

Diabetes in Nova Scotia

2023 Background

Summary: This backgrounder provides key statistics about diabetes in Nova Scotia, the impact of diabetes on the population of Nova Scotia, and Diabetes Canada's recommendations to the Government of Nova Scotia to address diabetes prevention and management.

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About Diabetes Canada: Diabetes Canada is a national health charity representing more than 11.9 million people in Canada living with diabetes or prediabetes. Diabetes Canada leads the fight against diabetes by helping those affected by diabetes live healthy lives, preventing the onset and consequences of diabetes, and discovering a cure. It has a heritage of excellence and leadership, and its co-founder, Dr. Charles Best, along with Dr. Frederick Banting, is credited with the co-discovery of insulin. Diabetes Canada is supported in its efforts by a community-based network of volunteers, employees, health care professionals, researchers, and partners. By providing education and services, advocating on behalf of people living with diabetes, supporting research, and translating research into practical applications, Diabetes Canada is delivering on its mission. Diabetes Canada will continue to change the world for those affected by diabetes through healthier communities, exceptional care, and high-impact research.

For more information, please visit: www.diabetes.ca.

Contact: advocacy@diabetes.ca with inquiries about this Diabetes Canada report.

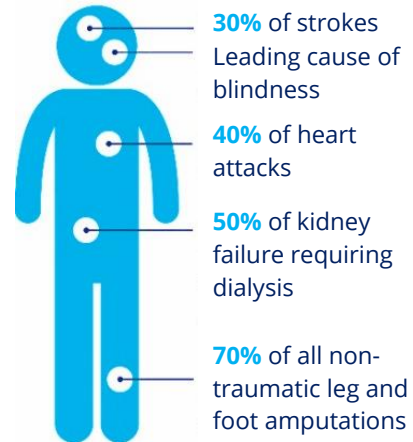
Estimated Prevalence and Cost of Diabetes – Nova Scotia

Prevalence (1)	2023	2033
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed)	177,000 / 17%	204,000 / 21%
Diabetes (type 1 and type 2 diagnosed)	124,000 / 12%	143,000 / 14%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes (includes undiagnosed)	339,000 / 34%	368,000 / 37%
Increase in diabetes (type 1 and type 2 diagnosed), 2023-2033	15%	
Direct cost to the health care system	\$116 Million	\$131 Million
Out-of-pocket cost per year (2)		
Type 1 diabetes costs, % of family income	\$223-\$14,007 / 1%-9%	
Type 2 diabetes costs, % of family income	\$232-\$5,010 / 1%-7%	

Impact of Diabetes

- Among Nova Scotians (1):
 - **34%** live with diabetes or prediabetes, and
 - **12%** live with diagnosed diabetes, a figure that climbs to **17%** when cases of undiagnosed type 2 diabetes are included.
- Diabetes complications are associated with premature death (3). Diabetes can reduce lifespan by **five to 15 years** (3). It is estimated that the all-cause mortality rate among people living with diabetes is **twice** as high as the all-cause mortality rate for those without diabetes (4).
- People with diabetes are over **three times** more likely to be hospitalized with cardiovascular disease, **12 times** more likely to be hospitalized with end-stage renal disease, and almost **20 times** more likely to be hospitalized for a non-traumatic lower limb amputation compared to the general population (3).

- Diabetes contributes to (5):



- **33-50%** of people living with diabetes experience diabetes distress (an overwhelming feeling about their condition that can lead to unhealthy habits like not checking their blood sugar or skipping medical appointments, etc.) (6).
- Individuals with depression have a **40% – 60%** increased risk of developing type 2 diabetes (6).

- Diabetic retinopathy, a retinal vascular disorder that occurs as a complication of diabetes, is a leading cause of new cases of blindness in Canada, and often affects working-aged adults (7).
- Vision loss is associated with significant morbidity, including increased falls, hip fractures, and an increased risk of death (8).
- Foot ulceration affects an estimated **15-25%** of people with diabetes in their lifetime (9).
- Compared to the general population, adults living with diabetes in Canada are over **20 times** more likely to undergo non-traumatic lower limb amputations - 85% of which are preceded by foot ulcers (10).
- Hypoglycemia (low blood sugar) and hyperglycemia (high blood sugar) may affect mood and behaviour and can lead to emergency situations if left untreated (11).
- For people living with diabetes, adherence to treatment is affected by costs which are not covered by their public drugs and devices coverage (2).
 - Those with type 1 diabetes can pay up to 9% of their gross annual income on medications and devices that range from \$223 to \$14,007.
 - Those living with type 2 diabetes can pay up to 7% of their gross annual income on medications and devices that range from \$232 to \$5,010.

Risk Factors for Diabetes

- The risk factors for type 1 diabetes are not well understood, but interaction between genetic and environmental factors are likely involved (11). Type 2 diabetes is caused by a combination of individual,

social, environmental, and genetic factors (11).

- Certain populations are at higher risk of developing type 2 diabetes, such as those of African, Arab, Asian, Hispanic, Indigenous, or South Asian descent, those who are older, have a lower level of income or education, are physically inactive, or are living with overweight or obesity (11).
- The age-standardized prevalence rates for diabetes are **16%** among people of South Asian descent, **13.3%** among Black adults, **12.5%** among people of Arab/West Asian descent, **8.8%** among people of East/Southeast Asian descent, and **5.7%** among people of Latin American descent (12).
- The prevalence of diabetes among First Nations adults living off reserve, Metis adults, and Inuit adults is **1.72 times**, **1.22 times**, and **1.18 times** higher respectively than the prevalence among non-Indigenous adult (12). In addition to the risk factors that impact all people in Canada, the ongoing burden of colonization continues to influence Indigenous peoples' health.
- The prevalence of diabetes among adults in the lowest income groups is **2.1 times** that of adults in the highest income group (12).
- Adults who have not completed high school have a diabetes prevalence **1.9 times** that of adults with a university education (12).
- Social determinants of health can influence the rate of individual-level modifiable risk factors and thus the risk of diabetes. The main determinants of health include income, employment, education,

childhood experiences, physical environments, social supports, access to health services, and racism (13).

Policy, Programs, and Services Related to Diabetes

- In August 2022, the government released its *Managing Diabetes in School Policy* that includes school staff to be trained to administer insulin and nasal glucagon.
- In 2019, Pharmacare revised the Special Authorization form to help remove barriers to access diabetes medications.
- In April 2015, the insulin pump program was enhanced to include eligible individuals with type 1 diabetes under age 26 years.
- The Diabetes Care Program of Nova Scotia is mandated to standardize and improve the quality of care provided through Nova Scotia's 38 Diabetes Centres (DCs). Originally a Department of Health program, the DCPNS now reports to the Nova Scotia Health Authority.
- The government produces an annual report for district health authorities on diabetes epidemiology and health services utilization using the National Diabetes Surveillance System. The DCPNS Registry allows for a review of process and outcome measures in diabetes centres that use the Registry onsite, as well as longitudinal tracking of newly diagnosed referrals, including those with prediabetes, and key self and clinical indicators of care, including lower-extremity amputation data, hypertension rates, and retinopathy screening rates.

Challenges

Nova Scotia faces unique challenges in reducing risk of type 2 diabetes and meeting the needs of those living with diabetes:

- Non-modifiable risk factors of type 2 diabetes include age, sex, and ethnicity (11).
 - The median age in Nova Scotia is **45.5 years** (14). **19.9%** of Nova Scotians are over 65 years old (14). The risk of developing type 2 diabetes increases with age (11). Older adults living with diabetes are more likely to be frail and progressive frailty has been associated with reduced function and increased mortality (15).
 - Adult men are more at risk of type 2 diabetes compared to adult women (11).
 - Approximately **7%** of Nova Scotians self-identify as being of African, Arab, Asian, Hispanic, or South Asian descent (14). These groups are at increased risk of developing type 2 diabetes (11).
 - There are **51,495** Indigenous people in Nova Scotia, who face significantly higher rates of diabetes and adverse health consequences than the overall population (16).
- Nova Scotia has high rates of individual-level modifiable risk factors (17):
 - **44.5%** of adults and **77.7%** of youth aged 12 to 17 are physically inactive;
 - **35.2%** of adults are living with overweight and **34.3%** of adults are living with obesity;
 - **75.8%** of adults are not eating enough fruits and vegetables; and
 - **19.3%** of adults are current tobacco smokers.
- Factors related to the social determinants of health and that can influence the rate

of individual-level modifiable risk factors among Nova Scotians include income, education, food security, the built environment, social support, and access to health care (3).

- Nova Scotia has one of the highest rural populations among the provinces. For people with diabetes, accessing care is more challenging in rural areas across Canada than in urban areas (18).
- The median after-tax family income in Nova Scotia is among the lowest among the provinces (19).

Diabetes Canada’s Recommendations to the Government of Nova Scotia

- 1. Fund a provincial diabetes framework**
 - Allocate funding to develop and implement a comprehensive diabetes framework with measurable goals for improving diabetes prevention, treatment, and health outcomes for the province.
- 2. Expand access: Put patients at the centre of policy decisions**
 - Eliminate barriers, including age discrimination, to access evidence-based, personalized diabetes treatments, including diabetes medications, devices, and supplies.
 - Provide equitable access to continuous glucose monitoring systems (isCGM & rtCGM) according to Diabetes Canada’s [reimbursement recommendations](#).
- 3. Prevent amputations**
 - Implement health policies that support the prevention and management of

diabetes foot complications and reduce the risk of lower limb amputations.

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