"There is today, greater recognition that the socioeconomic environment plays an important role in influencing individual lifestyles."

— Canadian Public Health Association, *Health Impacts of Social and Economic Conditions: Implications for Public Policy, 1997.*

A broad range of personal health practices influences the health of Canadians. However, there is a growing recognition that personal life "choices" are greatly influenced by the socioeconomic environments in which people live, learn, work and recreate. This chapter examines eight personal health practices: alcohol and tobacco use, illicit drug use, selected safety practices, sexual behaviours that increase risk for sexually transmitted diseases, HIV testing, physical activity, healthy eating and gambling. Trends in body weight — to a large extent the result of physical activity and eating practices — are also reported here. Efforts Canadians make to protect themselves and their children from excessive sun exposure are discussed in Chapter 4. Information on the effects of income, education and other broad determinants on personal health practices is provided when it was available.

Highlights

Many Canadians are making impressive efforts to improve their health.

- Almost half of the Canadian population aged 12 and older reported changing some behaviour to improve their health in the year before the 1996–97 National Population Health Survey.
- Overall, smoking rates have dropped impressively among Canadians aged 15 and over — from 47% in 1970 to 30% in 1990. Since then, there has been some fluctuation, but no clear trend in overall smoking rates.
- There has been an impressive decline over the past 20 years in fatal motor vehicle crashes, attributable at least in part to increases in seatbelt use and reductions in impaired driving.

Nevertheless, there remains considerable room for improvement in personal health practices. Considering the stresses on young people observed in other chapters, it is not surprising that adolescents and young adults are particularly vulnerable to negative health practices.

- Rates of smoking have increased substantially among adolescents and youth, particularly among young women, over the past five years. Rates of smoking among young women aged 12 to 19 remain substantially higher than among young men.
- Smoking rates among Aboriginal people are double the overall rate for Canada as a whole. The age of onset for the use of tobacco, alcohol and other drugs is substantially younger for Aboriginal children than for children in the population as a whole.
- Multiple drug use — particularly the combination of alcohol, tobacco and cannabis — among high school students has increased substantially, at least in all regions that have been surveyed.
- Multiple risk-taking behaviours, including such hazardous combinations as alcohol, drug use and driving, and alcohol, drug use and unsafe sex, remain particularly high among young people, especially young men.
- The proportion of overweight men and women in Canada increased steadily between 1985 and 1996–97 — from 22% to 34% among men and from 14% to 23% among women.
- Rates of physical activity drop quickly as age increases and there are large differences between males and females. In the 12 to 14 age group, 54% of boys and 33% of girls were active in their leisure time. By age 20 to 24, the percentage who were active dropped to 39% among males and 22% among females.
- In 1994–95, 51% of sexually active 15- to 19-year-old women who had more than one sex partner and 29% of sexually active young men in the same age group reported that they had had sex without a condom in the past year. Among 20- to 24-year-olds, 53% of sexually active women and 44% of men reported having had sex without a condom during the previous year.

Injection drug use (IDU) and its relationship to HIV infection and hepatitis C is a major concern.

- In 1997, 20% of adult AIDS cases were attributed to injection drug use, compared with less than 2% prior to 1990 and 5% in 1993.
- Injection drug use is believed to be associated with perhaps 70% of hepatitis C virus infections.

Trends in Health Practices

Almost half the Canadian population aged 12 and older reported changing some behaviour to improve their health in the year before the 1996–97 National Population Health Survey. A slightly larger proportion reported that some future change was needed. Women were more likely than men to report changes in the past year, to recognize the need for changes and to intend to make those changes in the coming year. Women and men who recognized the need for change were most likely to say that more exercise was the personal health practice that was most needed. A lack of time and will were cited as the main barriers to making lifestyle changes.

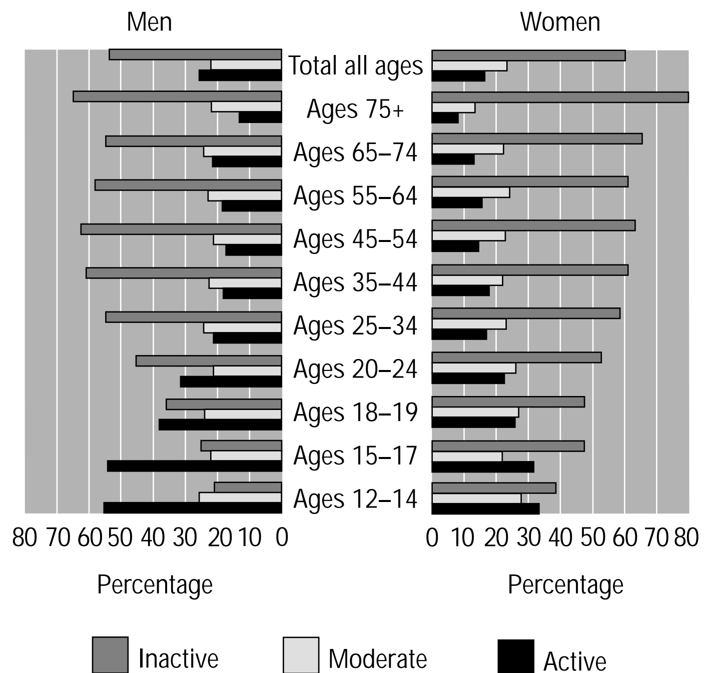
Behaviour changes were reported most often in Ontario (50%) and least often in Saskatchewan (39%).[1]

Physical Activity

Lack of physical activity is recognized as a significant risk factor for coronary heart disease and other serious health problems. Conversely, active living provides many health benefits including a reduced risk of cancer, diabetes, heart disease and osteoporosis, and an enhanced feeling of well-being.[2]

Surveys have shown a substantial increase in Canadians' levels of leisure-time physical activity between 1981 and 1995.[3] During 1996–97, 21% of Canadians aged 12 and over were classified as physically active during their leisure time; another 23% were moderately active, while more than half (57%) were inactive. These rates are similar to those of 1994–95, when 58% of Canadians were classified as physically inactive. As Exhibit 5.1 shows, men continued to report higher rates of physical activity and lower rates of sedentary behaviour than women at all ages. The data reveal that, after

Exhibit 5.1 Leisure-Time Physical Activity Levels, by Age Group and Sex, Canada, 1996–97

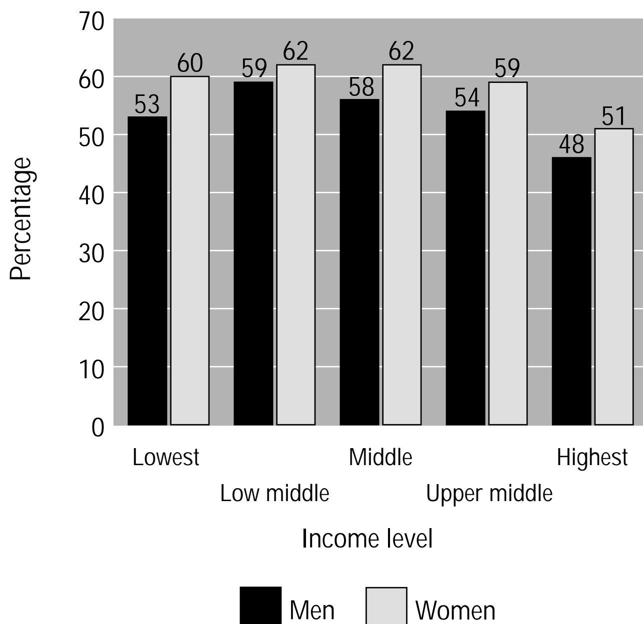


Source: Statistics Canada. *National Population Health Survey, 1996–97.*

NPHS Definition

- In the National Population Health Survey (NPHS), **level of activity** is classified by assigning estimated kilocalories used per kilogram of body weight per day: active = 3.0 or more, moderate = 1.5 to 2.9, inactive = less than 1.5.

Exhibit 5.2 Percentage of Canadians Who Are Not Physically Active During Leisure Time, by Sex and Income Level, Aged 12+, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

age 18, there was a significant drop in activity levels for young men. The number of girls and women who were active declined progressively from adolescence on.

An analysis of the 1994–95 NPHS showed that non-European immigrants were particularly likely to have been inactive in their leisure time (67%), regardless of their length of time in Canada. By contrast, the proportion of immigrants from European countries who reported inactive leisure varied from 59% of recent to 51% of long-term immigrants (less than among Canadian-born citizens.)[4]

In the 1996–97 NPHS, the highest rates of leisure-time physical activity were reported by men and women with the highest incomes. As shown in Exhibit 5.2, only 48% of men in the highest income bracket were physically inactive, compared with 53% of Canadian men in the lowest income bracket. Among women with high incomes, 51% were physically inactive, compared with 60% of women with the lowest income level. Lower-income Canadians may be more likely to have jobs that involve physical labour, and this may affect their need or desire to engage in leisure time physical activity. But there are other barriers to participation relating to income, including the costs of equipment and user fees for participation in recreational activities. Further research is needed on the links between income and participation in physical activity.

According to the Canadian Fitness and Lifestyle Research Institute, only one-third of Canadian children and youth are physically active enough to meet the optimal standards for healthy development. One of the reasons for this may be the cost of participating in sports and recreation. In 1995, nearly half of families with incomes below $20,000 per year cited high costs as a reason for not participating in physical activities compared with one-third of families earning $60,000 per year or more.[5]

Healthy Eating

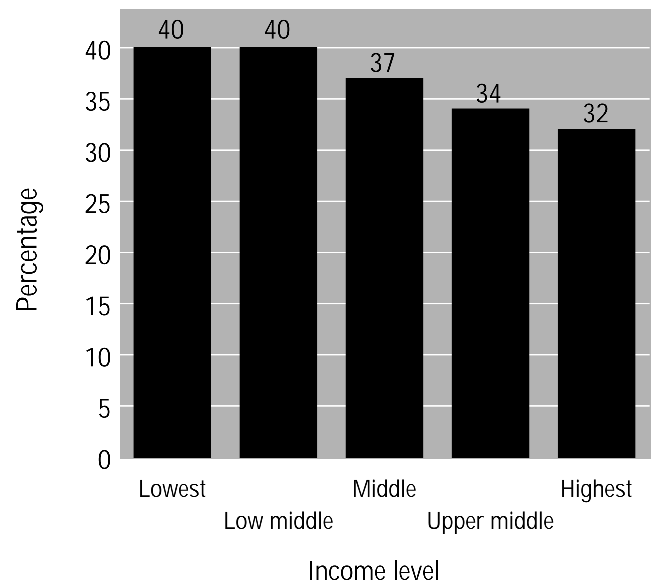
Diet in general and the consumption of fat in particular are linked to some of the major causes of death, including cancer and coronary heart disease. However, little data exist on the actual dietary intake of Canadians.

In the 1994–95 NPHS, 45% of men and 47% of women rated their eating habits as excellent or very good; 16% of both men and women described their eating habits as fair or poor. Canadians with low incomes were more likely to describe their eating habits as fair or poor than those in upper income brackets.

Dietary fat was a source of concern for many Canadians: 59% of persons aged 12 and over said they were concerned about fat in their diet and claimed to be taking action to reduce their consumption of fat. Two-thirds of women (67%) reported taking action to reduce dietary fat, compared with 50% of men. Similarly, one-third of women (32%) reported making efforts to increase carbohydrates and fibre in their diets, compared with about one in five men (20%).

Low-income Canadians were more likely to express concerns about the cost of low-fat foods than were high-income Canadians. As Exhibit 5.3 shows, 40% of Canadians in the lowest income bracket believed that low-fat products were expensive, compared with 32% of Canadians with the highest incomes. Similarly, 27% of low-income Canadians believed that grain products were expensive, compared with only 8% of Canadians with high incomes.[6]

Exhibit 5.3 Percentage of Canadians Who Believe That Low Fat Foods Are Expensive, Aged 12+, by Income Level, 1994–95

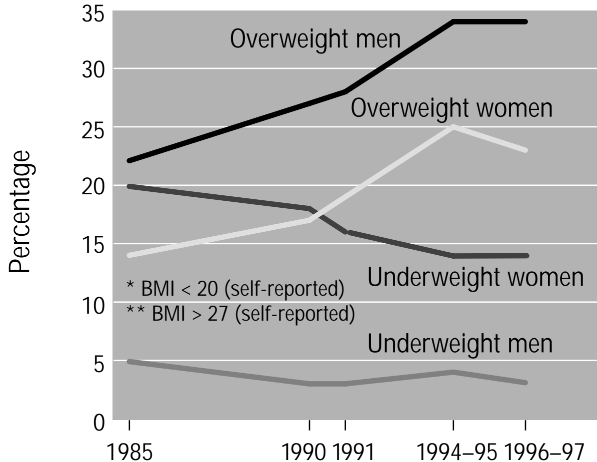


Source: Statistics Canada. *National Population Health Survey, 1994–95.*

Healthy Weights

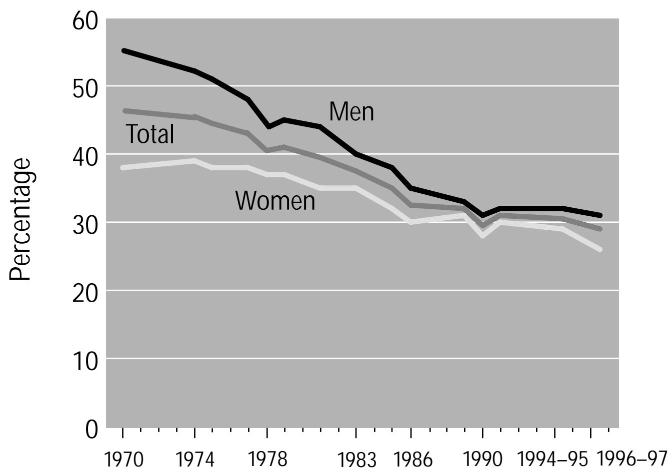
While body weight is not a personal health practice, it is, to a large extent, determined by eating and physical activity practices. Body weights above the healthy weight range (i.e. a Body Mass Index over 27) are linked to a variety of health problems, including cardiovascular disease, diabetes and some forms of cancer. Body weights below the healthy weight range (i.e. a Body Mass Index under 20) may also be a sign of current or impending health problems, including the eating disorders anorexia and bulimia.[7]

Exhibit 5.4 **Percentage of Underweight* and Overweight Canadians (Ages 20–64),** by Sex, 1985 to 1996–97**



Note: BMI refers to Body Mass Index.
Source: *General Social Survey Cycles 1 (1985)* and *6 (1991)*; *Health Promotion Survey (1990)*; and *National Population Health Surveys, 1994–95* and *1996–97*, special tabulations.

Exhibit 5.5 **Percentage of Men and Women Who Smoke Cigarettes, Aged 15+, Canada, 1970 to 1996–97**



Source: Pederson, L. Smoking. In *Health Promotion Survey 1990: Technical Report*; and Statistics Canada. *National Population Health Surveys, 1994–95* and *1996–97*, special tabulations.

A number of surveys (Exhibit 5.4) have shown that the proportion of overweight men and women in Canada increased steadily between 1985 and 1996–97 — from 22% to 34% among men and from 14% to 23% among women. In 1996, the problem of excess weight was particularly pronounced among men and women aged 45 to 64. Men in this age group (58%) were much more likely than women (37%) to be overweight. The chances of being overweight decreased with each successive level of education. Income was also a factor; being overweight was most common among adults in low-income groups.[8]

The increasing prevalence of excess body weight is a trend that has been observed in many developed countries.[9] Dietary changes and decreases in daily physical activity levels as well as the aging of the baby boomers have been cited as the most likely reasons for this trend, but further study is required.

As shown in Exhibit 5.4, in the 1996–97 NPHS, women (14%) were nearly five times more likely than men to be underweight (3%). The problem of low body weight remained most pronounced among women age 20 to 24, among whom one out of four were below the healthy weight range. Despite the substantially higher proportion of overweight men in Canada, women (40%) were still more likely than men (23%) to report recent attempts at weight loss. This desire to lose weight extended to many women who were already within the healthy weight range.

Little information is available on attempts to gain weight. However, concerns have been raised about young males trying to gain weight and muscle bulk through the use of steroids and other substances.[10]

Tobacco Use

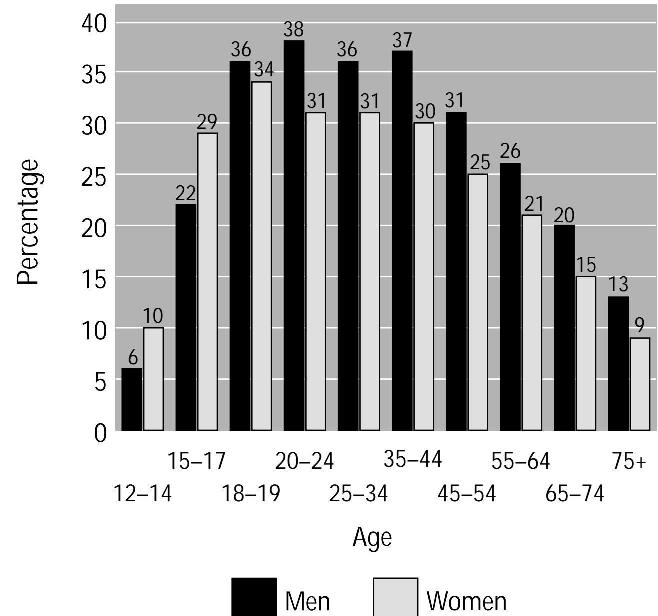
Studies over time (Exhibit 5.5) have shown that overall, smoking rates have dropped impressively among Canadians aged 15 and over — from 47% in 1970 to 30% in 1990. Since 1990, there has been some fluctuation, but no clear trend in smoking rates. The success of public health campaigns to reduce smoking rates, however, have not been equally successful with all population groups. Three groups — young women and women and men with low-income status — lag behind.

In the 1996–97 NPHS, 30% of Canadian men and 25% of women aged 12 and over reported being daily or occasional smokers. This represents a slight decline from 1994–95 when 31% of men and 28% of women reported smoking cigarettes. The rate of smoking among men exceeded the rate for women in every age group — with the exception of youth aged 12 to 17 (Exhibit 5.6). Continuing a trend observed in 1994–95, the rate of smoking among girls aged 12 to 14 (10%) and 15 to 17 (29%) remained substantially higher than among young men of the same age (6% and 22% respectively).[11]

Rates of smoking varied substantially by income level, with the highest rates of smoking reported by men (40%) and women (36%) in the lowest income bracket. As Exhibit 5.7 shows, smoking decreased to a low of 16% and 13% among men and women in the highest income bracket.[12]

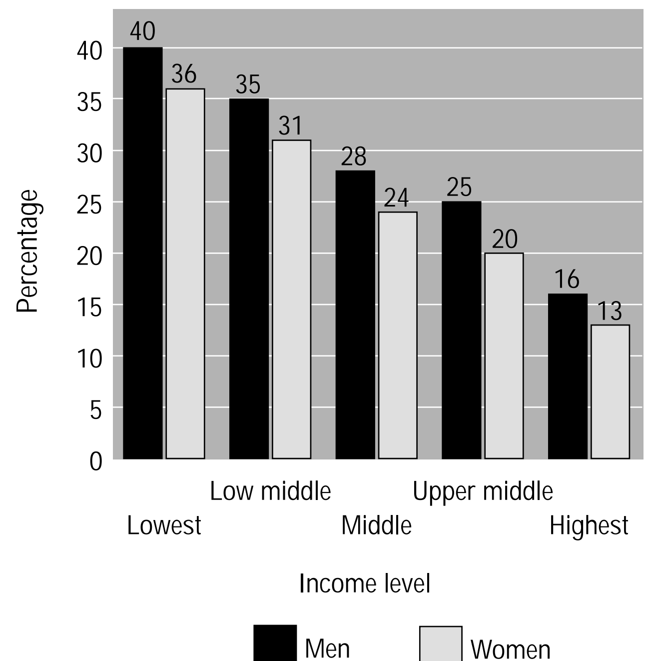
The highest rates of smoking in Canada are reported by Aboriginal people, about double the overall rate in the Canadian population as a whole. In 1997, adult smoking rates within the Aboriginal population were highest among young people aged 20 to 24 (72%) and 25 to 29 (71%) (Exhibit 5.8). The use of smokeless tobacco by Aboriginal youth in the Northwest Territories and northern Saskatchewan also poses a significant health problem.[13]

Exhibit 5.6 Percentage of Men and Women Who Smoke Cigarettes, by Age Group, Canada, 1996–97



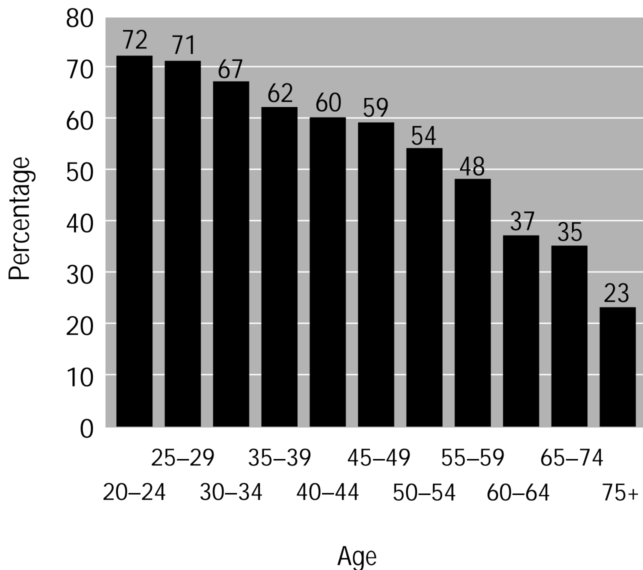
Source: *National Population Health Survey, 1996–97.*

Exhibit 5.7 Percentage of Men and Women Who Smoke Cigarettes, by Income Level, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

Exhibit 5.8 Percentage of Aboriginal Adults Who Smoke Cigarettes, by Age Group, 1997

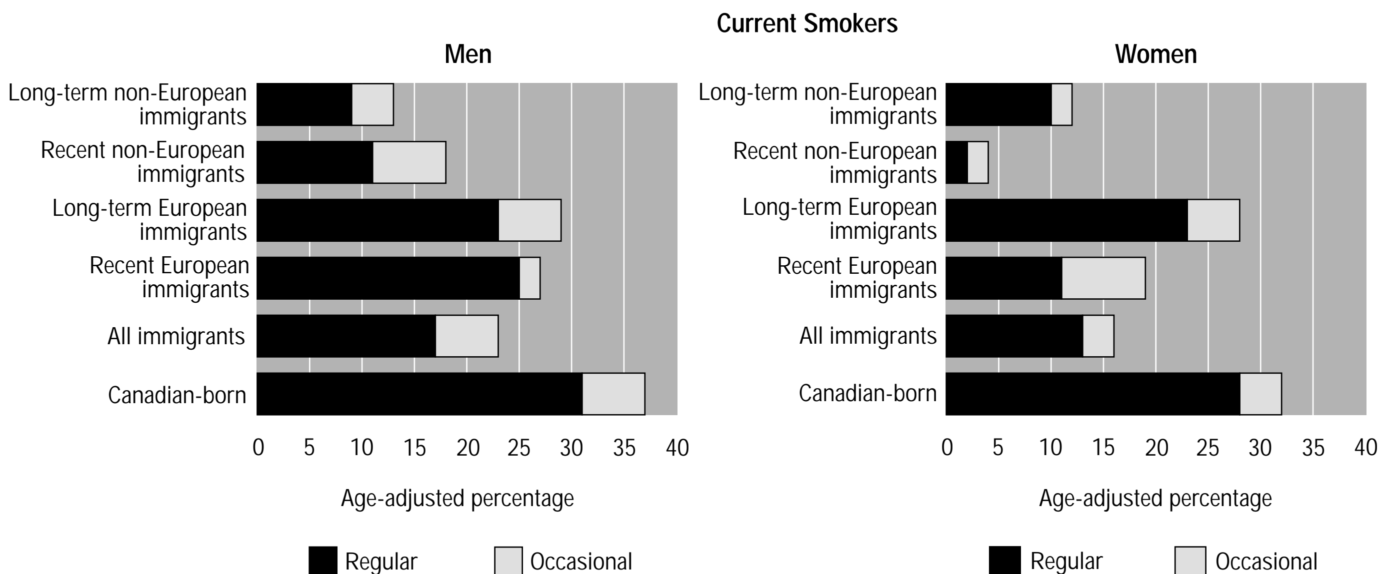


Source: Reading, J. "The Tobacco Report." *First Nations and Inuit Regional Health Survey, 1997.*

In 1994–95, recent non-European immigrants were significantly less likely than the Canadian-born population to smoke (Exhibit 5.9). For all immigrants, the number who smoke generally increased with the length of time in Canada. Unlike for the Canadian-born population, there was no clear association between smoking and income status.[14]

There was little increase in the rate of smoking among adolescents and youth from 1994–95 to 1996–97. However, data from provincial surveys of students suggest that the major increases in youth smoking occurred somewhat earlier, attributable at least in part to the availability of low-cost smuggled cigarettes, and the subsequent roll-back in tobacco taxes and prices. Data from Ontario, for example, suggest that rates of smoking among students in grades 7, 9, 11, and 13 increased sharply from 1991 to 1997. In 1991, 22% of both male and female students reported smoking at least one cigarette during the previous year. By 1997, this had increased to 28% among boys and 29% among girls.[15]

Exhibit 5.9 Prevalence of Smoking by Immigrant Status, Duration of Residence and Sex, Canada, 1994–95



Source: *National Population Health Survey, 1994–95.* Published in Chen, J., Ng, E., Wilkins, R. (Statistics Canada). "The Health of Canada's Immigrants in 1994–95." *Health Reports* 7, 4 (Spring 1996): 42.

In Nova Scotia, rates of smoking among students in grades 7, 9 and 11 increased significantly from 26% in 1991 to 36% in 1998 (34% among boys and 38% among girls). Rates reported in surveys in the other Atlantic provinces during 1998 were similar, ranging from 27% in Prince Edward Island to 33% in New Brunswick, and 38% in Newfoundland.[16]

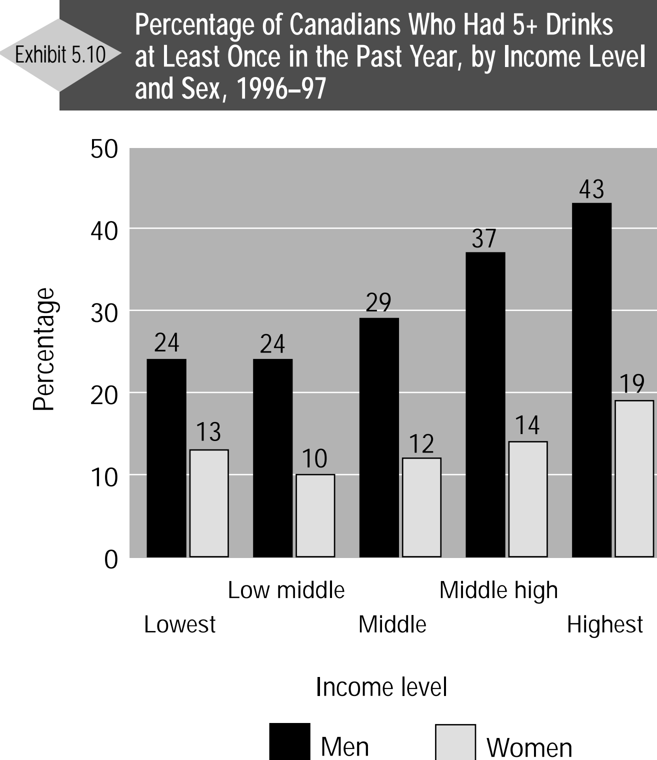
Use of Alcohol

While the moderate use of alcohol is not harmful for some people, excessive use can lead to a range of health and social problems, including motor vehicle crashes involving impaired drivers. According to Transport Canada, there were 3,082 motor vehicle traffic deaths in 1996 — an impressive decline from the 5,253 traffic deaths in Canada two decades earlier. There has also been a significant decline in the number of fatally injured impaired drivers over the past 20 years. Nevertheless, the rate of alcohol involvement in fatal traffic crashes remains unacceptably high. Among fatally injured drivers, 35% were legally impaired; the number of innocent victims who were injured or killed was not available for this report.[17]

According to the NPHS, in 1996–97, 53% of Canadians (63% of men and 43% of women) drank alcohol at least once per month — a slight decrease from 1994–95. Women were more likely to be non-drinkers than men. Men (42%) were more likely than women (21%) to report consuming five or more drinks on at least one occasion during the past year — a commonly used indicator of “heavy” or “binge” drinking. There are differences in how alcohol affects men and women, however, so the consumption of less than five drinks by women could be interpreted as heavy (problematic) drinking among women.

In the 1996–97 NPHS, the proportion of men and women who drank at least once per month rose steadily with increases in income. Men and women with higher incomes also tended to be heavier drinkers. Among men in the two lowest income levels and who were drinkers, 24% reported at least one episode of heavy or “binge” drinking, compared with 43% of men in the highest income bracket. The rate of heavy drinking among women drinkers in the lowest income level was 13%. This dropped to 10% at the next income level, then slowly climbed to 19% at the highest income level (Exhibit 5.10). This is due in part to the fact that lower income Canadians are less likely than upper income Canadians to consume any alcohol at all. However, among lower income Canadians who did drink alcohol during the previous year, their rate of heavy drinking tended to slightly exceed that of higher income earners.

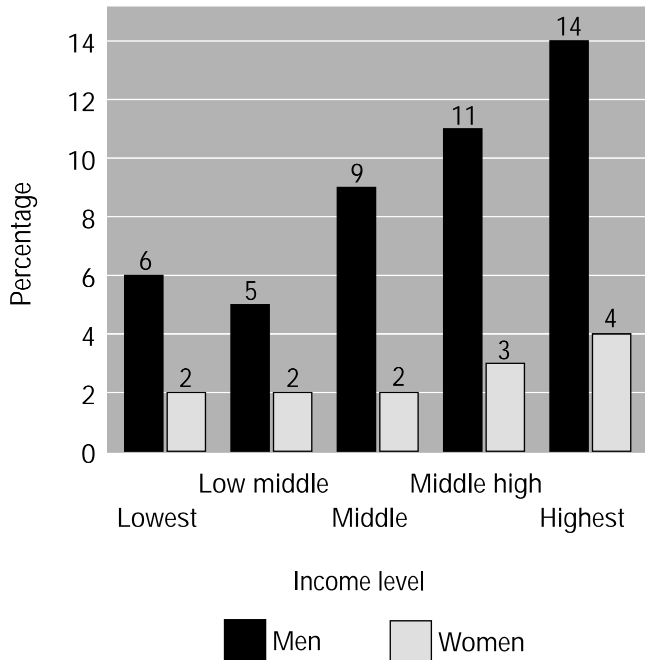
Exhibit 5.10 Percentage of Canadians Who Had 5+ Drinks at Least Once in the Past Year, by Income Level and Sex, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

According to the 1996–97 NPHS, among Canadians who have a driver's licence and consume alcohol, 10% admitted to driving after consuming "too much" alcohol. Men (13%) were much more likely than women (5%) to report driving after drinking. The highest rate of driving after drinking (18%) was reported by young drivers aged 18 and 19.

Exhibit 5.11 Percentage of Canadians Who Drove After Drinking, by Income Level and Sex, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

Canadians with low incomes were less likely than Canadians with high incomes to drink and drive. As Exhibit 5.11 shows, only 6% of men and 2% of women in the lowest income level reported driving after drinking, compared with 14% of men and 4% of women with the highest incomes. This is in keeping with the fact that low-income Canadians drink less overall and are also less likely to own cars.

Alcohol use, underage drinking, heavy drinking and alcohol-related problems among young people remain a persistent concern. And there are disturbing indications from provincial surveys that rates linked to these behaviours and problems may be increasing. For example, the Nova Scotia Student Drug Use Survey reported that 57% of students drank alcohol in 1998 — an increase of 12% from 1991. Similar rates of drinking were reported by students in the other Atlantic provinces (Prince Edward Island, 53%; New Brunswick, 56%; Newfoundland, 58%) and in Ontario (60%).[18]

In Nova Scotia, 21% of Grade 7 students and 58% of Grade 9 students (the vast majority of whom are below the legal drinking age) reported drinking alcohol in the previous year.[19] Similarly, in Newfoundland and Labrador, 20% of Grade 7 students and 59% of Grade 9 students reported drinking alcohol. In Ontario, 32% of Grade 7 students and 56% of those in Grade 9 reported drinking during the previous year.[20]

Motor vehicle traffic crashes are a leading cause of death among young people in Canada. In Nova Scotia, 8% of students admitted to driving a motor vehicle within an hour of consuming two or more alcoholic drinks. More than one out of four students (27%) had been passengers in a motor vehicle with a driver who had had "too much to drink," and 10% of students had driven a motor vehicle within one hour of using a drug (other than alcohol or tobacco).[21]

Illicit Drug Use

Generally, the reported use of illicit drugs in Canada is low: in the 1994–95 NPHS, less than 1% of Canadians used crack cocaine, LSD or speed. Seven percent of Canadians (1.7 million) reported the use of marijuana. Use of illicit drugs was highest among young people and especially among those with some post-secondary education — presumably current students in many cases.

Recent surveys of students in Ontario and the Atlantic provinces show that the use of cannabis has been increasing. In 1997, one out of four Ontario students (25%) reported using cannabis in the previous year — an increase from 12% in 1991.[22] Rates reported in surveys in the Atlantic provinces were similar and often higher, including rates of 22% in Prince Edward Island, 30% in Newfoundland and 31% in New Brunswick. The use of cannabis by students in Nova Scotia has dramatically increased — from 17% in 1991 to 38% in 1998.[23]

Disturbing Trends in Substance Use and Abuse

In addition to a major concern about increased tobacco use among adolescent women, three other trends deserve special attention: increasing rates of HIV infections among injection drug users, a resurgence in multiple drug use among adolescents, and the high rates of substance use by young children in Aboriginal communities.

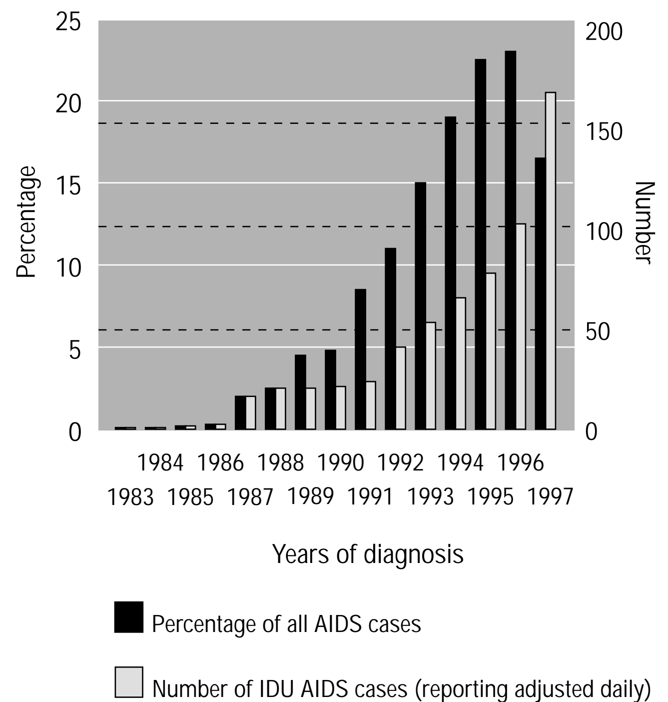
Injection drug use and increases in HIV infection

Since the early 1980s when HIV infection was concentrated in the population of men who have sex with men, the Canadian picture has continued to evolve. In 1996, approximately half of the estimated 3,000 to 5,000 HIV infections that occurred in Canada were among injection drug users.[24]

The proportion of AIDS cases attributed to injection drug use (IDU) increased until 1996 and then decreased slightly in 1997, likely due to the availability of new, more effective treatments and perhaps due to decreased reporting completeness (Exhibit 5.12). For men, the percentage of IDU-related cases of AIDS increased from 0.7% before 1988, to 2.4% between 1988 and 1992, and to 6.5% between 1993 and 1997. For women, the percentage increased from 4.1% to 14.7% and finally to 24.9% for the same time periods.[25]

The HIV epidemic among injection drug users is well documented in Canada's largest cities. For example, the prevalence of HIV infection among injection drug users in Vancouver increased from about 4% in 1992–93 to 23% in 1996–97; in Montreal, it increased from about 5% prior to 1988 to 19.5% in 1997. The problem, however, is now being seen outside major urban areas as well. Given the geographic mobility of injection drug

Exhibit 5.12 Number of Annual IDU AIDS Cases Diagnosed and Percentage of All Known AIDS Cases, 1983 to 1997



Note: IDU means "injection drug use."

Source: Health Canada. *HIV/AIDS, Epi Updates*, May 1998.

users and their social and sexual contact with non-users, there is an urgent need to deal with this problem in Canada's large cities as well as in areas outside the major urban centres, including Aboriginal communities.[26]

In addition to contributing to the onset of AIDS, IDU is also the major mode of transmission of hepatitis C in Canada. Injection drug use is now the major risk factor for the hepatitis C virus (HCV) accounting for perhaps 70% of all HCV infections.[27]

Increasing use of multiple drugs among adolescents

After a period of decline during the 1980s, the 1990s have seen a resurgence in adolescent drug use (based on data gathered from regions that have been surveyed). Between 1993 and 1995, the use of eight of 20 drugs increased significantly in Ontario.[28] Nova Scotia also reported significant increases in the use of 12 different drugs by students between 1991 and 1998: alcohol, cigarettes, cannabis, LSD, non-prescription stimulants, prescription stimulants, psilocybin or mescaline, non-prescription tranquilizers, cocaine or crack, PCP, heroin and inhalants.[29]

Student use of a combination of alcohol, tobacco and cannabis has increased substantially in all regions that have been surveyed. In Nova Scotia, for example, the percentage of students reporting use of all three of these drugs increased from 12% in 1991 to 25% in 1998;[30] in Newfoundland, the percentage increased from 18% to 23% during the same time period.[31]

Substance use by young children in some Aboriginal communities

While much attention has been focused on adolescent substance use in both Aboriginal and non-Aboriginal communities, one of the most disquieting facts about addiction in some Aboriginal communities is the alarming rate of substance use by young children. Studies continue to show that the age of onset for the use of tobacco products, alcohol, solvents and cannabis is substantially younger for Aboriginal children than for children in the population as a whole, and that Aboriginal children are entering Canadian treatment facilities at younger ages.[32] In the 1993 report of *Aboriginal Peoples in Urban Centres*, 67% of participating Friendship Centres reported that children were consuming alcohol and sniffing solvents during school hours, after school, on the streets and in their homes.[33]

Use of Safety Equipment for Injury Prevention

Safety equipment has proven successful in preventing several types of unintentional injuries. Common examples include:

- safety belts for automobiles
- helmets for motorcycles, bicycles, all-terrain vehicles, and snowmobiles
- flotation devices (PFDs, lifejackets) for watercrafts
- smoke detectors for protection against house fires and smoke inhalation
- child-proof container lids on medication and other potentially hazardous products to prevent poisoning.

As documented in annual drowning reports of the Canadian Red Cross Society from 1993 to 1998, among victims of boating drownings, wearing rates for flotation devices were only about 10%. For Aboriginal victims, wearing rates were lower — about 5%. Even among drowning victims who were non-swimmers or weak swimmers, wearing rates were equally low.[34]

Unlike the situation for safety belts in cars where wearing of the belt is mandatory, the law does not require boaters to wear a flotation device. Since most boating drowning incidents involve either sudden unanticipated falls into water or capsizes and swampings under adverse conditions, many boaters who are not wearing a flotation device at the moment of the incident are unable to find one, put it on, and rescue themselves.[35]

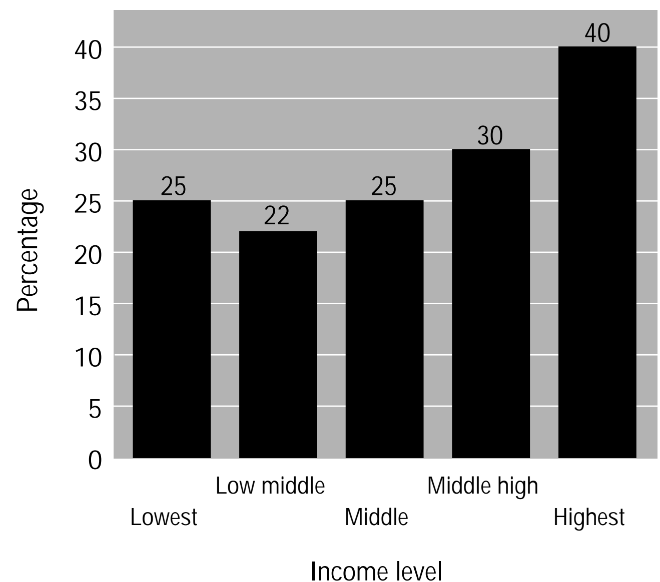
At present, all Canadian provinces have mandatory seatbelt legislation. In 1998, a roadside survey by Transport Canada found that 89% of vehicle occupants were wearing seatbelts. The highest rates of seatbelt usage were in Quebec (92%), Saskatchewan (90%) and British Columbia (90%); all 10 provinces achieved wearing rates of more than 82%. In the Yukon Territory, 82% of vehicle occupants were found to be wearing seatbelts, but the rate dipped to 53% in the Northwest Territories.

Among drivers of passenger cars, the rate of seatbelt use was 92%, an increase from 82% a decade earlier. Prior to seatbelt legislation in Canada, only an estimated 15% to 30% of Canadians wore seatbelts. These results, together with the impressive reduction in motor vehicle fatalities in Canada, reflect the profound influence that legislative action outside of the health sector can have on the health of Canadians.[36]

In the 1996–97 NPHS, 29% of Canadians aged 12 and over reported always wearing a helmet when riding a bicycle. Women (31%) were slightly more likely than men (28%) to report use of a helmet. The rate of helmet use was highest among those aged 12 to 14 (40%), but plummeted to its lowest level (15%) among youth aged 15 to 19.

Two of the most powerful determinants of bicycle helmet use are income and provincial legislation. Among Canadians in the lowest income group, 25% reported always using a helmet when riding a bicycle, compared with 40% of Canadians in the highest income group (Exhibit 5.13).

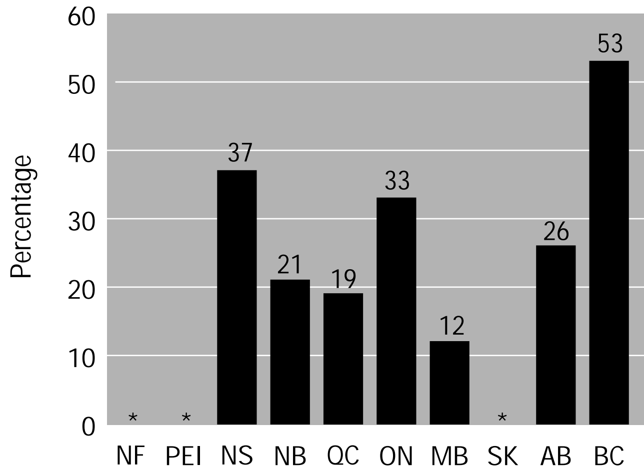
Exhibit 5.13 Percentage of Canadians Aged 12+ Who Always Wear a Helmet When Riding a Bicycle, by Income Level, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

Recently, three provinces (British Columbia, Nova Scotia and Ontario) enacted legislation involving the use of bicycle helmets. As shown in Exhibit 5.14, rates of helmet use were substantially higher in these three provinces. Fifty-three percent of British Columbians, 37% of Nova Scotians and 33% of Ontarians reported always wearing a helmet when they ride their bicycle. By contrast, in provinces without comparable legislation (where sufficient data were available), helmet wearing rates varied from a high of 26% in Alberta to a low of 12% in Manitoba.

Exhibit 5.14 Percentage of Canadians Aged 12+ Who Always Wear a Helmet When Riding a Bicycle, by Province, 1996–97



*Small sample size.

Source: *National Population Health Survey, 1996–97.*

Gambling

Government-regulated casinos and video lottery terminals (VLTs), introduced in the 1990s, have turned gambling into a multi-billion dollar industry in Canada. In 1997, Canadians wagered $6.8 billion on some form of government-run gambling activity — 2.5 times the amount wagered in 1992. Gambling profits increased in every province and in both territories over the past five years, and now account for between 1% (British Columbia) and 4% (Manitoba) of total government revenues in each province.[37]

In 1996, the majority of households in Canada (82%) gambled some money, spending an average of $423 during the year. Among households that gambled, those with incomes of less than $20,000 spent an average of $296, or about 2.2% of their total household income. Those with $80,000 or more spent $536, only 0.5% of their total income.[38]

While gambling may be a harmless pastime for some people, problem gambling has deleterious effects on the well-being of individuals and families. The nature and extent of problem gambling is only beginning to be documented in Canada. However, a 1997–98 Nova Scotia study of video lottery terminal (VLT) players showed cause for concern. This study concluded that 16% of those who play VLTs on a regular basis could be considered "problem VLT gamblers." This group of gamblers contributes just over one-half of the net revenue for video lottery gambling. For the most part, these adults report significant guilt and anxiety, as well as difficulties in coping and feeling at a loss as to how to control their VLT gambling.[39]

A study of students in Nova Scotia showed that three out of four students (75%) participated in gambling activities during the previous year. About 2% of students reported that betting money caused them problems and 2% stated that they would like to stop betting but do not think they can.[40]

Sexual Practices

In addition to unplanned pregnancies, unsafe sexual behaviours can lead to serious conditions such as sexually transmitted diseases (STDs), infertility and HIV infection. HIV infection can be prevented by practising safe sex, which entails the use of a condom during any form of insertive intercourse or the adoption of non-insertive forms of sexual interaction that avoids person-to-person transfer of body fluids which may harbour HIV (for example, semen, vaginal fluid and blood).

In the 1994–95 NPHS, among sexually active 15- to 19-year-olds (excluding those with a single sex partner and who were married, in a common-law relationship, divorced or widowed), 51% of females and 29% of males reported having had sex without a condom in the past year. Among youth aged 20 to 24, 53% of sexually active females and 44% of sexually active males reported having had sex without a condom during the previous year (Exhibit 5.15).[41]

Twenty-one percent of sexually active males aged 20 to 24 reported that they had multiple sexual partners and did not use condoms in the past year, as did 17% of females aged 20 to 24, 21% of females aged 15 to 19 and 15% of males aged 15 to 19 (Exhibit 5.16).[42]

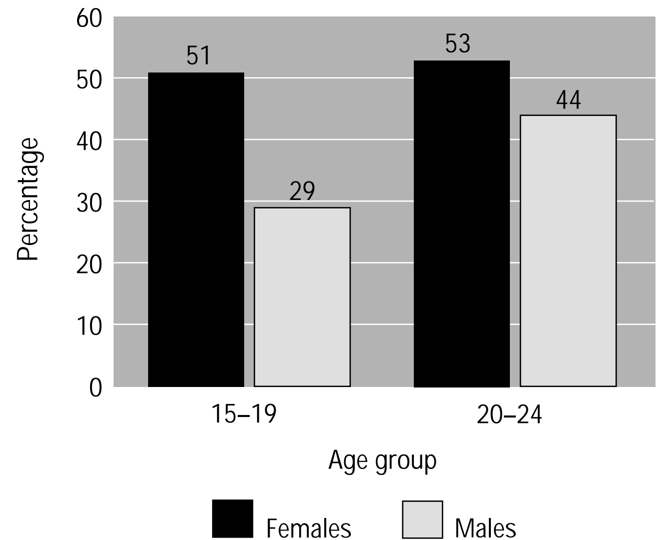
Findings from the four-province Atlantic Student Drug Use Survey (1998) were consistent with these results. The Atlantic study found that 26% of Grade 9 students, 37% of Grade 10 students and 58% of Grade 12 students had sexual intercourse during the previous year. Among sexually active students, 40% had more than one sexual partner. Fifty percent of sexually active students had unplanned intercourse on at least one occasion when under the influence of alcohol or another drug. Condoms were not consistently used, particularly among older students.[43]

HIV Testing

In 1996–97, 15% of men and 15% of women aged 18 and over reported in the NPHS having had an HIV test at some point in their lives. Adults aged 25 to 34 were most likely to have had an HIV test.

Exhibit 5.15

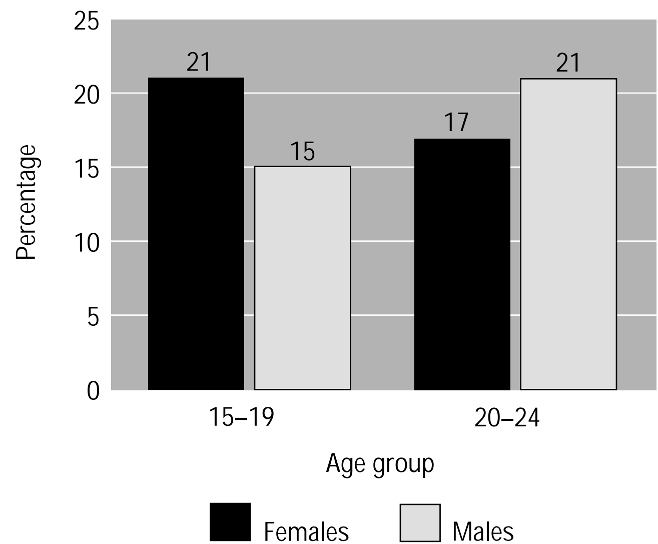
Percentage of Sexually Active 15- to 24-Year-Olds Who Never or Sometimes Used a Condom in the Past Year, by Age Group and Sex, Canada (Excluding Territories), 1994–95



Source: Galambos, N., and Tilton-Weaver, L. "Multiple-Risk Behaviour in Adolescents and Young Adults." *Health Reports* 10, 2 (Autumn, 1998). (Data based on 1994–95 NPHS).

Exhibit 5.16

Percentage of Sexually Active 15- to 24-Year-Olds with at Least Two Sex Partners, Who Did Not Use Condoms in the Past Year, by Age Group and Sex, Canada (Excluding Territories), 1994–95



Source: Galambos, N., and Tilton-Weaver, L. "Multiple-Risk Behaviour in Adolescents and Young Adults." *Health Reports* 10, 2, (Autumn, 1998). (Data based on 1994–95 NPHS).

An in-depth analysis of sexual health practices in 1997 revealed that among Canadians who reported having two or more sexual partners in the past year and not using condoms consistently, 53% of men and 38% of women had never been tested. This finding suggests that substantial numbers of Canadians may be HIV-positive, but unaware of their infection.[44]

Multiple Risk Behaviours

Risk behaviours generally emerge during adolescence and have important implications for both the immediate and future health of Canada's young people. While most youth experiment with at least one potentially risky behaviour, a minority engage in several. As noted in references to the recent Atlantic student surveys, certain combinations can be particularly hazardous, such as alcohol, illicit drug use and impaired driving; or alcohol, other drug use and unsafe sexual practices.

A recent analysis based on the 1994–95 NPHS that examined multiple risk behaviours by youth aged 15 to 24 focused on smoking, binge drinking, sex with multiple partners and sex without a condom. Males were somewhat more likely than females to engage in multiple risk behaviours. Among males, 32% reported no risk behaviours; 26% engaged in one risk behaviour; two risk behaviours were reported by 24% of males and 19% reported engaging in three or four risk behaviours. Among females (also aged 15 to 24), 39% reported engaging in none of the four risk behaviours; 28% reported one risk behaviour; 19% reported two risk behaviours and 14% engaged in three or four of these behaviours.[45]

The patterns of risk behaviour differed as well. Among females who engaged in a single risk behaviour, nearly half reported binge drinking and about one-third reported smoking. Among single-risk males, binge drinking was by far the most typical risk behaviour — reported by 80%. The most common two-risk combination for both sexes was smoking and binge drinking. However, among males, almost as many reported the combination of binge drinking and unsafe sex.[46]

Young Canadians: A Summary of Personal Health Practices

(Unless otherwise noted, the source of the information presented in this section is the 1996–97 NPHS.)

Adolescence and early adulthood are times when young people make important decisions related to sexuality, physical activity, nutrition and the use of alcohol, tobacco and other drugs. As we take a closer look at these years, we find significant differences in behaviours among young and older teens and those in their early 20s, and between males and females.

Physical activity: Rates of leisure-time physical activity dropped quickly as age increased, and there were large differences between males and females:

Percentage who are classified as "active" in their leisure time

Age	Males	Females
12 to 14	54%	33%
15 to 17	53%	31%
18 and 19	39%	26%
20 to 24	32%	22%

A Summary of Personal Health Practices ... continued

Smoking: Rates of smoking are higher among young women aged 12 to 17 than young men in the same age group. In the age group 18 to 24, men are more likely to smoke than women.

Healthy weights: Young women were more likely than young men to be concerned about their weight. In 1994, 28% of girls aged 12 to 14, 38% of those aged 15 to 19, and 43% of those aged 20 to 24 were trying to lose weight. Over half of the women in the age group 20 to 24 who were trying to lose weight were already within the healthy weight range.[47]

Healthy eating: Among 15-year-olds, only 39% of girls and 40% of boys ate whole wheat bread once a day or more; 25% of girls and 32% of boys ate candy or chocolate bars once a day or more.[48] Forty-eight percent of young women but only 19% of young men aged 15 to 19 reported that they were taking action to reduce dietary fat.

Drinking: The amount of alcohol consumed at one time increased with age for both genders. After age 18, young men drank significantly more than young women. At ages 18 and 19, young women were slightly more likely than young men to drive after drinking; after age 20 this pattern was dramatically reversed.

Age	Percentage of drinkers who drank five or more drinks on at least one occasion		Percentage who drove after drinking	
	Male	Female	Male	Female
12 to 14	16%	15%	—	—
15 to 17	53%	46%	—	—
18 and 19	71%	59%	17%	19%
20 to 24	71%	60%	23%	9%

Bicycle helmet use: While 12- to 14-year-olds were the most likely of all age groups to wear a bicycle helmet (40%), young people aged 15 to 19 were the least likely to wear one (15%).

Sexual practices: Among sexually active young people (aged 20 to 24), 48% reported that they never or sometimes used condoms in the past year. In the age group 15 to 19, 40% reported inconsistent or non-use of condoms.[49]

Multiple risk behaviours: Young men were more likely than young women to report multiple risk-taking behaviours. While smoking and binge drinking was the most common combination for both sexes, almost as many young men reported binge drinking combined with unsafe sex.[50]

Discussion

Influences on Personal Health Practices

This chapter has demonstrated that income, education and culture, in some circumstances, have a powerful influence on personal lifestyle "choices." This suggests that information, health education and efforts to teach personal behaviour change skills are not enough. It also suggests that Canadians with low incomes need access to the resources and supports available to higher-income Canadians when it comes to active living, healthy eating and other personal health practices.

This chapter also illustrates the efficacy of broad policy and legislative approaches that change the environment around individuals. For example, increases in smoking behaviour among young people after taxes on cigarettes were reduced substantiate the well-known fact that youth tobacco use is extremely price sensitive.[51] The success of seatbelt (and, to some extent, bicycle helmet) legislation suggests that legislative strategies may be as effective as (and possibly even more effective than) health education in supporting behavioural change. Probably a combination of strategies would be most effective.

Priorities for Action

As shown in Chapter 1, lung cancer cases and deaths due to lung cancer among women continue to increase. The trend toward increased smoking among girls in Canada foreshadows an epidemic of lung cancer in women 30 years from now, as well as substantially increased rates of heart disease if present rates continue. Why have strategies to reduce and prevent smoking among young people been less effective with girls than with boys? What are the factors in the surrounding environment that cause young women to smoke? What is the relationship between smoking, physical activity and young women's desire to be thin? It is time to ask these questions to young women themselves and to work with them to devise comprehensive strategies to reduce smoking behaviour.

While preventing smoking initiation altogether is most desirable, delaying the onset of smoking (for both sexes) has also been shown to be an important strategy. Starting to smoke at an early age (e.g. 15 or younger) is associated with heavy smoking and a lower probability of quitting in later life.[52] Thus, efforts to prevent or delay the initiation of smoking in preadolescence and early adolescence may be particularly important, especially among girls and in Aboriginal communities in which young people tend to begin smoking and tobacco use at very young ages.

The recent U.S. Surgeon General's Report on Physical Activity[53] has confirmed that increased levels of physical activity by all age groups can result in both health gains and reduced costs in the health-care system. Effecting a change in the level of activity among the inactive population stands to accomplish the most in terms of population health gains. Accordingly, the federal, provincial and territorial ministers responsible for fitness, recreation and sport set a goal of reducing the number of inactive Canadians by 10% by the year 2003. To achieve this goal, there will need to be a concerted effort to remove the barriers to active living among low-income, multicultural and indigenous groups. The factors most often cited as deterring low-income adults, children and youth from

participating in sport, recreation and fitness activities include lack of time, cultural concerns, lack of motivation, and user fees. In view of the low activity levels of Canadian children, renewed efforts to bring quality daily physical activity into school programs also need to be supported.

The launching of *Canada's Guide to Healthy Physical Activity* provides an important opportunity to raise awareness and knowledge about the whys and hows of active living — much in the same way that *Canada's Food Guide to Healthy Eating* has helped to educate Canadians about healthy eating.

Encouraging Canadians to become more active is especially important in light of the increase in the number of Canadians who carry excess weight, and are therefore at increased risk for diabetes and heart disease. Efforts to promote healthy weights will need to combine three messages — active living, healthy eating and positive body image. These three behaviours are most likely to lead to healthy weights without increasing weight preoccupation among vulnerable groups.[54]

Efforts to increase active living will need to be sensitive to the fact that sun exposure is often greatest while engaging in activities associated with an active lifestyle. Reducing sun exposure for children can be accomplished by providing more shaded areas in public places and parks, scheduling outdoor events at hours outside midday, making hats and sunscreen available, educating parents and children about the need to wear sunglasses and training child and youth workers about sun safety (see Chapter 4).

The dramatic increase in the relationship between HIV/AIDS and injection drug use is a major concern. Injection drug use also accounts for the great majority of cases of hepatitis C infection, and is associated with a wide range of related health and social problems.

In the new millennium, the mobility of injection drug users and global access to injection drugs are likely to increase. Reducing HIV infection and other harms associated with injection drug use (IDU) is a complex issue that brings into play legal and ethical issues, as well as having major implications for the health and social service systems in each province and territory. A comprehensive plan to address this problem is required now. Strategies should take a harm-reduction approach, with the objective being to normalize the life of the individual, reduce criminal activity associated with injection drug use, reduce the incidence of IDU and unprotected sexual activity, and facilitate a return to employment. Further research is urgently required on this issue since the problem is complex and its magnitude and characteristics are not well documented.

Risk-taking behaviours among youth remain stubbornly high, and in many areas like tobacco use, binge drinking and cannabis use, they appear to be increasing. Of particular concern is the trend of a significant proportion of adolescents and youth engaging in hazardous combinations of multiple risk behaviours. Recent surveys show alarming rates of multiple risk behaviours among high school students. These rates pale in comparison, however, to those for out-of-the-mainstream youth and street youth.

In a recent review of research and consultation documents that captured young people's views, youth were critical of the nature of the information and the timing of their courses in sex education. Many wanted a broader approach that would include more exploration of topics like love, the positive aspects of sexuality and sexual preference. Youth in small communities expressed concerns about access to condoms and the lack of privacy and confidentiality in their environment.[55]

As noted in previous chapters, there are many reasons to be concerned about the health of Canada's young people, including high rates of abuse, poverty and unemployment; low rates of self-esteem and psychological well-being; and high rates of death due to fatal unintentional injuries and suicides. In an environment characterized by such powerful, negative determinants of health, the tendency of some youths to engage in risk behaviours is not surprising.

Since *A New Perspective on the Health of Canadians* first identified lifestyle behaviours as a primary determinant of health, many governmental and non-governmental programs have worked to change individual behaviours. This approach has worked for some — but less so for those lacking the requisite environmental, social and personal supports and resources. Efforts to educate individuals and build personal skills for change must now work hand-in-hand with efforts to structure an environment around the individual that supports healthy lifestyle decisions. Nowhere is this likely to be more important than with youth.

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