

## Clinical Question 2

In order for our osteoporosis patients to understand the balance of risks and benefits, it is crucial for them to understand the impact of osteoporotic fractures on their quality of life.

- How can we best explain the impact of osteoporosis to our patients?



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## Learning Objectives

Upon completion of this module, participants will be better able to:



Describe the morbidity, mortality and economic burden of illness associated with osteoporosis in Canada



Explain the factors that determine osteoporotic fracture risk



Communicate to patients the impact of osteoporotic fractures on their quality of life and the actions they can take to reduce risk

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## Clinical Question 2



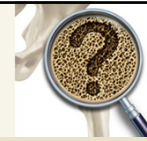
### ? How can we best explain the impact of osteoporosis to our patients?

Osteoporotic fractures begin to occur in women in their 60s. Early fractures include vertebral fractures with consequences of kyphosis, back pain, and disfigurement. Later in life, hip fractures and other major fractures create dependency and frailty with frequent institutionalization. Patients need to understand that fragility fractures are frequent in elderly patients, deteriorate our seniors' quality of life and can be effectively prevented.

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## Secondary Fracture Prevention:

Consensus Clinical Recommendations from a Multistakeholder Coalition



Communicate **3 simple messages** to people aged 65 years or older with a hip or vertebral fracture (as well as to their family/caregivers) consistently throughout the fracture care and healing process:

### MESSAGE 1

Their broken bone likely means they have osteoporosis and are at high risk for breaking more bones, especially over the next 1-2 years;

### MESSAGE 2

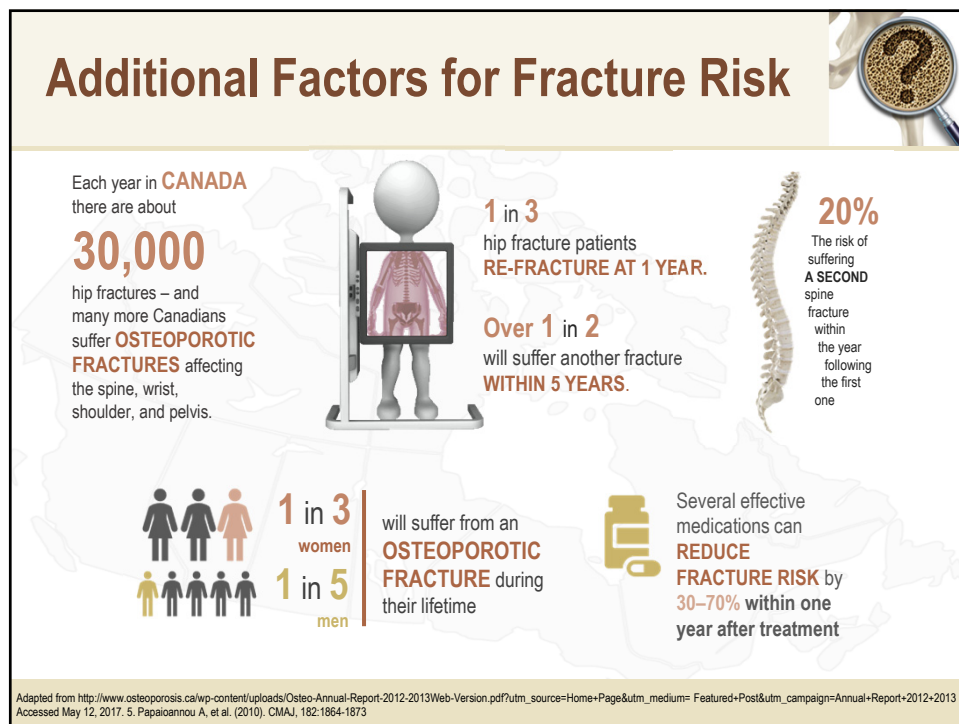
Breaking bones means they may suffer declines in mobility or independence—for example, have to use a walker, cane, or wheelchair, or move from their home to a residential facility, or stop participating in favorite activities—and they will be at higher risk of dying prematurely;

### MESSAGE 3

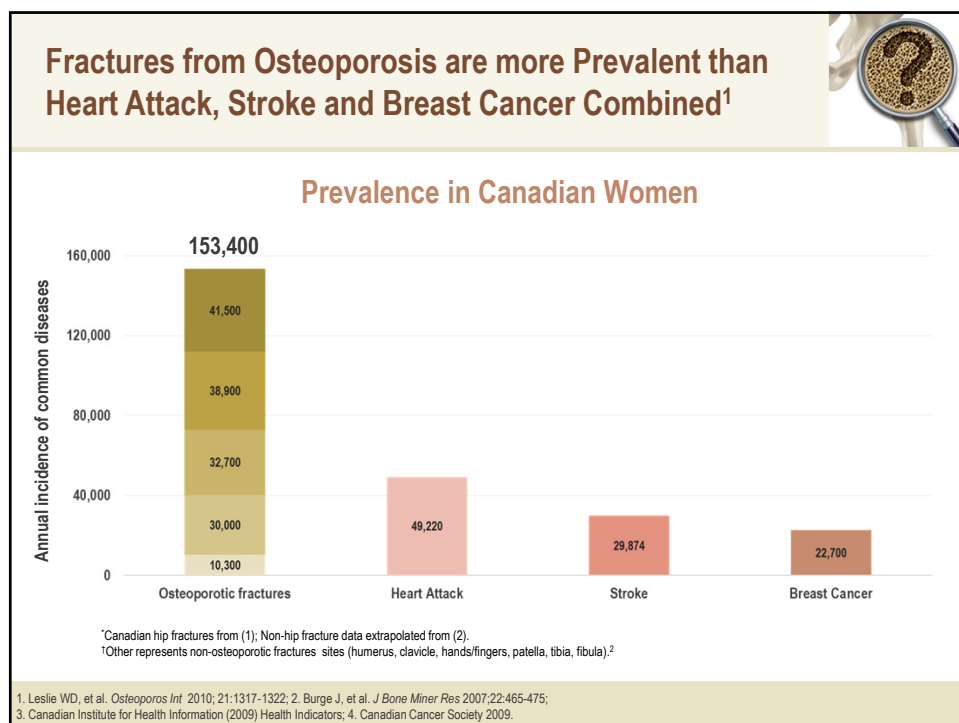
Most importantly, there are actions they can take to reduce their risk, including regular follow-up with their usual health care provider as for any other chronic medical condition.

Kiel DP et al. JBMR 2019

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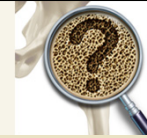


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## What is the best way to explain osteoporosis to your patients?



- Younger patients fear disfiguring kyphosis; vertebral fractures occur early in osteoporosis
- 17% of women over age 65 have a vertebral fracture, mostly undetected.

HEALTHY SPINE



A healthy spine is curved to position the head directly over the hips



As vertebrae collapse, the spine curves forward abnormally

Back appears hunched

SPINE AFFECTED BY KYPHOSIS

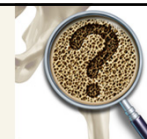


Shoulders may be rounded

Abnormal posture can cause slight curvature by loosening the spinal ligaments

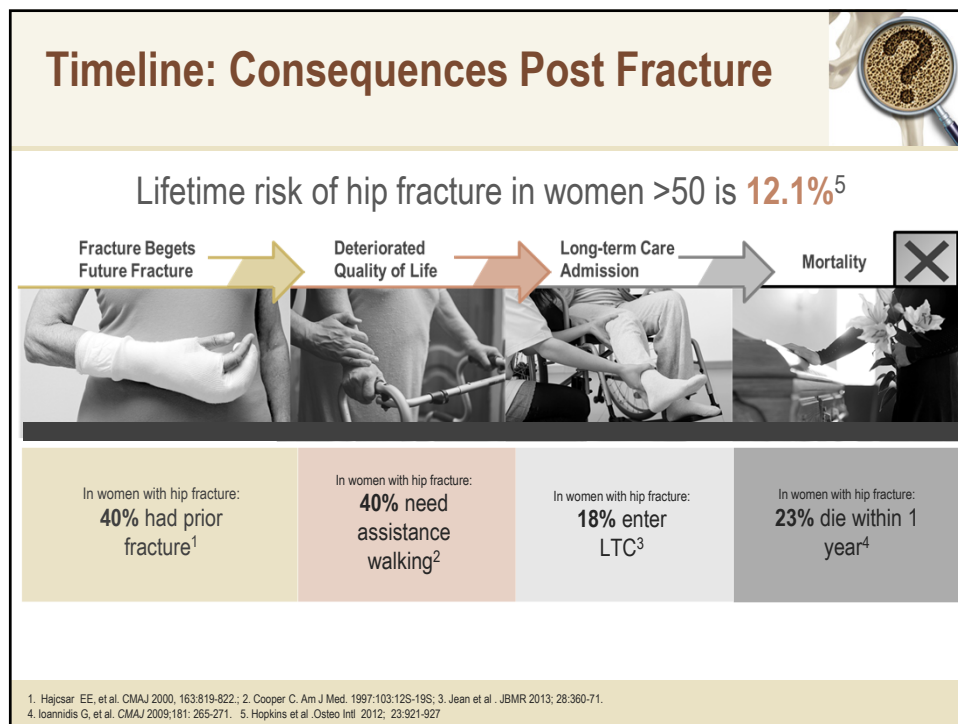
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## What is the best way to explain osteoporosis to your patients?

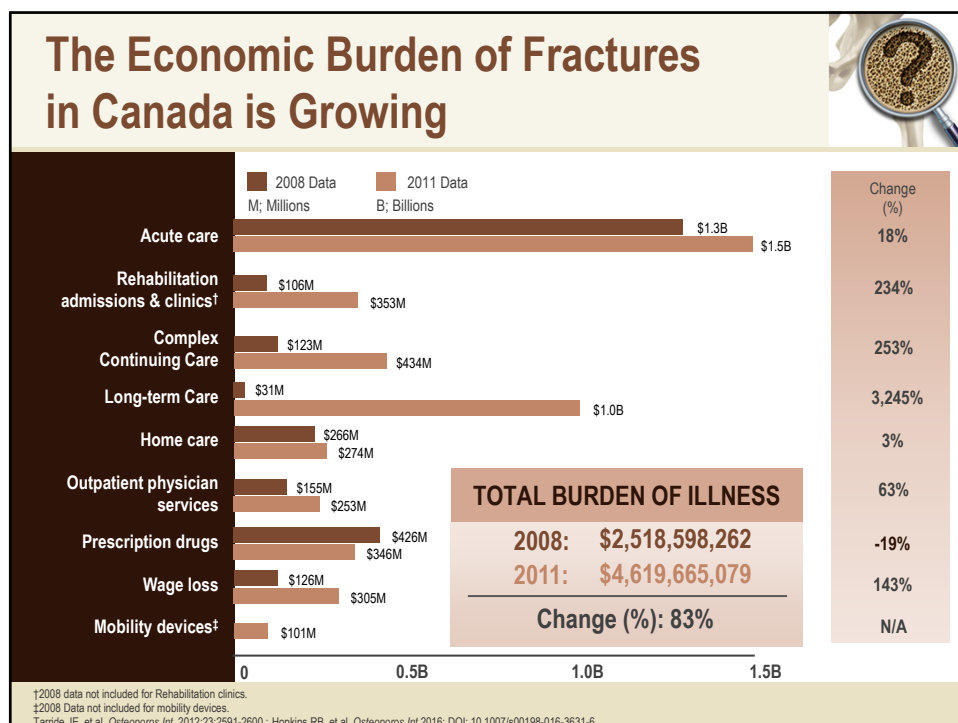


- Older patients fear the deterioration in quality of life with hip fracture; hip fractures occur later in life

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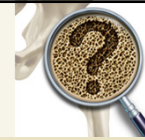


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## The Effect of Osteoporosis Treatment on Mortality



**30-70% REDUCTION** Effective medications reduce subsequent fractures by **30% to 70%** as early as one year after treatment initiation<sup>1</sup>

Fragility fractures cause substantial morbidity and mortality, effective osteoporosis treatment prevents both vertebral and nonvertebral fractures<sup>2</sup>

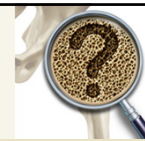
**40,000 SUBJECTS** Meta-analysis in ~40,000 subjects showed that treatment of osteoporosis with agents with proven vertebral and nonvertebral fracture efficacy reduces overall mortality by ~10%<sup>2</sup>

1. Papaioannou A, et al. *CMAJ*. 2010;182(17):1864-1873.
2. Bolland MJ, et al. *J Clin Endocrinol Metab*. 2010;95:1174-1181.

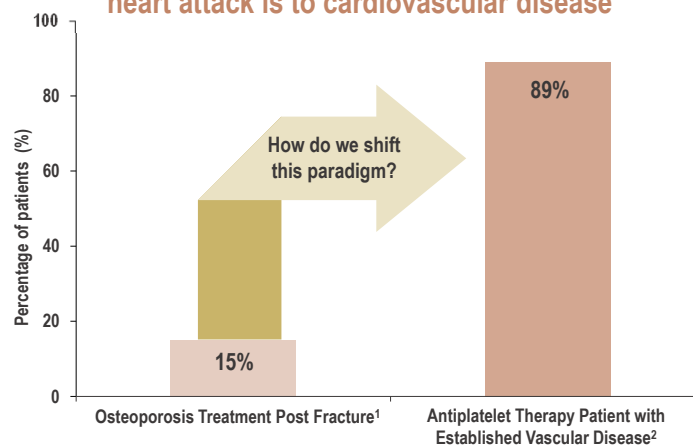
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## Which Raises the Question:

Why do 89% of Canadian Patients with Established Vascular Disease vs 15% Post-Fracture Leave the Hospital on Treatment?



A fracture is to osteoporosis what a heart attack is to cardiovascular disease



1. Papaioannou A, et al. *CMAJ*. 2010;182(17):1864-1873.
2. Bell A, et al. *Can J Cardiol*. 2009 Jun;25(6):345-51.



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