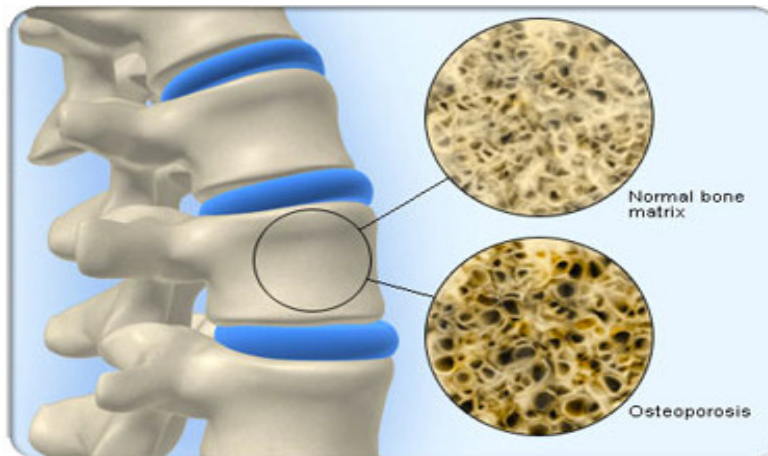


# Osteoporosis Awareness

**Osteoporosis is...** the thinning of bone tissue and loss of bone density over time.

**Bone production and bone tissues may suffer when:**

- You do not get enough calcium
- Your body does not absorb enough from your diet
- Calcium and phosphate gets reabsorbed back into the body as you age



## Symptoms

There are no symptoms in the *early* stages of the disease. Symptoms occurring *late* in the disease include:

- Bone pain or tenderness
- Fractures with little or no trauma
- Loss of height (as much as 6 inches) over time
- Low back pain due to fractures of the spinal bones
- Stooped posture or kyphosis

## Causes

The leading causes are a drop in **estrogen** in women at the time of menopause and a drop in **testosterone** in men.

Women over age 50 and men over age 70 have a higher risk for osteoporosis.

**Other causes include:**

- Being confined to a bed
- Chronic rheumatoid arthritis, chronic kidney disease, eating disorders
- Taking corticosteroid medications daily for over 3 months , or anti-seizure drugs
- Hyperparathyroidism
- Vitamin D deficiency
- White women, especially those with a family history have a greater risk

# Risk Factors

## Non-Modifiable Risk Factors

- Age 65 or older
- Vertebral compression fracture
- Fracture with minimal trauma after age 40
- Family history of osteoporitic fracture
- Spinal fracture apparent on x-ray
- Long term (over 3 months continuously) use of glucocorticoid therapy
- Medical conditions (celiac disease, Chron's disease) that inhibit absorption of nutrients
- Hyperparathyroidism
- Hypogonadism
- Early menopause (before age 45)
- Rheumatoid arthritis

## Modifiable Risk Factors

- Low body weight (<60kg)
- Present weight is more than 10% below your weight at age 25
- Low calcium intake
- Excess alcohol (consistently over 2 drinks a day)
- Smoking
- Low bone mineral density
- Tendency to fall

- **1 in 4 women** over the age of 50 has osteoporosis.
- At least **1 in 8 men** over 50 also has the disease.

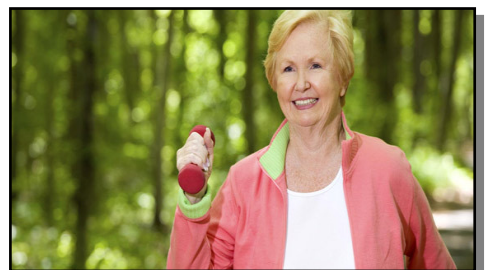
## Treatment

- **Biphosphonates:** primary drugs to prevent and treat osteoporosis in postmenopausal women.
- **Calcitonin:** slows the rate of bone loss and relieves bone pain. Appears to be less effective than bisphosphonates.

**Exercise:** Regular exercise can reduce the likelihood of bone fractures in people with osteoporosis. We must be active in order to “load” or stimulate our bones to maintain their structural competence and strength. This will also prevent falls, which is critical in preventing osteoporosis.

Some recommended exercises include:

- Weight bearing exercises: walking, jogging, tennis, dancing
- Resistance exercises: free weights, weight machines, stretch bands
- Balance exercises: tai chi, yoga



**Diet:** Calcium is vital to normal bone formation and Vitamin D helps your body absorb calcium. Although a diet rich in calcium and vitamin D will not completely stop bone loss, it **will guarantee a supply for the body to use to form and maintain bones.**

**Get at least  
1,200 mg per  
day of calcium  
and 800 -  
1,000 IU of  
vitamin D.**

**Caution:** Excess **salt** and **caffeine** cause calcium loss. Limit your sodium intake and do not drink over 4 cups of coffee a day.

**Recommended foods:**

- Dairy products (milk, cheese, yogurt)
- Calcium fortified soy beverages and orange juice
- Vegetables (spinach, collard greens, beets, bok choy, okra)
- Fish products containing bones (canned salmon, sardines)
- Meat alternatives (tofu, lentils, beans)

**Stop Unhealthy Habits:**

1. Quit smoking, if you smoke.
2. Limit alcohol intake.

## **Bone Mineral Density (BMD) Testing**

**What is it?**

- Specifically densitometry or DEXA
- Measures amount of calcium and other minerals in your bones
- Used to predict future risk for bone fractures

**Who should get a BMD test?**

- All women and men 65 years or older
- Postmenopausal women and men 50-64 with risk factors for fracture
- Younger men or women (under 50) with a disease or condition associated with low bone mass or bone loss

<b>CALCIUM CONTENT OF SOME COMMON FOODS</b>	<b>PORTION</b>	<b>CALCIUM</b>
<b><i>Food Product - 250 to 300+ mg Ca</i></b>		
Buttermilk	1 cup/250mL	300 mg
Fortified orange juice	1 cup/250mL	300 mg
Fortified rice or soy beverage	1 cup/250mL	300 mg
Milk - whole, 2%, 1%, skim, chocolate	1 cup/250mL	300 mg
Milk, evaporated	1/2 cup/125 mL	367 mg
Milk - powder, dry	1/3 cup/75 mL	270 mg
Yogurt – plain, 1-2% M.F.	3/4 cup/175 mL	332 mg
<b><i>Food Product – 160 to 249 mg Ca</i></b>		
Almonds, dry roast	1/2 cup/125 mL	186 mg
Beans – white, canned	1 cup/250 mL	191 mg
Cheese – Blue, Brick, Cheddar, Edam, Gouda, Gruyere, Swiss	1 1/4”/3 cm cube	245 mg
Cheese – Mozzarella	1 1/4”/3 cm cube	200 mg
Drinkable yogurt	4/5 cup/200 mL	191 mg
Frozen yogurt, vanilla	1 cup/250 mL	218 mg
Fruit-flavoured yogurt	3/4 cup/175 mL	200 mg
Ice cream cone, vanilla, soft serve	1	232 mg
Kefir (fermented milk drink) – plain	3/4 cup/175 mL	187 mg
Molasses, blackstrap	1 Tbsp/15 mL	180 mg
Salmon, with bones – canned	1/2 can/105 g	240 mg
Sardines, with bones	1/2 can/55 g	200 mg
Soybeans, cooked	1 cup/250 mL	170 mg
<b><i>Food Product – 125 to 159 mg Ca</i></b>		
Beans – baked, with pork, canned	1 cup/250 mL	129 mg
Beans – navy, soaked, drained, cooked	1 cup/250 mL	126 mg
Collard greens – cooked	1/2 cup/125 mL	133 mg
Cottage cheese, 1 or 2%	1 cup/250 mL	150 mg
Figs, dried	10	150 mg
Instant oatmeal, calcium added	1 pouch/32 g	150 mg
Soy flour	1/2 cup/125 mL	127 mg
Tofu, regular – with calcium sulfate	3 oz/84 g	130 mg

<b><i>Food Product – 75 to 124 mg Ca</i></b>		
Beans - baked, plain	1 cup/250 mL	86 mg
Beans - great northern, soaked, drained, cooked	1 cup/250 mL	120 mg
Beans - pinto, soaked, drained, cooked	1 cup/250 mL	79 mg
Beet greens - cooked	1/2 cup/125 mL	82 mg
Bok choy, Pak-choi - cooked	1/2 cup/125 mL	84 mg
Bread, white	2 slices	106 mg
Chickpeas (garbanzo beans)	1 cup/250 mL	77 mg
Chili con carne, with beans - canned	1 cup/250 mL	84 mg
Cottage cheese - 2%, 1%	1/2 cup/125 mL	75 mg
Dessert tofu	1/2 cup/100 g	75 mg
Okra - frozen, cooked	1/2 cup/125 mL	89 mg
Processed cheese slices, thin	1	115 mg
Turnip greens - frozen, cooked	1/2 cup/125 mL	104 mg
<b><i>Food Product - under 75 mg Ca</i></b>		
Artichoke - cooked	1 medium	54 mg
Beans, snap - fresh or frozen, cooked	1/2 cup/125 mL	33 mg
Broccoli - cooked	1/2 cup/125 mL	33 mg
Chinese broccoli (gai lan) - cooked	1/2 cup/125 mL	46 mg
Dandelion greens - cooked	1/2 cup/125 mL	74 mg
Edamame (East Asian dish, baby soybeans in the pod)	1/2 cup/125 mL	52 mg
Fireweed leaves, raw	1/2 cup/125 mL	52 mg
Grapefruit, pink or red	1/2	27 mg
Hummus	1/2 cup/125 mL	50 mg
Kale - cooked	1/2 cup/125 mL	49 mg
Kiwifruit	1	26 mg
Mustard greens - cooked	1/2 cup/125 mL	55 mg
Orange	1 medium	50 mg
Parmesan cheese, grated	1 Tbsp/15 mL	70 mg
Rutabaga (yellow turnip) - cooked	1/2 cup/125 mL	43 mg
Seaweed (agar) - dried	1/2 cup/125 mL	35 mg
Snow peas - cooked	1/2 cup/125 mL	36 mg
Squash (acorn, butternut) - cooked	1/2 cup/125 mL	44 mg

**Resources:** <http://www.ncbi.nlm.nih.gov/>, <http://www.osteoporosis.ca/> ---- [www.EWSNetwork.com](http://www.EWSNetwork.com)