

# HEALTH SURVEILLANCE INDICATORS: OVERWEIGHT AND OBESITY



## Public Health Relevance

Excess weight can increase the risk of many health issues such as type 2 diabetes, cardiovascular disease, high blood pressure, osteoarthritis, some types of cancer, and gall bladder disease. Overweight and obesity are also associated with mental health and emotional issues, decreased quality of life, functional limitations, and disabilities.

Overweight and obesity can be determined by Body Mass Index (BMI), which is calculated from a person's weight and height. Overweight people have a BMI of 25 to 29.9 and obese people have a BMI of 30 or higher.

## Highlights

1. The percent of adults that had an overweight/obese status increased significantly in Toronto from 2007 to 2014.
2. Overweight/obesity was significantly lower in Toronto compared to the rest of Ontario.
3. Adults in Rexdale Etobicoke were significantly more likely to have an overweight/obese status compared to Toronto as a whole.
4. Socio-demographic factors such as sex, age, and ethno-racial identity were associated with significant differences in overweight/obesity amongst adults in Toronto.

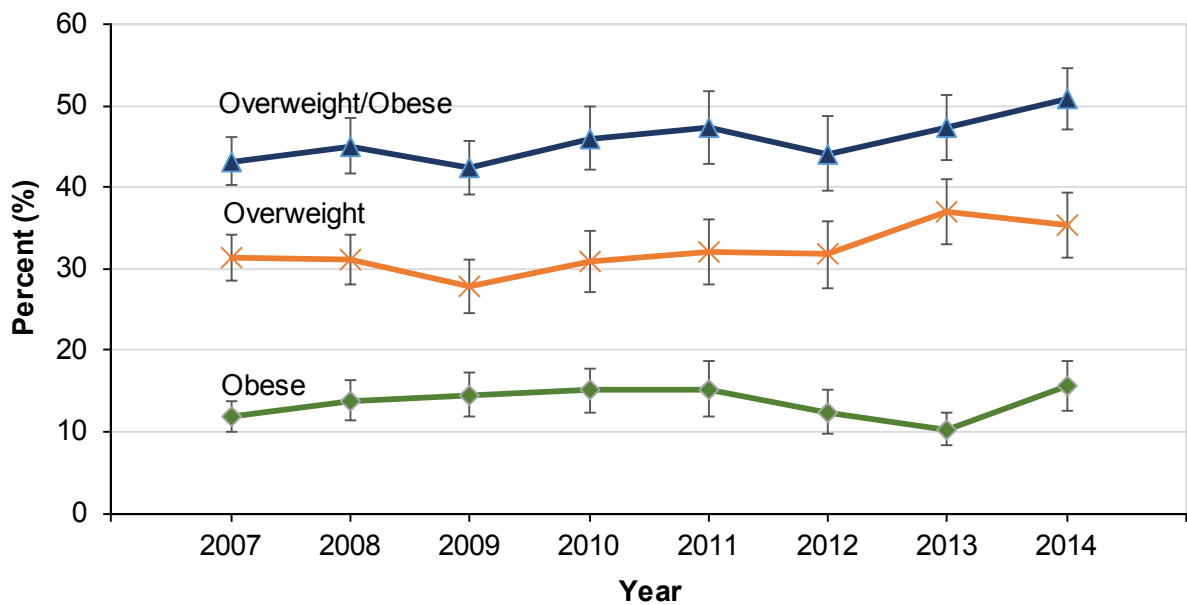
## Trends Over Time

The percent of adults that had an overweight/obese status increased significantly from 2007 to 2014.

Figure 1 shows the percent of adults aged 20 years and older that had an overweight status or obesity in Toronto from 2007 to 2014.

Although the percent of adults that had an overweight status and the percent that had obesity each remained fairly stable from 2007 to 2014 (31.3% versus 35.4% and 11.9% versus 15.6%, respectively), the combined percent of adults that had an overweight/obese status increased significantly during this time period (43.2% in 2007 versus 51.0% in 2014).

**Figure 1: Percent with Overweight/Obese Status, Adults Aged 20 Years and Older, Toronto, 2007 to 2014.**



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

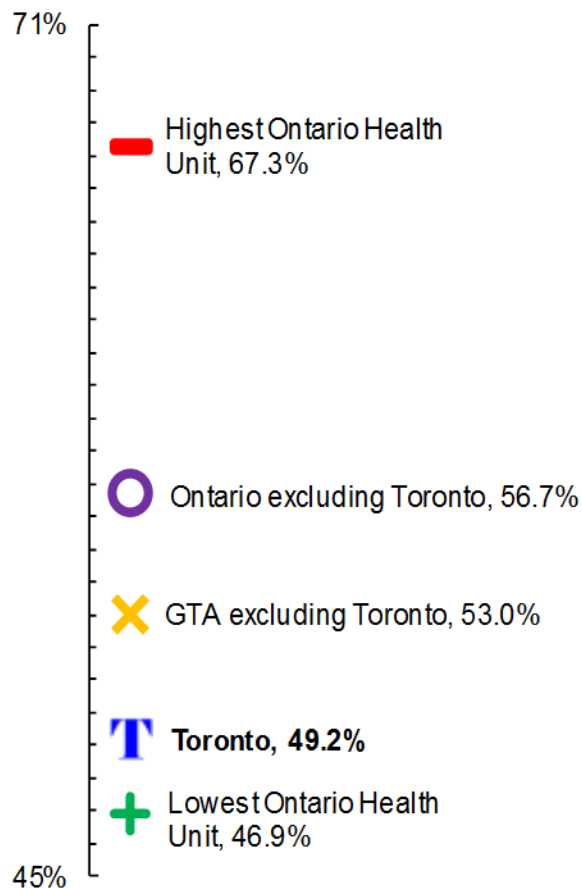
## Regional Comparisons

Overweight/obesity was significantly lower in Toronto compared to the rest of Ontario.

Figure 2 shows the percent of adults aged 20 years and older that had an overweight/obese status 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.

The percent of adults that had an overweight/obese status was significantly lower in Toronto compared to the rest of Ontario and the HU with the highest percent. Overweight/Obesity amongst adults in Toronto was not significantly different than the rest of the GTA or the HU with the lowest percent.

**Figure 2: Percent with Overweight/Obese Status, Adults Aged 20 Years and Older Selected Regions in Ontario, 2013/2014**



Data Source: see Data Notes.

## Toronto Neighbourhood Comparisons

Adults in Rexdale and Etobicoke were significantly more likely to have an overweight/obese status compared to Toronto as a whole.

Table 1 shows the percent of adults aged 20 years and older that had an overweight/obese status 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 Rexdale Etobicoke were significantly more likely to have an overweight/obese status. There were no significant differences in the percent of adults that had an overweight/obese status between any of the other SDAs and Toronto as a whole.

**Table 1: Percent with Overweight/Obese Status by Service Delivery Area\*, Adults Aged 20 Years and Older, Toronto, 2013/2014**

CDIP Service Delivery Area	%
Danforth East York	41.4
East Scarborough	52.2
Humber Downsview	66.2
Rexdale Etobicoke	62.1 <sup>H</sup>
Toronto Centre	45.1
West Scarborough	45.9
Willowdale Don Mills	45.2
York South Humber	51.2
<b>Toronto</b>	<b>49.2</b>

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

<sup>H</sup> Significantly higher than the Toronto total indicating an unfavourable result for that area.

## Socio-demographics

Socio-demographic factors such as sex, age, and ethno-racial identity were associated with significant differences in overweight/obesity amongst adults in Toronto.

Table 2 shows the percent of adults aged 20 years and older that had an overweight status or obesity by sex in Toronto in 2013/2014.

Males were significantly more likely to have an overweight status compared to females.

**Table 2: Percent with Overweight/Obese Status by Sex, Adults Aged 20 Years and Older, Toronto, 2013/2014**

Sex	Overweight (%)	Obese (%)	Overweight/Obese (%)
Male	41.4 <sup>H</sup>	14.6	55.9 <sup>H</sup>
Female	31.3	11.4	42.7

<sup>H</sup> 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 aged 20 years and older that had an overweight status or obesity by age group in Toronto in 2013/2014.

Older adults (40 years and older) were significantly more likely to have an overweight status compared to younger adults (20 to 39 years).

**Table 3: Percent with Overweight/Obese Status by Age Group, Adults Aged 20 Years and Older, Toronto, 2013/2014**

Age Group	Overweight (%)	Obese (%)	Overweight/Obese(%)
20 to 39 Years	26.6	12.6	39.2
40 to 64 Years	43.3 <sup>H</sup>	12.9	56.2 <sup>H</sup>
65 Years and Older	40.9 <sup>H</sup>	14.1	55.0 <sup>H</sup>

<sup>H</sup> 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 aged 20 years and older that had an overweight status or obesity by education level in Toronto in 2013/2014.

There were no significant differences in overweight status or obesity by education level.

**Table 4: Percent with Overweight/Obese Status by Education, Adults Aged 20 Years and Older, Toronto, 2013/2014**

Education Level	Overweight (%)	Obese (%)	Overweight/Obese (%)
Less than High School	42.0	11.5	53.5
High School Graduate	38.1	17.2	55.3
Post-Secondary Education	34.2	11.8	46.0

Data Source: see Data Notes.

Table 5 shows the percent of adults aged 20 years and older that had an overweight status or obesity by immigrant status in Toronto in 2013/2014.

There were no significant differences in overweight status or obesity by immigrant status.

**Table 5: Percent with Overweight/Obesity by Immigrant Status, Adults Aged 20 Years and Older, Toronto, 2013/2014**

Immigrant Status	Overweight (%)	Obese (%)	Overweight/Obese (%)
New Immigrant	36.0	10.3 <sup>c</sup>	46.2
Longer-Term Immigrant	38.6	13.8	52.3
Canadian-born	34.7	13.3	48.1

Data Source: see Data Notes.

Table 6 shows the percent of adults aged 20 years and older that had an overweight status or obesity by income level in Toronto in 2013/2014.

There were no significant differences in overweight status or obesity by income level.

**Table 6: Percent with Overweight/Obese Status by Income Level, Adults Aged 20 Years and Older, Toronto, 2013/2014**

Income Level	Overweight (%)	Obese (%)	Overweight/Obese (%)
Low Income	37.8	15.9	53.7
Middle Income	37.3	10.9	48.2
High Income	33.8	12.4	46.2

Data Source: see Data Notes.

Table 7 shows the percent of adults aged 20 years and older that had an overweight status or obesity by ethno-racial identity in Toronto in 2013/2014.

Adults that identified as White, Black, or an ethnic-racial identity group classified as 'Other' were significantly more likely to have an overweight/obese status compared to those adults identifying as East Asian or Southeast Asian (the ethno-racial group with the lowest percent of overweight/obesity). There were no significant differences in the percent of adults that had an overweight/obese status between any of the other ethno-racial identities.

**Table 7: Percent with Overweight/Obese Status by Ethno-racial Identity, Adults Aged 20 Years and Older, Toronto, 2013/2014**

<b>Ethno-racial Identity</b>	<b>Overweight/ Obese (%)</b>
White	50.4 <sup>H</sup>
Black	56.7 <sup>H</sup>
South Asian/West Asian/Arab	51.3
East Asian/Southeast Asian	36.4
Other Racialized Group	56.1 <sup>H</sup>

<sup>H</sup> Significantly higher than the ethno-racial identity with the lowest percent, thus, indicating an unfavorable 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 underestimate or underreport their weight to make it seem that they are less heavy than they actually are. 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.

**Ethno-racial Identity** is based on respondents identifying their cultural and/or racial background. South Asian includes ethnicities such as Indian and Pakistani; West Asian includes those such as Afghan and Persian; Arab includes those such as Egyptian and Saudi Arabian; East Asian includes those such as Chinese and Japanese; and Southeast Asian includes those such as Vietnamese and Filipino. The 'other' group includes people who defined themselves as Latin American, and of multiple ethnic groups. The sample size for these groups were too small to analyze them separately. 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.

**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** refers to individuals that arrived within the ten year period prior to data collection.

**Overweight and Obesity** are estimated using a scale called the Body Mass Index (BMI). BMI is calculated by dividing an individual's weight in kilograms by the square of their height in metres. According to the International Classification System outlined by the World Health Organization (WHO), a BMI of under 18.5 is considered underweight, 18.5 to 24.9 represents healthy weight, 25.0 to 29.9 is overweight, and 30.0 and greater is obese. The BMI measure used in this analysis is calculated from self-reported height and weight from survey data. Pregnant women and individuals reporting height under 0.91m or over 2.11m height are excluded. BMI can misclassify adults who are naturally very lean or who have very high muscle mass. Some evidence has shown that the risk factors associated with overweight and obesity correspond to different BMI cut-offs for different ethno-racial groups, particularly Asians, who may be at a higher risk at a lower weight. However, the WHO recommends the cut-offs used here as the international standard.

**Recent immigrants** or "Newcomers" are respondents that had 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 rating 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 Rating Branch, Ontario Ministry of Health and Long-Term Care.

Used in:

- Figures 1 and 2
- Tables 1-7

Health Surveillance Indicator: Overweight and Obesity

Category: Chronic Disease

Prepared: July, 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](http://www.toronto.ca/health)