



HEALTH SURVEILLANCE INDICATORS: THE LOW-RISK ALCOHOL DRINKING GUIDELINES

Public Health Relevance

Excessive alcohol consumption can lead to various types of cancers, cirrhosis of the liver, heart disease, diabetes, and other chronic diseases. People who engage in frequent heavy drinking episodes are at a higher risk for injuries and death from motor vehicle collisions, falls, drowning, and other accidents. They are also at a higher risk for violence, sexual assault, and unprotected sex that may lead to an unplanned pregnancy or contraction of sexually transmitted diseases.

Canada's Low-Risk Alcohol Drinking Guidelines help adults of legal drinking age moderate their alcohol consumption and reduce their immediate and long-term alcohol-related harm. The guidelines recommend a maximum of:

- 10 standard drinks a week for women, with no more than two drinks a day ; and
- 15 standard drinks a week for men, with no more than three drinks a day.

It is recommended that people have days every week with no alcohol consumption. The guidelines also state that for special occasions, people should reduce their risk of injury and harm by drinking no more than three standard drinks for women and four standard drinks for men on any one occasion. People should drink in a safe environment and stay within the weekly limits.

Highlights

1. The percent of adults that exceeded the low-risk alcohol drinking guidelines in Toronto remained fairly stable from 2007 to 2014.
2. Drinking in excess of the low-risk alcohol drinking guidelines was significantly lower in Toronto compared to the rest of Ontario.
3. Adults in the Toronto Centre were significantly more likely to exceed the low-risk alcohol drinking guidelines compared to Toronto as a whole.
4. Socio-demographic factors such as sex, age, education, immigrant status, income level, and ethno-racial identity were associated with significant differences in alcohol consumption amongst adults in Toronto.

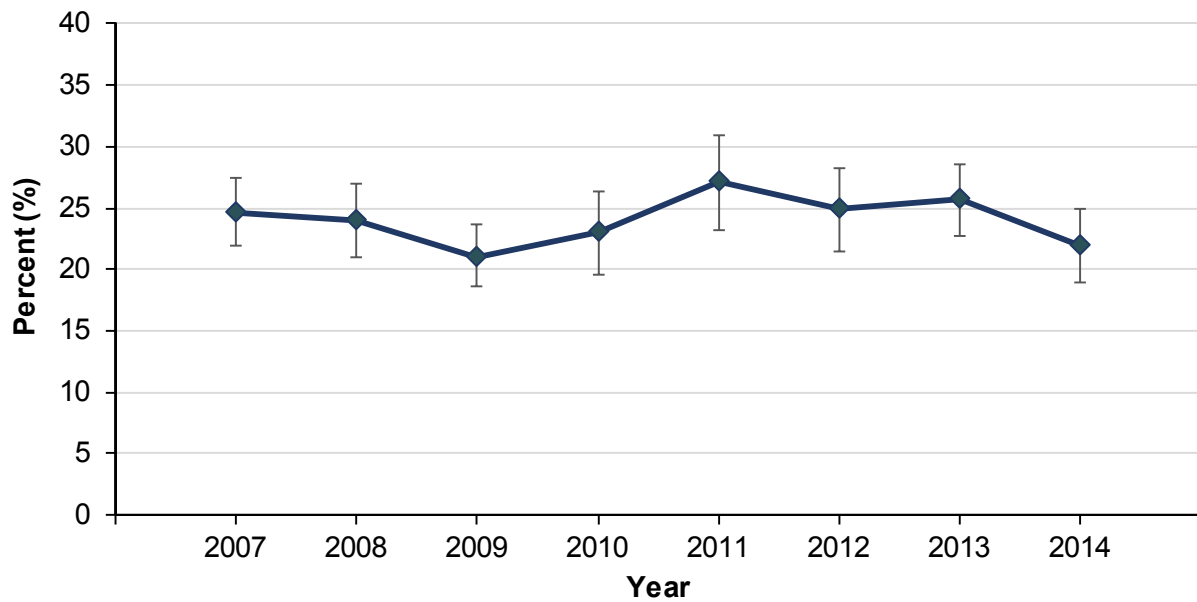
Trends Over Time

The percent of adults that exceeded the low-risk alcohol drinking guidelines in Toronto remained fairly stable from 2007 to 2014.

Figure 1 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines in Toronto from 2007 to 2014.

The percent of adults exceeding the low-risk alcohol drinking guidelines remained fairly stable from 2007 (24.7%) to 2014 (21.9%).

Figure 1: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines, Adults Aged 19 Years and Older, Toronto, 2007 to 2014.



Error bars (\bar{I}) represent the 95% confidence intervals.
Data Source: see Data Notes.

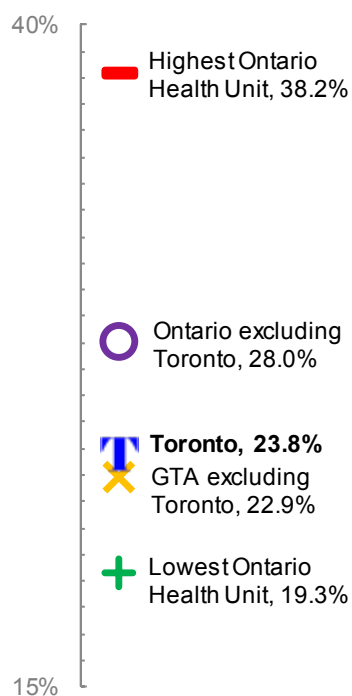
Regional Comparisons

Drinking in excess of the low-risk alcohol drinking guidelines was significantly lower in Toronto compared to the rest of Ontario.

Figure 2 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines in Toronto compared to the rest of Ontario (Ontario without Toronto), the rest of the Greater Toronto Area (GTA without Toronto), and the health units (HUs) in Ontario with the highest and lowest percent in 2013/2014.

Adults in Toronto were significantly less likely to exceed the low-risk alcohol drinking guidelines compared to the rest of Ontario and the HU with the highest percent. There was no significant difference in the percent of adults exceeding the low-risk alcohol drinking guidelines in Toronto compared to the rest of the GTA and the HU with the lowest percent.

Figure 2: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines, Adults Aged 19 Years and Older, Selected Regions in Ontario, 2013/2014



Data Source: see Data Notes.

Toronto Neighbourhood Comparisons

Adults in the Toronto Centre were significantly more likely to exceed the low-risk alcohol drinking guidelines compared to Toronto as a whole.

Table 1 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by Toronto Public Health's Service Delivery Areas (SDAs) for Chronic Disease and Injury Prevention in 2013/2014.

When compared to Toronto as a whole, adults in Toronto Centre were significantly more likely to exceed the low-risk alcohol drinking guidelines whereas adults in East Scarborough and West Scarborough were significantly less likely.

Table 1: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Service Delivery Area*, Adults Aged 19 Years and Older, Toronto, 2013/2014

CDIP Service Delivery Area	%
Danforth East York	31.0
East Scarborough	12.1 ^{c, L}
Humber Downsview	^S
Rexdale Etobicoke	17.4 ^c
Toronto Centre	39.9 ^H
West Scarborough	10.8 ^{c, L}
Willowdale Don Mills	17.6
York South Humber	27.5
Toronto	23.8

* Toronto Public Health's Service Delivery Areas for Chronic Disease and Injury Prevention (CDIP).

^c Moderately high sampling variability, interpret with caution.

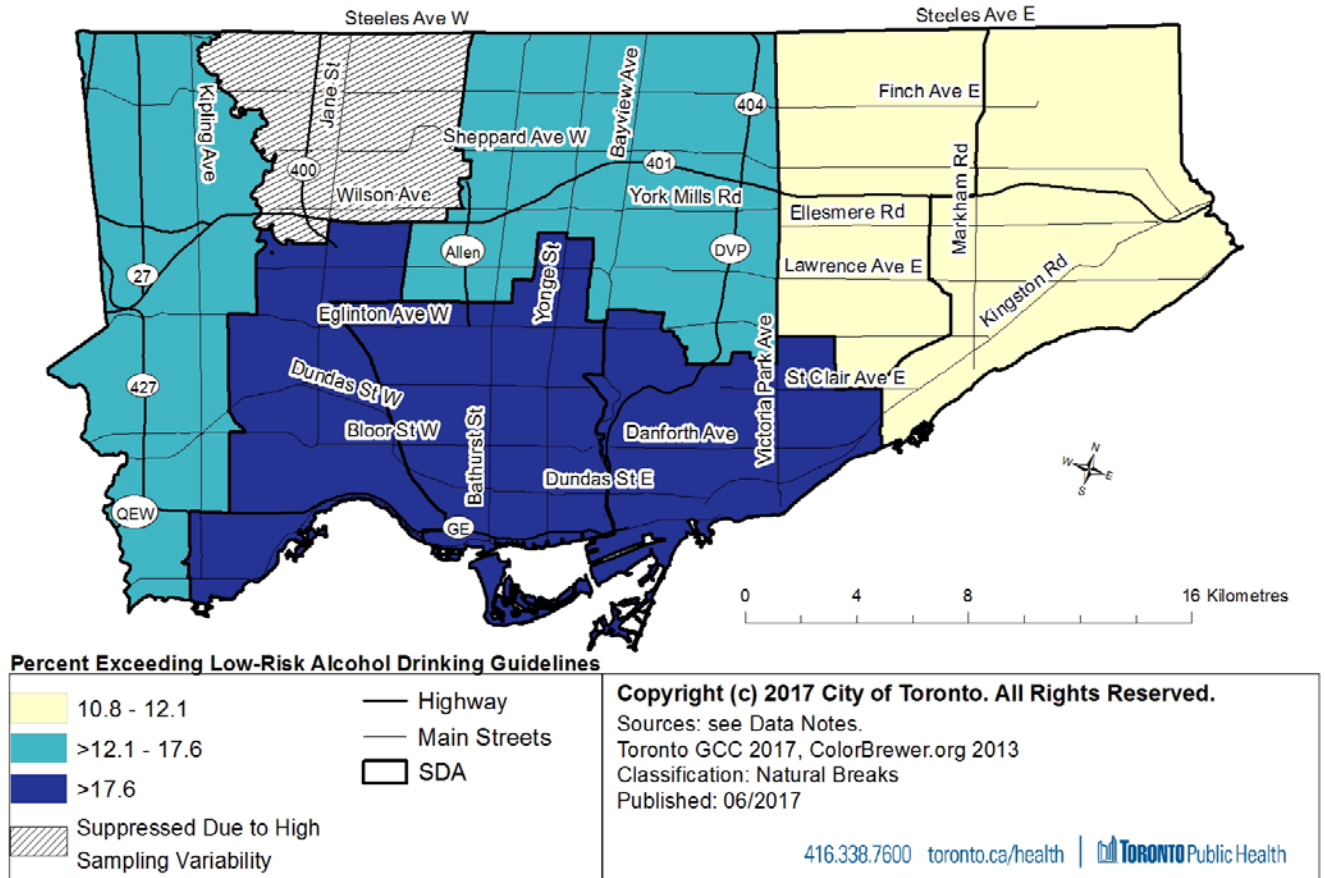
^L Significantly lower than the Toronto total indicating a favourable result for that area.

^S Extremely high sampling variability. Estimate suppressed.

^H Significantly higher than the Toronto total indicating an unfavourable result for that area.

Map 1 depicts the spatial trends described in Table 1 for the percent of adults exceeding the low-risk alcohol drinking guidelines by Service Delivery Area* in 2013/2014.

Map 1: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Service Delivery Area*, Adults Aged 19 Years and Older, Toronto, 2013/2014



* Toronto Public Health's Service Delivery Areas for Chronic Disease and Injury Prevention (CDIP).

Socio-demographics

Socio-demographic factors such as sex, age, education, immigrant status, income level, and ethno-racial identity were associated with significant differences in alcohol consumption amongst adults in Toronto.

Table 2 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by sex in Toronto in 2013/2014.

Males were significantly more likely to exceed the low-risk alcohol drinking guidelines as compared to females.

Table 2: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Sex, Adults Aged 19 Years and Older, Toronto, 2013/2014

Sex	%
Male	30.2 ^H
Female	17.9

^H Significantly higher than the other sex indicating an unfavourable result for this group.
Data Source: see Data Notes.

Table 3 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by age group in Toronto in 2013/2014.

Adults in the 19 to 39 years age group were significantly more likely to exceed the low-risk alcohol drinking guidelines as compared to the older age groups.

Table 3: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Age Group, Adults Aged 19 Years and Older, Toronto, 2013/2014

Age Group	%
20 to 39 Years	31.4 ^H
40 to 64 Years	18.3
65 Years and older	19.1

^H Significantly higher than the age group with the lowest percent, thus, indicating an unfavourable result for this group.
Data Source: see Data Notes.

Table 4 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by education level in Toronto in 2013/2014.

Adults with less than high school education were significantly less likely to exceed the low-risk alcohol drinking guidelines as compared to those with a higher level of education.

Table 4: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Education, Adults Aged 19 Years and Older, Toronto, 2013/2014

Education Level	%
Less than High School	13.0 ^c
High School Graduate	26.8 ^H
Post-Secondary Education	25.1 ^H

^c Moderately high sampling variability, interpret with caution.

^H Significantly higher than the education level with the lowest percent, thus, indicating an unfavourable result for this group.

Data Source: see Data Notes.

Table 5 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by immigrant status in Toronto in 2013/2014.

Canadian-born adults were significantly more likely to exceed low-risk alcohol drinking guidelines as compared to immigrants.

Table 5: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Immigrant Status, Adults Aged 19 Years and Older, Toronto, 2013/2014

Immigrant Status	%
Recent Immigrant	11.0 ^c
Longer-term Immigrant	14.0
Canadian-born	41.1 ^H

^c Moderately high sampling variability, interpret with caution.

^H Significantly higher than the immigrant status group with the lowest percent, thus, indicating an unfavourable result for this group.

Data Source: see Data Notes.

Table 6 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by income level in Toronto in 2013/2014.

The percent of adults exceeding the low-risk alcohol drinking guidelines increased significantly with income level. Adults in the high income group were significantly more likely to exceed the low-risk alcohol drinking guidelines as compared to low and middle income groups

Table 6: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Income Level, Adults Aged 19 Years and Older, Toronto, 2013/2014

Income Level	%
Low Income	12.8
Middle Income	21.6 H
High Income	35.9 H

H Significantly higher than the income group with the lowest percent, thus, indicating an unfavourable result for this group.

Data Source: see Data Notes.

Table 7 shows the percent of adults that exceeded the low-risk alcohol drinking guidelines by ethno-racial identity in Toronto in 2013/2014.

White adults were significantly more likely to exceed low-risk alcohol drinking guidelines as compared to racialized adults.

Table 7: Percent Exceeding the Low-Risk Alcohol Drinking Guidelines by Ethno-racial Identity, Adults Aged 19 Years and Older, Toronto, 2013/2014

Ethno-racial Identity	%
White	36.1 H
Racialized	11.0

H Significantly higher than the other ethno-racial group, thus, indicating an unfavourable result for this group.

Data Source: see Data Notes.

Data Notes

Notes

- Significant differences were estimated using overlapping confidence intervals. Although this method is conservative ($\alpha \sim < 0.01$) and most appropriate when comparing mutually exclusive groups, it was chosen as an objective means of drawing conclusions on population-based data. Multiple comparisons performed in the analyses were not taken into consideration when choosing the level of significance to test.
- Toronto is compared to the rest of Ontario (Ontario with Toronto removed) as opposed to the Ontario total because Toronto comprises a large proportion of the Ontario population. Toronto is also compared to the rest of the GTA (Greater Toronto Area) for the same reason.
- Data used for the regional comparisons normally shows the percentage for the Ontario health units with the highest and the lowest percentage. The purpose of these comparisons is to show the percent for Toronto relative to other areas in Ontario.
- The estimates in this indicator page are from self-reported data from the Canadian Community Health Survey (CCHS). Self-reported data have a number of limitations. People do not always remember their behaviours, and may under-report or over-report certain behaviours or characteristics based on their perceived social desirability. For example, people may report lower alcohol consumption because they perceive this to be a "better" response. In addition, surveys do not always provide a representative picture of the whole population. The CCHS under-represents people of low income, people with low education, and new immigrants. If a respondent did not respond to a survey question relevant to the analysis presented, they were excluded from both the numerator and the denominator.
- Time trend analysis is based on the most recent 8 years of data. This is because the CCHS changed from a two-year release cycle to an annual release cycle starting in 2007.

Definitions

95% Confidence Interval is the range within which the true value lies, 19 times out of 20.

Immigrants are those respondents whose country of birth is outside of Canada.

Income Level is derived as three equally divided parts of the weighted population based on the respondents' adjusted household income ratios. A respondent's adjusted household income ratio is calculated using the total household income, Statistics Canada's 2013-2014 Low Income Cut Offs (LICOs), and the CCHS income adjustment factor. Approximately 30% of survey respondents included in this analysis had their income level imputed based on other socio-demographic characteristics.

Longer-term Immigrants are individuals that arrived within the ten year period prior to data collection.

Low-Risk Alcohol Drinking Guidelines (Canada) recommend that:

- Women have no more than ten drinks per week with no more than two drinks per day on most days
- Men have no more than 15 drinks per week with no more than three drinks on most days
- People have at least two days per week with no alcohol consumption
- Women have no more than three drinks on any one occasion
- Men have no more than four drinks on any one occasion

For this analysis, a female survey respondent was considered to exceed the low risk drinking guidelines if she had more than ten drinks in the previous week, had more than two drinks on a single day in the previous week, consumed alcohol on six or seven days in the previous week, and/or had five or more drinks on one occasion at least once per month for the last 12 months. A male survey respondent was considered to exceed the low risk drinking guidelines if he had more than 15 drinks in the previous week, more than three drinks on a single day in the previous week, consumed alcohol on six or seven days in the previous week, and/or had five or more drinks on one occasion at least once per month for the last 12 months. This indicator excludes women who were pregnant or breastfeeding. Any individual who did not respond to one or more of the survey questions needed for deriving this indicator were excluded from the analysis.

This method of derivation matches the definition used by the Ministry of Health and Long-Term Care for the Accountability Agreements. It differs slightly from the method recommended by the Association of Public Health Epidemiologists of Ontario (APHEO). APHEO's method considers an individual to exceed the guidelines if he or she consumed five or more drinks on one occasion once or more in the last 12 months.

Racialized is used to define groups that do not identify themselves as White, recognizing that 'races' or 'visible minorities' are socially constructed but have real consequences for individuals and communities. Ethnic origins in this category include Black, Korean, Filipino, Japanese, Chinese, South Asian, Southeast Asian, Arab, West Asian, Latin American, other racial/cultural origin, and multiple racial/cultural origins. Aboriginal respondents are not included in this category because of their unique identity, history, and experiences. They are excluded from the analysis by ethno-racial identity.

Recent immigrants or "Newcomers" are respondents that have arrived in Canada in the ten years prior to the data collection.

Sex defines people based on their biological characteristics, whereas 'Gender' is a socially constructed concept. From a social determinants of health perspective, certain health conditions can be associated with gender, and from a biological perspective, health conditions can be associated with sex. Although reporting based on both concepts would be preferable, the data source used here only collects information on sex, and not gender.

Sources

Canadian Community Health Survey: Canadian Community Health Survey (CCHS), 2007 to 2014. Statistics Canada, Share File, Knowledge Management and Reporting Branch, Ontario Ministry of Health and Long-Term Care.

Used in:

- Figures 1 and 2
- Map 1
- Tables 1-7

Health Surveillance Indicator: Alcohol Drinking in Excess of the Low-Risk Alcohol Drinking Guidelines

Category: Chronic Disease

Prepared: August, 2017

This indicator report is part of a series that informs the ongoing assessment of Toronto's health status. For a full list of the indicators, please go to: www.toronto.ca/health