for falls as they are for car crashes.

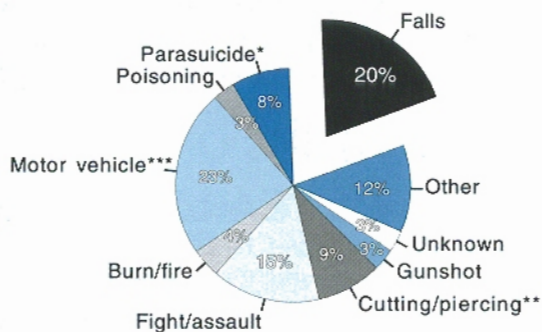
While falls often result in severe injuries, there are fewer deaths than from crashes.

ARE FALLS AN IMPORTANT HEALTH PROBLEM FOR THE CREE?

Some victims were so seriously hurt from falls that

828 days were spent in hospital by Cree during the study period. Although few Cree die from falls, falls and motor vehicle crashes were the most frequent causes of hospitalization for injuries. **Figure 1** shows that 1 out of every 5 Cree admitted to hospital for an injury was there because of a fall. While this seems high, people in Cree communities go to hospital for fall injuries at about the same rate as other people in Québec, and even a little less than people in some other rural areas of Québec.

Figure 1 Hospitalizations from falls & other injuries
Cree of Eeyou Istchee, Québec 1982-92 (n=910)



* Suicide attempts; ** Includes wounds from knives, sticks, broken glass, etc.; *** Includes injuries in cars/trucks, 3 & 4 wheelers (ATV's), snowmobiles, bicycles, motorcycles, & pedestrians
Source: Cree Injury Study 1997

This could be because older Cree who are physically active may have stronger bones and thus fewer broken hips than many elderly people in cities.

When a person falls, they are more likely to break a bone if their bones are weak. Bones are not like stone, but like hard wood. If not kept in good condition, bones will go soft like rotting wood. Exercise strengthens bones, just as it does for muscles.

HOW SEVERE ARE INJURIES FROM FALLS?

Imagine eight Cree in hospital after falls. Two will have broken arms, one a broken leg, and one a broken skull. Four others will have a brain injury, dislocated joint, sprains, or severe cut.

Most Cree who have to go to hospital after a fall must be transported by plane or ambulance, often far from home. This also adds significantly to regional health costs.

WHERE AND WHY FALLS HAPPEN & WHO ARE THE VICTIMS

Stairs and beds in homes, followed by hockey rinks and streets, were the most common location for serious injuries from falls among the Cree.

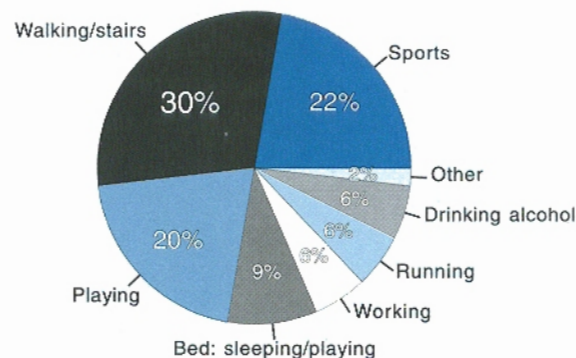
Most falls occurred during: walking, climbing stairs, sports, playing, sleeping (see Figure 2).

Home falls mainly involved beds, stairs, furniture, and swings

(see Figure 3). As you might expect, it is babies and very young children less than 5 years old and elderly people 65 and older who are most seriously injured at home.

Sports injuries from falls usually disable older children and young adults between 10 to 34 years old. Most boys and men were seriously hurt while playing hockey, while girls and young women received their severe injuries playing a variety of sports (see Figure 4). Several young children 1 to 4 years old were seriously injured when they fell from ramps and other high structures onto concrete surfaces in sports arenas. Not surprisingly, 1 out of 5 serious falls involved people who had slipped on ice.

Figure 2 Hospitalizations for falls by activity
Cree of Eeyou Istchee, Québec 1982-92 (n=183)*



* Note: Percentage breakdown for the 54% of falls where the activity is specified.
Source: Cree Injury Study 1997

Drunkenness was a factor in at least 2 falls in every 10 among people 15 and older. These injuries often occur on week-ends. About 1 fall in 10

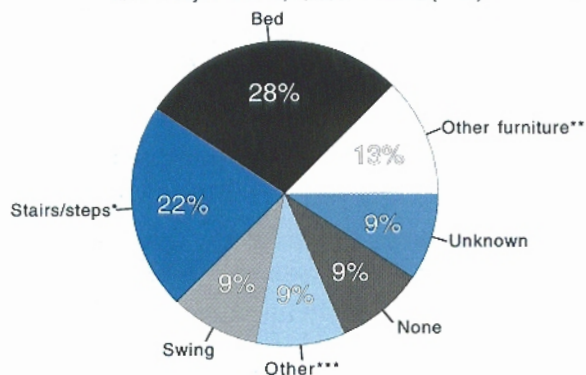
About half of all home injuries among Cree could be prevented with safer stairs and beds.

involved a person with diminished mobility as a result of a physical handicap of their legs or arms, which makes them more at risk for falling and being injured.

HOMES & COMMUNITIES CAN BE MADE SAFER FROM FALLS

Obviously, making a home safe from falls involves

Figure 3 Hospitalizations for falls at home by location
Cree of Eeyou Istchee, Québec 1982-92 (n=32)



* 5 inside stairs, 1 outside, & 1 unspecified - 2 infants fell downstairs while using walkers; ** 1 couch, 1 table, 1 fall onto corner of table, & 1 unspecified furniture; *** 1 freezer, 1 lego blocks, 1 heater
Source: Cree Injury Study 1997

measures that are quite different from actions that would prevent falls during sports or in the street.

Some falls can be prevented by careful attention to the environment and equipment.

This should be made routine when new homes are being built, when stairs are being replaced, or when furniture is being made or bought.

The steps on stairs should be at least “one-foot” wide. This means that when a large man walks downstairs, the entire length of his foot will fit onto each step. All risers between each step should be the same height, since people will judge all the other steps from the first one. Places with a single step — which is always hard to notice — are dangerous. All stairs should have a hand railing that is round and easy to put the fingers right around.

Steps should have a non-slip abrasive surface. This can be obtained by adding abrasive materials to paint or by attaching non-slip material to the treads. Long stairs should have a landing so if someone trips they will only fall, at most, half way down. Stairways should be well-lit and painted in light colours.

Dangerous furniture such as bunks and other high beds should be avoided. When there are young children in the home, coffee tables with sharp corners might be stored until the children are older. Baby walkers are now banned in Canada because so many children, including Cree babies, have fallen downstairs in

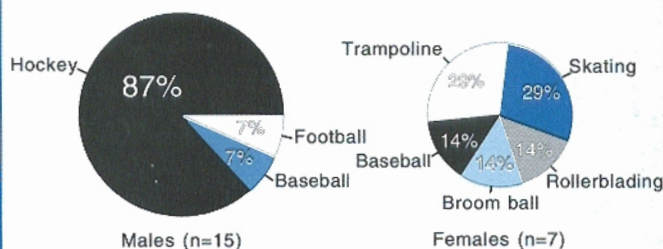
them. If there are any walkers still around, they should be destroyed.

In sports, proper protective equipment and maintenance of playing surfaces, such as ice, are important. All arenas should have railings and protective barriers in high areas where children might easily fall onto concrete below.

WHAT YOU CAN DO TO PREVENT FALLS

Building contractors, architects and safety inspectors can do a lot to prevent serious falls. Band administrations can take the lead in promoting a safe community and ensuring the safety of homes, sports arenas, and streets.

Figure 4 Hospitalizations for falls during sport for males & females
Cree of Eeyou Istchee, Québec 1982-92 (n=21)



Source: Cree Injury Study 1997

Contractors and home owners can make sure that stairs are safely constructed. However, home owners should be aware that building codes for home stairs still allow steps that are not deep enough for an adult's foot. Public safety officers can make home safety checks on the inside and outside of existing homes, including stairs and furniture. They can also check details of stairs in plans for new homes.

Individuals of all ages can reduce their risk of serious

Safe steps should be at least 11 inches deep and 4 to 7 inches high, with all steps the same distance apart. Hand rails should be round and about 2 inches in diameter so that the fingers can grip around them. If they are the right height for adults, children can reach up and hang onto them. Outside stairs need a non-slip surface such as paint with grit or a runner.

injuries from falls by regular exercise. Exercise helps to strengthen bones, especially if it is begun at a young age. However, regular exercise is very important for all ages, even elderly people. Walking or running is good, since it puts weight on the bones.

For young adults, especially men, alcohol is an important risk factor for falls. Some of these falls result in severe head injuries. Since alcohol is involved in at least 2 falls out of every 10, measures to prevent drunkenness should prevent many falls (as well as many other problems!).

Health workers can help after an injury occurs, not only in taking care of the injured, but also in recording details about the fall in the patient's medical file. This helps to make everyone more aware of what caused the fall, and therefore what needs to be done to prevent other similar falls.

In summary, Cree people and their families can prevent falls by building and maintaining safe homes, and by keeping their bodies fit and their minds alert.

STAIR SAFETY QUIZ

This photo was taken at a Cree home. What feature do you see that is good about these stairs? What is unsafe? What else would you like to know but cannot tell from the photo? Look carefully and think about what you have just read, before looking at the answers. After studying the answers, decide what you need to do to make the stairs in your home safer!



Answers to photo stair quiz:

Good:

Presence of hand railing.

Unsafe:

Hand railing is not round and is too large for an adult to put a hand around it or for a small child to reach up and hold onto. Railings should be on both sides. Height of first step is different from others so a user could misjudge the height of the next steps (The concrete step could have been made a few inches higher to avoid this).

Treads are too shallow for a large foot.

Unknown:

It is not possible to see whether there is a good light for the stairs. We cannot tell whether it has been painted with non-slip paint.

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The image of Canada geese is based on a painting by Margaret Orr, a Cree artist from Eeyou Istchee. The geese symbolize Cree life and culture. Their upward flight evokes a sense of freedom, and suggests traditional values guiding the way to the future.

Information:

Public Health Module, Cree Region (514) 861-2352 or fax (514) 861-2681. Copies available at local clinics and social services offices, band councils, and schools.

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