

Osteoporosis

As we age, our bones can become less dense ('thinner') and weaker. Bones can become so weak that they fracture (crack or break) very easily. This fragile bone condition is called osteoporosis. Osteoporosis is most common in postmenopausal women.

Effects of osteoporosis

Our bones are continually being rebuilt and strengthened in a process which depends on calcium, vitamin D and certain hormones (e.g. oestrogen). As we age, this rebuilding process slows and bones can weaken, leading to osteoporosis. People with osteoporosis have a high risk of breaking a bone during a fall.

A fracture is often the first sign of osteoporosis. Fractures occur most often in the bones of the spine (vertebrae), hip, wrist, ribs and upper arm. Fractures in the bones of the spine can lead to loss of height, changes in posture and spine deformity. Hip fractures can lead to permanent disability and loss of independence.



Bone density test (DXA scan)

The best way to test for osteoporosis is to measure bone mineral density (BMD). A special x-ray called 'dual x-ray absorptiometry' (DXA) can measure the density (solidness) of the bone in the spine and hips.

Self care

A healthy diet with plenty of calcium, spending enough time outside in the sun (for vitamin D) and regular exercise all help to maintain bone and muscle strength, which reduces the risk of fractures.

- Calcium strengthens bone and slows bone loss. The recommended daily intake of calcium for most adults is 1000mg. The recommended daily intake for women aged over 50 years (or past menopause) and men aged over 70 years is 1300mg. Low-fat, calcium-enriched foods, especially dairy foods (e.g. milk, cheese, yoghurt), are good sources of calcium. Aim for at least three serves a day.
- Vitamin D aids calcium absorption, bone formation and muscle strength. It is formed in our skin on exposure to sunlight. For enough vitamin D, most people with fair skin need to expose face, hands and arms (or an equal skin area) to sunlight for about 5-9 minutes (before 10am or after 3pm) on most days in summer and for up to 30 minutes on most days in winter (the amount of sun exposure needed depends on the time of day, season and region). Darker-skinned people and the elderly need more sun exposure. Some foods contain vitamin D (e.g. milk, eggs, liver, fatty fish), but usually not enough for bone health.
- Regular exercise strengthens bones and muscles and maintains flexibility and balance, which help to prevent

falls. A combination of 'weight bearing' or impact exercises (e.g. walking, running, jumping, dancing), resistance training (with weights) and balance exercises are recommended. If you already have osteoporosis you may need gentle exercises. Ask a physiotherapist or exercise specialist for advice.

- Don't smoke.
- Limit alcohol use.
- Protect against falls. With osteoporosis even a slight fall can cause a fracture.

Common treatments

Calcium supplements, vitamin D supplements and certain medicines can help strengthen bones and reduce the risk of fractures. Ask a doctor or pharmacist for advice.

Calcium supplements

A daily calcium supplement is recommended for people who cannot get enough calcium from their food and especially for older adults.

Vitamin D supplements

Osteoporosis Australia recommends a vitamin D supplement of at least 800 IU per day for people who do not get enough sun exposure. People who are low in vitamin D may need higher doses. As the body's ability to form vitamin D decreases with age, a daily supplement is also recommended for older adults. Colecalciferol (vitamin D3), is a vitamin D supplement commonly used in Australia.

Bisphosphonates

(e.g. alendronate and risedronate tablets, and zoledronic acid injection)

Bisphosphonates are prescription medicines that slow down bone loss, increase bone density and reduce the risk of vertebral (spine) and non-vertebral fractures. Some bisphosphonate products also include vitamin D3 or calcium or both.

It is important to take bisphosphonate tablets exactly as directed, in order to ensure their absorption and reduce the risk of gastro-intestinal side effects.

Raloxifene

Raloxifene (*Evista tablets*) is a non-hormone prescription medicine with an oestrogen-like effect on bone. It slows down bone loss, increases bone density and reduces the risk of vertebral (spine) fractures in women.

Strontium

Strontium (*Protos*) is a prescription medicine that slows down bone loss, increases bone formation and reduces the risk of vertebral (spine) and non-vertebral fractures. It is important to take strontium granules exactly as directed in order to ensure it's absorption.

Who is at risk of osteoporosis?

Women have a higher risk of developing osteoporosis due to their smaller bone mass and the drop in oestrogen levels after menopause.

Other risk factors for both men and women include:

- Low dietary calcium
- Low Vitamin D – usually related to too little sunlight exposure (e.g. people in residential care or housebound, dark-skinned people, those who wear traditional or religious dress that covers most of their body)
- Not enough physical activity

- Increasing age
- Low body weight
- Family history of osteoporosis
- Caucasian or Asian race
- Smoking
- Heavy alcohol use
- Some medicines – (e.g. prednisolone, prednisone)
- Some medical conditions – (e.g. some hormone disorders, rheumatoid arthritis, kidney disease).

If you are over 50 and have had a bone fracture, you may be at risk of having more fractures. Ask your doctor to investigate the cause of the fracture.

For more information

Osteoporosis Australia

Phone: 1800 242 141

Website: www.osteoporosis.org.au

Healthdirect Australia

Phone: 1800 022 222

Website: www.healthinsite.gov.au

Consumer Medicine Information (CMI)

Your pharmacist can advise on
CMI leaflets.

NPS: Better choices, Better health

Phone: 1300 MEDICINE (1300 633 424)

Website: www.nps.org.au

The Poisons Information Centre

In case of poisoning phone 13 11 26
from anywhere in Australia.

*Pharmacists are medicines experts.
Ask a pharmacist for advice when
choosing a medicine.*

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