

**Remember: You can live well with osteoporosis!**

## **Boning Up on Exercise To Reduce Fracture Risk and Manage Osteoporosis (Issue #5 of 8)**

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Balance Training and Osteoporosis

### **What is Balance Training Exercise?**

Balance training refers to exercises that involve transferring body weight from one part of the body to another or applying challenges to the body's balance systems. Recent physical activity guidelines have recommended that balance training be included in exercise programs for older adults and for individuals at risk of falls.

### **Why is Balance Training Exercise Important?**

Balance training has been shown to reduce the risk of falls. Balance exercises challenge the ability to maintain balance and therefore improve the ability to handle unexpected or unbalanced movements in daily life. Better balance and posture lead to fewer falls and therefore fewer fractures (broken bones).

**However, when balance is challenged while doing balance exercises, there is also an increased risk of falling. For this reason, it is very important to observe safety precautions while doing balance training, such as having a table, wall or chair nearby to hold on to, or by having someone “spotting” you.**

### **Types of Balance Training Exercise**

Balance training exercises may be “static” or “dynamic”.

- 1) In a static exercise, the balancing is done in a standing position (on either one or two feet). Static balance exercises can be done with or without holding on to a support object.

In light of recent media reports, Osteoporosis Canada is currently reviewing our recommendations on calcium intake and vitamin D supplementation. Follow our website for more information. To access all of our position statements visit our website at [www.osteoporosis.ca](http://www.osteoporosis.ca), click on the *News* tab, and click on *Position Statements*.

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- 2) In a dynamic exercise, the balancing is done while moving (such as going from a sitting to a standing position, or walking in a straight line). This, too, can be done supported (for example holding on to the arm rests of a chair or a wall) or unsupported (without holding on to anything).

*counter. That way, if you feel that you are losing your balance and may fall, you will still have enough time to grab onto the counter and prevent yourself from falling.*

- 2) Some examples of dynamic balance exercises are the following:

### Examples of Balance Training Exercises

- 1) One example of a static balance exercise is the following:

*Stand in front of a counter, your hands lightly resting on the counter top. Exert just enough pressure on the counter with the palms of your hands to get the support you need to feel steady, yet still be challenged by the exercise.*

- ▲ *Bend your left knee and hip, lifting your left foot off the floor.*
- ▲ *Hold this position for 30 seconds.*
- ▲ *Lower your left foot back down to the floor*
- ▲ *Bend your right knee and hip lifting your right foot off the floor.*
- ▲ *Hold this position for 30 seconds.*
- ▲ *Lower your right foot to the floor.*
- ▲ *Repeat this exercise three times on each leg.*

*Try walking on your toes. If you are afraid of losing your balance and falling, try walking on your toes while walking next to a wall or around a table that you can use for support with your hands.*

*Tai Chi is another type of dynamic balance exercise. Research shows that Tai chi is a very safe and effective low impact exercise that improves balance and reduces the risk of falls.*

*If you do not have osteoporosis or you have a low risk of fracture, you may choose to increase the difficulty of this exercise by doing it without holding onto the counter. However, you should always stay close to the*

### How Should I do Balance Training Exercise?

First, it is important to determine your fracture risk (low, moderate or high) with the help of your doctor. Then, consult with a physiotherapist, if needed, about specific exercises you should do and others you may need to avoid. Use the **Table** below *as a guide* to the types of exercise you may perform, how often you should do them (frequency) and how hard you should work (intensity). Consider making a schedule that specifies when you are going to exercise and what you are going to do (including details like duration, intensity and type of exercise).

Type of Balance Training Exercise (Examples)	Tai chi, or other exercises designed to challenge balance
How often should I exercise? (Frequency)	At least 2 days per week May incorporate balance training with weight bearing and/or strength training exercise to save time.
How hard should I work? (Intensity)	<b>Beginners: static exercises (standing in one spot holding a posture)</b> <b>Advanced: dynamic exercises (challenge balance while moving around) <i>May need guidance from an instructor</i></b>
For how long should I exercise? (Duration)	Start with 1-2 balance exercises, and perform 1 set of each. Progressively increase the number of exercises or the duration you do each exercise to continue to see improvement.
What are the benefits of this type of exercise?	Improved mobility and balance. Fewer falls

## Should I do Yoga?

Many Yoga positions are designed to improve balance and core muscle strength but there is little research on whether or not Yoga helps prevent falls or fractures. In addition, it is difficult to make general recommendations about Yoga because there are many different types of Yoga practice as well as different individual teaching philosophies. Furthermore, **many yoga postures emphasize twisting and forward or backward bending, and these activities are not advisable for someone with a spine fracture or who is at high risk of a spine fracture.** Balance postures are also a part of some Yoga practices, and these, too, should be done cautiously by individuals who have a moderate or high risk of fracture. Individuals with osteoporosis who wish to do Yoga should consult a professional who has special training in Bonefit™ or similar training program.

## Safety

Anyone who is not accustomed to exercise, **or has recently broken a bone**, is advised to consult a doctor or physical therapist *before* starting any type of exercise program. You are encouraged to start slowly and build up gradually – if you progress too quickly you may increase your risk of injury.

Not every exercise is for everyone. The safety of any activity will depend on your age, fitness level and your fracture risk. It is also important to consider your past experience with the activity and your current health status. When in doubt, start low and go slow! You can gradually increase the duration and intensity of your exercise to meet the recommended levels.

Proper footwear is important at all times, not just during exercise. Non-slip shoes with a hard sole provide the most stability, even inside your home. Invest in an indoor pair of shoes for use in your home. Avoid soft soled shoes and slippers or footwear that may fall or slip off your feet.

The surface you walk on or exercise on is also important. Avoid uneven ground (grassy turf) which may cause you to trip and fall or turn an ankle. Equally dangerous are slippery surfaces and soft, spongy surfaces like thick carpeting, as these can easily cause you to lose your balance and fall.

### Coming up Next!

It is important to combine balance training with some form of weight bearing (see Issue #3) and strength training exercise (see Issue #4) as well as

posture training, flexibility & stretching and core exercises. These are described in our subsequent issues of COPING, *so stay tuned!*

*The Boning Up on Exercise articles come from a collaboration of experts. Initiated by a contribution of material from Jo-Ann James, a Certified Medical Exercise Specialist who is Bone Fit™ trained, an impressive team of dedicated volunteers from COPN and the Scientific Advisory Council and OC staff further developed the material into a comprehensive series of eight articles that are all being published for the first time here in COPING !*



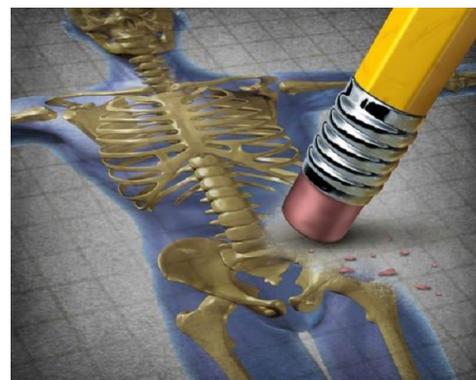
**Bone Fit™** is the name of Osteoporosis Canada's specialized non-profit training program that is taken by health and fitness professionals who want to learn effective and appropriate exercises for people with osteoporosis. The training provides knowledge and practical skills to prescribe exercise and adapt safe exercise programs to reduce the risk of fractures. Are you looking for an exercise professional to teach you the right exercises for osteoporosis? BoneFit™ is a growing program that now has trained professionals in seven provinces. Find a BoneFit™ trained professional in your area with our BoneFit™ locator at: [www.bonefit.ca/locator/](http://www.bonefit.ca/locator/)

**FUNNY BONE:** A truth about life that adults have learned is that middle age is when you choose your cereal for the fibre, not the toy.

**Public Education Forum “Osteoporosis Myth Busters – What You Thought You Knew and What You Need to Know” offered as a Virtual Forum – March 27, 2013**

Can't attend in person? Join us via webcast!

<http://www.osteoporosis.ca/event/osteoporosis-myth-busters/>



**A Recipe from Our Sponsor – Chicken & Mushroom Barley *Risotto* with Pear & Asiago**



Milk replaces chicken stock as Anna Olson mixes simple ingredients to make magical results in her Mushroom Barley Risotto. The milk makes the risotto taste decadently creamy, and you can control how much cheese you add, to keep the fat to a minimum.

Course: *Main Dishes*

Preparation Time: *15 mins*

Cooking Time: *45 mins*      Yields: *6 servings*

*1 1/2 milk product serving(s) per person*

**Preparation**

1/4 cup (50 ml) **butter**, divided

1 onion, diced

1 lb (500 g) cremini or button mushrooms, sliced

1 clove garlic, minced

1 tbsp (15 ml) finely chopped fresh thyme

**For more information about this recipe:** <http://www.dairygoodness.ca/getenough/recipes/chicken-mushroom-barley-risotto-with-pear-asiago>

1 1/4 cups (300 ml) pearl barley, rinsed and drained  
6 cups (1.5 l) **1% or 2% milk**  
2 cups (500 ml) cubed cooked chicken (white meat only)  
2 Bartlett pears, cored and cubed  
6 cups (1.5 l) fresh baby spinach leaves  
4 oz (125 g) **Canadian Asiago cheese**, coarsely grated (about 1 cup/250 mL)  
Salt & Pepper

**Instructions:** In a large, heavy-bottom pot, melt 2 tbsp (30 mL) of butter over medium heat. Add onion and mushrooms, sauté for about 8 minutes or until onion is translucent and any excess liquid from the mushrooms has evaporated. Stir in garlic and thyme; sauté for 1 minute.

Add barley and stir for 1 minute, to coat with butter. Add 1 cup (250 mL) of milk; cook stirring constantly, until all of the milk is absorbed. Continue, to add milk, 1 cup (250 mL) at a time; stirring after each addition until completely absorbed. Cook at a gentle simmer and reduce the heat to low if needed. (You should leave the pot uncovered, but you can leave it for up to 5 minutes without stirring after each addition of milk.) This takes about 35 minutes.

When adding final cup of milk, stir in chicken and pears to warm through.

Gradually stir in spinach until it has wilted. Stir in remaining butter and Canadian Asiago cheese until melted. Season to taste with salt and pepper and serve immediately.

Fracture Fact:  
28% of women and 37% of men who suffer a hip fracture  
will die within the following year

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