



**The Conference
Board of Canada**

HCP Menu

Provincial and Territorial Ranking

Mortality Due to Heart Disease and Stroke

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Key Messages

Nunavut and Quebec are the top-ranked Canadian regions, scoring “A” grades on mortality due to heart disease and stroke—though Nunavut’s ranking is puzzling because risk factors for heart disease and stroke are high.

Newfoundland and Labrador and N.W.T. are at the bottom of the pack, with average mortality rates of 200 deaths or more from heart disease and stroke per 100,000 population.

High blood pressure, a major risk factor for heart disease and stroke, is most prevalent in Nunavut.

Filter

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Nunavut



Putting mortality due to heart disease and stroke in context

Heart disease and stroke accounted for close to 20 per cent of all deaths in Canada (46,852 deaths) in 2011—the last year of published data¹—and remain the leading causes of hospitalization in the country.²

More than half of the deaths due to circulatory system diseases in Canada are due to ischaemic heart disease, also known as coronary artery disease, which is a condition that affects the supply of blood to the heart. The blood vessels are narrowed, reducing the supply of oxygen and nutrients to the heart, something that can eventually result in a heart attack. Deaths due to cerebrovascular diseases (known as strokes) account for about 20 per cent of circulatory disease deaths in Canada.³

It's important to note that deaths from heart disease and stroke typically occur later in life. Regions with lower life expectancies and high risk factors may actually see fewer deaths due to heart disease and stroke, simply because the population is dying prematurely from other diseases.

How do the provinces and territories rank relative to Canada's international peers?

Nunavut is the top-ranked region in Canada, with a three-year average mortality rate of only 97.2 per 100,000 population. The territory scores an "A" and ranks second only to France, the top performer with a mere 84.5 deaths per 100,000 due to heart disease and stroke per year on average between 2009 and 2011. Japan and the Netherlands are other top-ranked peer countries. Quebec is the only province to receive an "A" grade, with an average mortality rate of 124.6 deaths per 100,000 population.

Overall, Canada ranks 6th among the 16 peer countries and scores a "B" grade. Between 2009 and 2011, an average of 141.9 Canadians died per 100,000 population due to heart disease and stroke. Quebec, B.C., and New Brunswick are the only other regions with lower heart disease and stroke mortality rates than the Canadian average. Still, five other regions also earn "B" grades compared with Canada's international peers—Ontario, Nova Scotia, Saskatchewan, Yukon, and Manitoba.

Alberta and P.E.I. both score "C" grades, as do N.W.T. and the lowest-ranked province, Newfoundland and Labrador. With 202.3 heart disease and stroke deaths per 100,000 population, Newfoundland and Labrador ranks just above last-place Finland. Finland gets the only "D" grade, with an average mortality rate of 251 deaths per 100,000 population.

How do the provinces and territories perform relative to each other?

Grade
(Deaths per 100,000 population; age-standardized)

A
B

200
100
0



Nunavut has the lowest mortality rate due to heart disease and stroke in Canada. Quebec and B.C. are the highest-ranked provinces. Newfoundland and Labrador and N.W.T. stand out as the worst-ranked. There is a large discrepancy between the top and bottom performers on this indicator, as the rate of mortality from heart disease and stroke in Newfoundland and Labrador is more than twice the rate in Nunavut.

Do the rankings on mortality due to heart disease versus mortality due to stroke differ substantially among the provinces and territories?

| REPORT CARD | | |
|--|---------------|--------|
| Mortality Due to Heart Disease and Stroke* | | |
| | Heart Disease | Stroke |
| Canada | B | A |
| N.L. | C | C |
| P.E.I. | C | A |
| N.S. | B | A |
| N.B. | B | A |
| Que. | B | A+ |
| Ont. | B | A |
| Man. | C | B |
| Sask. | C | A |
| Alta. | C | A |
| B.C. | B | A |
| Yukon | B | D |
| N.W.T. | D | B |
| Nunavut | A | A |

*grades based on average mortality rates between 2009 and 2011
Source: The Conference Board of Canada.

If we look at mortality due to heart disease and mortality due to stroke separately, vast differences become apparent. Most provinces score "A" grades on mortality due to stroke relative to the international peer countries. Quebec actually scores an "A+" for having the lowest mortality rate among all regions—a mere 33.7 deaths per 100,000 population. Newfoundland and Labrador and Yukon are at the bottom of the rankings. Scoring a "D" with the third highest mortality rate, Yukon's ranks much worse on mortality due to stroke than it does on mortality due to heart disease and stroke.

The mortality due to heart disease results are not as good. All provinces are middle-of-the-pack "B" or "C" performers. With 147.8 deaths per 100,000 population, N.W.T. is one of only three regions—Austria and Finland are the other two—to receive a "D" grade.

How do the provinces and territories fare when it comes to blood pressure—a key risk factor for heart disease and stroke?

High blood pressure, or hypertension, is the number one risk factor for stroke and a major risk factor for heart disease. Although a person's age, ethnicity, and gender can help explain some cases of high blood pressure, other factors such as an unhealthy lifestyle, physical inactivity, and tobacco consumption can increase the risk of high blood pressure.⁴

Sadly, the prevalence of high blood pressure is trending upwards in Canada. In 2013, about 14.1 per cent of the population suffered from high blood pressure—up from 13 per cent in 2003. If we look at the last three years of data (2011 to 2013), N.W.T. had the lowest prevalence of high blood pressure, followed by B.C., Quebec, and Yukon. Less than 14 per cent of the population suffered from high blood pressure in these four regions over this three-year period. Meanwhile, the prevalence of high blood pressure in all other provinces and Nunavut was above the Canadian average. Nunavut, Newfoundland and Labrador, and New Brunswick are the worst ranked, with an average prevalence of high blood pressure near 17 per cent or higher between 2011 and 2013.



Why does Nunavut do so well on this report card?

Nunavut's "A" grade and second-place ranking on mortality due to heart disease and stroke may be misleading. The territory fares poorly on the key risk factors, with high prevalence rates of obesity, smoking, heavy drinking, and hypertension, yet this does not appear to be translating into deaths from heart disease or stroke.

One possible explanation is that deaths from heart disease and stroke normally occur later in life, and life expectancy in Nunavut is only 71.8 years. According to the report *Tracking Heart Disease and Stroke in Canada*, about 4.8 per cent of the total Canadian population reported living with heart disease. The figures are much higher for the elderly population—14.8 per cent among those aged 65 to 74 years

and 22.9 per cent among those aged 75 years and older.⁵ With the highest mortality rates due to cancer and respiratory diseases in Canada, coupled with a very high suicide rate, Nunavut residents may not live long enough to suffer from heart disease and stroke.

Is there a relationship between diabetes and heart disease and stroke?

Being diagnosed with [diabetes](#) also puts an individual at risk for heart disease and stroke. Indeed, about 80 per cent Canadians with diabetes die from a heart attack or a stroke.⁶ Compared with people who don't have diabetes, people with diabetes are at higher risk for heart disease, have additional causes of heart disease, may develop heart disease at a younger age, and may have more severe heart disease. In fact, the term "diabetic heart disease" refers to heart disease that develops in people who have diabetes.⁷

Diabetes can also pose health problems that increase the risk of stroke. High blood pressure is a major risk factor and leading cause of stroke. Many people with diabetes also have high cholesterol, increasing their risk for stroke. Brain damage may be more severe and extensive if blood sugar is high when a stroke happens.⁸

Why do Newfoundland and Labrador and N.W.T. have such high mortality rates due to heart disease?

Newfoundland and Labrador and N.W.T. have the highest mortality rates due to heart disease among all the provinces and territories. On all the risk factors for heart disease—hypertension, diabetes, smoking, obesity, and physical inactivity—Newfoundland and Labrador performs worse than the Canadian average. While N.W.T. performs better than Newfoundland and Labrador on these risk factors, its rates of smoking and obesity are still well above the Canadian average.

What are the costs to individuals and society of circulatory diseases?

Because of recent treatment advances, many individuals who would have died of heart disease and stroke in the past are now living with these diseases. But although a reduction in mortality due to heart disease and stroke has increased life expectancy for Canadians, a longer life lived in poor health is not necessarily indicative of improved health outcomes.

Heart disease and stroke have a major impact on a patient's quality of life. According to a survey conducted by the Heart and Stroke Foundation in 2000, more than 90 per cent of Canadians who have a heart attack and more than 80 per cent who have a stroke and make it to the hospital will survive.⁹ However, many of these patients have difficulty

making necessary changes to their lifestyle to avoid future complications.

Besides causing considerable difficulties for patients and affecting quality of life, heart disease and stroke have a significant economic cost. Not only do heart disease and stroke affect the health system, they also affect the overall economy through missed work and lower productivity. In Canada, total costs for cardiovascular diseases were estimated to be \$12 billion in 2008.¹⁰ These costs include both direct costs—that is, drugs, hospitals, physicians—and indirect costs—that is, lost productivity associated with illness, injury, and premature mortality.¹¹

Footnotes

¹ Statistics Canada, [CANSIM Table 102-0529, Deaths, by Cause, Chapter IX: Diseases of the Circulatory System \(100 to 199\), Age Group and Sex, Canada Annual \(Number\)](#) (accessed October 8, 2014).

² Canadian Institute of Health Information, *A Snapshot of Health Care in Canada as Demonstrated by Top 10 Lists, 2011* (Ottawa: CIHI, 2011).

³ Statistics Canada, [CANSIM Table 102-0529, Deaths, by Cause, Chapter IX: Diseases of the Circulatory System \(100 to 199\), Age Group and Sex, Canada](#) (accessed October 8, 2014).

⁴ Heart and Stroke Foundation, [Getting Your Blood Pressure in Check](#).

⁵ Public Health Agency of Canada, [Tracking Heart Disease and Stroke in Canada 2009](#).

⁶ Canadian Diabetes Association, [An Economic Tsunami: The Costs of Diabetes in Canada](#), 2009.

⁷ National Heart, Lung, and Blood Institute, [What Is Diabetic Heart Disease?](#)

⁸ National Stroke Association, [Diabetes and Stroke](#).

⁹ Heart and Stroke Foundation of Canada, [2014 Report on Health—Creating Survivors](#).

¹⁰ Public Health Agency of Canada, [Economic Burden of Illness in Canada 2005–2008](#) (Ottawa: Public Health Agency of Canada, March 2014), 12.

¹¹ Ibid., 3.



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