

BP Blogger

Myth Busting: The Bones Issue

Myth 1: Osteoporosis isn't as serious as other diseases

Osteoporosis is very common and serious problem for LTC residents. According to the World Health Organization, 13-18% of women over 50 years have it and 40% will suffer an osteoporotic fracture (spine, hip or wrist) in their remaining lifetime, up to 24% for men. In fact, a woman at age 50 is as likely to die of a hip fracture in



her remaining lifetime as she is from breast cancer. The personal disability that can result from fractures for older persons can be compared to that of a stroke or heart attack. Hip fractures are devastating with a 34% death rate in the first year after a fracture for men and 20-24% for women. In Sweden, the death rate for hip fracture per 100,000

older women has now exceeded the death rate from stroke! 40% of those who've had a hip fracture never return to their previous health. Death rates for those living in LTC at time of fracture:

- At 6 months: 31.4%
- At 12 months: 39.0%



Almost all fractures in LTC are due to **falls AND osteoporosis**. Residents' hip fracture rates are 2.4 to 10.5 times that of similar-aged community older adults. For them, falls are the biggest cause of injury deaths, functional decline and reason for 40% of all LTC admissions.

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Myth 2: Hip protectors don't work

Osteoporosis is a bone disorder with weakened bone strength that places a person at increased risk of a bone fracture. **Here are some startling hip fracture statistics:**

- 70-90% of hip fractures are caused by osteoporosis
- 2.3%-6% of falls result in fractures
- 1% of falls result in hip fractures
- Life expectancy after a hip fracture is ↓ by 6 years
- Annual cost of hip fracture care in Canada is estimated at \$650 million.
- 2,400 Ontario LTC residents will sustain a hip fracture each year at a cost of \$22 million
- 1 year cost of a resident readmitted to LTC after a fracture is \$33,729, newly admitted LTC is \$44,156
- Longer term mobility is lost in 68% of residents who've had a hip fracture
- Hip fracture risk in LTC is due to falls, osteoporosis, inactivity, vitamin D deficiency, age, dementia, SSRIs
- Hip fracture dramatically impacts on quality of life.

Studies indicate that for high risk residents with a history of hip fracture, using hip protectors seems to reduce the number of fractures. Many experts stress their use in high risk residents. LTC staff believe that hip protectors

are effective in reducing the risk of hip fracture and agree that residents at high risk of falls or fracture should be offered hip protectors. Hip protectors are padded undergarments designed to decrease the impact of a fall on the hip by either absorbing or shunting energy away from the hip, thus decreasing the risk of hip fracture.



Did you know? The number of residents needing to wear hip protectors to prevent one hip fracture is estimated to be 23.

Who should wear hip protectors? *Those who have*

- **Osteoporosis** → History of falls and fractures
- Frequent falls → Unsteady gait
- Arthritis in hip → Independently transfer
- Dementia → &/or at high risk for falls

How to make them work effectively in LTC?

- * Staff applies it to ensure it's being worn
- * Make sure it's always on
- * Select a hip protector that fits
- * Staff are educated on hip protection

More information on This and Other Best Practices

• **Contact your Regional LTC Best Practices Coordinator.** They can help you with Best Practices Info for LTC.

Find them at:

- www.rgpc.ca
Click on Long Term Care
- www.shrtn.on.ca
Click on Seniors Health
- **Check out the Hamilton Long Term Care Resource Centre**
www.rgpc.ca

• **Surf the Web** for BPGs. Some sites and

GOOD NEWS!

Now focusing on LTC The Ontario Osteoporosis Strategy is committed to preventing and treating osteoporosis



Best Practice in LTC Initiative Central South and The Long Term Care Resource Centre Hamilton

Hamilton LTC Resource Centre

Cutting Through the Foggy Myths Using Best Practice Guidelines in

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Myth 3: It's a woman's disease

Osteoporosis has often been considered a woman's disease, rates ranging from 64% for women aged 65-74 to 86% for women over 85 years, overall 1 in 8 Canadian women have it. Men account for about 20% of all persons with osteoporosis. It's also a significant source of morbidity and mortality in men. In fact, the mortality and complications rate due to hip fracture is higher in men. Nearly 1/3 of all hip fractures occur in men.

What type of osteoporotic fracture is most common? Vertebral(spine) fractures are the most



most common type of osteoporotic fracture and result in functional impairment similar to that seen following hip fracture. 50% of women will have had one by their mid 80s. Men will have had only slightly less than women. Residents may complain of sudden back pain. Spinal fractures present with back pain at the level of the fracture. They can occur suddenly from just sneezing. Residents with dementia may not be able to identify the source of their discomfort and may show increased responsive behaviours. Acute pain may last 12 weeks or longer. Kyphosis is an important sign of spinal compressions in older persons. Kyphosis is a curving of the spine that causes a bowing of the back, which leads to a hunchback or slouching posture. The resident's center of gravity shifts, which can affect gait. Walking aids may add stability, prevent falls and relieve some of the chronic back pain. Spinal fractures can reduce quality of life along with functional impairment, increased risk of future spinal and hip fractures, sleep disturbance, anxiety, depression, fear of falling, early mealtime satiety, difficulty fitting clothing, bending, lifting and moving.

Major Risk Factors for Osteoporosis

- Age > 65 years
- Female
- Previous fracture
- Family history of osteoporosis
- Low bone mineral density
- Vertebral compression fracture
- Use of corticosteroids

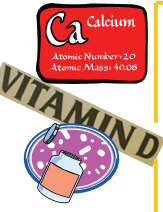
Find it on the Web at
www.rgpc.ca or www.shrtn.on.ca

Myth 4: Calcium & Vitamin D don't reduce falls

Adequate Calcium and Vitamin D are crucial for preventing bone loss. Calcium and Vitamin D levels in Canadian LTC residents are alarmingly low and are related to increased falls risk, reduced muscle strength, impaired neuromuscular coordination and increased body sway. Only 26-30% of residents have adequate intake of Calcium and Vitamin D. Most residents have inadequate intakes and regular supplementation does not occur consistently in Canadian LTC homes.

Calcium and Vitamin D supplementation in combination have been shown to significantly reduce falls and hip and non-vertebral fractures, especially in older women, and improve neuromuscular function. Several studies suggest that both men and women can benefit from Calcium and Vitamin D supplementation to:

- Improve muscle function
- Improve body sway by 9%
- Reduce risk of falling by 22% (especially for female LTC residents)
- Reduce debilitating effects from osteoporosis, and
- Improve bone mineral density



An initial step in LTC falls and fracture prevention programs should be Calcium and Vitamin D supplementation for residents

Non-pharmacological interventions such as exercise, nutrition, hip protectors, safety and other interventions are important and need to be combined with Calcium, Vitamin D and pharmacotherapies to help reduce fractures in residents with osteoporosis.

Did you know? 15 people would need to be treated with Vitamin D to prevent 1 person from falling.

What is Bone Strength?

Bone strength is the mix of bone quality and bone density. Bone quality is poor when a person has a fragility fracture (not due to major trauma). This puts them at a 1.5 to 9.5 fold increased risk of future fracture based on their age, number and site of previous fractures. A fragility fracture is actually a sign of osteoporosis. Bone mineral density (BMD) is a measure of how dense your bones are, your bone's ability to bear weight and your risk for having osteoporosis.

Check out these Best Practices & Guidelines. Answers to the Myths came from them. Find out more!

Canadian Multicentre Osteoporosis Study (CaMos). www.camos.org

Osteoporosis Canada www.osteoporosis.ca

Papaioannou A, Wiktorowicz ME, Adachi JD, et al. (2000). Mortality, independence in living and refracture, one year following hip fracture in Canadians. *J Soc Obstet Gynaecol Can.* 22:591-7.

Papaioannou A, Giangregorio L, Kvern B, et al. (2004). The Osteoporosis Care Gap in Canada. *BMC Musculoskelet Disord.* 5:11.

Sawka, A.M., Nixon, M., Giangregorio, L., et al. (2007). The use of hip protectors in long-term care facilities: A survey of nursing home staff. *J AM Med Dir Assoc.* 8, 229-232.

Sawka, A.M., Boulos, P., Beattie, K., et al. (2005). Do hip protectors decrease the risk of hip fracture in institutional and community-dwelling elderly? A systematic review and meta-analysis of randomized controlled trials. *Osteoporosis Int.* 16, 1461-1474.

Wiktorowicz ME, Goeree R, Papaioannou A et al. (2001). E. Economic implications of hip fracture: health service use, institutional care and cost in Canada. *Osteoporosis Int.* 12(4):271-8. International Osteoporosis Foundation www.iofbonehealth.org

Bischoff-Ferrari, H.A., Dawson-Hughes, B., Willett, W.C., et al. (2004). Effect of vitamin D on falls. A meta-analysis. *JAMA.* 291(16), 1999-2006.

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