



# Build Stronger Bones Through Physical Activity

It can happen without warning, you bend over to weed the garden and feel a sharp pain in your side. After visiting the doctor you learn that you have fractured a rib. If you are an older woman this fracture is most likely the result of osteoporosis. <sup>1</sup>

## What is Osteoporosis?

Osteoporosis, often known as the “silent thief”, affects 1.4 million Canadians. If not prevented or left untreated osteoporosis can progress painlessly until a bone actually breaks, hence “silent thief”. One in four women over the age of 50 have osteoporosis, and one in eight men over 50 also have the disease. However, the disease can strike at any age. <sup>2</sup>

Osteoporosis means “porous bones”. It is a condition that is characterized by low bone mass and deterioration of bone tissue. Broken bones or fractures occur typically in the wrist, hip, and spine. Any bone can be affected but these three areas are the most common. <sup>2</sup>

## Lifestyle Interventions

- Limit alcohol intake
- No smoking
- Engage in regular weight bearing exercise
- Exercise regularly, 3-5 times a week <sup>1</sup>



## Risk Factors For Osteoporosis:

- Female
- Small bones
- Under weight
- Increased age
- Low calcium intake, both past & present
- White or Asian race
- Inadequate vitamin D intake
- Cigarette smoking
- Excessive alcohol intake
- Estrogen deficiency in women
- Decreased testosterone levels in men <sup>1</sup>

## Exercising with Osteoporosis

**Strength training** - examples include using free weights, weight machines, therabands or tubing for resistance training and exercising in the water. These help to strengthen bones and muscles which help to slow mineral loss. Also, exercises that stretch out the upper back may strengthen the muscles between the shoulder blades which help to reduce stress on the bones and maintain bone density.<sup>3</sup> \* **Consult your family physician before using weights if you have osteoporosis.**

**Weight bearing aerobic training** - examples include walking, dancing, gardening, and low impact aerobics. These types of exercises are excellent for slowing mineral loss because they work directly on the bones of the lower spine, hips, and legs.<sup>3</sup>

**Flexibility training** - this type of training is extremely important because it helps to increase the mobility of the joints, which prevents muscle injury. It is best to do stretches after your muscles

are warmed up. Stretches should be done slowly and gently, without bouncing. Try to avoid stretches that cause you to flex your spine or cause you to bend at the waist because this may put extra stress on the spine.<sup>3</sup>

***Make sure to consult a health care professional before starting any new form of physical activity.***

### Nutritional interventions

- Adequate calcium intake. If you are over the age of 51 you should be consuming 1200-1500 mg of calcium each day. **Consult your family physician before starting a calcium supplement if you have any kidney problems.**
- Adequate vitamin D is necessary for the absorption of calcium. Individuals should be consuming at least 400-800 IU of vitamin D daily.<sup>1</sup>



### References

1. Miller, C. (2004). *Nursing for wellness in older adults: theory and practice* (4th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
2. Osteoporosis Canada. (2007). *About osteoporosis: what is osteoporosis*. Retrieved March 19, 2008 from <http://www.osteoporosis.ca/english/about%20osteoporosis/what-is/default.asp?s=1>
3. Mayo Clinic: Tools for healthier lives. (2006). *Exercising with osteoporosis: stay active the safe way*. Retrieved November 20, 2007 from <http://www.mayoclinic.com/print/osteoporosis/HQ00643/>