

Facts about Osteoporosis

What is osteoporosis?

Osteoporosis means porous or brittle bones. Weak bones can break easily; fractures of the hip, wrist and spine are commonly associated with osteoporosis.

Bone is surprisingly dynamic. It is constantly remodelled; bits of bone are eaten away or resorbed, while new bone grows to replace it. In osteoporosis, more bone is lost than made, resulting in net loss of bone mass.

Bone mass is closely related to bone strength -- the greater the mass, the less likely a bone is to break.

Facts about osteoporosis

Osteoporosis affects more than 1.4 million Canadians; more than 90 per cent are women.

One in four women and one in eight men over age 50 has osteoporosis. Half of Canadian women have osteoporosis by the age of 70, mostly because of estrogen loss after menopause.

Osteoporosis is a significant cause of death among the elderly, mainly due to complications following hip fracture. More women die from osteoporotic fractures than from breast and ovarian cancer combined.

Acute and long-term care and rehabilitation cost the Canadian health care system over a billion dollars a year. Costs could increase dramatically as the population ages.

Risk factors

Menopause is the single most important risk factor for osteoporosis. Bone density drops off sharply at menopause, because of a decrease in the hormone estrogen, which prevents resorption of bone.

Other risk factors include:

- a total hysterectomy (with removal of the ovaries) or menopause before age 45
- changes to menstrual cycles (e.g. due to an eating disorder or excessive exercise)
- not enough calcium and vitamin D in the diet
- not enough physical activity
- a thin, small build
- smoking
- alcohol (more than four drinks a day)

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- family history of osteoporosis or fractures
- chemotherapy (especially for breast cancer), resulting in ovarian failure
- chronic use of steroid treatment
- excessive doses of thyroid medications or anticonvulsant drugs

People with no risk factors may still develop osteoporosis

Symptoms

Osteoporosis is not painful unless you have fractures. Bone loss occurs without symptoms. Osteoporosis may go unrecognized for many years until a bone is fractured.

Fractures resulting from osteoporosis can gradually cause the spine to collapse. This can result in height loss, pain and a deformed back.

Diagnosis

Several tests can detect low bone mass. These tests are quick, painless and non-invasive. However, measurement of bone mineral density (BMD) is not currently recommended as a mass screening tool.

Standard X-rays can detect fractures, but cannot reliably detect bone loss until at least 30 per cent is gone. By that point the disease is well advanced.

Dual-energy X-ray absorptiometry (DXA) measures bone mass in the hip, spine and total body. It takes under 10 minutes and exposes the patient to a low level of radiation.

Treatment

Management of osteoporosis includes fall avoidance and treatment of back pain. Your family doctor is an important part of this process as he/she will order your pain medication. It is now possible to prevent further bone loss or even restore lost bone.

Treatments include:

- exercise
 - muscle strengthening
 - postural training
 - low-impact aerobics
 - balance exercises
- nutrition
 - dairy products
 - calcium and vitamin D supplements
- medications - three main types
 - bisphosphonates
 - anabolic (bone building)
 - denosumab
 - for more information about the medications please visit the Osteoporosis Canada website <https://osteoporosis.ca/>