

## Health Fact Sheets

### Blood pressure of adults, 2012 to 2013



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- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0<sup>s</sup> value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- <sup>P</sup> preliminary
- <sup>r</sup> revised
- X suppressed to meet the confidentiality requirements of the *Statistics Act*
- <sup>E</sup> use with caution
- F too unreliable to be published
- \* significantly different from reference category ( $p < 0.05$ )

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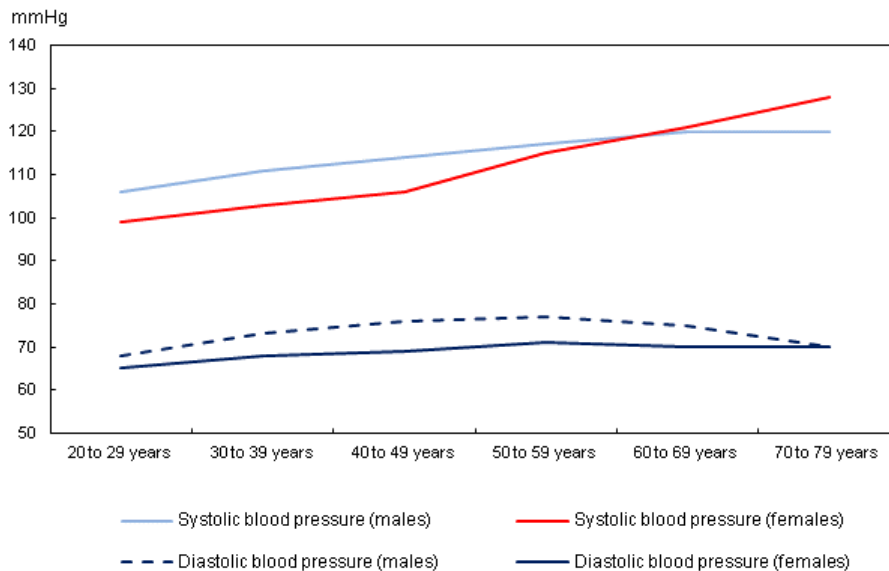
# Blood pressure of adults, 2012 to 2013

Blood pressure has many implications for health. High systolic blood pressure (SBP) and/or high diastolic blood pressure (DBP) can cause damage to blood vessels and can result in cardiovascular disease or events, such as heart attack or stroke, which are among the leading causes of hospitalization and death in Canada.<sup>1</sup>



Results from the 2012 to 2013 Canadian Health Measures Survey (CHMS) indicate that Canadian adults aged 20 to 79 had a measured average resting blood pressure of 112/71 mmHg. For both males and females, average resting blood pressure increased significantly with age (Chart 1). The average resting blood pressure for males aged 20 to 29 was 106/68 mmHg, compared to 120/70 mmHg for males aged 70 to 79. The average resting blood pressure for females aged 20 to 29 was 99/65 mmHg, compared to 128/70 mmHg for females aged 70 to 79. Average resting blood pressure tended to be significantly higher for males in younger age groups (aged 20 to 49) but significantly lower for males in the oldest age group (aged 70 to 79) compared to females in those same age groups.

**Chart 1**  
**Mean systolic and diastolic blood pressure (mmHg) in adults aged 20 to 79, by sex and age group, household population, Canada, 2012 to 2013**

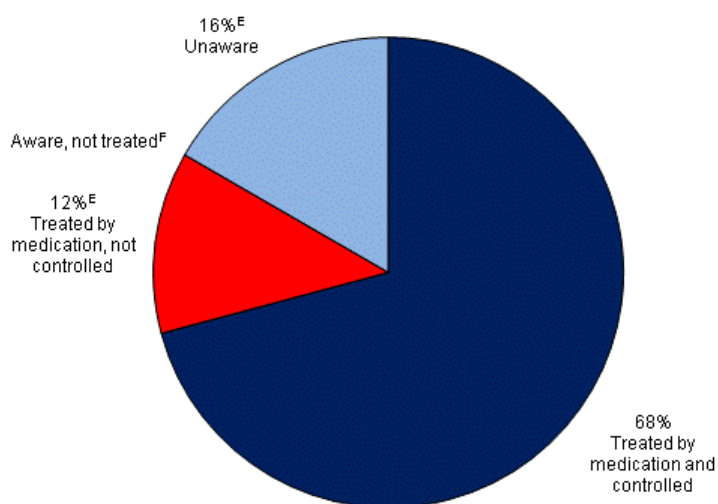


Source: Canadian Health Measures Survey, 2012 to 2013

## Hypertension

Hypertension is defined as a measured systolic blood pressure greater than or equal to 140 mmHg, a measured diastolic blood pressure greater than or equal to 90 mmHg, a self-reported diagnosis of high blood pressure, or the self-reported use of anti-hypertensive medication. Hypertension was prevalent in 22% of Canadian adults aged 20 to 79. The prevalence of hypertension increased significantly with age, such that 52% of Canadians aged 60 to 79 self-reported that they had been diagnosed with hypertension by a health-care professional, were taking anti-hypertensive medication, or had high measured blood pressure. Meanwhile, 24% of adults aged 40 to 59 and less than 5% of adults aged 20 to 39 were considered to be hypertensive.

**Chart 2**  
**Percentage of adults aged 20 to 79 with hypertension who are aware, treated by medication, controlled,<sup>1</sup> or unaware of their condition, household population, Canada, 2012 to 2013**



<sup>E</sup>Use with caution (data with a coefficient of variation (CV) from 16.6% to 33.3%)

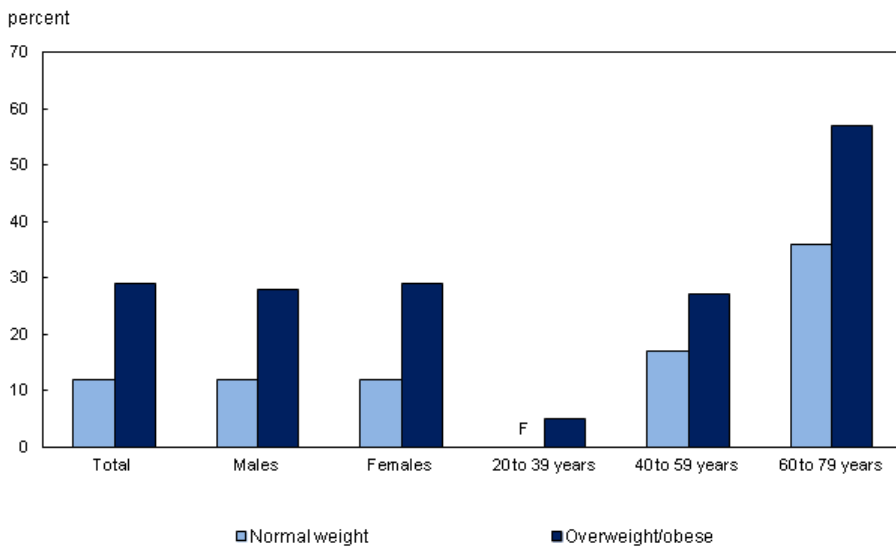
<sup>F</sup>too unreliable to be published (data with a coefficient of variation (CV) greater than 33.3%; suppressed due to extreme sampling variability)

1. "Controlled" refers to a measured resting blood pressure < 140/90 mmHg

**Source:** Canadian Health Measures Survey, 2012 to 2013

Approximately 16% of Canadian adults with measured hypertension were unaware of their condition, and another 17% were aware of their condition but were either not treated or the condition was not controlled (i.e. reported taking medication for high blood pressure yet had a measured blood pressure greater than or equal to 140/90 mmHg) (Chart 2). Over two-thirds (68%) of Canadian adults with hypertension were aware of their condition and were controlling it through medication use.

**Chart 3**  
**Distribution of adults aged 20 to 79 with hypertension, by sex, age group and body mass index (BMI),<sup>1</sup> household population, Canada, 2012 to 2013**



F too unreliable to be published (data with a coefficient of variation (CV) greater than 33.3%; suppressed due to extreme sampling variability)  
 1. The body mass index (BMI) classification is based on the "Canadian guidelines for body weight classification in adults" (Health Canada, 2003)  
 Source: Canadian Health Measures Survey, 2012 to 2013

An important risk factor for hypertension is being overweight or obese.<sup>2</sup> Results from the CHMS show that measured hypertension was more than two times more likely among adults who were overweight or obese, compared to their normal-weight counterparts (Chart 3). Hypertension was prevalent in 29% of Canadian adults who were classified as being overweight or obese, compared to 12% of those who were normal weight. Overweight or obese adults aged 60 to 79 had the highest prevalence of hypertension (57%), while adults aged 20 to 39 had the lowest, regardless of weight status (no significant difference between normal weight or overweight/obese).

### About blood pressure

Blood pressure (BP) is a measure of the force of blood against the artery walls, and is expressed as systolic blood pressure (SBP)/diastolic blood pressure (DBP) in millimetres of mercury (e.g., 120/80 mmHg). The systolic pressure (top number) is the pressure when the heart contracts and pushes the blood out, and the diastolic pressure (bottom number) is the lowest pressure when the heart relaxes between beats.

The CHMS measured resting blood pressure using an automated device (BPTru™) following a five minute rest period. The BPTru™ recorded six measurements, one minute apart. The average SBP and DBP were calculated using the last five of the six measurements. Respondents were also asked to report if they have ever been diagnosed with high blood pressure by a health care professional or if they have taken medication for high blood pressure in the past month.

The criteria for blood pressure classification in adults are as follows:

Category	Description
Normal	Mean SBP/DBP < 120/80 mmHg
Pre-hypertension	Mean SBP of 120-139 mmHg and mean DBP of 80-89 mmHg OR Mean SBP of 120-139 mmHg and mean DBP < 80 mmHg OR Mean SBP < 120 mmHg and mean DBP of 80-89 mmHg
Hypertension	Mean SBP ≥ 140 mmHg OR Mean DBP ≥ 90 mmHg OR Self-reported use of medication for high blood pressure within the past month OR Self-reported having been diagnosed with hypertension by a health-care professional

**SBP:** systolic blood pressure  
**DBP:** diastolic blood pressure

## Notes

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- 1 Statistics Canada. 2014. "Trends in mortality rates, 2000 to 2011". *Health Fact Sheets 2014*. Statistics Canada catalogue no. 82-625-X. <http://www.statcan.gc.ca/pub/82-625-x/2014001/article/11897-eng.htm> (Accessed: June 9, 2014)
  - 2 Chobanian, A.V., Bakris, G.L., Black, H.R., et al. 2003. "Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure". *Hypertension*; 42: 1206-52.
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## References

Chobanian, A.V., Bakris, G.L., Black, H.R., et al. 2003. "Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure". *Hypertension*; 42: 1206-52.

Statistics Canada. 2014. "Trends in mortality rates, 2000 to 2011". *Health Fact Sheets 2014*. Statistics Canada catalogue no. 82-625-X. <http://www.statcan.gc.ca/pub/82-625-x/2014001/article/11897-eng.htm> (Accessed: June 9, 2014)

## Data

Additional data from the Canadian Health Measures Survey are available from CANSIM tables 117-0001 to 117-0011.

For more information on the Canadian Health Measures Survey, please contact Statistics Canada's Statistical Information Service (toll-free 1-800-263-1136; 514-283-8300; [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca)).