

Diabetes in Alberta

2022 Background

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

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About Diabetes Canada: Diabetes Canada is a national health charity representing more than 11.7 million Canadians 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

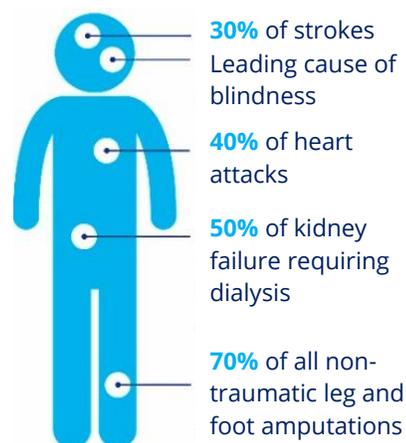
Prevalence (1)	2022	2032
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed)	575,000 / 12%	818,000 / 15%
Diabetes (type 1 and type 2 diagnosed)	403,000 / 8%	573,000 / 10%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes combined	1,242,000 / 26%	1,616,000 / 29%
Increase in diabetes (type 1 and type 2 diagnosed), 2022-2032	42%	
Direct cost to the health care system	\$494 million	\$692 million
Out-of-pocket cost per year (2)		
Type 1 diabetes on multiple daily insulin injections	\$2,200-\$2,400	
Type 1 diabetes on insulin pump therapy	\$600-\$900	
Type 2 diabetes on oral medication	\$500-\$2,000	

Impact of Diabetes

- Among Albertans (1):
 - **26%** live with diabetes or prediabetes and
 - **8%** live with diagnosed diabetes, a figure that climbs to 12% 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 Canadians 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):



- The prevalence of clinically relevant depressive symptoms among people living with diabetes is approximately **30%** (6). Individuals with depression have a **40% - 60%** increased risk of developing type 2 diabetes (6).

- Diabetic retinopathy is the leading cause of vision loss in people of working age (7). Vision loss is associated with increased falls, hip fractures, and a 4-fold increase in mortality (7). The prevalence of diabetic retinopathy is approximately **25%** in Canada (8).
- Foot ulceration affects an estimated **15%–25%** of people with diabetes in their lifetime (9). **One-third** of amputations in 2011–2012 were performed on people reporting a diabetic foot wound (10).
- 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 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 **18.5%** among people of African descent, **15.5%** among people of South Asian descent, and **6.3%** among people of East/Southeast Asian descent.
 - Diabetes rates are **3.5 times** higher in First Nations People off reserve and **1.4 times** higher in Métis than in the non-Indigenous population, a situation compounded by barriers to care for Indigenous peoples (12,13). 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 **3.9 times** that of adults in the highest income group (13).
 - Adults who have not completed high school have a diabetes prevalence **7 times** that of adults with a university education (13).
- For many Canadians with diabetes, adherence to treatment is affected by cost. The majority of Canadians with diabetes pay more than **3%** of their income or over **\$1,500** per year for prescribed medications, devices, and supplies out-of-pocket (2,14).
- Among Canadians with type 2 diabetes, **33%** do not feel comfortable disclosing their disease to others (2).
- Hypoglycemia (low blood sugar) and hyperglycemia (high blood sugar) may affect mood and behaviour and can lead to emergency situations if left untreated (11).

Policy, Programs, and Services Related to Diabetes

- In July 2021, the government announced increased coverage up to \$2,400 for diabetes supplies in government sponsored programs, including Blue Cross Coverage for Seniors and Non-Group Coverage.
- In December 2019, the government launched its Biosimilars Initiative which introduced changes for adults using insulin. To maintain public coverage, Individuals using an originator insulin will be required to switch to its biosimilar.
- In February 2019, the *Guidelines for Supporting Students with Type 1 Diabetes* was released to offer guidance to provincial school boards.

- In 2016, the Diabetes, Obesity and Nutrition Strategic Clinical Network (DON SCN) released an Inpatient Diabetes Management Initiative in its effort to standardize how patients with diabetes are cared for in Alberta’s hospitals.
- In 2014, DON SCN released a provincial Diabetes Foot Care Clinical Pathway for Albertans with diabetes in its effort to reduce diabetic foot ulcers and amputations.

Challenges

Alberta faces unique challenges in preventing 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 Alberta is **36.7 years** (15). **12.3%** of Albertans are over 65 years old (15). 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 (16).
 - Adult men are more at risk of type 2 diabetes compared to adult women (11).
 - Approximately **24.8%** of Albertans self-identify as being of African, Arab, Asian, Hispanic, or South Asian descent (15). These groups are at increased risk of developing type 2 diabetes (11).
 - There are **258,640** Indigenous Peoples in Alberta, who face significantly higher rates of diabetes and adverse health consequences than the overall population (17).

- Alberta has high rates of individual-level modifiable risk factors (18):
 - **41.8%** of adults and **56.9%** of youth are physically inactive;
 - **36.3%** of adults are living with overweight, **29.7%** of adults are living with obesity, and **25.6%** of youth are living with overweight or obesity;
 - **74.5%** of adults are not eating enough fruits and vegetables; and
 - **14.1%** 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 Albertans include income, education, food security, the built environment, social support, and access to health care (3).
 - Alberta had the largest increase in diabetes prevalence during the last 10 years among the provinces and is projected to also experience the largest increase over the next 10 years (1).
 - Albertans with diabetes living in non-metro health zones have lower rates of specialist care visits and higher use of hospital and emergency departments for acute and chronic complications of diabetes.

Diabetes Canada’s Recommendations to the Government of Alberta

1. **Implement Diabetes 360°**
 - Implement a provincial diabetes strategy that aligns with the Diabetes 360° framework.
 - Support the F/P/T process to establish a nationwide diabetes framework.

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.

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