

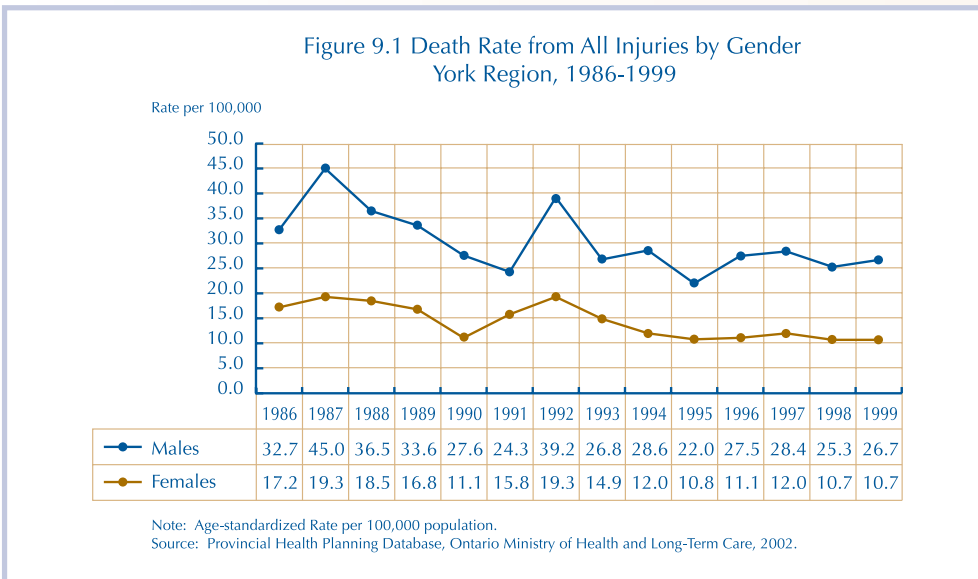
# Injuries

## Chapter 9

*Injuries are the leading cause of death in children, youth and young adults. Even in non-fatal injuries, people are often disabled for the rest of their lives, which can affect their quality of life and their ability to work. While often referred to as "accidents", injuries typically occur because of circumstances or for reasons that can be prevented or modified. This section highlights selected causes of injuries, including those caused by motorized vehicles or resulting from falls. In addition, the number and types of work-related injuries, as reported to the Workplace Safety and Insurance Board, are noted.*

### Deaths Due to Injuries

There were 1,390 deaths due to injuries in York Region over the fourteen-year period 1986 to 1999. The York Region injury death rate among males was consistently higher than the rate among females (Figure 9.1). During this period, the York Region death rate from injuries decreased by 37% for males and 18% for females. The average death rate due to injuries for York Region was 17.5 deaths per 100,000 population, the lowest figure recorded across Ontario for 1986 to 1999.



Injuries are the leading cause of death among those 1 to 19 years old. The injury-related death rate increases steadily from age 1 to 19 (Figure 9.2) and begins to decrease during the 20 to 24 age group, only increasing again after age 55.

### At a Glance

Between 1986-1999 in York Region,

Male death rates from all injuries were approximately twice as high as female rates.

Death rates from all injuries decreased by 37% for males and 18% for females.

Death rates from all injuries, motor vehicle collisions, suicide and accidental falls among York Region residents were the lowest across Ontario.

Between 1997-2001 in York Region,

Hospitalization rates from all injuries were among the lowest across Ontario and 29% lower than the provincial average.

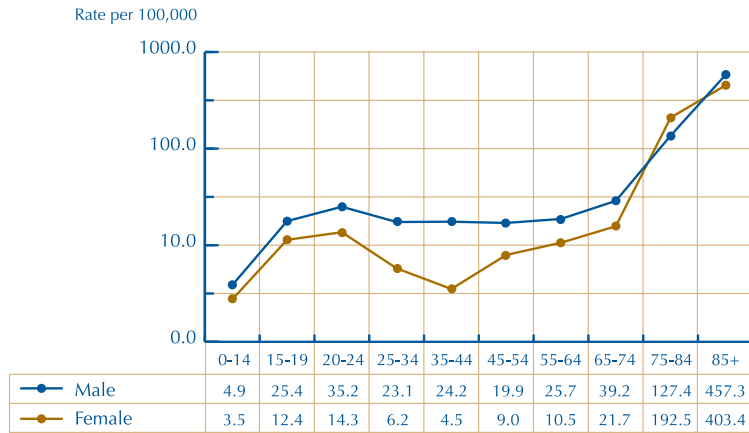
There were 35 fatalities in York Region due to occupational illness or injury between 1995 and 1999.

Workplace Safety and Insurance Board figures indicate that there were 6,056 lost-time claims in 1999 in York Region.

Sprains and strains and tears were the most common claim for work-related injury in York Region in 1999.



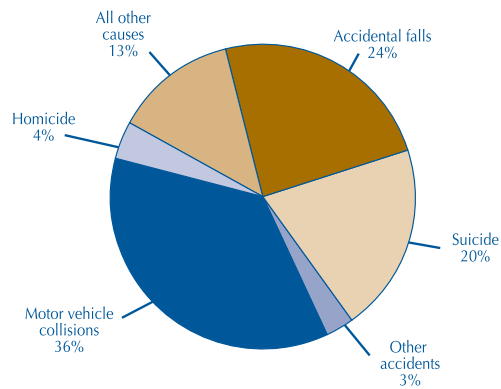
Figure 9.2 Death Rate from All Injuries By Age  
York Region, 1986-1999



Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

From 1986 to 1999, motor-vehicle collisions, accidental falls and suicide were the major causes of injury-related deaths among York Region residents, accounting for 80% of deaths due to injuries (Figure 9.3).

Figure 9.3 Major Causes of Injury Deaths  
York Region, 1986-1999

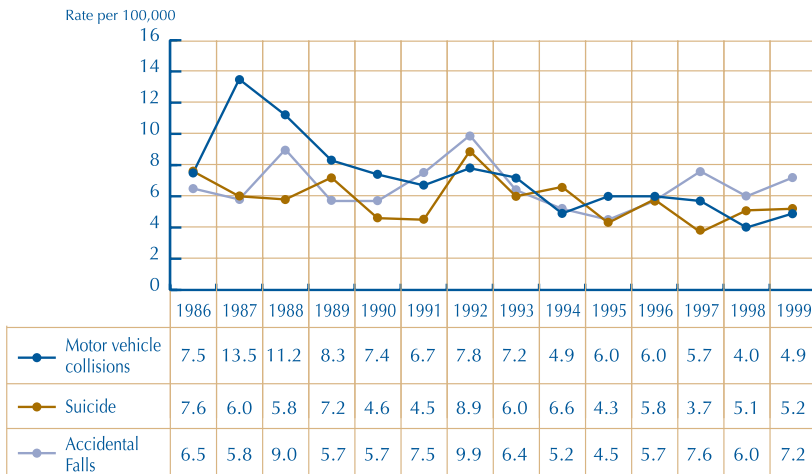


Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.



The death rate from motor vehicle collisions in this period fell from a 14-year high of 13.5 deaths per 100,000 population in 1987, to 4.9 in 1999 (Figure 9.4). The death rates from suicide and accidental falls fluctuated from year to year during this period.

Figure 9.4 Death Rate from Selected Causes of Injuries  
York Region, 1986-1999



Note: Age-standardized Rate per 100,000 population.  
Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

## Did You Know?

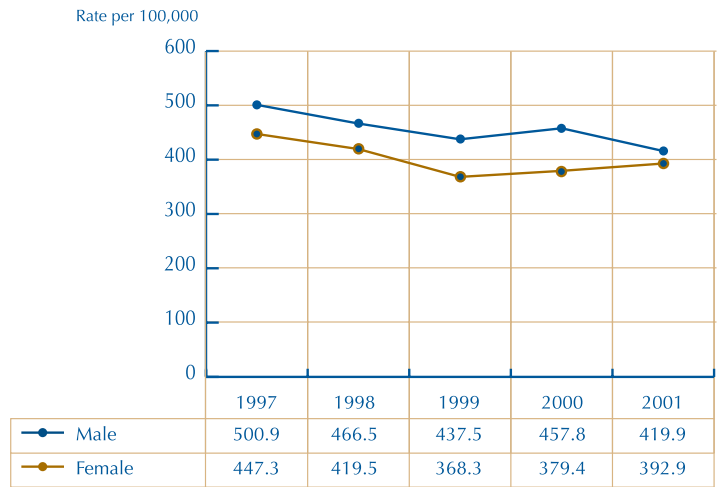
Death rates from all injuries, motor vehicle collisions, suicide and accidental falls among York Region residents were the lowest across Ontario over the 14-year period 1986-1999.

## Hospitalizations Due to Injuries

The rate of acute care inpatient hospitalization due to injuries sheds light on the adequacy and effectiveness of injury prevention efforts. These efforts include public education, product development and use, community and road design, and prevention and treatment resources. From 1997 to 2001, there were 13,693 hospitalizations and over 144,364 patient days in a hospital as a result of injuries to York Region residents. These figures underestimate the extent of the injury problem since only very serious injuries actually result in a hospital admission and stay. The hospitalization rate from injuries for York Region males was consistently higher than the rate for females (Figure 9.5). During this period, the age-standardized five-year hospitalization rate due to injuries was 432.3 hospitalizations per 100,000 York Region residents. By comparison, across Ontario the hospitalization rate from injuries ranged from 425.9 per 100,000 to 1,006.2 per 100,000.



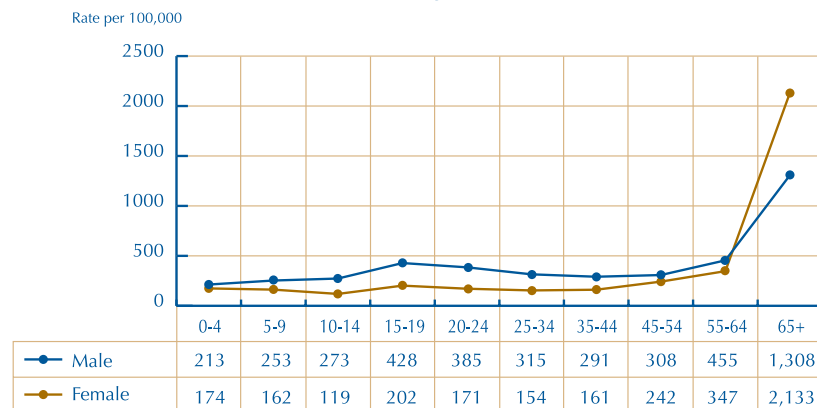
Figure 9.5 Hospitalization Rate from All Injuries  
York Region Males and Females, 1997-2001



Note: Age-standardized Rate per 100,000 population.  
Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

For residents age 19 and under, injury-related hospitalization rates were highest among 15 to 19 year olds (428 hospitalizations/100,000 males ages 15 to 19 and 202 per 100,000 females ages 15 to 19). Injury-related hospitalization rates increased dramatically from age 55 onward, reaching a high of 2,133 per 100,000 females ages 65 and over (Figure 9.6).

Figure 9.6 Hospitalization Rate from All Injuries by Age  
York Region, 1997-2001



Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

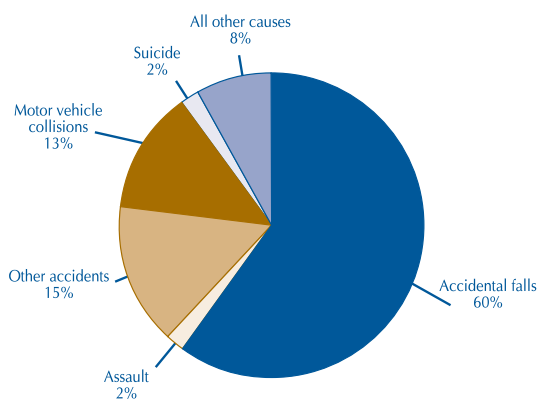


## Selected Causes of Injuries

### Motor Vehicle Collisions

Between 1997 and 2001 motor vehicle collisions among York Region residents accounted for 13% of all injury-related hospitalizations (Figure 9.7). Injuries due to motor vehicle collisions were the most frequent cause of injury hospitalizations for York Region residents aged 25 to 34 years (Table 9.1).

Figure 9.7 Major Causes of Injury-Related Hospitalizations  
York Region, 1997-2001



Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

Table 9.1 Injury-Related Hospitalizations Due to  
Motor Vehicle Collisions By Age  
York Region, 1997 - 2001

Age	Number of Hospitalizations	%	Rate/100,000
0-4	23	1.2	10.5
5-9	54	2.9	21.1
10-14	46	2.5	17.8
15-19	196	10.6	77.5
20-24	240	13.0	102.1
25-34	309	16.8	61.4
35-44	270	14.7	41.3
45-54	266	14.4	50.1
55-64	192	10.4	66.3
65+	246	13.4	80.0
TOTAL	1,842	100.0	52.5

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.





## Working for You

Public Health Inspectors in York Region routinely inspect playgrounds at day care facilities and recreational camps.

In 2001, 170 inspections of York Region playgrounds were conducted.

## Pedal Cycle Injuries

Injuries sustained while riding a bicycle or tricycle are called pedal cycle injuries. Serious pedal cycle injuries resulted in 236 hospitalizations of York Region residents, from 1997 to 2001. The rate of pedal cycle injury hospitalizations during this period was 44% lower than the provincial average of 4.44 per 100,000 population.

In York Region, between 1986 and 1999, there were 11 pedal cycle deaths compared to an expected number of 20 deaths based on provincial average rates during this time period.

## Playground Injuries

In Ontario between 1997 and 2001, there were 3,112 hospitalizations associated with falls from playground equipment.

In York Region between 1997 and 2001 there were a total of 142 hospitalizations due to falls from playground equipment, more than 90% occurring among children ages 1 to 19 years (Table 9.2).

Table 9.2 Number of Hospitalizations Due to Playground Injuries by Age Group, York Region, 1997-2001

Age Group	Number of Hospitalizations	% of Total (Ages 1-19)
1-4	36	27.5
5-9	77	58.8
10-19	18	13.7
Total 0-19	131	100%

Source: Provincial Health Planning Database, Ontario Ministry of Health and Long-Term Care, 2002.

## Falls

Falls are a major threat to the health and independence of seniors and are the primary cause of injury-related hospitalizations for York Region adults 65 years of age and over. Between 1997 and 2001 there were over 4,631 fall-related hospitalizations among the York Region senior population. In addition, an average of 20 York Region seniors die each year as a direct result of a fall. The 2001/2002 Rapid Risk Factor Surveillance System asked York Region adults 18 and over if they



## Working for You

Since 1997, Public Health Nurses in York Region have conducted 40 fall assessment clinics. A total of 845 York Region seniors have been assessed for risk factors leading to falls.

The Falls Intervention Team (F.I.T.) is a pilot project developed by York Region Health Services Department, Toronto Public Health and Baycrest Centre for Geriatric Care. The purpose of F.I.T. is to determine better ways to provide services in the community to frail seniors who are at risk for falls.

had had a fall in the last 12 months. Seven per cent or approximately 40,000 adults stated that they had had a fall in the past year.

## Work-related Injuries

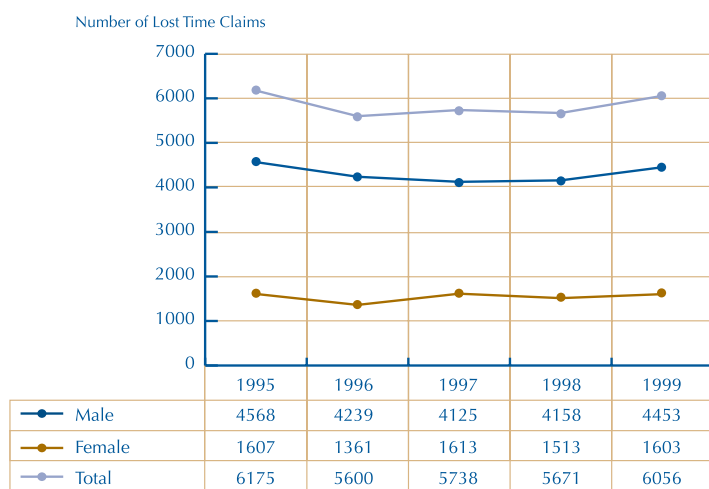
The workplace is a source of many injuries and occupational diseases. Workplace-related injuries and diseases have a major impact not only on workers, but also on their families, workplaces and society. Impacts include lost days at work, lost wages, medical expenses and production delays. All of these are quantifiable expenses. However, there are other costs that cannot be quantified, such as pain and suffering, stress and stress-related illnesses, and economic insecurity. In York Region there were a total of 35 fatalities due to occupational illness or injury from 1995 to 1999.

## Workplace Safety and Insurance Board Information

In addition to the number of deaths due to occupational illness and injury, York Region-specific Workplace Safety and Insurance Board (WSIB) data indicates that there were 6,056 lost-time claims to WSIB in 1999.

Figure 9.8 shows the number of lost-time claims from 1995 to 1999. WSIB statistics only cover injuries serious enough to warrant a WSIB claim.

Figure 9.8 Total Number of Lost-Time Claims  
York Region, 1995 to 1999



Source: Workplace Safety and Insurance Board, 2001.

## Nature and Location of Injury

According to WSIB statistics, sprains, strains and tears were the most common reason for a work-related injury claim in York Region in 1999 (38% of all claims), followed by contusions and bruises (12%). The major types of work-related injuries from 1995 to 1999 are presented in Table 9.3.



Table 9.3 Lost-Time Claims by Nature of Injury  
York Region, 1995 to 1999

Nature of Injury	1995 Number	%	1996 Number	%	1997 Number	%	1998 Number	%	1999 Number	%
Sprains, strains and tears	2,613	42%	2,172	39%	2,134	7%	2,081	37%	2,291	38%
Contusions and bruising	860	14%	704	13%	713	12%	738	13%	733	12%
Cuts, lacerations and punctures	774	13%	666	12%	658	11%	693	12%	738	12%
Fractures	441	7%	388	7%	418	7%	397	7%	453	7%
Scratches, abrasions	67	1%	73	1%	61	1%	58	1%	66	1%
Heat burns and scalds	110	2%	75	1%	84	1%	88	2%	93	2%
Dislocations	44	1%	55	1%	63	1%	50	1%	5	1%
Amputations, finger tips	79	1%	67	1%	56	1%	53	1%	67	1%
Foreign bodies	46	1%	85	2%	74	1%	107	2%	74	1%
Carpal tunnel syndrome	57	1%	41	1%	49	1%	49	1%	51	1%
Non-specified injuries & disorders	577	9%	140	3%	242	4%	272	5%	316	5%
All other injuries	507	8%	1,134	20%	1,186	21%	1,085	19%	1,123	19%
Total	6,175	100%	5,600	100%	5,738	100%	5,671	100%	6,056	100%

Source: Workplace Safety and Insurance Board, 2001.

Work-related injuries are most likely to affect the upper extremities of the body. More than half of all York Region work-related lost time injury claims between 1995 and 1999 involved injury to a worker's arms, hands, back or neck (Table 9.4).

Table 9.4 Lost-Time Claims by Part of Body Injured  
York Region, 1995 to 1999

Location of Injury	1995 Number	%	1996 Number	%	1997 Number	%	1998 Number	%	1999 Number	%
Back, including neck	1975	32%	1564	28%	1593	28%	1486	26%	1683	28%
Upper extremities (arms & hands)	1608	26%	1560	28%	1654	29%	1664	29%	1779	29%
Lower extremities (legs & feet)	999	16%	1007	18%	1059	18%	1003	18%	1078	18%
Trunk (excluding back)	537	9%	569	10%	598	10%	599	11%	629	10%
Head	441	7%	419	7%	425	7%	428	8%	413	7%
All other locations	615	10%	481	9%	409	7%	491	9%	474	8%
Total	6175	100%	5600	100%	5738	100%	5671	100%	6056	100%

Source: Workplace Safety and Insurance Board, 2001



# Injury Prevention

## Falls

According to The Economic Burden of Unintentional Injury in Canada study (1998), falls can be prevented if risk factors - such as a history of falls, impairment related to cognition, balance and gait, low body mass index, the misuse of medications and hazards in the home - are recognized and addressed.<sup>97</sup>

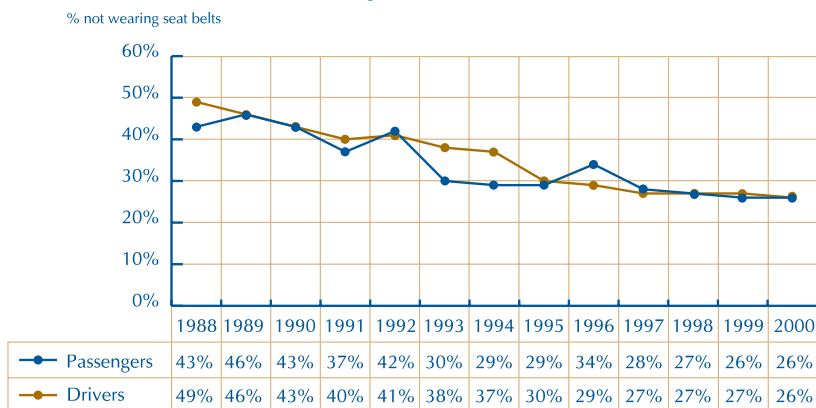
## Seat Belt Use

The proper and consistent use of seat belts reduces the risk of injuries and fatalities during a collision. It is estimated that wearing seat belts and installing air bags can reduce motor vehicle injuries by 61%.<sup>98</sup>

Transport Canada's July 2001 Survey of Seat Belt Use in Canada found that 92.5% of Ontario occupants in light duty vehicles (passenger cars, passenger vans, light trucks) wore seat belts, an increase from 79.4% in 1993.<sup>99</sup> The increase could be due to the introduction of mandatory seat belt use legislation, stiffer fines for non-use of seat belts, and education campaigns.

Although the use of seat belts is improving, many drivers and passengers killed in motor vehicle collisions were not wearing seatbelts (Figure 9.9).<sup>100,101,102,103,104,105,106,107,108</sup> Although percentages have decreased since 1988, one in four Ontario drivers and passengers killed in motor vehicle collisions in 2000 were not wearing seat belts.

Figure 9.9 Percent of Drivers and Passengers Killed in Collisions Not Wearing Seat Belts, Ontario, 1988-2000



Source: Ontario Road Safety Annual Report. Ministry of Transportation.





Ninety per cent of licensed drivers and 85% of adult passengers (ages 18 and over) in York Region stated that they always wear their seat belts, according to the 2001/02 Rapid Risk Factor Surveillance System.

### Child Safety Seat Use

Consistent and correct use of appropriate child safety seats is important in preventing injuries and deaths from motor vehicle collisions. The correct use of child safety restraints can reduce the risk of injury by 70% and the risk of death by 90%.<sup>109</sup> However, their improper use continues to be of concern.

Safety checks conducted in York Region between May 1998 and October 2001 indicated that, on average, 91% of restraints examined were used incorrectly (Table 9.5). The most common causes of incorrect usage included harnesses or seat belts that were too loose as well as shoulder straps placed in the wrong location on the child.

### Working for You

The Injury and Substance Abuse Prevention Team of York Region Health Services Department, in partnership with York Regional Police Services and the Ontario Ministry of Transportation, launched a car seat safety program in 1998.

In 2001, these car seat safety programs reached nearly 4,000 York Region parents and key community influencers (health professionals, school boards, and retail stores).

Table 9.5 Child Safety Restraint Checks  
York Region, 1998-2001

Year	Total # of Restraints Checked	# Used Correctly	# Used Incorrectly	% Used Incorrectly
1998	134	12	122	90%
1999	190	16	174	92%
2000	258	32	226	88%
2001	209	9	200	96%
Total	791	69	722	91%

Source: Injury and Substance Abuse Prevention Team, York Region Health Services Department, 2002.

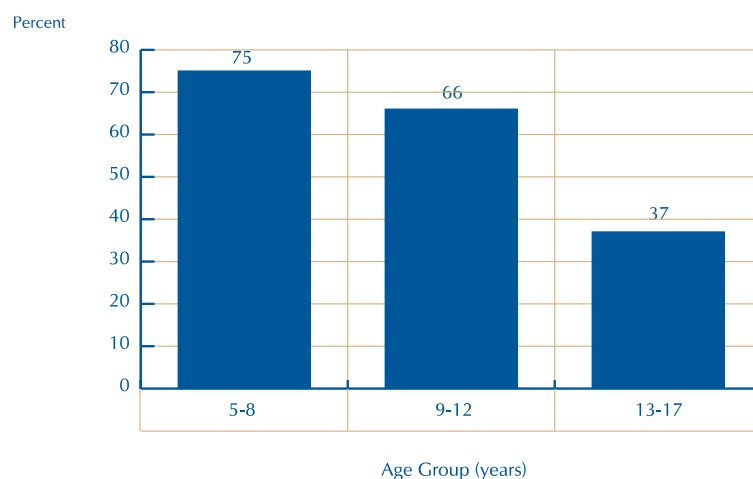
### Bicycle Helmet Use

In 1995, Ontario enacted legislation making bicycle helmet use mandatory for all Ontarians under age 18.<sup>110</sup> A bike helmet that fits properly and is worn correctly can reduce the risk of serious head injuries by as much as 88%.<sup>111</sup>

Bike helmet use decreases with age, from a high of 75% for children 5 to 8 years of age, to 37% for children 13 to 17 years of age, according to York Region's Rapid Risk Factor Sureillance System survey (Figure 9.10).



Figure 9.10 Bicycle Helmet Use All of the Time by Age Group  
York Region, 2001/2002



Source: Rapid Risk Factor Surveillance System (Feb. 2001-July 2002),  
York Region Health Services Department, 2002.

*This chapter has discussed injuries - those that occurred both at work and outside of work - and their consequences, in terms of deaths and hospitalizations, in York Region. Injuries typically occur because of circumstances or for reasons that can be prevented or modified. Chapter 5 (Lifestyle Behaviours and Health) discusses excessive consumption of alcohol, which is known to be involved in many injuries, including those from motor vehicle collisions. Other related chapters include Chapter 7 (Deaths), which ranks causes of death in York Region, and Chapter 12 (Use of Health Care Services), which outlines hospitalization rates.*

