

Remember: You can live well with osteoporosis!

Secondary Osteoporosis – Drugs and Diseases that can Cause Bone Loss, Falls and/or Fractures (Part 4)

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Fracture

Fact: A meal of just tea and toast is deficient in protein and calcium and when taken on a regular basis, this may increase your risk of falls and fractures.

Part 4: MEDICAL CONDITIONS

In this issue we complete our discussion of medical conditions that can cause bone loss, falls and/or fractures.

Chronic Obstructive Pulmonary Disease (COPD)

COPD is a type of chronic lung disease that usually results after prolonged smoking but can also occur due to other causes. COPD can consist of chronic bronchitis or emphysema or both, and is often associated with a chronic cough, phlegm production, shortness of breath on exertion or at rest (depending on the severity) and frequent chest infections. There is a strong association between COPD and low bone mass or osteoporosis, usually from a combination of factors such as smoking history, low body weight, poor nutrition and treatment with oral glucocorticoids.

Untreated Hyperthyroidism

Normal thyroid hormone levels maintain good bone health. Too much thyroid hormone interferes with the body's ability to absorb calcium into the bones and increases bone turnover, which can cause bone loss over time.

Neurological Disorders

Many neurological disorders are associated with an increased risk of fractures (broken bones) because they increase fall risk, bone loss or both. For example:

1. Conditions or injuries resulting in *immobility* are associated with bone loss. This includes stroke, multiple sclerosis and spinal cord injury.
2. Conditions or injuries that result in *poor balance*, or problems with *gait* or *movement*, are associated with an increased risk of falls and fractures. These include cerebral palsy, multiple sclerosis, Parkinson's disease, spinal cord injury, stroke, confusion (due to dementia or delirium), dizziness and vertigo, and lower limb muscle weakness.
3. *Neuropathy* (numbness or reduced sensation) of the feet or legs can also lead to poor balance. This includes diabetic neuropathy, sciatica and other types of neuropathy.

The **Table** below summarizes other common **conditions or diseases** that may increase the risk of fracture by increasing either bone loss or fall risk or both.

Other Medical Conditions that May Increase Risk of Osteoporotic Fracture	Drug Treatment May Cause Bone Loss	Condition May Increase Bone Loss	Condition May Increase Fall Risk
Cushing's syndrome		*	
Pituitary disease		*	
Multiple myeloma	*	*	
Leukemia and Lymphoma	*		
Thalassemia major		*	
AIDS/HIV	*	*	
Low blood sugar			*
Dehydration			*

How to Minimize the Harmful Effects of Other Medical Conditions on Bone

Talk to Your Doctor

These last two issues of *COPING* may not include all medical conditions that can contribute to fractures. If you suffer from any medical conditions that may increase bone loss or the risk of falls, talk to your doctor and request a *fracture risk assessment*, which is a more in-depth assessment of your bone health. To do this your doctor may suggest you have a bone mineral density (BMD) test. This is a painless test that can help to predict your likelihood of fracture. Your doctor will also need to consider other risk factors including your age, sex, fracture history, parental history of hip fracture and glucocorticoid use.

Calcium, Protein and Vitamin D

The Osteoporosis Canada (OC) fact sheet *Nutrition: Healthy Eating for Healthy Bones* can help you determine if you are getting enough calcium and vitamin D. OC recommends that as much as possible, calcium intake should be from food, and calcium supplements should only be taken if one cannot consume sufficient calcium from the diet. On the other hand, there are few food sources of vitamin D and the sun is an unreliable source, so OC recommends *daily* vitamin D supplementation *all year round* for all Canadian adults. A well balanced diet, following *Canada's Food Guide*, will ensure that you get sufficient protein and other nutrients essential for bone health.

Regular Exercise

Exercise helps build and maintain strong muscles and bones. The OC fact sheet *Exercise for Healthy Bones* and COPN's own 8-part newsletter series on exercise, both provide good general guidelines for choosing an exercise program that is right for you.

Smoking and Alcohol

Any type and amount of smoking contributes to bone loss and increases the risk of osteoporosis in both men and women. Drinking an average of three or more alcoholic beverages per day may also increase bone loss and fracture risk. OC recommends no smoking and no more than an average of two alcoholic drinks daily.

FUNNY BONE:

Keep the dream alive: Hit the snooze button.

Osteoporosis Research and You

From time to time *COPING* features osteoporosis-related research studies that require the participation of individuals who are affected by osteoporosis. **Physical Activity Levels and Barriers to Exercise in Individuals with Low Bone Mass** from the University of Waterloo is one such study. In this report, researcher Helen Ng shares with us the interesting results of the research.

In the [November 23, 2012 issue of COPING](#), the researchers of the University of Waterloo asked COPN members to complete an online survey that looked at the amount of time they spent doing moderate to vigorous intensity aerobic (MVPA) physical activity, strength training, and balance training each week. They also asked about factors that make it difficult for them to exercise or that affect their exercise behaviour. We would like to thank those who participated in our study and to share some interesting results. We recruited 130 participants (125 females, 5 males) to our study, with an average age of 66 years. Among the people who responded to our survey:

- 87% of participants reported doing at least 150 minutes MVPA each week
- 58% of participants reported doing strength training 2 times per week
- 37% reported doing balance training at least 2 times per week.

Three factors were related to whether or not people met moderate- to vigorous-intensity aerobic physical activity guidelines:

- How determined they were to exercise regularly and to meet guidelines
- A strong feeling that obstacles prevented them from being able to exercise regularly and to meet guidelines
- How confident they were in their ability to exercise regularly and to meet physical activity guidelines

About half of our participants reported that experiencing no enjoyment from exercise prevented them from being able to exercise. Many people also said that not having others with whom to exercise was a barrier to participating in exercise.

Many people said they would be interested in exercise information in the form of a DVD, group exercise class, or working one-on-one with a personal trainer. However, the amounts people said they were willing to pay for these things were less than what they normally cost – perhaps cost is another barrier to getting exercise information.

The findings of our study reveal that many adults with low bone mineral density are not meeting Canada's physical activity guidelines for strength and balance training. Strength and balance training are also recommended by Osteoporosis Canada for the prevention of falls and fractures.

This project has been reviewed by and received ethics clearance through the Office of Research Ethics at the University of Waterloo. If you have questions about your rights as a research participant, you may contact Dr. Maureen Nummelin at the Office of Research Ethics at 519-888-4567 ext. 36005.

If you have any questions or concerns about this study, please contact Helen Ng by e-mailing hln@uwaterloo.ca.

The Canadian Physical Activity Guidelines recommend that adults do the following:

1. Participate in at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity each week
2. Do muscle strengthening activities or strength training at least 2 times per week
3. Do physical activities to enhance balance and prevent falls at least 2 times per week

More information can be found at: http://www.csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_older-adults_en.pdf

See also Osteoporosis Canada's fact sheet *Exercise for Healthy Bones* at www.osteoporosis.ca/multimedia/pdf/publications/OC_Exercise_For_Healthy_Bones_EN.pdf or call 1-800-463-6842 to request a copy. For a more detailed outline of the types of exercises people with osteoporosis may do, please see COPING's eight-part series "Boning Up on Exercise" at <http://www.osteoporosis.ca/osteoporosis-and-you/copn/coping-archives/copn-boning-up-on-exercise-series/>.

A Recipe from our Sponsor

Italian Beef-Topped Potatoes

Turn plain potatoes into a complete meal with a few added ingredients. Canadian Provolone cheese adds a punch of flavour, and important nutrients.

Course: *Main Dishes*

Preparation Time: *5 mins*

Cooking Time: *15 mins*

Yields: *4 servings*

1/2 milk product serving(s) per person



Preparation

4 baking potatoes (about 2 lbs/1kg)
12 oz (375 g) extra lean ground beef or lean
1 can (19 oz/540 mL) Italian-seasoned
stewed tomatoes
1/2 tsp (2 ml) dried Italian herb seasoning or
dried oregano
1 cup (250 ml) small cubes **Canadian
Provolone** or **Mozzarella** cheese, divided

Instructions

Scrub potatoes and prick with a fork in several places. Place on a microwave safe plate, in a spoke like fashion with thicker ends toward the outside. Microwave on High (100%) power for 10 to 12 min, or until just tender, rearranging halfway through. Let stand for 3 min.

Meanwhile, heat a large non-stick skillet over medium-high heat. Add beef and brown, breaking up with a spoon, for about 7 min or until no longer pink; drain off any fat. Stir in tomatoes and Italian seasoning and bring to a boil, breaking up tomatoes with a spoon. Reduce heat and simmer, stirring occasionally for 6 min or until flavours are blended and sauce is slightly thickened. Stir in half of the Canadian Provolone cheese.

Cut potatoes lengthwise down the center, almost but not all the way through and top with beef mixture. Sprinkle with remaining cheese.

Tips

The sauce can be prepared, cooled, covered and refrigerated for up to 2 days. Reheat on the stove top or in the microwave oven on Medium (50%) power until hot.

Many microwave ovens have a baked potato feature and are a great option.

For the Adventurous: Substitute baking potatoes with large sweet potatoes.

For more information about this recipe:

<http://www.dairygoodness.ca/getenough/recipes/italian-beef-topped-potatoes>

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Season's Greetings!

This issue of COPING brings to a close another busy year for the Canadian Osteoporosis Patient Network. As we look forward to 2014 and the celebration of COPN's 10th anniversary, I would like to thank the many individuals who have supported COPN throughout the years. To the passionate volunteers and staff who guide, write and edit our newsletters, to the experts who share their wisdom and advice, to the staff and volunteers at Osteoporosis Canada who champion and support our patient voice, and to our generous sponsors – thank you! And to you, our readers. Without you, we would not have a reason for being. Together we are making a difference.

The holiday season is a time of year when our attention may be easily diverted away from our health. Remember, taking care of our bones and avoiding fractures is a daily task for *every* season. Take your medications and supplements. Watch your step both outside and inside the home. Be careful lifting those parcels. Choose the bone-friendly treats. Above all, have a safe and Merry Christmas and a happy, fracture-free New Year!

Larry Funnell



Chair, COPN Executive Committee



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These newsletters are not intended to replace individualized medical advice. Readers are advised to discuss their specific circumstances with their healthcare provider.

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