



# Public Health Agency of Canada

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- [Français](#)
- [Home](#)
- [Contact Us](#)
- [Help](#)
- [Search](#)
- [Canada.ca](#)

Home > Health Promotion > Population Health > What Determines Health? > What Makes Canadians Healthy or Unhealthy?

## Main Menu

- [About the Agency](#)
- [Infectious Diseases](#)
- [Chronic Diseases](#)
- [Travel Health](#)
- [Food Safety](#)
- [Immunization & Vaccines](#)
- [Emergency Preparedness & Response](#)
- [Health Promotion](#)
- [Injury Prevention](#)
- [Lab Biosafety & Biosecurity](#)
- [Surveillance](#)

## Explore

- [Media Room](#)
- [Acts & Regulations](#)
- [Reports & Publications](#)
- [A-Z Index](#)

## Transparency

- [External Advisory Bodies](#)
- [Public Engagement](#)
- [Completed Access to Information Requests](#)
- [Proactive Disclosure](#)

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## What Makes Canadians Healthy or Unhealthy?

- [What Makes Canadians Healthy or Unhealthy?](#)
- [Underlying Premises and Evidence Table](#)

This deceptively simple story speaks to the complex set of factors or conditions that determine the level of health of every Canadian.

"Why is Jason in the hospital?  
Because he has a bad infection in his leg.

But why does he have an infection?  
Because he has a cut on his leg and it got infected.

But why does he have a cut on his leg?  
Because he was playing in the junk yard next to his apartment building and there was some sharp, jagged steel there that he fell on.

But why was he playing in a junk yard?  
Because his neighborhood is kind of run down. A lot of kids play there and there is no one to supervise them.

But why does he live in that neighborhood?  
Because his parents can't afford a nicer place to live.

But why can't his parents afford a nicer place to live?  
Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?  
Because he doesn't have much education and he can't find a job.

But why ...?"

### - from **Toward a Healthy Future: Second Report on the Health of Canadians**



There is a growing body of evidence about what makes people healthy. The *Lalonde Report* set the stage in 1974, by establishing a framework for the key factors that seemed to determine health status: lifestyle, environment, human biology and health services. Since then, much has been learned that supports, and at the same time, refines and expands this basic framework. In particular, there is mounting evidence that the contribution of medicine and health care is quite limited, and that spending more on health care will not result in significant further improvements in population health. On the other hand, there are strong and growing indications that other factors such as living and working conditions are crucially important for a healthy population.

The evidence indicates that the key factors which influence population health are: income and social status; social support networks; education; employment/ working conditions; social environments; physical environments; personal health practices and coping skills; healthy child development; biology and genetic endowment; health services; gender; and

culture.

Each of these factors is important in its own right. At the same time, the factors are interrelated. For example, a low weight at birth links with problems not just during childhood, but also in adulthood. Research shows a strong relationship between income level of the mother and the baby's birth weight. The effect occurs not just for the most economically disadvantaged group. Mothers at each step up the income scale have babies with higher birth weights, on average, than those on the step below. This tells us the problems are not just a result of poor maternal nutrition and poor health practices associated with poverty, although the most serious problems occur in the lowest income group. It seems that factors such as coping skills and a sense of control and mastery over life circumstances also come into play.

The following Underlying Premises and Evidence Table provides an overview of what we know about the ways the determinants influence health.

The source documents are: [Toward a Healthy Future: Second Report on the Health of Canadians](#)  and [Strategies for Population Health: Investing in the Health of Canadians](#) 

## Underlying Premises and Evidence Table

### KEY DETERMINANT -- 1. Income and Social Status

#### UNDERLYING PREMISES

Health status improves at each step up the income and social hierarchy. High income determines living conditions such as safe housing and ability to buy sufficient good food. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth.

Why are higher income and social status associated with better health? If it were just a matter of the poorest and lowest status groups having poor health, the explanation could be things like poor living conditions. But the effect occurs all across the socio-economic spectrum.

Considerable research indicates that the degree of control people have over life circumstances, especially stressful situations, and their discretion to act are the key influences. Higher income and status generally results in more control and discretion. And the biological pathways for how this could happen are becoming better understood. A number of recent studies show that limited options and poor coping skills for dealing with stress increase vulnerability to a range of diseases through pathways that involve the immune and hormonal systems.

#### EVIDENCE

There is strong and growing evidence that higher social and economic status is associated with better health. In fact, these two factors seem to be the most important determinants of health.

#### Evidence from **the Second Report on the Health of Canadians**

- Only 47% of Canadians in the lowest income bracket rate their health as very good or excellent, compared with 73% of Canadians in the highest income group.
- Low-income Canadians are more likely to die earlier and to suffer more illnesses than Canadians with higher incomes, regardless of age, sex, race and place of residence.
- At each rung up the income ladder, Canadians have less sickness, longer life expectancies and improved health.
- Studies suggest that the distribution of income in a given society may be a more important determinant of health than the total amount of income earned by society members. Large gaps in income distribution lead to increases in social problems and poorer health among the population as a whole.

#### Evidence from **Investing in the Health of Canadians:**

- Social status is also linked to health. A major British study of civil service employees found that, for most major categories of disease (cancer, coronary heart disease, stroke, etc.), health increased with job rank. This was true even when risk factors such as smoking, which are known to vary with social class, were taken into account. All the people in the study worked in desk jobs, and all had a good standard of living and job security, so this was not an effect that could be explained by physical risk, poverty or material deprivation. Health increased at each step up the job hierarchy. For example, those one step down from the top (doctors, lawyers, etc.) had heart disease rates four times higher than those at the top (those at levels comparable to deputy ministers). So we must conclude that something related to higher income, social position and hierarchy provides a buffer or defence against disease, or that something about lower income and status undermines defences.
- See also evidence from the report *Social Disparities and Involvement in Physical Activity*
- See also evidence from the report *Improving the Health of Canadians*

## KEY DETERMINANT -- 2. Social Support Networks

### UNDERLYING PREMISES

Support from families, friends and communities is associated with better health. Such social support networks could be very important in helping people solve problems and deal with adversity, as well as in maintaining a sense of mastery and control over life circumstances.

The caring and respect that occurs in social relationships, and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems.

In the 1996<sup>27</sup> National Population Health Survey (NPHS), more than four out of five Canadians reported that they had someone to confide in, someone they could count on in a crisis, someone they could count on for advice and someone who makes them feel loved and cared for. Similarly, in the 1994<sup>25</sup> National Longitudinal Survey of Children and Youth,

### EVIDENCE

Evidence from **Investing in the Health of Canadians:**

Some experts in the field have concluded that the health effect of social relationships may be as important as established risk factors such as smoking, physical activity, obesity and high blood pressure.

- An extensive study in California found that, for men and women, the more social contacts people have, the lower their premature death rates.
- Another U.S. study found that low availability of emotional support and low social participation were associated with all-cause mortality.
- The risk of angina pectoris decreased with increasing levels of emotional support in a study of male Israeli civil servants.

children aged 10 and 11 reported a strong tendency toward positive social behaviour and caring for others.

## KEY DETERMINANT -- 3. Education and Literacy

  
[Top of Page](#)

### UNDERLYING PREMISES

Health status improves with level of education.

Education is closely tied to socioeconomic status, and effective education for children and lifelong learning for adults are key contributors to health and prosperity for individuals, and for the country. Education contributes to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances. It increases opportunities for job and income security, and job satisfaction. And it improves people's ability to access and understand information to help keep them healthy.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians:**

- Canadians with low literacy skills are more likely to be unemployed and poor, to suffer poorer health and to die earlier than Canadians with high levels of literacy
- People with higher levels of education have better access to healthy physical environments and are better able to prepare their children for school than people with low levels of education. They also tend to smoke less, to be more physically active and to have access to healthier foods.
- In the 1996-97 National Population Health Survey (NPHS), only 19% of respondents with less than a high school education rated their health as "excellent" compared with 30% of university graduates.

Evidence from **Investing in the Health of Canadians:**

- The 1990 Canada Health Promotion Survey found the number of lost workdays decreases with increasing education. People with elementary schooling lose seven work days per year due to illness, injury or disability, while those with university education lose fewer than four days per year.

## KEY DETERMINANT -- 4. Employment / Working Conditions

### UNDERLYING PREMISES

Unemployment, underemployment, stressful or unsafe work are associated with poorer health.

People who have more control over their work circumstances and fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians:**

- Employment has a significant effect on a person's physical, mental and social health. Paid work provides not only money, but also a sense of identity and purpose, social contacts and opportunities for personal growth. When a person loses these benefits, the results can be devastating to both the health of the individual and his or her family. Unemployed people have a reduced life expectancy and suffer

significantly more health problems than people who have a job.

- Conditions at work (both physical and psychosocial) can have a profound effect on people's health and emotional well-being.
- Participation in the wage economy, however, is only part of the picture. Many Canadians (especially women) spend almost as many hours engaged in unpaid work, such as doing housework and caring for children or older relatives. When these two workloads are combined on an ongoing basis and little or no support is offered, an individual's level of stress and job satisfaction is bound to suffer. Between 1991 and 1995, the proportion of Canadian workers who were "very satisfied" with their work declined, and was more pronounced among female workers, dropping from 58% to 49%. Reported levels of work stress followed the same pattern. In the 1996~~07~~ NPHS, more women reported high work stress levels than men in every age category. Women aged 20 to 24 were almost three times as likely to report high work stress than the average Canadian worker.

Evidence from **Investing in the Health of Canadians:**

- A major review done for the World Health Organization found that high levels of unemployment and economic instability in a society cause significant mental health problems and adverse effects on the physical health of unemployed individuals, their families and their communities.

## KEY DETERMINANT -- 5. Social Environments

  
[Top of Page](#)

### UNDERLYING PREMISES

The importance of social support also extends to the broader community. Civic vitality refers to the strength of social networks within a community, region, province or country. It is reflected in the institutions, organizations and informal giving practices that people create to share resources and build attachments with others.

The array of values and norms of a society

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- In the U.S., high levels of trust and group membership were found to be associated with reduced mortality rates.
- Family violence has a devastating effect on the health of women and children in both the short and long term. In 1996, family members were

influence in varying ways the health and well being of individuals and populations. In addition, social stability, recognition of diversity, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health.

A healthy lifestyle can be thought of as a broad description of people's behaviour in three inter-related dimensions: individuals; individuals within their social environments (eg. family, peers, community, workplace); the relation between individuals and their social environment. Interventions to improve health through lifestyle choices can use comprehensive approaches that address health as a social or community (ie. shared) issue.

Social or community responses can add resources to an individual's repertoire of strategies to cope with changes and foster health.

In 1996-97:

- Thirty-one percent of adult Canadians reported volunteering with not-for-profit organizations in 1996-97, a 40% increase in the number of volunteers since 1987.

- One in two Canadians reported being involved in a community organization.

- Eighty-eight percent of Canadians made donations, either financial or in-kind, to charitable and not-for-profit organizations.

accused in 24% of all assaults against children; among very young children, the proportion was much higher.

- Women who are assaulted often suffer severe physical and psychological health problems; some are even killed. In 1997, 80% of victims of spousal homicide were women, and another 19 women were killed by a boyfriend or ex-boyfriend.
- Since peaking in 1991, the national crime rate declined 19% by 1997. However, this national rate is still more than double what it was three decades ago.

## KEY DETERMINANT -- 6. Physical Environments

### UNDERLYING PREMISES

The physical environment is an important determinant of health. At certain levels of exposure, contaminants in our air, water, food and soil can cause a variety of adverse health effects, including cancer, birth defects, respiratory illness and gastrointestinal ailments.

In the built environment, factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our physical and psychological well-being.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- The prevalence of childhood asthma, a respiratory disease that is highly sensitive to airborne contaminants, has increased sharply over the last two decades, especially among the age group 0 to 5. It was estimated that some 13% of boys and 11% of girls aged 0 to 19 (more than 890,000 children and young people) suffered from asthma in 1996<sup>27</sup>.
- Children and outdoor workers may be especially vulnerable to the health effects of a reduced ozone layer.

Excessive exposure to UV-B radiation can cause sunburn, skin cancer, depression of the immune system and an increased risk of developing cataracts

Evidence from **Investing in the Health of Canadians:**

- Air pollution, including exposure to second hand tobacco smoke, has a significant association with health. A study in southern Ontario found a consistent link between hospital admissions for respiratory illness in the summer months and levels of sulphates and ozone in the air. However, it now seems that the risk from small particles such as dust and carbon particles that are by-products of burning fuel may be even greater than the risks from pollutants such as ozone. As well, research indicates that lung cancer risks from second hand tobacco smoke are greater than the risks from the hazardous air pollutants from all regulated industrial emissions combined.

## KEY DETERMINANT -- 7. Personal Health Practices and Coping Skills

### UNDERLYING PREMISES

Personal Health Practices and Coping Skills refer to those actions by which individuals can prevent diseases and promote self-care, cope with challenges, and develop self-reliance, solve problems and make choices that enhance health.

Definitions of lifestyle include not only individual choices, but also the influence of social, economic, and environmental factors on the decisions people make about their health. There is a growing recognition that personal life "choices" are greatly influenced by the socioeconomic environments in which people live, learn, work and play.

These influences impact lifestyle choice through at least five areas: personal life skills, stress, culture, social relationships and belonging, and a sense of control. Interventions that support the creation of supportive environments will enhance the capacity of individuals to make healthy lifestyle choices in a world where many choices are possible.

Through research in areas such as heart disease and disadvantaged childhood,

### EVIDENCE

Evidence from **the Second Report on the Health of Canadians**

- In Canada, smoking is estimated to be responsible for at least one-quarter of all deaths for adults between the ages of 35 and 84. Rates of smoking have increased substantially among adolescents and youth, particularly among young women, over the past five years and smoking rates among Aboriginal people are double the overall rate for Canada as a whole.
- 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.
- 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. The proportion of overweight men and women in Canada increased steadily between 1985 and 1996  $\uparrow$  from 22% to 34% among men and from

there is more evidence that powerful biochemical and physiological pathways link the individual socio-economic experience to vascular conditions and other adverse health events.

However, there is a growing recognition that personal life "choices" are greatly influenced by the socioeconomic environments in which people live, learn, work and play. Through research in areas such as heart disease and disadvantaged childhood, there is more evidence that powerful biochemical and physiological pathways link the individual socio-economic experience to vascular conditions and other adverse health events.

14% to 23% among women.

#### Evidence from **Investing in the Health of Canadians**:

- Coping skills, which seem to be acquired primarily in the first few years of life, are also important in supporting healthy lifestyles. These are the skills people use to interact effectively with the world around them, to deal with the events, challenges and stress they encounter in their day to day lives. Effective coping skills enable people to be self-reliant, solve problems and make informed choices that enhance health. These skills help people face life's challenges in positive ways, without recourse to risky behaviours such as alcohol or drug abuse. Research tells us that people with a strong sense of their own effectiveness and ability to cope with circumstances in their lives are likely to be most successful in adopting and sustaining healthy behaviours and lifestyles.
- See also evidence from the report *Social Disparities and Involvement in Physical Activity*
- See also evidence from the report *Improving the Health of Canadians*

## KEY DETERMINANT -- 8. Healthy Child Development

 [Top of Page](#)

### UNDERLYING PREMISES

New evidence on the effects of early experiences on brain development, school readiness and health in later life has sparked a growing consensus about early child development as a powerful determinant of health in its own right. At the same time, we have been learning more about how all of the other determinants of health affect the physical, social, mental, emotional and spiritual development of children and youth. For example, a young person's development is greatly affected by his or her housing and neighbourhood, family income and level of parents' education, access to nutritious foods and physical recreation, genetic makeup and access to dental and medical care.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- Experiences from conception to age six have the most important influence of any time in the life cycle on the connecting and sculpting of the brain's neurons. Positive stimulation early in life improves learning, behaviour and health into adulthood.
- Tobacco and alcohol use during pregnancy can lead to poor birth outcomes. In the 1996-97 National Population Health Survey, about 36% of new mothers who were former or current smokers smoked during their last pregnancy (about 146,000 women). The vast majority of women reported that they did not drink alcohol during their pregnancy.
- A loving, secure attachment between

parents/caregivers and babies in the first 18 months of life helps children to develop trust, self-esteem, emotional control and the ability to have positive relationships with others in later life.

- Infants and children who are neglected or abused are at higher risk for injuries, a number of behavioural, social and cognitive problems later in life, and death.

Evidence from **Investing in the Health of Canadians:**

- A low weight at birth links with problems not just during childhood, but also in adulthood. Research shows a strong relationship between income level of the mother and the baby's birth weight. The effect occurs not just for the most economically disadvantaged group. Mothers at each step up the income scale have babies with higher birth weights, on average, than those on the step below. This tells us the problems are not just a result of poor maternal nutrition and poor health practices associated with poverty, although the most serious problems occur in the lowest income group. It seems that factors such as coping skills and sense of control and mastery over life circumstances also come into play.
- See also evidence from the report *Improving the Health of Canadians*

## KEY DETERMINANT -- 9. Biology and Genetic Endowment

### UNDERLYING PREMISES

The basic biology and organic make-up of the human body are a fundamental determinant of health.

Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status. Although socio-economic and environmental factors are important determinants of overall health, in some circumstances genetic endowment appears to predispose certain individuals to particular diseases or health problems.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- Studies in neurobiology have confirmed that when optimal conditions for a child's development are provided in the investment phase (between conception and age 5), the brain develops in a way that has positive outcomes for a lifetime.
- Aging is not synonymous with poor health. Active living and the provision of opportunities for lifelong learning may be particularly important for maintaining health and cognitive capacity in old age. And studies on education level and dementia suggest that exposure to education and

lifelong learning may create reserve capacity in the brain that compensates for cognitive losses that occur with biological aging.

## KEY DETERMINANT -- 10. Health Services

### UNDERLYING PREMISES

Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function contribute to population health. The health services continuum of care includes treatment and secondary prevention

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- Disease and injury prevention activities in areas such as immunization and the use of mammography are showing positive results. These activities must continue if progress is to be maintained.
- There has been a substantial decline in the average length of stay in hospital. Shifting care into the community and the home raises concerns about the increased financial, physical and emotional burdens placed on families, especially women. The demand for home care has increased in several jurisdictions, and there is a concern about equitable access to these services.
- Access to universally insured care remains largely unrelated to income; however, many low- and moderate-income Canadians have limited or no access to health services such as eye care, dentistry, mental health counselling and prescription drugs.

## KEY DETERMINANT -- 11. Gender

### UNDERLYING PREMISES

Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Many health issues are a function of gender-based social status or roles.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- Men are more likely to die prematurely than women, largely as a result of heart disease, fatal unintentional injuries, cancer and suicide. Rates of potential years of life lost before age 70 are almost twice as high for men than women and approximately three times as high among men aged 20 to 34.
- While women live longer than men, they are more likely to suffer depression, stress overload (often due to efforts to balance work and family life), chronic conditions such as arthritis and allergies, and injuries and death resulting from family violence.

- While overall cancer death rates for men have declined, they have remained persistently stubborn among women, mainly due to increases in lung cancer mortality. Teenage girls are now more likely than adolescent boys to smoke. If increased rates of smoking among young women are not reversed, lung cancer rates among women will continue to climb.

See also articles on Rural, remote and northern women - where you live matters to your health and How being Black and female affects your health

## KEY DETERMINANT -- 12. Culture

### UNDERLYING PREMISES

Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services.

### EVIDENCE

Evidence from the **Second Report on the Health of Canadians**

- Despite major improvements since 1979, infant mortality rates among First Nations people in 1994 were still twice as high as among the Canadian population as a whole and the prevalence of major chronic diseases, including diabetes, heart problems, cancer hypertension and arthritis/rheumatism, is significantly higher in Aboriginal communities and appears to be increasing.
- In a comparison of ethnic groups, the highest rate of suicide occurred among the Inuit, at 70 per 100,000, compared with 29 per 100,000 for the Dene and 15 per 100,000 for all other ethnic groups, comprised primarily of non-Aboriginal persons.
- The 1996-97 National Longitudinal Survey of Children and Youth found that many immigrant and refugee children were doing better emotionally and academically than their Canadian born peers, even though far more of the former lived in low-income households. The study suggests that "poverty among the Canadian-born population may have a different meaning than it has for newly arrived immigrants. The immigrant context of hope for a brighter future lessens poverty's blows; the hopelessness of majority-culture poverty accentuates its potency."
- See also evidence from the report

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[Top of Page](#)

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