

Diabetes in Prince Edward Island

2023 Background

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

Publication Date: July 2023

Report Length: 6 Pages

Cite As: Diabetes in Prince Edward Island: Backgrounder. Ottawa: Diabetes Canada; 2023.

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.

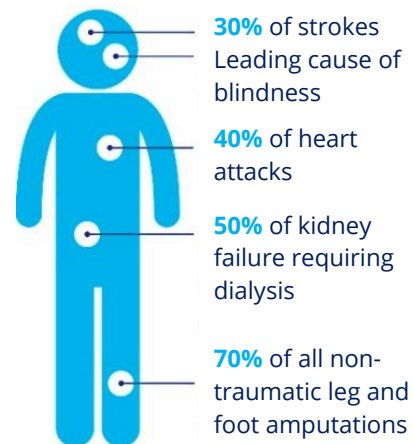
Estimated Prevalence and Cost of Diabetes – Prince Edward Island

Prevalence (1)	2023	2033
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed)	26,000 / 16%	31,000 / 18%
Diabetes (type 1 and type 2 diagnosed)	18,000 / 11%	22,000 / 13%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes (includes undiagnosed)	52,000 / 31%	58,000 / 34%
Increase in diabetes (type 1 and type 2 diagnosed), 2023-2033	22%	
Direct cost to the health care system	\$19 Million	\$23 Million
Out-of-pocket cost per year (2)		
Type 1 diabetes costs, % of family income	\$867-\$6,085 / 3%-20%	
Type 2 diabetes costs, % of family income	\$487-\$4,832 / 2%-16%	

Impact of Diabetes

- Among Prince Edward Islanders (1):
 - **31%** live with diabetes or prediabetes, and
 - **11%** live with diagnosed diabetes, a figure that climbs to **16%** 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 20% of their gross annual income on medications and devices that range from \$897 to \$6,085.
 - Those living with type 2 diabetes can pay up to 16% of their gross annual income on medications and devices that range from \$487 to \$4,832.
- Certain people 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).

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).

Policy, Programs, and Services Related to Diabetes

- In June 2023, the Government of PEI supported by the Government of Canada announced that PEI will expand its provincial drug coverage to reduce copays for commonly prescribed, eligible medications to \$5 for residents covered under the Seniors Drug, the Family Health Benefit, as well as the Generic Drug and Diabetes Drug programs will greatly reduce barriers to accessing medications for people living with diabetes.
- Budget 2023 committed funding of \$400,000 to launch a foot care program further demonstrates PEI's commitment to caring for people living with diabetes.
- In 2022, the government announced a Glucose Sensor Program, providing access to real-time continuous glucose monitoring (rtCGM) and intermittently-scanned glucose monitoring (isCGM) systems at a reduced cost through local P.E.I. pharmacies.
- In Budget 2021, the government announced \$1 million in diabetes supports.
- Effective January 2021, the insulin pump program was expanded to include Islanders up to 25 years, and monthly coverage of blood glucose test strips was increased from 100 to 120 strips monthly for individuals with diabetes using insulin.
- In November 2020, the government announced the renewal of its provincial diabetes strategy (2020-2024) that is aligned with the Diabetes 360° framework.
- In August 2018, the Department of Education released Guideline for Diabetes Management in Schools.

- *P.E.I. Diabetes Strategy 2014-2017* set goals and performance measures to improve the prevention, detection, and management of diabetes, aligning itself with the principles outlined in the Diabetes Charter for Canada.
- In November 2017, blood glucose test strip coverage was increased from 100 to 250 test strips monthly through pregnancy.
- In March 2014, the insulin pump program launched for eligible individuals with type 1 diabetes under age 19 years.

Challenges

Prince Edward Island 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, gender, and ethnicity (11).
 - The median age in P.E.I. is **44.5 years** (14). **19.4%** of Islanders 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 **5.7%** of Islanders 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 **2,740** Indigenous people in P.E.I, who face significantly higher rates of diabetes and adverse health

consequences than the overall population (16). In addition to the risk factors that impact all people in Canada, the ongoing burden of colonization continues to influence Indigenous peoples' health.

- P.E.I. has high rates of individual-level modifiable risk factors (17):
 - **47.7%** of adults and **83%** of youth aged 12-17 are physically inactive;
 - **38.3%** of adults are living with overweight and **32.9%** of adults are living with obesity;
 - **73%** of adults are not eating enough fruits and vegetables; and
 - **16.9%** 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 Islanders include income, education, food security, the built environment, social support, and access to health care (3).
 - P.E.I. has one of the highest rural populations among the provinces. For people living with diabetes, accessing care is more challenging in rural areas across Canada than in urban areas (18).
 - As with other smaller provinces, P.E.I. has difficulty in attracting and retaining specialists who are limited in numbers and on whom people with diabetes rely heavily.

Diabetes Canada's Recommendations to the Government of Prince Edward Island

- 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. Protect students with diabetes**
 - Implement a mandatory standard of care for students with diabetes that aligns with Diabetes Canada's [Guidelines for the Care of Students Living with Diabetes at School](#).
- 4. Prevent amputations**
 - Implement health policies that support the prevention and management of diabetes foot complications and reduce the risk of lower limb amputations.

References

1. Canadian Diabetes Cost Model. Ottawa: Diabetes Canada; 2016.
2. Diabetes and Diabetes-Related Out-of-Pocket Costs: 2022 Update. Diabetes Canada; 2022.
3. Diabetes in Canada: Facts and figures from a public health perspective [Internet]. Ottawa: Public Health Agency of Canada; 2011 p. 126. Available from:

- <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/cd-mc/publications/diabetes-diabete/facts-figures-faits-chiffres-2011/pdf/facts-figures-faits-chiffres-eng.pdf>
4. Public Health Agency of Canada. Twenty years of diabetes surveillance using the Canadian chronic disease surveillance system. [Internet]. 2019. Available from: http://publications.gc.ca/collections/collec tion_2019/aspc-phac/HP35-122-2019-eng.pdf
 5. Hux J, Booth J, Slaughter P, Laupacis A. Diabetes in Ontario: An ICES Practice Atlas [Internet]. Institute for Clinical Evaluative Sciences; 2003. Available from: <https://www.ices.on.ca/Publications/Atlas es-and-Reports/2003/Diabetes-in-Ontario>
 6. Diabetes Canada Clinical Practice Guidelines Expert Committee, Robinson DJ, Coons M, Haensel H, Vallis M, Yale JF. Diabetes and Mental Health. *Can J Diabetes*. 2018 Apr;42 Suppl 1: S130–41.
 7. Flaxel, Christina J.; Adelman, Ron A.; Bailey, Steven T.; Fawzi, Amani; Lim, Jennifer I.; Vemulakonda, G. Atma; Ying, Gui-shuang. *Ophthalmology (Rochester, Minn.)*, 2020, Vol.127 (1), p.P66-P145
 8. 10. Vu, H. T., Keeffe, J. E., McCarty, C. A., & Taylor, H. R. (2005). Impact of unilateral and bilateral vision loss on quality of life. *The British journal of ophthalmology*, 89(3), 360–363. <https://doi.org/10.1136/bjo.2004.047498>
 9. Yazdanpanah, L., Shahbazian, H., Nazari, I., Arti, H. R., Ahmadi, F., Mohammadianinejad, S. E., Cheraghian, B., & Hesam, S. (2018). Incidence and Risk Factors of Diabetic Foot Ulcer: A Population-Based Diabetic Foot Cohort (ADFC Study)-Two-Year Follow-Up Study. *International journal of endocrinology*, 2018, 7631659. <https://doi.org/10.1155/2018/7631659>
 10. Armstrong DG, Boulton AJM, Bus SA. Diabetic Foot Ulcers and Their Recurrence. *N Engl J Med*. 2017 Jun 15;376(24):2367–75
 11. Diabetes Canada Clinical Practice Guidelines Expert Committee. Diabetes Canada 2018 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes*. 2018;42(Suppl 1): S1:S325.
 12. Public Health Agency of Canada. Pan-Canadian Health Inequalities Data Tool, 2022 Edition [Internet]. Available from: <https://health-infobase.canada.ca/health-inequalities/data-tool/>
 13. Prinjha S, Wicklow B, Nakhla M, Banerjee AT. Toward the Goal of Understanding and Tackling the Social Determinants of Diabetes. *Can J Diabetes*. 2022 Aug 1;46(6):549–50.
 14. Government of Canada SC. Census Profile, 2016 Census -Prince Edward Island [Province] and Canada [Country] [Internet].
 15. Meneilly GS, Knip A, Miller DB, Sherifali D, Tessier D, Zahedi A. Diabetes in Older People. *Can J Diabetes*. 2018 Apr;42:S283–95.
 16. Aboriginal peoples in Canada: Key results from the 2016 Census [Internet]. Ottawa: Statistics Canada; 2017 Oct p. 11. Available from: <https://www150.statcan.gc.ca/n1/en/daily->

quotidien/171025/dq171025a-
eng.pdf?st=krvs_yCt

17. *Canadian Risk Factor Atlas (CRFA), 2020 edition*. Public Health Agency of Canada. Available at Public Health Infobase: <https://health-infobase.canada.ca/crfa/>
18. Statistics Canada. Table 17-10-0118-01 Selected population characteristics, Canada, provinces and territories [Internet]. 2009. Available from: Selected population characteristics, Canada, provinces and territories.