

# **An in-depth look at rates of diet-related noncommunicable disease morbidity and mortality in Canada:**

**Results from INFORMAS Canada**

Complementary report

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Further information on INFORMAS Canada is available at:  
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# Background

## Health, dietary patterns and food environments

Unhealthy dietary patterns are a main contributor to current high rates of noncommunicable disease in Canada and globally. National data suggest that overall, very few individuals in Canada achieve or maintain healthy dietary patterns as recommended in Canada’s food guide<sup>1-3</sup>. The environments in which people make food choices (also known as their food environments) are a critical determinant of dietary patterns and heavily influence consumer food purchasing and consumption<sup>4</sup>.

**Food environments** comprise the political, physical, economic and sociocultural factors that influence what foods and beverages are available, accessible and attractive to consumers<sup>5</sup>.

Food environments are complex systems, shaped by government policies and actions of food companies, that influence the quality of foods, how foods are labelled, promoted, priced and placed. There are many potential points of intervention—in the manufacturing process, in schools, hospitals, recreation centres, grocery stores, restaurants and more. Digital environments are increasingly important influences on individual’s dietary patterns, as food purchasing and promotion are shifting to online environments.

The need to create healthier food environments to support healthy eating and improve diet-related outcomes has been recognized globally<sup>6-9</sup>.

# Methods

## INFORMAS Canada study

This report is part of a series of complementary reports that accompany [An in-depth look at Canada’s food environments – Results from INFORMAS Canada](#), which comprehensively examines and benchmarks the status of food environments in Canada. The full report represents a comprehensive evaluation of the Canadian food environment undertaken using methods from the International Network for Food and Obesity and noncommunicable disease Research, Monitoring and Action Support (INFORMAS).

The INFORMAS framework<sup>5</sup> (see Figure 1) breaks food environments down into seven policy areas (food composition, food labelling, food marketing, food provision in public sector settings, food retail, food prices and food trade and investment), which are shaped by food- and nutrition-related policies and actions of the public and private sectors. Together, these policy domains interact to influence population diet, physiological and metabolic risk factors and health

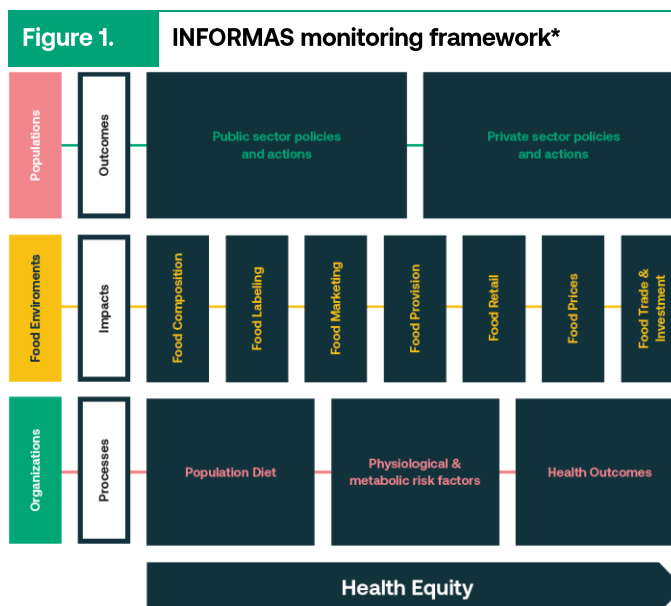
outcomes. For a comprehensive description of the INFORMAS Canada methods, please refer to the full report.

This series of complementary reports seeks to examine important outcomes of unhealthy food environments, including how food environments in Canada may contribute to health-related outcomes, including inequities in these outcomes.

The current report presents findings for the Health Outcomes component of the INFORMAS framework. Additional complementary reports from INFORMAS Canada provide results for the framework’s remaining components:

- An in-depth look at the quality of population diets in Canada - Results from INFORMAS Canada
- An in-depth look at risk factors for noncommunicable diseases in Canada- Results from INFORMAS Canada

All the reports are available on the INFORMAS Canada website: <https://informascanada.com/2025-report>



\*Image adapted from Swinburn et al., *Obes Rev.* 2013;14 Suppl 1:1-12.

# Rates of diet-related noncommunicable disease morbidity and mortality

The burden of noncommunicable disease continues to increase globally. Unhealthy diets are among the leading causes of noncommunicable diseases and deaths caused by modifiable risk factors worldwide<sup>10</sup>. Diet-related noncommunicable diseases include cardiovascular diseases (CVD), type 2 diabetes, obesity and certain types of cancer. In 2019, dietary risks were the second largest contributor to causes of death from CVD, diabetes and tumors (both cancerous and non-cancerous) for females, and the third largest for males<sup>10</sup>.

Diet-related noncommunicable diseases are associated with substantial health care costs each year in Canada. In 2018, the economic burden of not meeting Canadian dietary recommendations was estimated to be CAD\$5.9 billion in direct costs (i.e., hospitalization, physician, and drug costs) and

CAD\$9.9 billion in indirect cost (lost productivity, morbidity, and premature mortality), amounting to CAD\$15.8 billion/year<sup>11</sup>.

Data sources for information on the burden of noncommunicable diseases among people living in Canada include the Canadian Health Measures Survey (CHMS)<sup>12</sup>, the Canadian Chronic Disease Indicators Data Tool<sup>13</sup>, the Canadian Chronic Disease Surveillance System<sup>14</sup> and the Canadian Cancer Registry<sup>15,16</sup>. Information related to inequities is also available from the Health Inequalities Data Tool<sup>17</sup>, a platform providing recent data on health inequalities, health status and health determinants stratified by social and economic characteristics.

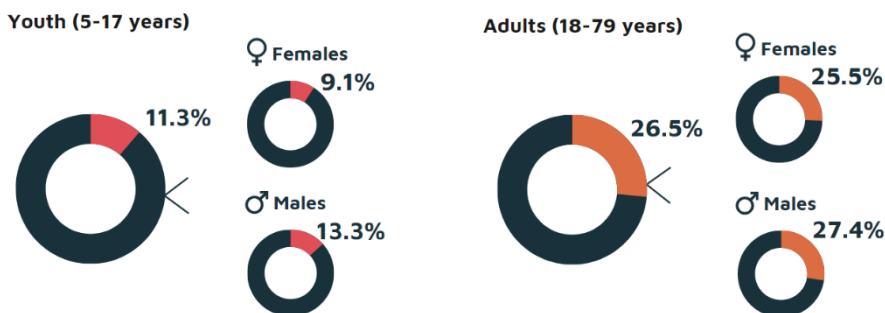


## Obesity

In 2019, elevated body mass index (BMI) was estimated to have caused more than 5 million deaths worldwide by increasing rates of noncommunicable diseases, including CVDs, diabetes and cancers<sup>10</sup>. Obesity is a complex disease as its development involves an intricate interplay of genetic, biological, psycho-social, behavioral/lifestyle, socio-economic, sociodemographic and environmental risk factors<sup>18,19</sup>.

Based on measured data for the 2014–2019 period, **26.5% of adults (18–79 y) had obesity**, as defined by a BMI  $\geq 30$  kg/m<sup>2</sup>, including 27.4% of males and 25.5% of females<sup>17</sup>. In the same period **11.3% of youth (5–17 y) living in Canada had obesity**, including 13.3% of males and 9.1% of females<sup>17</sup>

**Figure 2.** Percentage of youth and adults in Canada that had obesity in 2014–2019



### Box 1. A note on defining obesity

Many provincial, national and international associations, consider obesity as a “chronic, progressive and relapsing” disease<sup>20</sup>. Obesity is also known to be an important risk factor for other diseases such as some types of cancer, CVDs, diabetes, respiratory diseases, digestive diseases and neurological disorders<sup>10,19,21</sup>. At a population level, obesity is typically measured using BMI, which equates to an estimate based on body size (height and weight). While BMI is a widely accepted screening approach that has been associated with higher risk of illness at a population level, it is less informative for clinical diagnosis at an individual level and is often insufficient to inform effective medical intervention. Increasingly, obesity is diagnosed using broad criteria including physical and psychological symptoms and functional limitations of obesity to better estimate the need for clinical intervention and approach for treatment; however, these data are not available at a population level that could be used for tracking and reporting estimates of obesity. As such, this report uses BMI to estimate population prevalence of obesity, acknowledging these limitations.

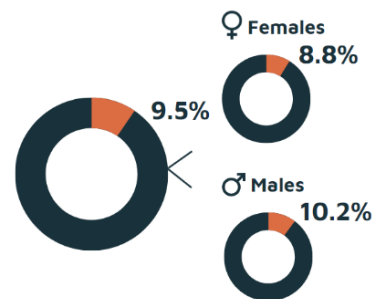
## Diabetes mellitus

Globally, in 2019, 26% of deaths from type 2 diabetes mellitus were attributable to poor diets<sup>22</sup>.

In 2021-2022<sup>a</sup>, **9.5%** of the Canadian population (≥1 y) had **diabetes** (type 1 or 2), including 10.2% of males and 8.8% of females<sup>14</sup>. For the same period, **657 per 100,000 adults in Canada were diagnosed with diabetes**, including 715 males per 100,000 and 600 females per 100,000<sup>14</sup>.

Figure 3.

Percentage of individuals in Canada that had diabetes (type 1 or 2) in 2021-2022  
General population (≥1 years)



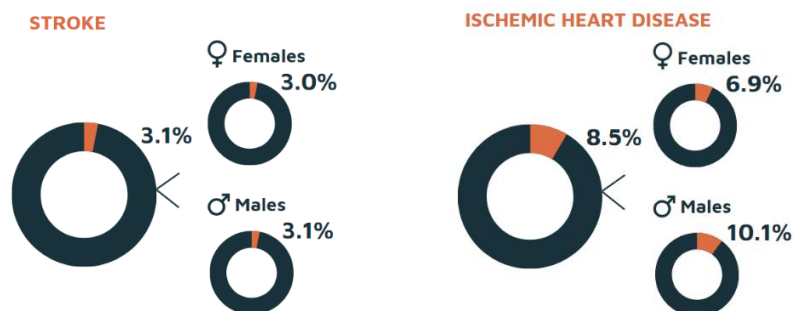
## Cardiovascular diseases

Dietary risks are a leading cause of CVDs. In Canada, 20% of deaths from stroke and 49% of deaths from ischemic heart diseases were attributable to poor diets in 2021<sup>23</sup>.

In 2021-2022<sup>a</sup>, **3.1%** of Canadian **adults** (≥20 y) had a **stroke**. The prevalence was similar for males (3.1%) and females (3.0%)<sup>14</sup>. For the same period, the **incidence of stroke** was **308 per 100,000** adults, with again similar trends for males 319 per 100,000 and females 298 per 100,000<sup>14</sup>. Over the same period in Canada, **8.5%** of adults (≥20 y) lived with diagnosed **ischemic heart disease**, including **10.1% of males** compared to **6.9% of females**<sup>14</sup>, and **577 per 100,000** adults received a new diagnosis of ischemic heart disease including **680 males** per 100,000 and **480 females** per 100,000<sup>14</sup>.

Figure 4.

Percentage of individuals in Canada that had a stroke and that were diagnosed with ischemic heart disease in 2021-2022<sup>a</sup>



## Cancer

While cancers are caused by a combination of risk factors, several dietary factors have been associated with the risk of developing cancer. The strongest evidence links dietary risk factors to colorectal cancer. In Canada, an estimated 30% of deaths from colorectal cancer are attributable to dietary risks<sup>24</sup>.

In 2017 (excluding Quebec), **52.6 adults per 100,000** in the general population in Canada were diagnosed with colorectal cancer, including **62.4 males per 100,000** compared to **43.9 females per 100,000**<sup>16</sup>. In 2018, the estimated number of people with colorectal cancer was 88,150 among females and 103,370 among males<sup>25</sup>.

Based on 2022 data from the International Agency for Research on Cancer, colorectal cancer was the third most common type of cancer diagnosed among males (after prostate and lung cancers) and females (after breast and lung cancers) in Canada<sup>26</sup>.

<sup>a</sup> As described in the Canadian Chronic Disease Surveillance System (CCDSS) data tool website "Many [CCDSS] measures, such as chronic disease incidence, were influenced by the COVID-19 pandemic. Changes in such measures may be driven by multiple factors, including (but not limited to) differences in healthcare seeking behaviour, the availability and use of healthcare services, as well as true changes in health status. As such, CCDSS measures should be used cautiously when making inferences about population health during the COVID-19 pandemic."<sup>14</sup>

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## Inequities in the prevalence of noncommunicable diseases

There are important inequities in the prevalence of diet-related noncommunicable diseases in Canada. For example, national data from 2014/15 and 2018/19 indicate that obesity prevalence among children in Canada aged 5 to 17 years from high-income, highly educated households was lower compared to their peers from middle- and low-income families, as well as those from households with lower levels of education<sup>17</sup>. In 2014-2019, the rate of obesity was 26% among non-indigenous adults and 40% or higher among First Nations adults living off reserve and Métis, and the prevalence of obesity was higher among non-immigrant adults (29%) than recent ( $\leq 10$  y; 13%) and long-term immigrants ( $> 10$  y; 22%)<sup>17</sup>.

In 2015-2018, the prevalence of diabetes (type 1 and 2) was generally lower with higher levels of income and education among adults ( $\geq 18$  y) in Canada<sup>17</sup>, and these data suggest a similar trend for the prevalence of heart disease<sup>17</sup>. The incidence of colorectal cancer in the general population was also higher as area-level income declined<sup>17</sup> (data from 2015-2017; Territories 2013-2017; Quebec excluded).

## Key Messages

- High rates of diet-related noncommunicable diseases demonstrate the need for population-level approaches to address these issues at a societal level by changing food environments and food systems.
- Efforts to reduce rates of diet-related noncommunicable diseases are positioned to have a meaningful positive impact on the health of the population in Canada.

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Refer to the INFORMAS Canada website for further reports on Canada's food environments : <https://informascanada.com/2025-report>.

- An in-depth look at Canada's food environments—Results from INFORMAS Canada
- An in-depth look at the quality of population diet in Canada
- An in-depth look at the risk factors for noncommunicable diseases in Canada

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