

Diabetes in British Columbia

Estimated prevalence and cost¹

Prevalence	2019	2029
Diabetes (type 1 and type 2 diagnosed)	520,000 / 10%	704,000 / 13%
Diabetes (type 1)	5-10% of diabetes prevalence	
Diabetes (type 1 + type 2 diagnosed + type 2 undiagnosed) and prediabetes combined	1,527,000 / 30%	1,875,000 / 34%
Increase in diabetes (type 1 and type 2 diagnosed), 2019-2029	35%	
Direct cost to the health-care system	\$509 million	\$685 million
Out-of-pocket cost per year ²		
Type 1 diabetes on multiple daily insulin injections	\$800–\$2,800	
Type 1 diabetes on insulin pump therapy	\$800–\$4,700	
Type 2 diabetes on oral medication	\$1,500–\$1,900	

Impact of diabetes

- Diabetes complications are associated with premature death. Diabetes can reduce lifespan by five to 15 years. It is estimated that at least one in every ten deaths in Canadian adults was attributable to diabetes in 2008–2009.³
- 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 30% of strokes, 40% of heart attacks, 50% of kidney failure requiring dialysis, and 70% of non-traumatic lower limb amputations every year.⁴
- The prevalence of clinically relevant depressive symptoms among people with diabetes is about 30%; individuals with depression have an approximately 60% increased risk of developing type 2 diabetes.⁵
- The risk of blindness in people with diabetes is up to 25 times higher than those without diabetes.⁶ Diabetes is the leading cause of acquired blindness in Canadians under the age of 50.⁷ Diabetic retinopathy affects 500,000 Canadians.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
- Some populations are at higher risk of type 2 diabetes, such as those of African, Arab, Asian, Hispanic, Indigenous or South Asian descent, those who are older, have a low income or are living with overweight. Diabetes rates are three to five times higher in First Nations populations than in the general population, a situation compounded by barriers to care for Indigenous peoples.⁵
- 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.^{11,12}
- Among Canadians with type 2 diabetes, 33% do not feel comfortable disclosing their disease to others.¹²
- Hypoglycemia (low blood sugar) and hyperglycemia (high blood sugar) may affect mood and behaviour, and can lead to emergency situations, if left untreated.

Policy, programs and services related to diabetes

- Effective January 1, 2019, British Columbia eliminated PharmaCare deductibles for households earning up to \$30,000 in annual net income and reduced deductibles for households earning up to \$45,000.
- In July 2018, British Columbia expanded its insulin pump program to cover people living with diabetes who require one, regardless of age. At the same time, the existing program was converted to a tiered program, providing a tier one pump at no charge. A tier two pump may be available at a reduced cost determined by the applicable PharmaCare plan, if the request is based on medical need and approved by the program.
- In 2015, the Ministry of Health introduced changes to public coverage of blood glucose test strips. Within the new test strip policy, the maximum level of test strip reimbursement is similar to Diabetes Canada's *minimum* recommended test strip usage guidelines.
- In 2014, the province introduced provincial standards to support students with diabetes in schools, which includes staff training to administer glucagon in an emergency, as well as monitor blood sugar and administer insulin for students who are unable to manage their diabetes independently.
- Generic drug prices were reduced from 35% of the brand name price to 20% on April 1, 2014.
- A Childhood Healthy Weights Intervention Initiative was introduced in 2013.
- The *Healthy Families B.C. Strategy* (2011) focuses on healthy eating, healthy communities, healthy lifestyle and a healthy start for babies.

- A diabetes care guideline was released in 2010 by B.C.'s Guidelines and Protocols Advisory Committee.
- The government provides ongoing financial support for the Food Skills for Families program, which helps make healthy eating easy, enjoyable and affordable.
- B.C.'s *Primary Health Care Charter* identifies diabetes management as a priority medical condition and establishes outcome measures.
- B.C. has family practice incentive programs and billing codes for physicians providing care for chronic illnesses, including diabetes.

Challenges

British Columbia faces unique challenges in preventing type 2 diabetes and meeting the needs of those living with diabetes:

- B.C. is home to 33% of Chinese, 20% of South Asian, 17% of Southeast Asian and 17% of Indigenous people in Canada. Chinese people make up about 10% of the provincial population.^{13,14}
- In B.C., 38% of adults and 14% of youth are living with overweight; 21% of adults and 10% of youth are living with obesity.^{15,16} Over 60% of residents do not eat enough fruits and vegetables, and 38% are physically inactive.¹⁷
- B.C. experienced a 59% increase in diabetes prevalence over the last 10 years.¹

Diabetes Canada recommendations to the Government of British Columbia

1. List medications with proven efficacy on the provincial drug formulary in a timely fashion.
2. Commit to public funding of foot specialists and devices to prevent amputation for those with diabetic foot ulcers, and improve foot screening and education.
3. Support Canada's need for a nation-wide diabetes strategy, Diabetes 360°, to end the diabetes epidemic.

References

¹ Diabetes statistics in British Columbia are estimates generated by the Canadian Diabetes Cost Model, a forecasting model that provides projections on prevalence, incidence and economic burden of diabetes in Canada based on national data from government sources.

² Estimated out-of-pocket costs for type 1 and type 2 diabetes were calculated based on composite case studies. As such, the estimates may reflect the out-of-pocket costs for many people with diabetes in British Columbia, but not all. The costs are 2015 estimates and may vary depending on income and age. For details on the methodology and estimates, please see the appendix in the Diabetes Canada's 2015 Report on Diabetes: *Driving Change*, retrieved from <https://www.diabetes.ca/getmedia/5a7070f0-77ad-41ad-9e95-ec1bc56ebf85/2015-report-on-diabetes-driving-change-english.pdf.aspx>.

³ Public Health Agency of Canada. (2011). Diabetes in Canada: Facts and figures from a public health perspective. Ottawa, Ont.: Public Health Agency of Canada. Retrieved 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>.

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- ⁴ Institute for Clinical Evaluative Sciences. (2003). Diabetes in Ontario: An ICES Practice Atlas. Retrieved from <http://www.ices.on.ca/Publications/Atlases-and-Reports/2003/Diabetes-in-Ontario.aspx>.
- ⁵ Diabetes Canada Clinical Practice Guidelines Expert Committee. (2013). Diabetes Canada 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. *Can J Diabetes*, 37 (suppl 1).
- ⁶ Thomann KH, Marks ES, Adamczyk DT. (2001). Primary Eye care in Systemic Disease; New York: McGraw-Hill. (Cited in <http://www.cdc.gov/diabetes/ndep/pdfs/ppod-guide-eye-care-professionals.pdf>; also by Ovenseri-Ogbomo, et al. 2013).
- ⁷ CNIB. (2015). About diabetic retinopathy. Retrieved from <http://www.cnib.ca/en/your-eyes/eye-conditions/eye-connect/DR/About/Pages/default.aspx>.
- ⁸ CNIB. (2015). Eye connect: diabetic retinopathy. Retrieved from <http://www.cnib.ca/en/your-eyes/eye-conditions/eye-connect/DR/Pages/default.aspx>.
- ⁹ Singh, N, Armstrong, DG, Lipsky, BA. (2005) Preventing Foot Ulcers in Patients with Diabetes. *JAMA*. 2005;293(2):217-228. Retrieved from <http://jama.jamanetwork.com/article.aspx?articleid=200119#REF-JCR40054-1>.
- ¹⁰ Canadian Institute for Health Information. (2013). Compromised wounds in Canada. Ottawa, Ont.: Canadian Institute for Health Information. Retrieved from https://secure.cihi.ca/free_products/AiB_Compromised_Wounds_EN.pdf.
- ¹¹ Out-of-pocket costs that exceed 3% or \$1,500 of a person's annual income are defined as catastrophic drug costs by the Kirby and Romanow Commissions on healthcare. Please see Diabetes Canada. (2011). The burden of out-of-pocket costs for Canadians with diabetes. Retrieved from <http://www.diabetes.ca/CDA/media/documents/publications-and-newsletters/advocacy-reports/burden-of-out-of-pocket-costs-for-canadians-with-diabetes.pdf>.
- ¹² Diabetes Canada (2015). 2015 Report on Diabetes: Driving Change. Toronto, Ont.: Diabetes Canada. Retrieved from <https://www.diabetes.ca/getmedia/5a7070f0-77ad-41ad-9e95-ec1bc56ebf85/2015-report-on-diabetes-driving-change-english.pdf.aspx>.
- ¹³ Statistics Canada. 2011 National Household Survey, data tables. Retrieved from <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/dt-td/Rp-eng.cfm?TABID=2&LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GK=0&GRP=0&PID=105395&PRID=0&PTYPE=105277&S=0&SHOWALL=0&SUB=0&Temporal=2013&THEME=95&VID=0&VNAMEE=&VNAMEF=>.
- ¹⁴ Statistics Canada. Number and distribution of the population reporting an Aboriginal identity and percentage of Aboriginal people in the population, Canada, provinces and territories, 2011. Retrieved from <http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-011-x/2011001/tbl/tbl02-eng.cfm>.
- ¹⁵ Statistics Canada. (2017). Table 105-2023 - Measured adult body mass index (BMI) (World Health Organization classification), by age group and sex, Canada and provinces, Canadian Community Health Survey – Nutrition, occasional. Retrieved from <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1052023&&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid=>.
- ¹⁶ Statistics Canada. (2017). Table 105-2024 - Measured children and youth body mass index (BMI) (World Health Organization classification), by age group and sex, Canada and provinces, Canadian Community Health Survey – Nutrition, occasional. Retrieved from <http://www5.statcan.gc.ca/cansim/a47>.
- ¹⁷ Statistics Canada. Table 105-0501 - Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories, health regions (2013 boundaries) and peer groups, occasional, *CANSIM (database)*. Retrieved from <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1050501&&pattern=&stByVal=1&p1=1&p2=31&tabMode=dataTable&csid=>.

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