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## Some Important Facts About Osteoporosis

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## Some Important Facts About Osteoporosis

### From your pharmacist

This includes information on:

- What is osteoporosis?
- How is osteoporosis diagnosed?
- How to protect your bones
- Medications available



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## **Some Important Facts About Osteoporosis**

### What is osteoporosis?

Osteoporosis is a disease where the bones become thin and porous. The bones are weak and fragile and can break more easily (called a fracture).

Your bones are always renewing themselves. Old bone is constantly being replaced by new bone. Your body continues to build bone until about the age of 25. Your "bone bank" is at its peak at this age.

At around the age of 40 years women start to lose bone density. The greatest loss occurs the first 15 years after menopause. Men also lose bone density but at a more gradual rate than women. Osteoporosis happens when bone loss is greater than new bone formation.

### Osteoporosis is a common disease:

One in four women and 1 in 8 men over the age of 50 will have osteoporosis BUT osteoporosis can happen at any age. Forty percent of women over the age of 50 will have a fracture in their lifetime. Osteoporosis is called a "silent disease" because you can have osteoporosis and not feel anything until a fracture happens.

Osteoporosis cannot be cured but the goal is to prevent bones from breaking. Fractures can be painful and can reduce the ability to do daily activities and reduce your quality of life.

How is osteoporosis diagnosed?

Diagnosis is accomplished by:

1. Assessment of your risk factors
2. A bone mineral density test (DEXA)

The Osteoporosis Society of Canada (OSC) recommends that:

- Everyone over the age of 50 should have their risk factors assessed. If you have one major risk factor or 2 or more minor risk factors you should have a bone mineral density test.

The following medications are all used to treat osteoporosis:

### **Drugs that slow down bone breakdown (prevent bone resorption):**

Bisphosphonates

Etidronate (Didrocal™)

Alendronate (Fosamax™, Novo-Alendronate™)

Risedronate (Actonel™)

SERM (Selective Estrogen Receptor Modulator)

Raloxifene (Evista™)

Nasal Calcitonin

Miacalcin™

Hormone Replacement Therapy

*(Recommended only if a woman is experiencing menopausal symptoms at the same time)*

### **Drugs that build up bone:**

Parathyroid Hormone

Teriparatide (Forteo™)

### **Where can I find more information?**

The Osteoporosis Society of Canada provides many useful resources and programs for patients. You can access the Osteoporosis Society of Canada through their website at [www.osteoporosis.ca](http://www.osteoporosis.ca) or give them a call at **1-800-463-6842**.

Tips for taking calcium properly:

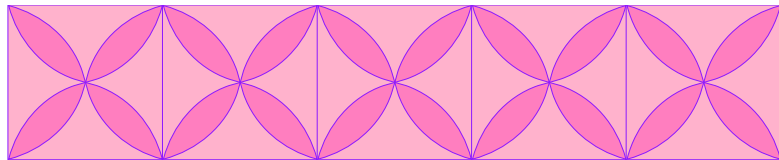
1. Look for the amount of elemental calcium in each tablet. The amount should be written on the label or ask your pharmacist for help.
2. Take calcium carbonate with food and lots of water for better absorption.
3. Take calcium in divided doses – no more than 500 to 600 mg of elemental calcium at one time. For example, if you are taking 1000mg total calcium in a day, take 500mg at breakfast and the other 500mg at lunch or supper.
4. Do not take more than 2500mg of elemental calcium a day – too much calcium may cause kidney stones.

<b>How much vitamin D is enough?</b>	
Men and Women	
-Ages 19 to 50 years	400IU per day
-Over 50 years	800IU per day

Vitamin D helps the bones absorb calcium. The main source of vitamin D is sunshine but in the winter months in Edmonton you may not get enough sunshine to get the right amount of vitamin D. Supplements come in 400IU and 1000IU. Many multivitamins will contain vitamin D so remember to include that in your total calculations.

**Are there medications to treat osteoporosis?**

The main goal of medication use in osteoporosis is to prevent fractures. Fortunately, there are a number of medications that can help treat osteoporosis and prevent fractures.



- Everyone over the age of 65 should have their risk factors assessed and a bone mineral density test.

Risk Factors

Risk factors have been identified by the Osteoporosis Society of Canada and are divided into major and minor risk factors. Refer to the "Osteoporosis: Are You at Risk?" pamphlet from the OSC for the list of major and minor risk factors.

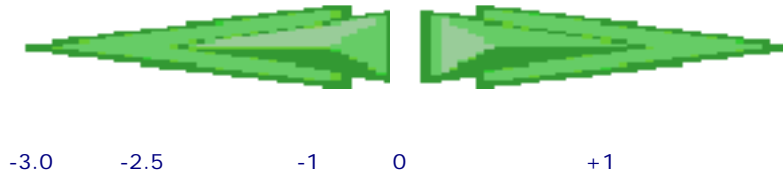
Identifying your risk factors is the first step in assessing your risk of osteoporosis. The more risk factors you have, the greater the risk of osteoporosis.

Bone Mineral Density (BMD) Test

Bone strength is determined by the quantity of bone (bone density) and the quality of bone (how good the bone structure is). The machine that measures bone density is called the DEXA. This machine is used to diagnose osteoporosis. At this time, there is no good test to measure bone quality. The BMD test needs to be ordered by your physician. It last about 15 minutes and is painless. The DEXA provides your physician with a T-score. The T-score is a comparison of your bone mineral density with that of a young, healthy person of the same sex. It provides the number of standard deviations that your bone mineral density is away from a young adult.

Your T-score will be categorized into normal, osteopenia, and osteoporosis (*based on the World Health Organization criteria*).

**Osteoporosis    Osteopenia    Normal bone density**



Osteopenia is low bone mineral density – it is not osteoporosis but can be a risk factor for osteoporosis (also depends on your age). Severe osteoporosis is when you have had a T-score lower than -2.5 and a fracture.

**What is the heel ultrasound machine?**

The heel ultrasound machine (also called the quality ultrasound) measures the bone strength in your heel. It can measure the risk of fracture but is not used to diagnose osteoporosis. It is mainly used for screening for osteoporosis. The heel ultrasound is painless and there is no radiation with this test.

**What can I do to protect my bones?**

Five easy ways to protect your bones:

1. Exercise regularly, especially weight bearing exercise like walking, tennis or dancing.
  - a. Try and get 30 minutes every other day.
  - b. Do things that you enjoy and do them regularly.
2. Quit smoking.
  - a. Ask your pharmacist about smoking cessation techniques or products.
  - b. Find out ways to help quit smoking. Some good resources in Edmonton include AADAC’s Smokers Help Line which can be accessed as follows:  
Phone: 1-866-332-2322  
website: [www.tobacco.aadac.com](http://www.tobacco.aadac.com)

3. Limit your caffeine intake to less than 4 cups a day.
  - a. Try decaffeinated herbal teas, water or milk.
4. Limit alcohol intake to less than 2 drinks a day.
5. Get enough elemental calcium and vitamin D from your diet or by taking supplements.
  - a. Your pharmacist will provide you with a pamphlet to help you calculate the amount in your diet.
  - b. Ask about supplements – there are many different kinds available. The most common products are calcium carbonate, calcium citrate, or calcium gluconate. There is a lot of controversy on which is the best absorbed calcium product. All are equally good to use. If you are on a medication that will affect stomach acidity (ie Prevacid™, Losec™, etc), carbonate may not be as absorbed as well. You may want to chose a citrate product in these situations.

<b>How much calcium is enough?</b>	
Children ages 4 – 8 years	800mg/day
Adolescents –Ages 9 – 18 years	1300mg/day
Women and Men –Ages 19 to 50 years –Over 50 years	1000mg/day 1500mg/day

