



# What is the impact of osteoporosis in Canada and what are Canadians doing to maintain healthy bones?

- › An estimated **1.5 million (10%) Canadians 40 years of age or older** reported having been diagnosed with osteoporosis.
- › The use of age-appropriate calcium and vitamin D supplementation and impact-type exercise are recommended for the prevention of osteoporosis. However, **among Canadians 40 years of age or older—less than half reported taking calcium and vitamin D supplements and less than half reported regular physical activity.**

## Fast Facts from the *2009 Canadian Community Health Survey—Osteoporosis Rapid Response*

**Osteoporosis** (i.e., thin or brittle bones) is a skeletal disorder characterized by low bone density and an elevated risk of fracture. While it is more prevalent among older individuals (women more than men) it affects individuals of all ages. Fractures associated with osteoporosis, specifically fractures of the spine and hip, are a significant cause of disability, mortality and health care utilization; however, they are largely preventable.

Clinical practice guidelines outline risk factors that help to identify people who should be assessed for osteoporosis and fracture risk. These include advanced age, previous fragility fracture—fracture associated with low bone density, parental hip fracture, cigarette smoking, heavy alcohol consumption, being thin—body weight under 132 lbs (60 kg), prolonged use of glucocorticoids and other bone depleting medications, certain disease states and genetic disorders associated with bone loss. Furthermore, they provide recommendations regarding lifestyle approaches such as calcium and vitamin D intake and physical activity, in addition to the use of medications for the prevention and management of osteoporosis.<sup>1,2</sup>

The Public Health Agency of Canada funded a questionnaire on osteoporosis for two months of the 2009 Statistics Canada *Canadian Community Health Survey* to provide information on the prevalence, assessment, prevention and management of osteoporosis. A nationally-representative sample of 5,849 people 40 years of age or older living in the community participated in the survey. The number of survey respondents was weighted to ensure that estimates would be representative of the total Canadian population 40 years of age or older. The average age of respondents was 61 years, with a range of 40 to 100 years.

### **Osteoporosis is common among Canadians 40 years of age or older.**

- 1.5 million Canadians 40 years of age or older (10%) reported having been diagnosed with osteoporosis, of which,
  - › Women were 4 times more likely to report having osteoporosis than men.
  - › One in five (21%) reported having had a fracture (broken bone) after 40 years of age at one of the common sites for an osteoporotic fracture i.e., wrist, upper arm, spine, pelvis or hip.



- › Many Canadians are at risk for osteoporotic fracture.
- › Many Canadians at high risk of osteoporosis are not being screened for osteoporosis using a bone density test.

**What are Canadians doing to maintain healthy bones?**

- The use of age-appropriate calcium and vitamin D supplementation and impact-type exercise, such as walking and jogging, are recommended for the prevention of osteoporosis. In addition, once diagnosed with osteoporosis, medication is recommended for its management.<sup>1,2</sup>
- Among Canadians 40 years of age or older:
  - › Less than half reported taking calcium (40%), vitamin D (42%) or both calcium and vitamin D (32%) supplements.
  - › Less than half (43%) reported regular physical activity.
- Among Canadians 40 years of age or older who had been diagnosed with osteoporosis, 59% reported having been prescribed medication for osteoporosis.

**Many Canadians are at risk for osteoporotic fracture that is, fractures associated with low bone density.**

- Two important risk factors for fractures associated with osteoporosis are being a woman and being 50 years of age or older. Individuals with multiple risk factors are at greater risk of fracture particularly if they have low bone mineral density.<sup>2</sup> Clinical risk factors can be used to assess fracture risk or to help decide who should be screened for osteoporosis using a bone density test. The risk factors reported below do not include all of the known risk factors for osteoporotic fracture, but rather, those collected in this survey.

**Among Canadians 40 years of age or older who did not report having been diagnosed with osteoporosis, a high proportion were at risk for osteoporotic fracture:**

- 29% were women over 50 years of age.
- 33% were men over 50 years of age.
- 7% reported having had a fracture of the wrist, upper arm, spine and/or hip, after 40 years of age.
- 15% reported weighing less than 132 lbs (or 60 kg).
- 19% reported smoking daily or occasionally.
- 12% reported drinking alcohol every day.

**Many individuals at high risk of osteoporosis are not being screened.**

- A bone density test can indicate whether someone has osteoporosis and the future likelihood of developing the disease. This test can also help individuals make decisions that may prevent fractures or further bone loss. It is currently recommended that specific at-risk populations including individuals 65 years and older regardless of clinical risk factors, and those who have had a prior fracture associated with low bone density, be screened for osteoporosis using a bone density test,<sup>1,2</sup> however:
  - › Less than half (47%) of Canadians over the age of 65 years reported having had a bone density test.



› Almost **one in ten (8%)** Canadians reported having had a fracture at one of the common sites for an osteoporotic fracture after 40 years of age—a common complication of osteoporosis.

- › Only one in two (48%) Canadians who reported having had a fracture at one of the common sites for an osteoporotic fracture after 40 years of age, reported having had a bone density test.
- › In both cases, women were more than three times more likely to report having had this test compared to men.

**Many Canadians reported having had a fracture at one of the common sites for an osteoporotic fracture after 40 years of age.**

- Almost one in ten (8%) Canadians reported having had a fracture of the wrist, upper arm, spine, pelvis or hip after 40 years of age—a common complication of osteoporosis.
  - › The majority of these fractures occurred as a result of low trauma i.e., falls from standing height or lower (58%).
  - › Fractures of the wrist were most common (63%), followed by fractures of the upper arm (19%) and spine (16%).
  - › Among individuals who have had a fracture, nearly one in ten (9%) reported having had a fracture at more than one of these sites.
  - › Wrist fractures tended to occur at a younger age than spine and hip fractures (average age of occurrence was 52 versus 56 and 63 years, respectively).

**References:**

1. Papaioannou A, Morin S, Cheung AM, et al.: Scientific Advisory Council of Osteoporosis Canada. 2010 clinical practice guidelines for the diagnosis and management of osteoporosis in Canada: summary *CMAJ* 2010; Oct. 12 [Epub ahead of print].  
URL: [www.cmaj.ca/cgi/rapidpdf/cmaj.100771v1](http://www.cmaj.ca/cgi/rapidpdf/cmaj.100771v1)
2. Management of osteoporosis in postmenopausal women: 2010 position statement of The North American Menopause Society. *Menopause: The Journal of The North American Menopause Society* 2010 17(1): 25-56.

**Additional information on osteoporosis, falls prevention and safe participation in physical activity can be found online at:**

- The Public Health Agency of Canada:  
[www.phac-aspc.gc.ca/seniors-aines/publications/](http://www.phac-aspc.gc.ca/seniors-aines/publications/)  
[www.phac-aspc.gc.ca/pau-uap/paguide/older/index.html](http://www.phac-aspc.gc.ca/pau-uap/paguide/older/index.html)
- Osteoporosis Canada: [www.osteoporosis.ca/](http://www.osteoporosis.ca/)

**This fact sheet can be found on-line at:** [www.phac-aspc.gc.ca](http://www.phac-aspc.gc.ca)

**More information about the *Canadian Community Health Survey* and its 2009 rapid response on osteoporosis can be found online at:** [www.statcan.gc.ca](http://www.statcan.gc.ca)