

Chapter

6

Personal Health Practices

Overview

Personal health practices, such as smoking, use of alcohol and other drugs, healthy eating, physical activity, and sexual practices have a profound effect on the health and well-being of Canadians. Unintentional injuries — related to motor vehicle accidents, falls, aquatic mishaps and fires — are the largest single cause of death for children and youth.

There is strong evidence that early childhood experiences influence the adoption of healthy practices in childhood and later in life. Infants born at a normal birthweight and young children who enjoy quality child care, good nutrition and plentiful opportunities for stimulation are more likely to practice health-promoting behaviours in later life. Similarly, children who develop strong coping skills, competence and self-esteem tend to engage in health-promoting behaviours.

Personal health practices exert an influence on children's health. Low birthweight, which increases the risk of developing certain health problems and disabilities, may be associated with a number of undesirable maternal behaviours during pregnancy, including poor nutrition, smoking, and alcohol and drug use.

Health practices are learned within the context of family, community and society — beginning at an early age and continuing through the transition from primary school and puberty to secondary school and the work force. Parents' modelling of behaviours such as smoking and physical activity can influence the adoption of these behaviours by their children. Societal values and attitudes influence health behaviours and choices, as do social and emotional support from families, friends and communities.



Relationship to Healthy Child Development

Early experience sets the stage.

Two of the critical periods of child development occur during pregnancy and adolescence. Behavioural risks during these times can have a negative effect on development. For example, during the prenatal period, risk behaviours of the mother, such as smoking or alcohol consumption, have the potential to exert adverse effects on the fetus such as low birthweight or premature birth. Another critical period is during the adolescent years when youth are becoming increasingly independent. At this stage in development, adolescents may be faced with tremendous pressure to engage in activities and behaviours that could have serious and potentially lasting implications (e.g. unprotected sex, alcohol and drug use). In both of these stages, such challenges are influenced by the individual's sense of values, knowledge and societal expectations.

While progressing through the various developmental stages from conception to adulthood, children and youth may encounter many challenges and situations that entail risk. In addition to protecting children from potential dangers, parents (and society) need to guide children through these pressures, giving them the skills, knowledge and confidence to face these challenges in a responsible, productive way (Guy, 1997, p. 46).

The health status and behaviour of pregnant women have a major impact on the health, well-being and long-term development of their children. In extreme cases, a woman's health status or behaviour can result in severe problems for her child, such as very low birthweight, neurological abnormalities or developmental delays (Health Canada, 1996a, p. 4).

Babies with low birthweights are at a significantly increased risk of illness and death. In fact, low birthweight is the determining factor in about 15% of all deaths among newborns; those who survive are at greater risk of developing health problems and disabilities (CICH, 1994, pp. 21, 27).

Breastfeeding safeguards infants' health.

Breastfeeding is widely recognized as the best way to feed infants. It provides nutritional and emotional nurturing as well as immunological benefits, all of which enhance an infant's growth and development. There is strong evidence that infants who are breastfed have increased protection against respiratory, ear and intestinal infections (Canadian Dietetic Association, 1998). Breast-feeding may also supply some protection against sudden infant death syndrome (SIDS) (Health Canada, 1999a, p. 2).



Positive parenting plays a role.

Early stimulation and positive parenting are essential for children's healthy development. New evidence shows that brain development before age 1 is more rapid and critical than was previously realized. There is widespread agreement that the first two years of life represent a "window of opportunity" for providing the stimulæ for certain kinds of brain development. If this crucial period passes, the full potential for certain aspects of brain development may be lost (Kalil, 1989).

Exposure to unhealthy physical and social environments in early childhood may have health implications for children and youth. For example, children who are raised in a family that is unable to provide the basic physical and emotional necessities for optimal development may be at increased risk of negative health outcomes — emotionally, behaviourally and academically. This risk increases exponentially with each additional condition of risk (e.g. exposure to abuse, exposure to substance abuse present in the household).

Healthy eating and physical activity contribute to better health.

While the overall nutritional health of Canadians is good, the eating patterns of some Canadians contribute to the high incidence of such nutrition-related chronic diseases as cardiovascular disease, diabetes, osteoporosis and cancer (Canadian Dietetic Association, 1996, p. 4). The development of most of these diseases is a gradual process which often begins in childhood or youth. Food choices play an important role in nutritional health and significantly influence health status.

Physical activity has been directly linked to health outcomes for children and adults. People who have an active lifestyle reduce their risk of disease and chronic conditions, and are better able to resist stress and depression. Evidence also suggests that participation in various types of physical activity leads to increased self-esteem and a pattern of healthy eating, including eating foods that contain more fibre and are lower in fat and higher in complex carbohydrates (Stephens and Craig, 1990).

Children are susceptible to injury.

Unintentional injuries are the leading cause of death for children over the age of 1 (CCSD, 1996, p. 24). The natural course of growth and development places children at higher risk for certain types of injuries at different stages in their lives. Most injuries to infants and young children (age 5 to 9) result from falls and other incidents occurring in the home (38%); older children (age 10 to 14) are injured in the home too (23%), as well as during outdoor play (15%) and on roadways (15%) (CICH, 1994, pp. 70–71).



Children need to make informed decisions about smoking, alcohol and drugs.

Childhood experiences have a lasting impact. For example, people who grow up with an alcoholic parent are more likely to abuse alcohol themselves. Those who begin smoking in early adolescence also tend to be more addicted than people who begin later in life (Statistics Canada, 1998).

The health effects of smoking are widely known. Smoking (and environmental tobacco smoke), the leading cause of lung cancer, has also been linked to leukemia, as well as to cancer of the sinuses, brain, breast, uterus, and thyroid and lymph glands (Health Canada, 1999b). Babies of women who smoke or who were exposed to second-hand smoke during pregnancy are, on average, smaller at birth than babies of smoke-free mothers (Health Canada, 1995a).

Generally, continued excessive use of alcohol can damage the liver and eventually lead to cirrhosis of the liver. Alcohol is also a risk factor for the development of some cancers.

Native youths, including both Aboriginal and Métis youth, are between two and six times greater risk for every alcohol-related problem than youth in the general Canadian population (McKenzie, 1997, p. 135).

Adolescents are at risk for pregnancy and sexually transmitted diseases.

The development of intimacy and trust, gender identification and positive sexual and sensual experiences begin in early childhood and influence healthy sexuality and sexual decision making throughout life. Gender is an important issue in sexual health. While sexual and reproductive health is important to both men and women, the onus for preventing pregnancy most often falls on young women. There is strong evidence to suggest that teen parents have lower lifetime earnings and more social problems throughout life (Health Canada, 1999c, p. 4).

Sexually active youth are more vulnerable to the transmission of diseases such as hepatitis B, acquired immune deficiency syndrome (AIDS) and sexually transmitted diseases (STDs) — in part because about half of 15- to 19-year-olds believe they have no risk of contracting STDs (Williamson, 1993, p. 197). Research has shown that most youth are either unaware of or unconcerned about the consequences of STDs, which include pelvic inflammatory disease, infertility, ectopic pregnancy, and chronic pelvic pain (Health Canada, 1999c, p. 14).



Conditions and Trends

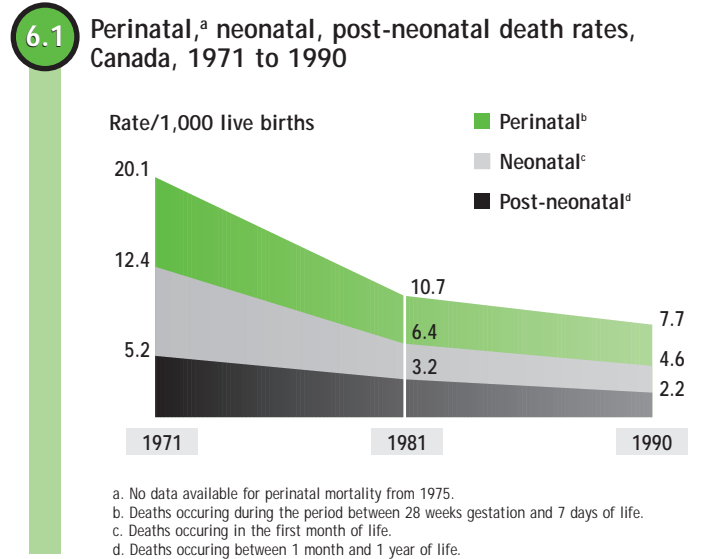
Prenatal and Infant Health

The incidence of low birthweight, stillbirths, perinatal death rates and SIDS has either remained stable or declined in recent years. More Canadian mothers are breastfeeding and most women abstain from smoking during pregnancy.

Most babies are healthy.

While most babies in Canada are born at a healthy weight, in 1990, 21,963 babies — 5.5% of all babies born in Canada — were low in birthweight. The rate of low birthweight has not changed significantly since the 1980s (Statistics Canada, 1992a, pp. 14–15). Rates of low birthweight are virtually the same for the First Nations population as for the general Canadian population. However, high birthweight is a concern in First Nations communities, where 18% of babies are born at a high weight, compared with 12% for the general population (Health Canada, 1996b).

The number of stillbirths (as well as hospitalization rates for spontaneous, unspecified abortions) dropped dramatically across Canada between 1974 (38,973) and 1993 (21,984) (Statistics Canada, 1996, p. 2). Perinatal death rates dropped steadily between 1971, when the rate was 20.1 per 1,000 live births, and 1990, reaching a low that year of 7.7 per 1,000 live births; these figures have levelled off since 1985 (Statistics Canada, 1992b, p. 40). See **Exhibit 6.1**.



Source: Canadian Institute of Child Health (1994). *The Health of Canada's Children: A CICH Profile*, 2nd edition. Ottawa: CICH, p. 25.

SIDS is a major cause of death for babies.

Sudden infant death syndrome (SIDS) is the leading cause of death for infants between one month and one year of age. In 1995, 252 cases of SIDS were recorded — a decrease from the 266 reported in 1993 (CFSID, 1997). Although the number of deaths due to SIDS has declined overall since 1978, the risk for Aboriginal infants is higher than the risk for non-Aboriginal infants (Health Canada, 1996b). In fact, it is estimated that the incidence of SIDS is approximately three times higher among Aboriginal infants (Canadian Paediatric Society, 1996). Factors contributing to SIDS include sleeping in a prone (tummy down) position, exposure to environmental tobacco smoke, and overheating of the baby (Health Canada, 1999a; Health Canada, 1995b).



More mothers are breastfeeding.

In Canada, the proportion of new mothers who initiated breastfeeding their babies had increased from 38% in 1963 (Health and Welfare Canada, 1990, p. 1) to 73% in 1994–95 (Health Canada, 1998a, p. 8). Data for 1994 show that 31% of mothers were breastfeeding their 6-month-old babies (Health Canada, 1998a, p. 25).

One in five pregnant women smoke.

While the majority of Canadian women abstain from smoking cigarettes during pregnancy, 19% of women aged 20 to 44 who had been pregnant in the five years preceding a 1994 study smoked regularly during their most recent pregnancy (Health Canada, 1995c). See **Exhibit 6.2**.

Healthy Eating

No current comprehensive national data are available on the eating patterns of children and youth, or on the incidence of obesity among children. However, it is known that infants and growing children are most vulnerable to the adverse impact of nutritionally poor eating patterns. While most Canadian children eat well, Aboriginal children are at higher risk for some nutritional deficiencies (e.g. iron, vitamin D) (Canadian Dietetic Association, 1996, p. 4).

Most children have healthy eating patterns.

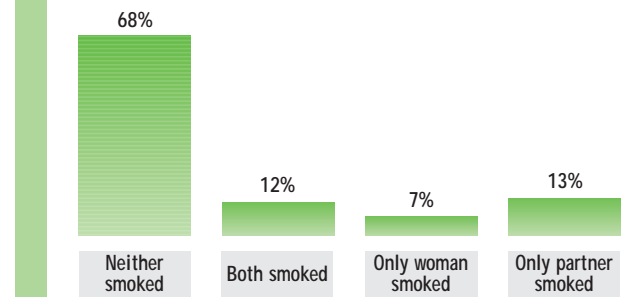
Research has shown that four in five children aged 10 to 14 eat in accordance with Canada's Food Guide to Healthy Eating, at least partially (CICH, 1994, p. 79). See **Exhibit 6.3**. A qualitative study carried out in 1995 of children's and parents' perceptions of healthy eating showed that most of the children aged 6 to 12 believed they were healthy eaters. Parents of 6- to 9-year-olds also reported that their children ate healthily; however, parents of 10- to 12-year-olds were much less likely to label their children's eating patterns as healthy (Health Canada, 1995d, pp. 10, 12).

What Contributes to Low Birthweight?

Factors contributing to low birthweight include: poor nutrition, smoking or alcohol and drug use during pregnancy; low pre-pregnancy weight; very young maternal age and multiple births (Federal, Provincial and Territorial Advisory Committee on Population Health, 1996a, p. 11).

6.2

Proportion of women aged 20 to 44 and their partners who smoke regularly during pregnancy, Canada, November 1994



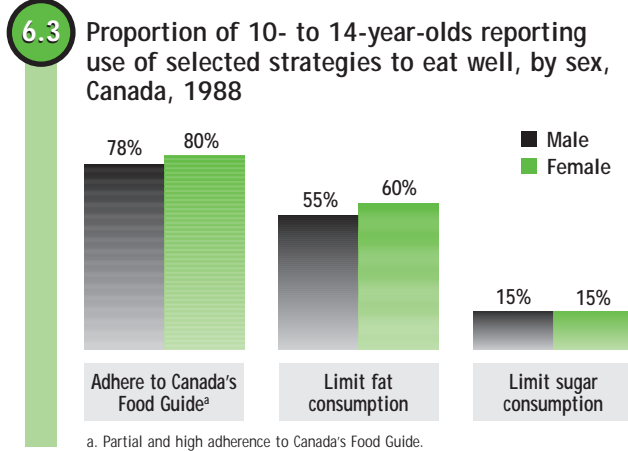
Source: Health Canada (1995). *Survey on Smoking in Canada — Cycle 3*. Ottawa: Health Canada, Chart 7.2.



Not everyone has healthy eating patterns.

Intakes of vitamin A, calcium and folacin are frequently below recommended levels in northern and isolated Aboriginal communities (Lawn and Langer, 1994).

While the rate of vitamin D deficiency rickets in children decreased after fluid milk began to be fortified with vitamin D in 1975 (Health Canada, 1998b), the risk is still present, though minimal. Children in northern communities and those with dark skin are at greatest risk for vitamin D deficiency (Canadian Paediatric Society, Dietitians of Canada and Health Canada, 1998, p. 19).



Source: Canadian Institute of Child Health (1994). *The Health of Canada's Children: A CICH Profile*, 2nd edition. Ottawa: Canadian Institute of Child Health, p. 79.

Body Image

Body weight, which is largely determined by eating patterns and exercise, is a significant contributor to children's self-image, which in turn has important effects on their mental health, sense of competence and control over life circumstances. Adolescence is a particularly difficult time for young people — adolescent girls, especially, are at risk for eating disorders.

Girls are concerned with body image.

In 1993–94, an international study showed that 77% of 15-year-old Canadian girls wanted to change something about their body, compared with 57% of Canadian boys (King et al., 1996).

Many female adolescents struggle to maintain a positive self-image. Physical appearance and acceptance figure prominently in their thoughts and self-perceptions. For example, in a study conducted by the Canadian Teachers' Federation, 48.2% of girls "strongly agreed" or "agreed" with the statement "being popular is a big worry for me right now." In addition, 85% of girls "strongly agreed" or "agreed" that they worry a lot about how they look (Canadian Teachers' Federation, 1990, p. 11). A 1998 study showed that more than one third (41%) of 13-year-old girls and almost half (44%) of 15-year-old girls felt that they needed to lose weight or were dieting to lose weight (King, Boyce and King, 1999, p. 70).



Even though girls are less active than boys, the activity level of young women aged 18 to 24 increased substantially between 1981 and 1995.



Eating disorders are a cause for concern among young people.

Young women with negative body image have a higher risk of engaging in disordered eating behaviours (e.g. bingeing and purging, self-induced vomiting, refusal to eat) than those who are not concerned with their body image. Males are not immune to negative body image. Low self-esteem has been linked with obsessive attempts to gain weight among boys and young men — sometimes with the help of anabolic steroids (Health Canada, n.d., p. 2). In 1998, 5% of 13-year-old boys and 4% of 15-year-old boys used anabolic steroids (WHO, 1999).

Among teens and young adults, 1% to 2% suffer from anorexia nervosa, and 3% to 5% from bulimia (Health Canada, 1995e, p. 1). The prevalence of obesity in children has increased dramatically in the past decade — from 14% to 24% among girls and from 18% to 26% among boys (Canadian Dietetic Association, 1996, p. 4).

Physical Activity

Participation in physical activity has far-reaching health impacts. Boys are more likely to be physically active than girls, although there are indications that girls' activity level is increasing.

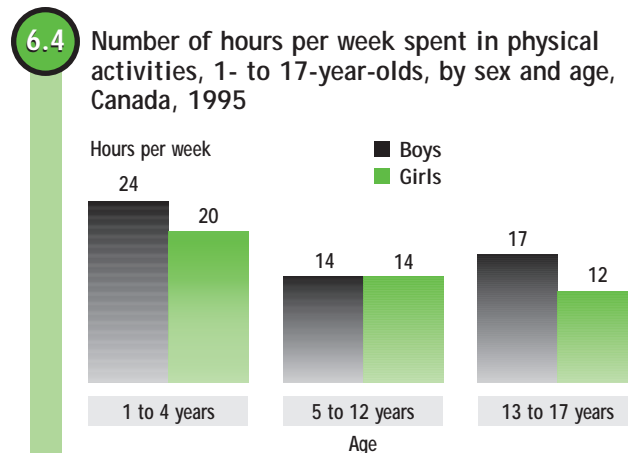
There is room for improvement.

A 1995 study revealed that approximately one third of Canada's children and youth were physically active enough to meet the energy-expenditure standard for optimal health and development (six to eight kilocalories per kilogram of body weight per day). Another one fifth came close to meeting the standard and one fourth met the minimum energy standard — the equivalent of walking for one hour per day (CFLRI, 1997, pp. 1–2). See **Exhibit 6.4**.

Notably, however, one quarter of Canadian children and youth are sedentary — girls, in particular. Adolescent boys spent 50% more energy on physical activities than did girls (CFLRI, 1997, pp. 1–2).

Young women are getting more active.

Even though girls are less active than boys, the activity level of young women aged 18 to 24 increased substantially between 1981 and 1995 (CFLRI, 1996a, p. 3 of chart). Parents' level of physical activity and their belief in the value of being physically active has a strong influence on their children's activity level (CFLRI, 1996b, pp. 2–3).



Source: Prepared by the Canadian Council on Social Development using data from Canadian Fitness and Lifestyle Research Institute, *Progress on Prevention*, Bulletin No. 8, 1995. In Canadian Council on Social Development (1997). *The Progress of Canada's Children — 1997*. Ottawa: Canadian Council on Social Development, p. 38.



Smoking, Alcohol and Other Drugs

Adolescents are particularly at risk for such negative health practices as smoking, drinking and using drugs. Despite public health messages warning of the consequences, many young teens try smoking. Alcohol appears to be the “drug of choice” among teenagers, although there are indications that the use of cannabis is increasing.

Smoking is on the rise among some groups.

Data from 1994 reveal that one in six teens had tried smoking by age 11. By age 13, 46% of girls and 41% of boys had tried smoking; by age 15, these numbers had risen to 64% and 58% respectively. Almost 10% of 12- to 14-year-olds reported being regular smokers (CCSD, 1996, p. 45).

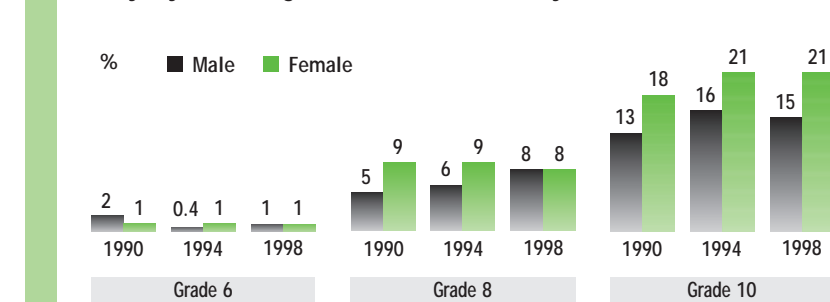
While the total number of Canadians who smoke has decreased since 1981 (Statistics Canada, 1995a, p. 39), the number of young women who smoke continues to increase. The HBSC data show that in 1998, 21% of 15-year-old girls smoked daily, the same proportion as in 1994 but a rise from 18% in 1990 (King, Boyce and King, 1999, p. 95). See **Exhibit 6.5**.

The rate of smoking among Aboriginal people is significantly higher than the rate for the Canadian population. Nine percent of First Nations youth aged 10 to 14 smoke daily, and an additional 21% smoke occasionally. Rates of smoking increase rapidly with age: at age 10, 23% of First Nations youth smoke at least occasionally, while by age 14 more than half (53%) do so (Saulis, 1997, pp. ii, 41). On average, Aboriginal people started smoking between the ages of 11 and 15 (Health Canada, 1996c, p. 20).

Smoking, Drinking and Drugs

A 1994 study showed that more than 40% of 15- to 19-year-old smokers engaged in heavy drinking, compared with 13% of non-smoking teenagers. Smokers were also more apt to be users of marijuana and hashish (Canada's Alcohol and Other Drug Survey, 1994, as cited in Clark, 1996, p. 6).

6.5 Proportion of students (aged 11, 13 and 15 years) who smoke daily, by sex and grade, Canada, selected years, 1990 to 1998



Source: A.J.C. King, W. Boyce and M. King (1999). *Trends in the Health of Canadian Youth*. Catalogue No. H39-498/1999E. Ottawa: Health Canada.



A small percentage of youth also use chewing tobacco. In 1994, 7% of children aged 10 to 14 reported having tried chewing tobacco, including 1% who reported use in the week prior to the survey (Adlaf and Bondy, 1996, p. 51). A 1995–96 survey of First Nations youth showed that 4.5% of youth between the ages of 10 and 14 reported having used the smokeless tobacco product (Saulis, 1997, pp. 45).

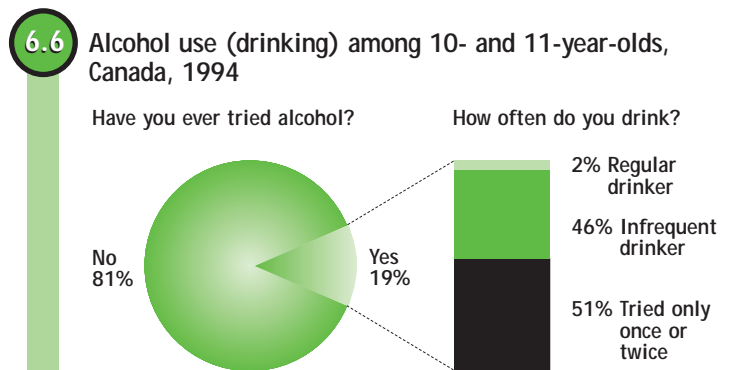
Second-hand smoke affects young people.

Almost half (45%) of non-smoking teens aged 15 to 19 had daily contact with second-hand smoke. The home is the most common source of second-hand smoke for non-smoking teenagers (Clark, 1998, pp. 3–4).

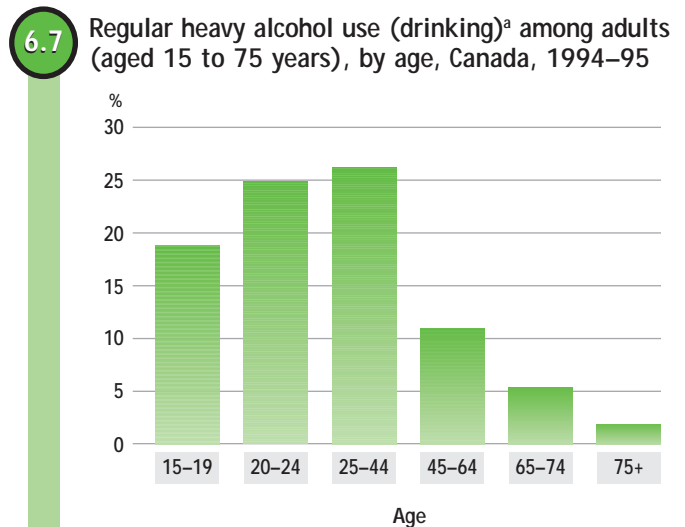
Alcohol — the teenager’s “drug of choice.”

A 1994 study showed that among 11-year-olds, 3% of girls and 6% of boys said they were regular drinkers (CCSD, 1997, p. 41). See **Exhibit 6.6**. Twenty percent of teens are heavy drinkers (Federal, Provincial and Territorial Advisory Committee on Population Health, 1996b, p. 202). (Heavy drinking is defined as five or more drinks per drinking session.) See **Exhibit 6.7**. According to *The Ontario Student Drug Use Survey: 1977–1995*, drinking and driving among Ontario youth is on the decline. The percentage of youth in grades 7, 9, 11 and 13 driving within an hour of consuming two or more drinks dropped from 58.1% in 1977 to 24.4% in 1995 (Adlaf et al., 1995, p. 124).

While alcohol is still a primary factor in many road collisions involving young drivers, the proportion of drivers under the age of 21 with illegal blood alcohol content who were fatally injured in motor vehicle accidents has decreased more than 20% since 1977 (CICH, 1994, p. 105).



Source: Prepared by the Canadian Council on Social Development using data from Statistics Canada's National Longitudinal Survey of Children and Youth, 1994. In Canadian Council on Social Development (1997). *The Progress of Canada's Children — 1997*. Ottawa: Canadian Council on Social Development, p. 41.



a. Drinking five or more drinks on one occasion 12 or more times in the previous year.

Source: Federal, Provincial and Territorial Advisory Committee on Population Health (1996). *Report on the Health of Canadians*. Ottawa: Health Canada, p. 57.



FAS/FAE

Fetal alcohol syndrome (FAS) is one of the leading causes of preventable birth defects and developmental delay (Health Canada, 1996a, p. 4). Fetal alcohol effects (FAE) refers to children with prenatal exposure to alcohol who manifest only some FAS characteristics. It is estimated that one to three children in every 1,000 in industrialized countries will be born with FAS; the rate for children born with FAE may be several times higher (Health Canada, 1996a). Limited studies suggest that the rate of FAS among Aboriginal people may be at least 10 times higher than the rate for the non-Aboriginal population (CCSA National Working Group on Policy, 1994).

The NPHS found that 16% of women under age 25, 24% of 24- to 35-year-olds, and 31% of women over age 35 consumed alcohol during their last pregnancy (Health Canada, 1998c).

Some young people are using other drugs.

Drug use among Canadian youth declined steadily since reaching its peak in the late 1970s. One study of Ontario students in 1995 found that 22.7% of students in grades 7, 9, 11, and 13 reported using cannabis at least once in the year prior to the survey, up from 12.7% in 1993. Between 1993 and 1995, cannabis use increased significantly among those in Grade 9 (8.7% to 19.6%) and Grade 11 (from 22.3% to 40.7%). Despite these recent increases, the 1995 rate of cannabis use among Ontario youth (22.7%) was well below the 1979 rate (31.7%). See **Exhibit 6.8**. The study also found that the percentage of students reporting injection drug use increased from 5.4% to 8.8% in the same period (Adlaf et al., 1995, various pages).

6.8 Proportion of students who have ever taken marijuana, by selected levels of use, by sex and age, Canada, selected years, 1989 to 1998

		Boys		Girls	
		13 years	15 years	13 years	15 years
1989-1990	Never	89.1%	73.8%	90.1%	76.4%
	Experiment (once or twice)	6.0%	10.5%	5.8%	10.8%
	Regular use (three or four times)	4.9%	15.7%	4.1%	12.8%
1993-1994	Never	87.5%	69.5%	89.5%	72.6%
	Experiment (once or twice)	6.7%	11.4%	5.4%	10.7%
	Regular use (three or four times)	5.9%	19.0%	5.1%	16.7%
1997-1998	Never	78.9%	55.9%	82.3%	59.4%
	Experiment (once or twice)	8.3%	12.6%	8.4%	11.5%
	Regular use (three or four times)	12.8%	31.5%	9.2%	29.1%

Source: WHO (1999). *Health Behaviour in School Age Children Survey, A World Health Organization Cross-National Study, 1997-98.*



Information from Health Canada's Bureau of Drug Surveillance shows that, in a 10-year period, the number of charges for all drug-related offences for the 15 to 19 age group increased 62%, from 844 charges in 1985 to 1,368 charges in 1994 (Health Canada, 1996d).

Young people have more experience with cannabis than other age groups. One third of 15- to 24-year-olds have used this drug in their lifetime (Hewitt, Vinje and MacNeil, 1995, p. 32).

Injuries

During 1992, 1,452 out of a total of 4,838 deaths among Canadians under age 20 resulted from injuries (Health Canada, 1997a, p. 2). In simple terms, almost one in three deaths were attributed to injury, as were one in six hospitalizations. The proportion of injuries as a cause of death increased with age (Health Canada, 1997a, p. 14). There has been a slow but steady decrease in injury occurrence during recent years. Injury mortality rates among children under 20 years of age decreased 35% between 1982 and 1991, and the hospitalization rate decreased 13% (Health Canada, 1997a, pp. 22–23). While these trends are encouraging, injuries remain the leading cause of death for Canadian children (Statistics Canada, 1995b, pp. 5–12).

According to national longitudinal and other health survey data, at least 10% of Canadian children are injured each year seriously enough to either seek medical attention or be restricted for a period of time in their daily activities (Health Canada, 1999d). About 1 in every 18 male children and 1 in every 29 female children aged 1 to 4 are hospitalized for injury; in the toddler years, the cumulative risk for injury is about one in five for boys and one in seven for girls (Canadian Red Cross Society, 1994, p. 4). In all age groups, boys have higher death and hospitalization rates than girls; in particular, the mortality rate for boys aged 15 to 19 was nearly three times higher than for girls in 1995 (Statistics Canada, 1995b, pp. 11–12).

Aboriginal children have a much higher injury-related death rate than non-Aboriginal children. The rate for infants is four times the national rate; for pre-schoolers, five times; and for teens, three times (CICH, 1994, p. 143).

Traffic-related injuries are the leading cause of death.

Although the trends have been declining in recent years, motor vehicle crashes remain the leading cause of injury-related deaths among children 1 to 19 years of age and the third leading cause of injury-related deaths among infants under age 1 (Health Canada, 1997a, p. 14). In 1995, 611 Canadian children (birth to 19 years old) died of motor vehicle-related injuries (Mackenzie, 1997, p. 5). Motor vehicle crashes are also an important cause of injuries among children, resulting in 7,489 hospitalizations each year (CIHI, 1998).



Children die as passengers.

In 1995, 309 child passengers died in motor vehicle crashes (Mackenzie, 1997, p. 5). Most victims who suffer motor vehicle-related injuries (fatal and non-fatal) are occupants of a vehicle as opposed to pedestrians or cyclists. The injuries sustained are more serious among children and youth unprotected by a restraint system. Occupant injuries are generally due to ejection from the vehicle or to collision of the occupant with the interior of the vehicle or with another occupant. Periodic surveys indicate that use of seat belts among back seat passengers, most of whom are children, is less than 60%.

The annual number of injuries increases with each age group, peaking among 15- to 19-year-olds. Young drivers aged 16 to 19 sustain a disproportionate number of injuries. Risk factors for this group include speeding, alcohol use and inexperience in driving itself (Health Canada, 1997a, pp. 82–83).

In 1995, 84 children and youth from birth to age 19 were killed as pedestrians — struck by motor vehicles (Mackenzie, 1997, p. 5). After age 9, the number of pedestrian fatalities is inversely related to a child's age (Health Canada, 1997a, p. 95). Childhood and youth pedestrian injuries represent 37% to 41% of all road vehicle injury-related deaths for those 1 to 4 and 5 to 9 years of age. The proportion falls to 18% for those aged 10 to 14 years (Health Canada, 1997a, p. 94).

Bicycle helmets reduce the risk of injury for cyclists.

Between 1990 and 1992, 96% of bicyclists who suffered fatal injuries were struck by motor vehicles, whereas only 20% of hospitalized bicyclists were involved in collisions with motor vehicles (Health Canada, 1997a, pp. 108–109).

Head injuries are sustained by more than half of hospitalized bicyclists and are the single most serious injury incurred by 30%, with higher rates among younger bicyclists (Health Canada, 1997a, p. 108). Bicycle helmets reduce the severity of head injuries, and their ever-increasing use in the past decade represents a major improvement in the safety-related behaviour of Canadian children and youth (Health Canada, 1997a, p. 113). In rural areas, where the risk of serious and fatal bicycle injury is higher, observed helmet use is lower than in non-rural areas (Health Canada, 1997a, p. 114).



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Drownings are a leading cause of death.

In 1995, there were 113 drownings among those from birth to age 19 (Mackenzie, 1997, p. 5). That year, for children and youth overall, drownings were the third leading cause of injury-related death at 8.2%. One- to four-year-olds appear to be at greatest risk; in this age group, drownings accounted for more than 20% of injury-related deaths, second only to motor vehicle accidents (Health Canada, 1997a, pp. 14, 182). Studies of water-related injuries of children and adolescents aged 5 to 19 indicate many are related to diving, jumping or being pushed with resulting collisions injuring the head, spine and extremities. Many of these injuries have the potential to cause permanent impairment and disability.



Younger children are more at risk during bath time or from falls into water. Older children and youth are more at risk while participating in aquatic and boating activities.

The drowning rate for Aboriginal children is higher than for non-Aboriginal children. For example, the rate for infants is about eight times higher; toddlers, nine times higher; and 5- to 9-year-olds, six times higher (Health Canada, 1997a, p. 185).

Falls cause serious injury.

For those under age 20, falls are not a major cause of death; rather, they produce injuries serious enough for hospitalization. During the period 1990 to 1992, for every fall-related death, there were about 800 hospitalizations. Falls from playground equipment, falls on stairs, falls during sports activities, falls from a chair or bed and falls from a building accounted for 40% of these hospitalizations (Health Canada, 1997a, pp. 136–137).

In the 1 to 4 age group, most falls occur in the home. Data from the 1990–92 period show that infants generally fell off adult beds, change tables, and down stairs, or from high chairs or child seats. Toddlers mostly fell down stairs, tripped while running or playing and fell onto a hard or sharp object, and occasionally fell out a window. Fall-related injuries for 5- to 9-year-olds resulted from falls from bunk beds or during play. Older children fell during play, or off structures upon which they were perched (Health Canada, 1997a, pp. 138–141).

Playground falls are serious for young children.

Between 1992 and 1997, 16 children died after being strangled with drawstrings or loose clothing caught on equipment or fencing, or by skipping ropes that had been tied to playground equipment (Lockhart, 1997, p. 1). The majority of playground injuries are the result of falls. The hospitalization rate for 5- to 9-year-old children following falls from playground equipment was three times higher than for 1- to 4-year-olds and 10- to 14-year-olds (Health Canada, 1997a, p. 198). Almost 42% of playground equipment injuries occurred on public playgrounds, with 33.9% occurring at schools or daycares. The main types of equipment involved were climbers (38.2%), swings (25%) and slides (25%). Fractures from falls were the most common type of injury reported.

Fire-related injuries and burns affect children of all ages.

During the period 1990 to 1992, fire-related injuries and burns were associated with an annual mean of 77 deaths and approximately 1,680 hospitalizations of Canadians under the age of 20. For each child or youth who died, about 23 others were hospitalized. Children under the age of 5 composed the group with the highest number of fire- and burn-related deaths and hospitalizations.



With the exception of those in the 15- to 19-year-old age group, boys sustained a greater proportion of fire-related injuries and burns (Health Canada, 1997a, p. 146). During this period, residential fires were responsible for 92% of fire-related deaths and 5% of fire-related hospitalizations of Canadians under age 20 (Health Canada, 1997a, p. 149).

The primary source of scalds for children under age 20 is hot liquids. A great many incidents involved hot tap water, particularly during baths. For older children, mishaps with hot beverages and while cooking caused scalds (Health Canada, 1997a, p. 149).

Children are at risk for unintentional poisoning.

During the period 1990 to 1992, poisonings in children and youth under the age of 20 ranked third among all hospitalizations for unintentional injury (Health Canada, 1997a, p. 160). Hospitalization rates for poisonings are much higher among 1- to 4-year-olds than any other age group. These poisonings are mainly attributable to ingestion of medication and biological products. According to a 1995 study of Canadian Poison Control Centres, approximately 100,000 Canadian children and youths under the age of 15 fall victim to poisoning every year (Health Canada, 1997a, p. 161). For those aged 0 to 9, 11% of children poisoned were admitted to hospital, compared with 6.3% for other injuries; the figures for those aged 10 to 19 are 42.6% and 5.2%, respectively (Mackenzie, 1995, p. 5). According to Canadian Hospitals Injury Reporting and Prevention Program (CHIRPP) data, the majority of poisonings (92.4%) occurred in the home, particularly among children aged 4 or younger, for whom the percentage was 97.1% (Health Canada, 1997a, p. 161).

Sexual Activity

Adolescence is a time of experimentation with newly discovered sexuality. Consequently, teenagers are at risk for pregnancy and infection from sexually transmitted diseases (STDs).

Many adolescents do not practise safe sex.

Results of more than 30 studies in Quebec show that between 12% and 23% of students in early high school years have had at least one sexual experience involving vaginal or anal penetration. Researchers estimate that between 47% and 69% of students in late high school years have had at least one sexual experience (Otis, 1995, as cited in Godin and Michaud, 1998, p. 368).

According to a national survey, 17% of sexually active girls aged 12 to 14 did not use birth control; 14% used the pill in combination with a condom (CICH, 1994, p. 77). See **Exhibit 6.9**.

Who Uses Condoms?

Recent studies conducted in Quebec show that adolescents are more likely to use a condom than older Canadians. Characteristics associated with those who are increasingly using condoms are listed below:

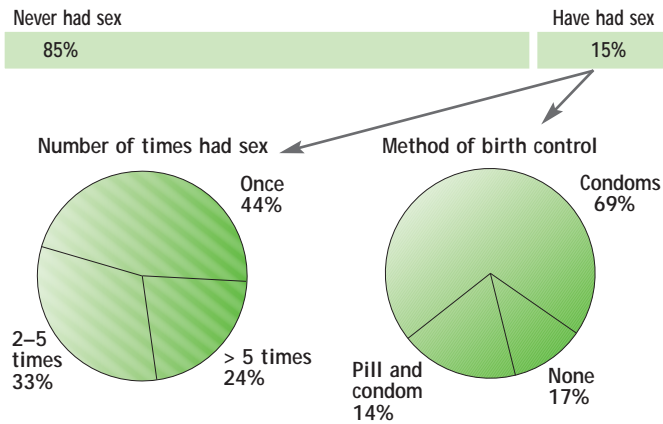
- male
- from a linguistic group other than Francophone
- lives in a large urban centre
- drinks alcohol and uses drugs less often
- has had fewer sexual partners

(Otis, 1995, as cited in Godin and Michaud, 1998, p. 369)



6.9

Sexual activity and method of birth control among girls aged 12 to 14, Canada, 1992



Source: Canadian Institute of Child Health (1994). *The Health of Canada's Children: A CIH Profile*, 2nd edition. Ottawa: Canadian Institute of Child Health, p. 77.

It is estimated that more than half of young people (50% to 76%) use a condom the first time they have sex (Otis, 1995, as cited in Godin and Michaud, 1998, p. 369). According to the 1994–95 National Population Health Survey, among sexually active 15- to 19-year-olds, 51% of females and 29% of males reported having had sex without a condom in the previous year (Galambos and Tilton-Weaver, 1998, p. 13). Less than one in five sexually active girls report using the pill and condom combination as a method of birth control (Insight Canada Research, 1992, p. 8).

HIV, AIDS and STDs are a risk for teens.

Epidemiological information regarding HIV shows that the median age of people with AIDS has decreased from 32 years of age (before 1982) to 23 years of age (between 1985 and 1990). This indicates that many people are becoming infected as teenagers (Health Canada, 1995f).

Despite the fact that the number of reported cases as well as the incidence rates for some STDs have been falling, STDs are important contributing factors to morbidity among Canadian men and women (Health Canada, 1998e). Rates for both chlamydia and gonorrhoea are well above average for young women (aged 15 to 19 years) (Health Canada, 1998f). See **Exhibit 6.10** and **Exhibit 6.11**.

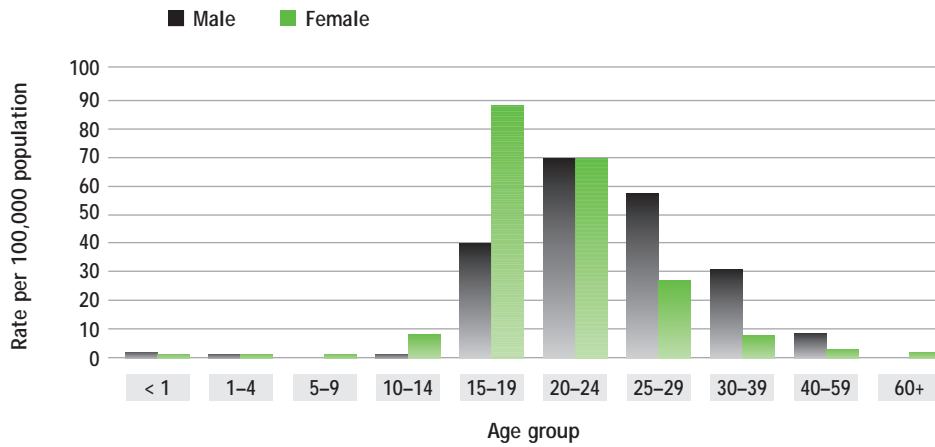
Between 1988 and 1995, 559 children in Canada were known to have been exposed perinatally to HIV. Women in their childbearing years represent an increasing proportion of people infected with HIV. The transmission from mothers to babies creates serious implications for both the woman and child (Goldie et al., 1997).

Paediatric AIDS

Since 1988, a total of 131 AIDS cases have been reported in Canada for children aged 0 to 14. Perinatal transmission is the most common form of HIV transmission in children. Encouragingly, the number of new cases reported each year is declining: in 1997, there were just five new cases — half the number reported in 1996, and down from 24 in 1995 (Health Canada, 1998d, pp. 22, 26).

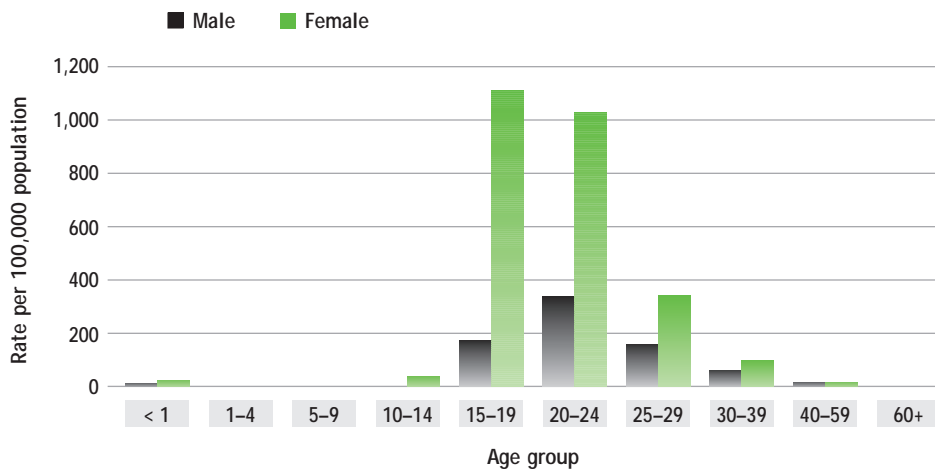


6.10 Reported gonorrhoea: incidence per 100,000 by age and sex, Canada, 1995



Source: Health Canada Web site: <http://www.hc-sc.gc.ca>

6.11 Reported genital chlamydia: incidence per 100,000 by age and sex, Canada, 1995



Source: Health Canada Web site: <http://www.hc-sc.gc.ca>

Teen Pregnancy

*In 1994, there were an estimated 46,800 pregnancies among 15- to 19-year-olds — marking the continuation of an almost steady rise from 1987, when 39,300 teen pregnancies were recorded. There has also been an increase in the number of teenage pregnancies that end in abortion (Wadhera and Millar, 1997, pp. 11–12). See **Exhibit 6.12**.*



6.12 Distribution of outcomes of teenage pregnancy, by selected age groups, Canada, 1974 and 1994

Age group	Year	Outcome (distribution)		
		Live birth	Abortion	Miscarriage/ Stillbirth
Total				
15–19	1974	66.3	25.8	7.9
	1994	50.7	45.0	4.3
15–17	1974	58.3	34.2	7.5
	1994	46.1	49.5	4.4
18–19	1974	71.2	20.7	8.1
	1994	53.4	42.4	4.2

Source: Adapted from S. Wadhwa and W.J. Millar (1997). "Teenage Pregnancies, 1974 to 1994." *Health Reports*, Vol. 9, No. 3 (Winter 1997): 9–16. Catalogue No. 82-003-XPB. Ottawa: Statistics Canada, p. 11.



Personal Health Practices and Other Determinants

Income and Education

Lower socio-economic status is associated with higher rates of injury, and with more severe and often fatal injury (Rivara and Mueller, 1987). For example, in 1991, the rate of injury-related deaths for the poorest children and youth was 40% higher than the rate for the wealthiest children and youth (Health Canada, 1997a, p. 53).

Income is also associated with various health behaviours and negative health outcomes. For instance, low income and smoking during pregnancy are two of the factors associated with an increased incidence of low birthweight (Ross, Scott and Kelly, 1996, p. 21). See **Exhibit 6.13**. Teen pregnancy is almost five times more common in the lowest income neighbourhoods than in the highest income neighbourhoods (Health Canada, 1999c, p. 4).

Education also plays a role, influencing decisions about sexual behaviour. For example, young people who have high investment in their education are more likely to use contraception (Health Canada 1999c, p. 12).

Natural and Built Environments

Environmental tobacco smoke is an important source of indoor air pollution. Infants and young children whose parents smoke in their presence are more susceptible than others to a number of health risks including respiratory infections and asthma. Almost two-fifths of children under the age of 6 live with one or more people who smoke (Health Canada, 1997b).



6.13 Distribution of children aged 0 to 3 years by birthweight, household income and mother's smoking during pregnancy, Canada, 1994–95

	Normal birthweight (> 2,500 g) (%)	Low birthweight (< 2,500 g) (%)
Family income^a		
< \$30,000	93.5	6.5
\$30,000–\$60,000	93.7	6.3
> \$60,000	95.8	4.2
Smoking during pregnancy^b		
Smoked	92.2	7.8 ^c
Did not smoke	94.8	5.2

a. Distribution of children aged 0 to 3 years by family income.

b. Distribution of children aged 0 to 2 years by mother's smoking during pregnancy.

c. Estimate less reliable due to high sampling variability.

Source: Adapted from D.P. Ross, K. Scott and M.A. Kelly (1996). "Overview: Children in Canada in the 1990s." In *Growing Up in Canada: National Longitudinal Survey of Children and Youth*. Catalogue No. 89-550-MPE, No. 1. Ottawa: Human Resources Development Canada and Statistics Canada, p. 21.

Individual Capacity and Coping Skills

Personal capacities such as coping skills and sense of control are key contributors to sexual and reproductive health. Young people who have a good sense of their own worth and strong coping skills are likely to make more sound decisions about sex. At the same time, supportive social environments are necessary to enable and sustain healthy choices (Health Canada, 1999c, pp. 12–13).

Culture

The prevalence of smoking is high among Inuit and Francophone women and low among most immigrant women (Maritime Centre of Excellence for Women's Health, 1997). With respect to alcohol consumption, alcoholism is virtually unheard of as a social or medical problem in Chinese society (Lin T.-y., 1983, p. 864) and has been noted as more prevalent among the Irish than the Jewish (Henderson and Primeaux, 1981, p. xix).

Gender

Young women are more likely to engage in disordered eating behaviours than young men. Among boys and young men, low self-esteem has been linked with the use of anabolic steroids (WHO, 1999).



Supportive social environments are necessary to enable and sustain healthy choices.



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