



OSTEOPOROSIS



Osteoporosis is a disease that affects both men and women. "Osteo" means bone and "porosis" means porous, like a sponge. The bones become fragile and brittle. If it is not prevented or treated, osteoporosis can weaken the bones to the point where they may fracture (break). There are things you can do and medicines that will help prevent osteoporosis and replace some of the bone that has been lost.

WHAT CAUSES OSTEOPOROSIS?

Osteoporosis is caused by a change in the body's bone-building cycle. Throughout life, bone is constantly renewed through a process in which old bone is removed and replaced with new bone. In normal, healthy people, up until about age 30 more bone tissue is added than is taken away. From then on, the body removes old bone faster than it can replace it with new bone, leading to a loss of bone thickness (reduced bone mass or density). When too much bone is lost, the bones become thin, weak and more likely to break.

WHO'S AT RISK?

Both men and women are at risk of developing osteoporosis. Men tend to develop osteoporosis later in life than women.

You are at greater risk of developing osteoporosis if you:

- are going or have gone through menopause (see *Menopause Fact Card*)
- have a low calcium intake
- have other family members with osteoporosis
- have a thin or small build (because the skeleton is smaller to start with)
- don't exercise regularly
- smoke (smoking speeds up the rate at which you lose bone)
- take certain medicines e.g. corticosteroids (ask your pharmacist)
- have more than 2 standard drinks of alcohol per day.

Some medical conditions, e.g. kidney or liver disease or an overactive thyroid, can also cause osteoporosis.

Talk to your doctor about your risk of developing osteoporosis.

OSTEOPOROSIS TESTS

The best way to know if you are at risk of or have osteoporosis is to measure the thickness of the bone – the *bone density*. This is usually done through a special x-ray called a dual energy x-ray absorptiometry (DEXA) scan. A DEXA scan measures the thickness of the bone in the spine and at the hip. These areas give the best guide of your risk of having a break in a bone.

Heel ultrasound is a promising new technique to test for osteoporosis but needs further research to establish its place in diagnosis.

EFFECTS OF OSTEOPOROSIS

The main effect of osteoporosis is bone fractures (broken bones). People with osteoporosis can break bones more easily, following fairly mild falls.



Bones most commonly fractured due to osteoporosis include the wrist, hip, pelvis, ribs and spine.

Fractures of the spine can lead to

- a forward bending in the spine, giving the appearance of a hump back or "Dowager's" hump
- loss of height
- chronic back pain.

The lower your bone density, the greater your risk of fracture.

SELF CARE

Calcium

- used to slow bone loss
- normal recommended intake for adult men and women is 800mg per day, but, after menopause, women need up to 1200mg per day
- dairy foods are the best source; try low-fat, calcium enriched foods if you're concerned about weight or cholesterol
- if you don't get enough calcium from your diet, you can take a calcium supplement – ask your pharmacist (check with your doctor first if you have a history of kidney disease, especially kidney stones)
- while it slows bone loss, calcium alone can't restore bone mass

- Check with your pharmacist if you are taking prescribed medicines for osteoporosis – calcium cannot be taken while on some medicines and it may decrease the effectiveness of other medicines.

Be active!

- physical activity builds and maintains strong bones during growth
- regular weight-bearing exercise (e.g. walking, cycling, dancing) for 30 minutes on all or most days of the week is best
- in adults, weight-bearing exercise may slow bone loss but it will not increase bone density very much
- exercise also helps with balance, coordination and muscle strength.

Quit smoking

- smoking is an important risk factor for osteoporosis (see Smoking series of Fact Cards).

MEDICINES

Medicines may be used to help prevent or treat osteoporosis. Your doctor will help you decide which one is best for you.

Hormone replacement therapy (HRT)

- in women the most rapid bone loss occurs just after menopause
- HRT has been shown to prevent bone loss and may increase bone density and reduce the risk of fracture
- hormone therapy may also prevent further bone loss in older women.

Bisphosphonates

- e.g. alendronate sodium, etidronate disodium – non-hormone medicines that slow down bone loss
- have been shown to increase bone density and reduce the risk of fracture.

Your Self Care pharmacist



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Vitamin D compounds

- allow calcium to leave the intestines and enter the bloodstream
- control entry and loss of calcium from bones
- special forms, e.g. calcitriol, can help your body absorb more calcium from food – ask your doctor

Other medicines may also be used – talk to your doctor.

PREVENTING FALLS

While low bone density increases the risk of fracture, in many people it is a fall that leads to the actual fracture. Read the *Preventing Falls* Fact Card for advice on reducing your risk of having a fall.

Other relevant Fact Cards

- Menopause
- Smoking Fact Cards
- Preventing Falls

Contact:

Your doctor (listed under Medical Practitioners in the yellow pages of the phone book).

Osteoporosis Australia in your state phone 1800 242 141

Your Self Care pharmacist
To find: (02) 6281 1366

In case of poisoning, phone the Poisons Information Centre on 131 126 from anywhere in Australia.



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