# Inequalities in Diabetes and Related Risk Factors

Comparing Canadian adults by income level



Diabetes is a chronic health condition in which the body cannot produce or process insulin effectively, leading to issues in glucose (sugar) regulation. There are three types of diabetes. Type 2 is the most common <sup>1</sup>. Other types include type 1 and gestational diabetes, which occurs during pregnancy. Here we describe income inequalities in self-reported chronic disease risk factors as well as self-reported diabetes, looking specifically at type 1 and type 2 diabetes combined, excluding gestational diabetes<sup>1</sup>.

### **Diabetes prevalence:**

#### Prevalence of diabetes is higher among lower income groups 9.2 Prevalence (%) 7.0 4.8 3.4 Ouintile 1 Ouintile 2 Ouintile 3 Ouintile 4 Ouintile 5 Source: Canadian Community Health Survey 2015-16, 2017-18. (lowest) (highest) Household income (quintiles) (reference)

#### The prevalence of diabetes is



among adults living in the lowest income group, compared to those living in the highest income group<sup>ii</sup>.





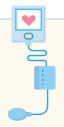
Overall, men are

1.5x
MORE LIKELY

to have diabetes than women. However, inequalities in diabetes prevalence rates observed between lowest and highest income groups are more pronounced for women<sup>iii</sup>.

#### **Chronic conditions - risk factors**

Inequalities persist between income groups in self-reported **risk factors** for chronic conditions.



## Hypertension

The proportion of people with high blood pressure in the lowest income group is

1.3x

than that in the highest income group.

This corresponds to

5 MORE PEOPLE

per 100 in the lowest income group that have high blood pressure, compared to the highest income group.

#### Obesity

Compared to the highest income group, obesity prevalence is

1.2x

among the lowest income group.

For **women**, the income inequality is larger: there are

MORE WOMEN

with obesity in the lowest income group compared to the highest income group, per 100 people.

#### Cigarette smoking

Adults in the lowest income group are

**2.1**<sub>x</sub>

more likely to smoke, compared to adults in the highest income group. This corresponds to

13 MORE PEOPLE

per 100 in the lowest income group that smoked, compared to the highest income group.

#### Heavy alcohol consumption

Among both men and women, heavy alcohol consumption increases with income.



For every 100 people, there are



with heavy alcohol consumption in the highest income group, compared to the lowest.

Source: Canadian Community Health Survey 2015-16, 2017-18



# **Physical activity**



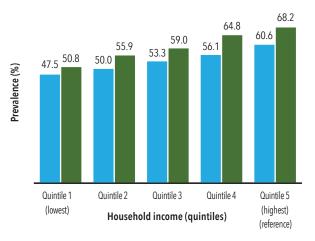
Meeting the Canadian
Physical Activity Guidelines'
recommended level of
physical activity (at least
150 minutes of moderate
to vigorous physical activity
per week, in bouts of
10 minutes or more) can
help reduce the risk of
chronic health conditions.



Income level can influence one's capacity to meet this recommendation <sup>2,3</sup>. Income inequalities affect access to recreational and green spaces, safe built environment, and competing demands on personal time, for work or caregiving <sup>2,3</sup>. All these factors influence physical activity.



#### Percentage of adults who report meeting Canadian guidelines for physical activity is lower among lower income groups



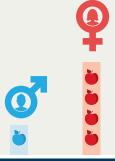


# Fruit and vegetable consumption

Across all income levels, fruit and vegetable consumption is



among men, compared to women.



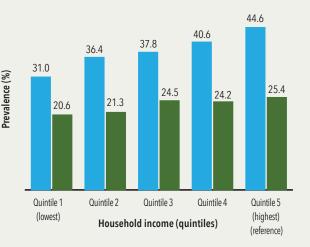
For both sexes, the association between fruit and vegetable consumption and income follows a gradient, with higher prevalence of fruit and vegetable consumption among higher income groups. This gradient is strongest for women: the prevalence for women in the lowest income group is

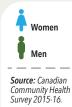
**0.7**x

that of **women** in the highest income group – compared to a ratio of



# The consumption of fruit and vegetable at least 5 times per day is lower among lower income groups, especially for women





Inequalities in diabetes risk are driven in part by social determinants of health, including inequalities in income, social support or built environment <sup>4</sup>. These determinants influence opportunities and access to health promoting resources, including access to health care, food security and healthy eating, and physical activity <sup>4</sup>.

To view these data and others on health inequalities in Canada, visit: https://health-infobase.canada.ca/health-inequalities/data-tool/

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To explore the latest data on diabetes incidence, prevalence and all–cause mortality in Canada, visit: https://health-infobase.canada.ca/ccdss/data-tool/

#### References:

- <sup>1</sup> Public Health Agency of Canada. (2021). Diabetes in Canada in review, 2021. Retrieved from https://www.canada.ca/en/public-health/services/publications/diseases-conditions/diabetes-canada-review-2021.html
- <sup>2</sup> Gordon-Larsen P, Nelson MC, Page P, Popkin BM. Inequality in the built environment underlies key health disparities in physical activity and obesity. *Pediatrics*. 2006;117(2):417-424.
- <sup>3</sup> Kalenkoski, C. M., & Hamrick, K. S. (2013). How does time poverty affect behavior? A look at eating and physical activity. *Applied Economic* Perspectives and Policy, 35(1), 89-105.
- <sup>4</sup> Public Health Agency of Canada. (2018). Key Health Inequalities in Canada: A National Portrait. Retrieved from https://www.canada.ca/en/public-health/services/publications/science-research-data/key-health-inequalities-canada-national-portrait-executivesummary.html.

#### Notes:

- Fates presented in this infographic are age-standardized based on the 2016 Canadian population.
- In this infographic: 'income' refers to 'household total income'. This stratifier (income quintiles provincial) represents a distribution of the household income adequacy ranking for the residents of each of the 10 provinces. This stratifier provides, for each respondent, a measure of their household income relative to the household incomes of all other respondents in the same province. The territories are excluded. It is derived from the total before-tax household income adjusted for household size and community size for CCHS. An income quintile is a measure of neighbourhood socioeconomic status that divides the population into five income groups (from lowest income to highest income) so that approximately 20% of the population is in each group.
- No data were available among people who identify as Non-binary, as information on gender was not collected in CCHS 2015-2018. For more information, visit: https://www150.statcan.gc.ca/n1/en/catalogue/982000012021001