
Osteoporosis, Fracture Risk Assessment and Promoting Healthy Bones

What is osteoporosis?

Osteoporosis means porous or brittle bones. Osteoporosis occurs when the solid parts of the bones weaken and lose strength.

This most often starts in the spine (back), hips and wrists.

With osteoporosis, bones may break easily. These breaks are called 'fragility fractures'. This means that a bone breaks because it is 'fragile'.

What causes osteoporosis?

We do not know this answer. All bones have 2 kinds of cells that help keep them healthy:

- scavenger cells called osteoclasts
- building cells called osteoblasts

Scavenger cells look for parts of the bone that need fixing. They get the bone ready for the building cells by taking away old cells that break down. They are sometimes called bone-eating cells.

Building cells then come and repair the bone. These cells work as partners to keep bones strong and healthy.

In osteoporosis, the builder cells begin to slow down. The scavenger cells keep on working. Over time, bones begin to lose their mass or density and strength. They become brittle and break.

Who gets osteoporosis?

Both men and women get osteoporosis. Research shows that 1 in 3 women and 1 in 5 men will have broken bone from osteoporosis in their lifetime.



What is at high fracture risk?

Some people have a higher fracture risk than others. However, you can get osteoporosis even if you do not have any risk factors.

Men and Women over the age of 50 with one or more of the following have a higher risk for fracture:



- have already had a fracture of a bone (vertebrae) in the spine
- have already had a hip fracture
- have had 2 or more fragility fractures (not skull, ankles and feet)
- have had 1 or more fragility fracture(s) AND also currently taking glucocorticoid medication such as prednisone
- have a high risk of fracture based on an appropriate Fracture Risk Assessment tool

What is a Fracture Risk Assessment tool?

This is a standard set of questions that you and your health care provider go through to assess individual risk of having a fracture over the next 10 years. Tools are designed based on current research.

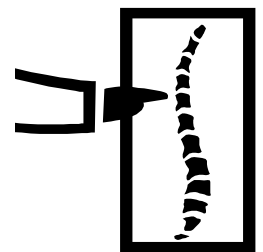
How will I know if I have osteoporosis?

Since you lose bone mass slowly over time, many people do not know this is happening. This is why osteoporosis is sometimes called **the silent thief**.

Most people do not feel any pain. Often, the first sign is a broken bone. Breaks are more common in hips, wrists and the spine.

If you think you may be at risk of having osteoporosis, talk to your health care provider. Your health care provider should first complete a Fracture Risk Assessment tool.

Your health care provider may also arrange a Bone Mineral Density test or BMD. This is a quick, painless and safe way to look at your bone health using small amounts of X-rays.



Who can I talk to if I have questions or concerns?

Some treatments can help prevent or slow down osteoporosis. Try to learn more about the prevention and treatment of osteoporosis by reading, going to lectures and talking to others.

Who can I talk to if I have questions or concerns?

Talk to your health care provider to decide the best plan for you. There are many research studies being done to learn how to prevent and treat osteoporosis. Your health care provider will know the current recommended treatments.

If you have questions or concerns talk to your health care provider. You can work together to plan what is best for you. You may need to meet with a dietitian or exercise therapist. These can all be arranged for you.

For more information:

Osteoporosis Canada is the leading source of free information about osteoporosis in Canada.

They have many information pamphlets they can send you to read.

Call Toll-free: 1-800-463-6842

Websites:

www.osteoporosis.ca

www.osteoporosisstrategy.on.ca



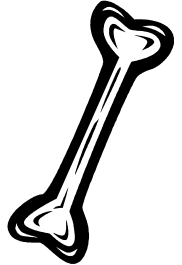
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Promoting Healthy Bones

What can I do to promote healthy bones?

Osteoporosis can be prevented or slowed down. Your health care provider, dietitian and pharmacist can help you learn how to have strong, healthy bones.



Be active and exercise

All of these types of exercise help:

- Weight bearing
- Strength resistance
- Postural training
- Balance training
- Stretching



Weight-bearing exercises are the kind you do when your feet are pressing on a surface such as walking, dancing, playing tennis, stair-climbing, biking and doing low impact aerobics.

You should exercise 30 to 45 minutes at a time, 3 times a week. Any exercise, weight bearing or not, is better than no exercise. You can also do 10 minute intervals if you find exercising for long periods of time hard to do.

Talk to your health care provider about starting an exercise program if you are not following one now.

Add calcium to your diet

Keep your bones strong with a good supply of calcium.

Eat food high in calcium.

The amount you need:

- All teenagers - 1200 to 1400 mg a day
- Pregnant or breastfeeding women - 1000 mg a day
- All adults age 19 to 50 - 1000 mg a day
- All adults over 50 years old – 1200 mg a day



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The best sources of calcium are milk and milk products such as cheese and yogurt. Some foods like spinach, rhubarb and beet greens contain calcium but it is not well absorbed by your body.

You may want to talk to a dietitian to see how you can adjust your diet to meet your needs. Your health care provider can refer you to a dietitian.

Here are some examples of the amount of calcium in food:

Type of Food	Amount	Calcium
Almonds	63 ml or ¼ cup	95 mg
Beans – cooked kidney or lima	250 ml or 1 cup	50 mg
Bread – whole wheat	1 slice	20 mg
Bok Choy	125 ml or ½ cup	75 mg
Broccoli – cooked	185 ml or ¾ cup	50 mg
Cheese – cheddar, edam, gouda	3 cm or 1¼” cube	245 mg
Cheese – cottage 1% or 2%	125 ml or ½ cup	75 mg
Figs – dried	10	150 mg
Milk – skim, 1% or 2%	250 ml or ½ cup	300 mg
Oatmeal – instant with calcium added	32 grams or 1 pouch	150 mg
Orange	1 medium	50 mg
Orange juice – fortified	250 ml or 1 cup	300 mg
Salmon – canned with bones	105 grams or ½ can	240 mg
Sesame seeds	125 ml or ½ cup	95 mg
Soy drink – fortified	250 ml or 1 cup	285 mg
Soybeans – cooked	250 ml or ½ cup	170 mg
Tofu – with calcium sulfate	84 grams or 3 ounces	130 mg
Yogurt – plain	185 ml or ¾ cup	295 mg
Note: If milk is labelled as calcium-enriched – add 100 mg to serving size.		

(adapted from Osteoporosis Canada)

Calcium supplements

If you do not get enough calcium in your diet, you may need to take a calcium supplement such as calcium carbonate or citrate. Do not take non-purified calcium such as bone-meal and dolomite.



If you take a calcium supplement spread them out over the day and take with plenty of water. If you have heart or kidney problems talk to your health care provider or dietitian about the amount of water to drink with the supplement.

Vitamin D

You need Vitamin D to absorb calcium and keep your bones strong. Sunlight helps Vitamin D work better. When you do not get enough sunlight you need extra Vitamin D. In Canada, this often happens during the winter months.



In the summer months 15 minutes of sunlight a day on your hands and face without sun protections will give you all of the Vitamin D you need. Milk and milk products also contain Vitamin D. Other products with Vitamin D are margarine, fish, liver, eggs and meat.

It is hard to get enough Vitamin D from food alone. You may need to take a Vitamin D supplement. In Canada it is recommended that everyone has a Vitamin D supplement during the winter months. Talk to your health care provider, pharmacist or dietitian before taking a supplement. Vitamin D₃ is the best kind to take. Read the label or ask for help finding Vitamin D₃.

Osteoporosis Canada recommends that Canadians:

- aged 19 to 50 have Vitamin D 400 to 1000 IUs a day
- over 50 have Vitamin D 800 to 2000 IUs a day
- pregnant or lactating (breastfeeding) have Vitamin D 400 to 1000 IUs a day
- IUs are International Units



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Reduce alcohol and caffeine and quit smoking

Have less than 2 drinks of wine, beer or liquor a day.

Avoid drinks with caffeine such as coffee, tea and colas.

Limit caffeine to 3 cups or less a day.

Stop smoking. For more help call the Smoker's Helpline:

- 1-877-513-5333
- www.smokershelpline.ca



Medications to slow bone loss

There are many medications that slow bone loss.

Some medications are taken by injection, intravenous infusion or oral pill. These medications are not hormones.

It is important to talk to your health care provider about the medication that is best for you and your lifestyle.

Talk to your health care provider to learn more about medications and osteoporosis.



About Hormone Replacement Therapy or HRT

Estrogen or a combination of estrogen and progestin may be prescribed to prevent bone loss when a woman has her ovaries removed by surgery or during menopause.

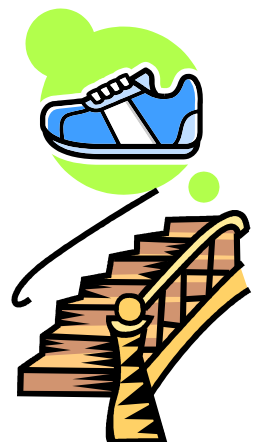
There are some benefits and risks to having hormone replacement therapy.

Since each woman has her own needs, you should talk to your health care provider about the benefits and risks for you.

Be careful

Take special care to prevent falls, injury and broken bones:

- Wear flat, comfortable shoes with non-slip soles.
- Use railings going up and down stairs.
- Remove scatter rugs in your home and avoid walking on scatter rugs when visiting.
- Take extra care walking in icy spots



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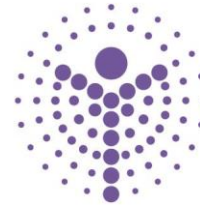


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