

FAQ

Osteoporosis & Rehabilitative Care for Older Adults

Thank you for attending this webinar! As there were many questions that we were unable to answer within our Q&A discussion, our speakers, Dr. Caitlin McArthur & Dr. Jenny Thain, as well as our RCA, PGLO and OOS partners, have kindly provided these answers.

Osteoporosis & Prevention

Q. What is a low trauma event?

A low trauma event is one that occurs with minimal force or trauma. Often referred to as fragility or osteoporosis-related fractures, they occur as a result of a fall from standing height or when the force applied to the bone is judged to be insufficient to fracture normal bone. Most often, this is a slip, trip or fall from standing height or less. The bones most likely to break are the hip, spine and wrist, though you can also break other bones.

Q. What is the difference between "prospective" height loss and "historical" height loss?

Prospective height loss is objective height loss that has been recorded, for example, between clinic visits. Historical height loss is the patient's self-reported difference in height over time e.g. I used to be 5 ft 4, now I'm 5 ft 1.

Q. What is the latest research around wearing hip protectors?

Hip protectors are effective at preventing hip fractures in long-term care, but the most important thing is to support adherence by finding a type of hip protector that is comfortable and that the resident is willing to wear. The evidence for hip protectors in the community is not as strong.

Q. Are there studies on osteoporosis and social isolation/depression, i.e. socioemotional issues?

Yes - here is a recent paper: [Associations between Social Isolation Index and changes in grip strength, gait speed, bone mineral density \(BMD\), and self-reported incident fractures among older adults: Results from the Canadian Longitudinal Study on Aging \(CLSA\)](#)

Q. How do you interpret the FRAX/CAROC and fracture risk for patients who are 20 to 39 years of age?

FRAX is not calibrated to calculate at these age ranges. It will give a fracture probability for ages 40 to 90 years.

Q. If a patient with a hip fracture has returned home without starting medication in hospital, and has no family physician, is there anywhere you can recommend seeking treatment?

Suggest that they seek treatment from a walk-in clinic. These doctors may be able to assess and prescribe or access specialist opinions through e-consult. The patient may also contact [Health Care Connect](#) to help Ontarians without a family health care provider find one.

Exercise & Balance Training

Q. What are the best exercises to reduce bone loss? Do heel drops help and if so how many should be done daily?

The best exercises to prevent bone loss are resistance and weightbearing exercises. There is some evidence that impact exercise can also have an effect on bone loss; however, it is not safe for everyone - especially not for those at moderate to high fracture risk. You want to ensure that the person has a good foundation with resistance training first, then impact exercise like heel drops could be added afterward. Impact exercise should always be part of an exercise program, not the only thing. Here's a great article to help: [Using the specificity and overload principles to prevent sarcopenia, falls and fractures with exercise](#)

Q. What type of balance training do you recommend for patients who are using walkers?

Balance training for those using a walker can implement the same principles as for those without a walker. You can focus on ensuring upright posture, and reducing reliance on holding the walker when doing the exercises (e.g., don't put as much weight on it, hold lightly, rest on finger tips, or take hands off for short periods of time). Always ensure the walker's brakes are activated when doing balance exercises.

Q. If a person is dependent on a wheelchair; non-weight bearing for transfers, is high risk for fractures or has had a hip fracture, is medication the best option? Or should the focus be on resistance exercises and maintaining ROM?

Always try to incorporate resistance exercises and maintaining ROM in addition to medical management. Positioning while sitting and lying down is also going to be important for fracture prevention.

Q. What do you think about using yoga to treat or even reverse Osteoporosis?

The evidence to support claims that yoga can reverse osteoporosis is very low. Here is a great paper about yoga and osteoporosis: [Effect of yoga on health-related outcomes in people at risk of fractures: a systematic review](#)

Q. For balance exercises, what does the updated guideline say regarding the number of minutes recommended per week? During Bone Fit™ training several years ago, it mentioned 2 hours per week.

The updated guideline suggests balance training on two or more days per week. Ideally, we want to try to accumulate at least 3 hours per week. I believe the 2 or more days per week was suggested from a practicality/implementation standpoint.

Q. Do you have any knowledge regarding research out of Australia stating some form of gentle jumping program is good for your bones?

There have been some studies done out of Australia suggesting that impact training like jumping etc. can help prevent bone loss. However, they have been done with individuals who are fairly high functioning and low fracture risk. The risks of impact training for individuals at moderate to high fracture risk are unknown. It's suggested that a strong foundation of resistance training is established first, then a monitored progression of impact training could follow. Here is a helpful article: [Using the specificity and overload principles to prevent sarcopenia, falls and fractures with exercise](#)

Medications & Supplements

Q. We recognize the need for calcium and vitamin D, but what about magnesium, vitamin K2 and other co-factors?

If the patient has an adequate diet according to the [Canada's Food Guide](#), the 2023 Osteoporosis Guideline suggests no supplementation of protein, vitamin K or magnesium is needed to prevent fractures.

Q. For patients who are on osteoporosis treatment and then have a hip or vertebral fracture, should treatment be changed? Should the timeframe they have been on the osteoporosis treatment be factored in when considering switching treatments?

If the patient has been treated for less than 12 months, treatment does not necessarily need to be changed due to 'treatment failure'. However, if the patient is on anti-resorptive therapy (e.g. Bisphosphonate or Denosumab) and suffers a high-risk fracture (hip, vertebral, 2 or more fractures), they should speak with their physician about the benefits of switching to anabolic therapy (Romosozumab or Teriparatide) if there are no contraindications.

Q. If bone density is improving, can you stop Denosumab as a treatment?

Denosumab cannot be stopped without follow up treatment as it is a reversible drug. If Denosumab discontinuation is being considered, the patient will require treatment with a bisphosphonate. For people discontinuing denosumab after ≤ 4 doses, we suggest transitioning to a bisphosphonate 6 months after the last dose of denosumab to reduce the risk of rapid bone loss. We suggest bisphosphonate therapy for 1 year and then reassessing the need for ongoing transition therapy. For people discontinuing denosumab after ≥ 5 doses where the risk of rapid bone loss or vertebral fractures is high (e.g., those with prevalent vertebral fractures), good practice includes seeking advice from a consultant with expertise in osteoporosis on how to transition to an alternative therapy.

Q. When would an anabolic medication be used instead of a Bisphosphonates?

Anabolic therapy is recommended if patients are at very high risk of fracture. The 2023 guideline recommends for patients with recent severe vertebral fracture or ≥ 2 vertebral fractures and T score ≤ -2.5 . The Canadian Society of Obstetricians and Gynaecologists of Canada 2022 guideline suggests recent fracture within the last 12 months OR multiple fragility fractures OR FRAX major osteoporotic fracture risk of $>30\%$ or hip fracture risk of $>4.5\%$ over 10 years are indications to consider anabolic therapy.

Q. Please discuss drug side effects.

Oral bisphosphonates - most common side effects can be GI upset, muscular aches and pains. Intravenous bisphosphonate (Zoledronic Acid) can cause flu like symptoms post infusions which can last several days. Denosumab can also cause muscular aches, injection site reaction. These are usually self-limiting. If there are significant side effects that are persistent, osteoporosis treatment should be reviewed. Bisphosphonates and Denosumab can rarely cause atypical femoral fractures (AFF). Incomplete AFF results in persistent aching / pain in the thigh or groin. For anabolic treatments, Teriparatide can lead to headaches and postural hypotension.

Q. As a therapist and having a mother with severe osteoporosis, my experience is that most current medications (i.e., Bisphosphonates) have a lot of side effects and many people can't tolerate them. What would be the contraindications to osteoporosis medications?

A summary of drug information, potential side effects, contraindications and other considerations can be found in Table 5 of the 2023 Osteoporosis Guideline: Medications for the treatment of osteoporosis.

For more information on the 2023 *Osteoporosis Clinical Practice Guideline*, please visit:

<https://ostestrategy.on.ca/cpg/>

Beyond the Break Webinar Series:

<https://ostestrategy.on.ca/btb-main/>

For more information on *RCA-PGLO Rehabilitative Care for Older Adults Living With/At Risk of Frailty: From Frailty to Resilience* please visit:

<https://rehabcarealliance.ca/older-adults-with-frailty-rehab-guidelines/>

Frailty to Resilience Webinar Series:

<https://rehabcarealliance.ca/webinars/>