

The Women's Health Research Program

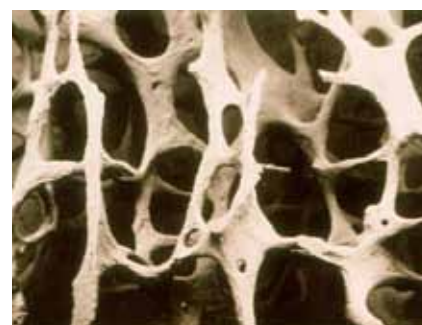
Health Bulletin
March 2012

Bone Health – osteoporosis and osteopaenia

Osteoporosis is a condition whereby bones become thinner, or less dense, and are more likely to fracture with minimal trauma. **Osteopaenia** is the term used to describe mild thinning of the bones. This is the first step towards development of osteoporosis.

Women in general are more likely than men to develop osteoporosis. Women experience an accelerated loss of bone around the time of menopause, at the average age of 50–51 years, when oestrogen levels drop significantly.

The consequences of untreated osteoporosis include fracture and the potential development of deformity, for example the 'dowager's hump'. Osteoporosis is often described as a 'silent disease', given that it may be present without any symptoms. Generalised bony aches and pains that may be present with increasing age are unlikely to be due to osteoporosis, but are more likely to be due to degenerative disease of the joints, or osteoarthritis. Some osteoporotic fractures may also be 'silent'. One third of women with Xray evidence of a previous fracture of the spine are not aware of having had a fracture at any point.



Above left: Normal bone. Above right: Osteoporotic bone – one can see thinning of connecting bone and big spaces in the bone structure making the bone more fragile.

Fractures of the spine however may also be associated with significant pain and a reduced ability to do the normal activities of daily life. Hence health practitioners aim to identify women at risk of developing osteoporosis, in order to maximise their bone density and where possible, avoid fracture and associated morbidity.

There are a number of recognised risk factors for the development of osteoporosis. These include:

- A family history of osteoporosis, especially if either of one's parents have had a hip fracture.
- Medical conditions associated with a higher incidence of osteoporosis include: rheumatoid arthritis, overactive thyroid/parathyroid glands, and chronic disease of the liver, kidney or gastrointestinal tract, such as coeliac disease.

- Certain medications are associated with a higher risk for the development of osteoporosis, including high dose corticosteroids (e.g. prednisolone for asthma).
- An early menopause has been associated with a higher risk for osteoporosis, (especially when menopause occurs before the age of 40).
- There is a higher incidence of osteoporosis in women who have long spaces (6 to 12 months) without periods
- Additional risk factors include: vitamin D deficiency (the sun exposure vitamin), cigarette smoking, excess alcohol consumption, a lack of calcium in the diet, inadequate weight bearing exercise, and potentially caffeine excess.

Diagnosis of osteoporosis is made based on the results of a bone density



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scan, or DEXA (also known as DXA). This is a relatively quick procedure which is similar to having a normal xray, and requires a referral from a health practitioner. The usual sites examined in a DEXA scan include the lower (lumbar) spine, and the hip. Some DEXAs also look at the wrist. Heel ultrasounds are available at some pharmacies and other locations and are a reasonable guide to the presence of osteoporosis, but they lack the accuracy and precision of the DEXA scan, and should not be relied on to either confirm or exclude the presence of osteoporosis.

Professor Susan Davis, director of the Women's Health Research Program, has undertaken several studies in the area of osteoporosis, including a study which has introduced a simple screening tool for health practitioners to use to identify which older women would be highly likely to have osteoporosis and be at risk of fracture (the 'PROSPECT wheel'). This is currently being used around Australia. Dr Sonia Davison, Senior Postdoctoral Research Fellow, hopes to embark on a study examining the screening of 2,500 younger women for osteoporosis in 2013, funding permitting.

To optimise bone health the following are recommended:

- Examine your risk factors for the development of osteoporosis with your health practitioner;
- Ensure your diet contains enough calcium;
- Participate in regular weight bearing exercise (walking, dancing, jogging etc);
- Check for the presence of vitamin D deficiency (via a blood test);
- Discuss the need for having a DEXA scan with your health practitioner; and
- Adhere to osteoporosis medications, if prescribed by your doctor.

The following websites have an abundance of information about osteoporosis:

www.med.monash.edu.au/medicine/alfred/womenshealth/info-sheets.html

www.osteoporosis.org.au

www.bonehealthforlife.org.au

www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Osteoporosis

Get involved in research

Antidepressants ruining your sex drive?

Are you a woman aged between 35 – 55 years, have been taking a stable dose of one of SSRIs (sertraline, citalopram, paroxetine, fluoxetine or fluvoxamine) or SNRIs (venlafaxine) for the past three months and are experiencing sexual difficulties and for which you would like to be treated.

If you would like more information, regarding this and other studies please visit our website: womenshealth.med.monash.edu or contact the Women's Health Research Program on 03 9903 0820 or by email on womens.health@monash.edu