

OSTEOPOROSIS

2022 Osteoporosis Canada Facts and Stats

PHAC OSTEOPOROSIS KEY FINDINGS

Osteoporosis Canada has been working closely with the Public Health Agency of Canada (PHAC) over the past few years assisting in the collection of data in Canada's Canadian Chronic Disease Surveillance System (CCDSS).

The following infographic [Osteoporosis and related fractures in Canada, 2021](#) is based on the most recent CCDSS data and provides an update on key findings from PHAC's 2020 Report. It is just one outcome in the last decade resulting from Osteoporosis Canada working in partnership with PHAC.

The infographic provides an update on key findings from PHAC's 2020 report [Osteoporosis and related fractures in Canada: Report from the Canadian Chronic Disease Surveillance System \(CCDSS\) 2020](#) using the most recent data available in the CCDSS.

With this new data Osteoporosis Canada has updated its facts and statistics on bone health and osteoporosis.

FACTS AND STATS

- Osteoporosis is a condition that causes bones to become thin and porous, decreasing bone strength and leading to increased risk of breaking a bone.
- No single cause for osteoporosis has been identified.
- Osteoporosis can strike at any age.
- Osteoporosis affects both men and women.
- Osteoporosis is often called the 'silent thief' because bone loss occurs without symptoms unless one has fractured.
- At least 1 in 3 women and 1 in 5 men will suffer from an osteoporotic fracture during their lifetime.
- Bone health is important at every age but especially during childhood and adolescence when bones are still growing. As most people reach their maximum bone size and strength (known as peak bone mass) by age 30, bone-healthy behaviours are important from an early age in order to optimize bone health and reduce the risk of developing osteoporosis later in life.¹
 - Reduce the risk of bone loss by following a healthy lifestyle with balanced nutrition, ideally starting from childhood.
- Over 2.3 million Canadians are living with osteoporosis.
- Over 80% of all fractures in people 50+ are caused by osteoporosis.
- 1 in 3 hip fracture patients will re-fracture within one year.
- Women and men alike begin to lose bone in their mid-30s.
- 22% of women and 33% of men who suffer a hip fracture will die within one year.²
- The most common sites of osteoporotic fracture are the wrist, spine, shoulder and hip.
- Fractures from osteoporosis are more common than heart attack, stroke and breast cancer combined.
- The overall annual cost to the healthcare system is estimated at over \$4.6 billion due to improved data capture of the multiple encounters and services that accompany a fracture: emergency room, admissions to acute and step-down non-acute institutions, rehabilitation, home-assisted or long-term residency support.³
- Osteoporosis causes 70-90% of 30,000 hip fractures annually.

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- The average cost to the healthcare system in the first year following a hip fracture is \$63,649. For hip fracture patients who cannot be discharged back home and who require admission to a long-term care facility, the average cost to the healthcare system in the first year following that broken hip is \$125,085.⁴
- Osteoporotic hip fractures consume more hospital bed days than stroke, diabetes, or heart attack.
- Fewer than 20% of fracture patients in Canada currently undergo diagnosis or adequate treatment for osteoporosis.
- 80% of patients with a history of fractures are not given osteoporosis therapies. Hundreds of thousands of Canadians needlessly fracture each year because their osteoporosis goes undiagnosed and untreated.
- After sustaining a common osteoporotic fracture, less than 10% of Canadians aged 40+ had their BMD measured.
- A study recently reported that only 44% of people discharged from hospital for a hip fracture return home; of the rest, 10% go to another hospital, 27% go to rehabilitation care, and 17% go to long-term care facilities.
- 14% of persons with a wrist fracture suffered a repeat fracture within 3 years.
- Over 1 in 2 hip fracture patients will suffer another fracture within 5 years.
- As women approach menopause, they lose bone at a greater rate, from 2-3 per cent per year.
- The risk of suffering a second spine fracture within the first 12 months following an initial vertebral fracture is 20%
- About 80% of those living with diagnosed osteoporosis are women.
- In 2016–2017, there were 150 hip fractures per 100,000 Canadians aged 40+.
- Women were 2x more likely to fracture their hip compared to men.
- Men being 1.3x more likely to die from any cause following a hip fracture.
- Osteoporosis can result in disfigurement, lowered self-esteem, reduction or loss of mobility, and decreased independence.
- Risk factors include older age, sex, vertebral compression fracture, fragility fracture after age 40, either parent has had a hip fracture, >3 months use of glucocorticoid drugs, medical conditions that inhibit absorption of nutrients and other medical conditions or medications that contribute to bone loss.
- Loss of 2cm (3/4") as measured by one's healthcare provider or 6cm (2 1/2") overall from when one was younger may be an indicator of spinal fracture.

Osteoporosis Care Gap

- After sustaining a common osteoporotic fracture, less than 20% of Canadians aged 65+ were prescribed a treatment for osteoporosis.
- After sustaining a common osteoporotic fracture men are less likely to receive any intervention.
- BONE ATTACK <25% that had a hip fracture received medication to prevent a future fracture VS HEART ATTACK 80% received medication to prevent a future heart attack
- Given the success [Fracture Liaison Service \(FLS\)](#) is having in preventing secondary fractures and the resulting cost-saving benefits - increasing accessibility to FLS across the country will help to close the existing osteoporosis care gap.⁵

APPENDIX

¹ The exact timing of peak bone mass is still disputed. It could be appropriate to say that peak bone mass is reached around age 20 and up to age 30. **Zhu et al. Factors influencing peak bone mass gain. *Front Med.* 2021 Feb;15(1):53-69. doi: 10.1007/s11684-020-0748-y. Epub 2020 Jun 9.**

² In individuals 65 years and older in Canada, from a case-control study conducted in Ontario (approx 200,000 patients): « The absolute mortality risk within one year after a fragility fracture occurring at a non-hip vs hip site was 9.4% vs 21.5% in women and 14.4% vs 32.3% in men. » Brown et al, Mortality in older adults following a fragility fracture: real-world retrospective matched-cohort study in Ontario, *BMC Musculoskelet Disord.* 2021 Jan 23;22(1):105. doi: 10.1186/s12891-021-03960-z. **In individuals 65 years and older in Canada (matched cohort, approx 30,000 patients): « Approximately 24 % of women and 19 % of men living in the community at the time of fracture entered a long-term care facility, and 22 % of women and 33 % of men died within the first year following hip fracture. » Nikitovic et al, Direct health-care costs attributed to hip fractures among seniors: a matched cohort study, *Osteoporos Int.* 2013 Feb;24(2):659-69. doi: 10.1007/s00198-012-2034-6. Epub 2012 Jun 27. **In individuals 50 years and older in Canada (retrospective, approx 70,000 incident fractures): « The crude mortality rates over the first 12 months after a hip fracture ranged from 27.6% to 40.5% in men and 15.8% to 23.3% in women. » Morin et al, Mortality rates after incident non-traumatic fractures in older men and women, *Osteoporos Int.* 2011 Sep;22(9):2439-48. doi: 10.1007/s00198-010-1480-2. Epub 2010 Dec 16.

³ We previously estimated the economic burden of illness of osteoporosis-attributable fractures in Canada for the year 2008 to be \$2.3 billion in the base case and as much as \$3.9 billion. The aim of this study is to update the estimate of the economic burden of illness for osteoporosis-attributable fractures for Canada based on newly available home care and long-term care (LTC) data. We estimate the current burden of illness of osteoporosis in Canada is double (\$4.6 billion) our previous estimates (\$2.3 billion) due to improved data capture of the multiple encounters and services that accompany a fracture: emergency room, admissions to acute and step-down non-acute institutions, rehabilitation, home-assisted or long-term residency support. Since the 2008 estimate, new Canadian data on home care and LTC are available which provided a better estimate of the burden of osteoporosis in Canada. This suggests that our previous estimates were seriously underestimated. » Hopkins et al, The current economic burden of illness of osteoporosis in Canada, *Osteoporos Int.* 2016. Oct;27(10):3023-32. doi: 10.1007/s00198-016-3631-6. Epub 2016 May 11.

⁴See Table 4 in Hopkins et al, 2016. The new fact seems to be (in 2014 Canadian dollars): Each hip fracture costs the system \$22,759 in the 1st year after hospitalization, and \$47,377 if the patient is institutionalized. (if institutionalized is defined as « home care »)

Hopkins et al, The current economic burden of illness of osteoporosis in Canada, *Osteoporos Int.* 2016. Oct;27(10):3023-32. doi: 10.1007/s00198-016-3631-6. Epub 2016 May 11.

⁵An FLS is a specific model of care where a dedicated coordinator proactively identifies fracture patients, typically in orthopaedic services, on a system-wide basis, and determines their fracture risk with the express purpose of facilitating effective osteoporosis treatment for high-risk patients. FLS is the only intervention that has been proven to have a meaningful impact (i.e., with at least a two-fold improvement) on the post-fracture osteoporosis care gap.

<https://fls.osteoporosis.ca/wp-content/uploads/FLS-Info-sheet-6.0.pdf>