

## Chronic Disease Prevalence, Waterloo Region & Ontario, 2009-2010, 2011-2012, 2013-2014

### Definition:

Proportion of the population aged 12 years and older with selected chronic diseases or conditions:

- Asthma
- Arthritis or rheumatism (excluding fibromyalgia) (aged 14 years or older only)
- Back problems (excluding fibromyalgia/arthritis)
- High blood pressure
- Migraines
- Chronic bronchitis, emphysema, or chronic obstructive pulmonary disease (COPD) (aged 35 years or older only)
- Diabetes
- Heart disease
- Cancer
- Stomach or intestinal ulcers
- Effects of stroke
- Urinary incontinence (aged 25 years or older only)

**Table 1. Proportion of individuals aged 12 years and older with one or more selected chronic diseases or conditions, Waterloo Region & Ontario, 2009-2010, 2011-2012, 2013-2014**

Place of residence	Year	Per cent
<b>Waterloo Region</b>	<b>2009-2010</b>	54.8 (CI: 51.0-58.7)
	<b>2011-2012</b>	55.1 (CI: 51.1-59.1)
	<b>2013-2014</b>	30.9 (CI: 26.1-35.7)
<b>Ontario</b>	<b>2009-2010</b>	53.4 (CI: 52.5-54.2)
	<b>2011-2012</b>	53.8 (CI: 52.8-54.7)
	<b>2013-2014</b>	34.1 (CI: 32.8-35.4)

**Table 2. Proportion of individuals aged 12 years and older with one or more selected chronic diseases or conditions, by sex, age group, municipality, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Sex</b>	<b>Male</b>	42.5 (CI: 38.2-46.9)
	<b>Female</b>	54.4 (CI: 49.5-59.4)
<b>Age group</b>	<b>12 to 17 years</b>	37.3 (CI: 28.6-46.1)
	<b>18 to 24 years</b>	27.7 (CI: 21.6-33.8)
	<b>25 to 34 years</b>	39.0 (CI: 32.2-45.7)
	<b>35 to 49 years</b>	54.3 (CI: 45.9-62.6)
	<b>50 to 64 years</b>	70.2 (CI: 62.5-77.9)
	<b>65 years and older</b>	80.2 (CI: 73.2-87.2)
<b>Municipality</b>	<b>Cambridge</b>	45.8 (CI: 38.5-53.1)
	<b>Kitchener</b>	51.6 (CI: 46.9-56.2)
	<b>Waterloo</b>	42.5 (CI: 34.3-50.6)
	<b>Townships</b>	50.0 (CI: 40.7-59.3)

## Definition (continued):

Proportion of the population aged 12 years and older with selected chronic diseases or conditions:

- Bowel disorder
- Alzheimer's or other dementia (aged 35 years or older only)
- Mood disorder
- Anxiety disorder
- One or more of the above conditions\* (aged 12 years or older except where otherwise specified)

## Limitations and Notes:

The prevalence of chronic diseases or conditions is reported for all individuals aged 12 years and older except where otherwise specified.

The CCHS is based on self-reported data collected in telephone and in-person interviews. The CCHS excludes individuals living on Indian reserve communities, institutions, full-time members of the Canadian Armed Forces, and residents of remote regions of the country.

## Limitations and Notes (continued):

Self-reported measures are subject to such sources of bias as social desirability bias and recall bias.

'Don't know', refused and not stated responses were removed from analysis when they represented less than five per cent of the sample. In removing these responses from the denominator, the assumption is that the missing values are random, which is not always the case.

Estimates provided at the municipal level may not be representative of the given population as the CCHS sampling frame was not designed for analysis below the health region level. The 'Townships' category combines responses from North Dumfries, Wellesley, Wilmot and Woolwich townships.

'CI' refers to 95 per cent confidence limits. The superscript 'E' denotes high sampling variability, and estimates must be interpreted with caution. The 'F' denotes estimates which were suppressed due to unacceptably high sampling variability. The 'NR' denotes estimates which were not reportable (numerator contained less than 10 observations or denominator contained less than 30 observations).

**Table 3. Proportion of individuals aged 12 years and older with one or more selected chronic diseases or conditions, by household income, level of education & immigration status, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Household income</b>	<b>Less than \$40,000</b>	56.7 (CI: 50.6-62.9)
	<b>\$40,000-\$69,999</b>	50.8 (CI: 44.1-57.6)
	<b>\$70,000-\$99,999</b>	46.2 (CI: 37.7-54.7)
	<b>\$100,000 or more</b>	42.5 (CI: 36.0-49.0)
<b>Level of education</b>	<b>Less than high school</b>	49.3 (CI: 42.3-56.3)
	<b>High school diploma</b>	48.2 (CI: 39.5-56.9)
	<b>Some post-secondary</b>	32.6 (CI: 20.1-45.2) <sup>E</sup>
	<b>Post-secondary degree</b>	49.6 (CI: 44.9-54.3)
<b>Immigration status</b>	<b>Immigrant</b>	41.5 (CI: 34.7-48.3)
	<b>Canadian-born</b>	50.8 (CI: 46.6-54.9)

**Table 4. Proportion of individuals aged 12 years and older with a chronic disease or condition, by type of disease or condition, Waterloo Region, 2009-2010, 2011-2012, 2013-2014**

Place of residence	Chronic Disease or Condition	2009-2010	2011-2012	2013-2014
Waterloo Region	Asthma	8.4 (CI: 6.5-10.3)	8.1 (CI: 5.8-10.3)	7.7 (CI: 5.7-9.7)
	Arthritis or rheumatism (14 years and older only)	13.1 (CI: 11.1-15.2)	14.9 (CI: 12.0-17.7)	16.9 (CI: 14.3-19.5)
	Back problems	20.3 (CI: 17.5-23.2)	20.0 (CI: 16.0-24.0)	16.6 (CI: 13.7-19.5)
	High blood pressure	16.0 (CI: 13.8-18.3)	15.0 (CI: 12.6-17.3)	15.5 (CI: 13.3-17.7)
	Migraines	15.4 (CI: 11.0-19.8)	12.9 (CI: 9.3-16.5)	8.6 (CI: 6.8-10.4)
	Chronic bronchitis, emphysema, COPD (35 years and older only)	4.8 (CI: 3.4-6.3)	4.9 (CI: 2.8-7.0) <sup>E</sup>	NR
	Diabetes	7.5 (CI: 5.9-9.1)	7.8 (CI: 4.3-11.3) <sup>E</sup>	7.8 (CI: 5.0-10.6) <sup>E</sup>
	Heart disease	3.0 (CI: 2.1-4.0)	4.4 (CI: 2.9-5.9) <sup>E</sup>	5.3 (CI: 3.7-6.9)
	Cancer	1.5 (CI: 0.9-2.1) <sup>E</sup>	2.0 (CI: 1.2-2.7) <sup>E</sup>	1.6 (CI: 0.8-2.4) <sup>E</sup>
	Stomach or intestinal ulcers	2.2 (CI: 1.3-3.0) <sup>E</sup>	2.1 (CI: 1.2-3.0) <sup>E</sup>	1.7 (CI: 0.7-2.6) <sup>E</sup>
	Effects of stroke	1.2 (CI: 0.7-1.7) <sup>E</sup>	1.3 (CI: 0.5-2.2) <sup>E</sup>	1.1 (CI: 0.5-1.7) <sup>E</sup>
	Urinary incontinence (25 years and older only)	4.4 (CI: 2.6-6.2) <sup>E</sup>	3.7 (CI: 2.4-5.0) <sup>E</sup>	4.8 (CI: 3.4-6.2)
	Bowel disorder	3.6 (CI: 2.3-5.0) <sup>E</sup>	4.3 (CI: 2.9-5.7) <sup>E</sup>	4.0 (CI: 2.9-5.2)
	Alzheimer's or other dementia (35 years and older only)	NR	F	0.7 (CI: 0.3-1.1) <sup>E</sup>
	Mood disorder	6.7 (CI: 4.9-8.6)	11.1 (CI: 8.2-14.1)	7.1 (CI: 5.4-8.7)
	Anxiety disorder	5.7 (CI: 4.1-7.3)	9.8 (CI: 6.9-12.7)	7.9 (CI: 5.7-10.2)

**Table 5. Proportion of individuals aged 12 years and older with a chronic disease or condition, by type of disease or condition, Ontario, 2009-2010, 2011-2012, 2013-2014**

Place of residence	Chronic Disease or Condition	2009-2010	2011-2012	2013-2014
Ontario	<b>Asthma</b>	8.4 (CI: 8.0-8.9)	7.9 (CI: 7.5-8.4)	7.6 (CI: 7.2-8.1)
	<b>Arthritis or rheumatism (14 years and older only)</b>	17.2 (CI: 16.7-17.8)	17.0 (CI: 16.3-17.6)	17.7 (CI: 17.2-18.3)
	<b>Back problems</b>	19.4 (CI: 18.7-20.0)	18.6 (CI: 17.9-19.3)	18.3 (CI: 17.6-19.0)
	<b>High blood pressure</b>	17.4 (CI: 16.8-18.0)	17.7 (CI: 17.1-18.3)	18.4 (CI: 17.8-19.1)
	<b>Migraines</b>	11.2 (CI: 10.6-11.7)	11.2 (CI: 10.6-11.8)	10.7 (CI: 10.2-11.3)
	<b>Chronic bronchitis, emphysema, COPD (35 years and older only)</b>	4.2 (CI: 3.9-4.6)	3.9 (CI: 3.6-4.2)	NR
	<b>Diabetes</b>	6.9 (CI: 6.4-7.3)	6.7 (CI: 6.2-7.1)	7.0 (CI: 6.6-7.5)
	<b>Heart disease</b>	4.9 (CI: 4.6-5.2)	5.1 (CI: 4.7-5.4)	4.9 (CI: 4.6-5.2)
	<b>Cancer</b>	1.9 (CI: 1.7-2.1)	2.3 (CI: 2.1-2.5)	1.7 (CI: 1.5-2.0)
	<b>Stomach or intestinal ulcers</b>	2.7 (CI: 2.5-3.0)	2.4 (CI: 2.1-2.6)	2.7 (CI: 2.4-3.0)
	<b>Effects of stroke</b>	1.1 (CI: 1.0-1.2)	1.3 (CI: 1.1-1.6)	1.2 (CI: 1.0-1.3)
	<b>Urinary incontinence (25 years and older only)</b>	3.8 (CI: 3.5-4.1)	4.1 (CI: 3.8-4.5)	4.4 (CI: 4.1-4.8)
	<b>Bowel disorder</b>	4.2 (CI: 3.9-4.5)	4.5 (CI: 4.2-4.8)	4.8 (CI: 4.5-5.2)
	<b>Alzheimer's or other dementia (35 years and older only)</b>	0.7 (CI: 0.6-0.8)	0.9 (CI: 0.7-1.2)	0.9 (CI: 0.7-1.1)
	<b>Mood disorder</b>	7.0 (CI: 6.6-7.4)	7.7 (CI: 7.2-8.1)	8.6 (CI: 8.1-9.1)
	<b>Anxiety disorder</b>	5.0 (CI: 4.7-5.4)	6.6 (CI: 6.1-7.1)	7.6 (CI: 7.2-8.1)

**Table 6. Proportion of individuals aged 12 years and older with asthma, by sex, age group, municipality, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Sex</b>	<b>Male</b>	6.8 (CI: 4.9-8.7)
	<b>Female</b>	8.9 (CI: 6.9-11.0)
<b>Age group</b>	<b>12 to 17 years</b>	17.0 (CI: 8.1-25.8) <sup>E</sup>
	<b>18 to 24 years</b>	7.4 (CI: 4.0-10.7) <sup>E</sup>
	<b>25 to 34 years</b>	6.4 (CI: 3.9-8.9) <sup>E</sup>
	<b>35 to 49 years</b>	6.1 (CI: 3.6-8.6) <sup>E</sup>
	<b>50 to 64 years</b>	7.2 (CI: 4.3-10.2) <sup>E</sup>
	<b>65 years and older</b>	9.2 (CI: 5.9-12.5) <sup>E</sup>
<b>Municipality</b>	<b>Cambridge</b>	9.4 (CI: 6.2-12.6) <sup>E</sup>
	<b>Kitchener</b>	7.4 (CI: 5.4-9.5)
	<b>Waterloo</b>	5.8 (CI: 3.3-8.3) <sup>E</sup>
	<b>Townships</b>	8.7 (CI: 4.3-13.0) <sup>E</sup>

**Table 7. Proportion of individuals aged 12 years and older with asthma, by household income, level of education & immigration status, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Household income</b>	<b>Less than \$40,000</b>	8.8 (CI: 5.8-11.8) <sup>E</sup>
	<b>\$40,000-\$69,999</b>	8.8 (CI: 5.4-12.2) <sup>E</sup>
	<b>\$70,000-\$99,999</b>	9.1 (CI: 4.8-13.3) <sup>E</sup>
	<b>\$100,000 or more</b>	6.1 (CI: 3.9-8.2) <sup>E</sup>
<b>Level of education</b>	<b>Less than high school</b>	11.7 (CI: 7.3-16.1) <sup>E</sup>
	<b>High school diploma</b>	5.2 (CI: 2.8-7.6) <sup>E</sup>
	<b>Some post-secondary</b>	F
	<b>Post-secondary degree</b>	7.3 (CI: 5.5-9.0)
<b>Immigration status</b>	<b>Immigrant</b>	4.3 (CI: 2.2-6.3) <sup>E</sup>
	<b>Canadian-born</b>	8.8 (CI: 7.0-10.7)

**Table 8. Proportion of individuals aged 12 years and older with high blood pressure, by sex, age group, municipality, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Sex</b>	<b>Male</b>	16.8 (CI: 14.1-19.5)
	<b>Female</b>	13.7 (CI: 11.8-15.6)
<b>Age group</b>	<b>12 to 17 years</b>	NR
	<b>18 to 24 years</b>	NR
	<b>25 to 34 years</b>	3.1 (CI: 1.3-5.0) <sup>E</sup>
	<b>35 to 49 years</b>	9.6 (CI: 6.4-12.9) <sup>E</sup>
	<b>50 to 64 years</b>	26.5 (CI: 21.8-31.3)
	<b>65 years and older</b>	45.8 (CI: 40.6-50.9)
<b>Municipality</b>	<b>Cambridge</b>	14.6 (CI: 11.6-17.5)
	<b>Kitchener</b>	15.3 (CI: 12.6-18.1)
	<b>Waterloo</b>	14.7 (CI: 10.4-18.9)
	<b>Townships</b>	17.4 (CI: 12.0-22.7)

**Table 9. Proportion of individuals aged 12 years and older with high blood pressure, household income, level of education & immigration status, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Household income</b>	<b>Less than \$40,000</b>	20.6 (CI: 17.3-23.8)
	<b>\$40,000-\$69,999</b>	17.5 (CI: 13.7-21.2)
	<b>\$70,000-\$99,999</b>	15.8 (CI: 11.8-19.9)
	<b>\$100,000 or more</b>	10.1 (CI: 7.3-13.0)
<b>Level of education</b>	<b>Less than high school</b>	17.9 (CI: 14.2-21.6)
	<b>High school diploma</b>	14.9 (CI: 11.0-18.9)
	<b>Some post-secondary</b>	F
	<b>Post-secondary degree</b>	14.5 (CI: 12.2-16.9)
<b>Immigration status</b>	<b>Immigrant</b>	19.5 (CI: 15.7-23.3)
	<b>Canadian-born</b>	13.5 (CI: 11.8-15.2)

**Table 10. Proportion of individuals aged 12 years and older with diabetes, by sex, age group, municipality, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Sex</b>	<b>Male</b>	8.8 (CI: 5.8-11.7) <sup>E</sup>
	<b>Female</b>	6.9 (CI: 4.1-9.6) <sup>E</sup>
<b>Age group</b>	<b>12 to 17 years</b>	NR
	<b>18 to 24 years</b>	NR
	<b>25 to 34 years</b>	NR
	<b>35 to 49 years</b>	F
	<b>50 to 64 years</b>	10.4 (CI: 7.3-13.4)
	<b>65 years and older</b>	18.7 (CI: 14.5-22.9)
<b>Municipality</b>	<b>Cambridge</b>	6.3 (CI: 4.4-8.3)
	<b>Kitchener</b>	10.9 (CI: 6.8-15.0) <sup>E</sup>
	<b>Waterloo</b>	4.2 (CI: 2.2-6.3) <sup>E</sup>
	<b>Townships</b>	4.2 (CI: 2.2-6.1) <sup>E</sup>

**Table 11. Proportion of individuals aged 12 years and older with diabetes, by household income, level of education & immigration status, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Household income</b>	<b>Less than \$40,000</b>	9.8 (CI: 7.3-12.3)
	<b>\$40,000-\$69,999</b>	8.0 (CI: 5.2-10.9) <sup>E</sup>
	<b>\$70,000-\$99,999</b>	5.0 (CI: 2.9-7.2) <sup>E</sup>
	<b>\$100,000 or more</b>	F
<b>Level of education</b>	<b>Less than high school</b>	8.0 (CI: 5.3-10.7) <sup>E</sup>
	<b>High school diploma</b>	F
	<b>Some post-secondary</b>	NR
<b>Immigration status</b>	<b>Post-secondary degree</b>	6.6 (CI: 4.0-9.1) <sup>E</sup>
	<b>Immigrant</b>	6.6 (CI: 4.3-8.8) <sup>E</sup>
	<b>Canadian-born</b>	8.2 (CI: 5.5-10.9) <sup>E</sup>



**Table 12. Proportion of individuals aged 12 years and older with heart disease, by sex, age group, municipality, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Sex</b>	<b>Male</b>	5.5 (CI: 3.9-7.2)
	<b>Female</b>	4.1 (CI: 2.8-5.5)
<b>Age group</b>	<b>12 to 17 years</b>	NR
	<b>18 to 24 years</b>	NR
	<b>25 to 34 years</b>	NR
	<b>35 to 49 years</b>	F
	<b>50 to 64 years</b>	7.6 (CI: 4.3-10.9) <sup>E</sup>
	<b>65 years and older</b>	16.9 (CI: 13.6-20.2)
<b>Municipality</b>	<b>Cambridge</b>	4.7 (CI: 2.4-7.1) <sup>E</sup>
	<b>Kitchener</b>	4.1 (CI: 3.1-5.2)
	<b>Waterloo</b>	4.1 (CI: 1.4-6.8) <sup>E</sup>
	<b>Townships</b>	8.5 (CI: 4.2-12.8) <sup>E</sup>

**Table 13. Proportion of individuals aged 12 years and older with heart disease, household income, level of education & immigration status, Waterloo Region, 2011-2014**

	Measure	Per cent
<b>Household income</b>	<b>Less than \$40,000</b>	7.7 (CI: 5.7-9.7)
	<b>\$40,000-\$69,999</b>	4.4 (CI: 2.4-6.4) <sup>E</sup>
	<b>\$70,000-\$99,999</b>	4.1 (CI: 1.6-6.6) <sup>E</sup>
	<b>\$100,000 or more</b>	3.8 (CI: 1.7-6.0) <sup>E</sup>
<b>Level of education</b>	<b>Less than high school</b>	6.2 (CI: 3.9-8.4) <sup>E</sup>
	<b>High school diploma</b>	4.0 (CI: 1.6-6.3) <sup>E</sup>
	<b>Some post-secondary</b>	NR
	<b>Post-secondary degree</b>	4.4 (CI: 3.0-5.8)
<b>Immigration status</b>	<b>Immigrant</b>	6.1 (CI: 4.0-8.2) <sup>E</sup>
	<b>Canadian-born</b>	4.2 (CI: 3.0-5.4)

### Source:

Canadian Community Health Survey, 2009-2010, 2011-2012, 2013-2014 Statistics Canada, Share File, Ontario MOHLTC.

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