



Bone deep

A frequent misconception about osteoporosis is that it's 'an old woman's disease'. While we know that it's more likely to occur in those with low calcium levels, the 'silent crippler' doesn't only affect post-menopausal women, according to **NOFSA**.

Did you know that bone loss in women can begin as early as the age of 25? Worldwide, the lifetime risk for a woman to have an osteoporotic fracture is at the age of 30-40 years.

A disease that reduces the density and quality of the bones, osteoporosis leads to weakness of the skeleton and increased risk of fracture, particularly in the spine, wrists, hip, pelvis and upper arms. Loss of height with gradual curvature of the back (caused by vertebral compression fractures) may be the only physical sign of osteoporosis.

History matters

Genetics offer us a map of our future simply by offering the examples of our parents' or grandparents' experience. If osteoporosis is evident in at least two generations, the possibility that you may also develop the condition around a similar age is, unfortunately, rather likely. The weakening of bones and bone fractures has definitively been linked to family history. Those with a small, frail body structure are at the greatest risk of suffering decreased bone density event at an early age.

Research has found that there are around 56 genetic variants that can be linked to osteoporosis – but basic genetic risk factors include:

- female gender
- ethnicity – Caucasian and Asian
- body size – Small frame, low body weight (less than 55kg)
- optimal bone density not reached in young adulthood
- family history – including tallness and thinness
- a maternal and paternal history of osteoporosis and hip fracture

New studies have shown the prevalence of osteoporosis in men is higher than previously thought, with approximately one in five men affected.

Close to the bone

The breaking of a bone is hardly a pleasant experience. Apart from the initial pain and shock, there's the long road of recovery and adjustment, because a bone is a fragile thing and needs space and time to rebuild strength. During this time, a person may be considerably compromised with regard to lifestyle and general engagement with society in the normal way. The psychological impact of this can be as limiting and difficult as the bone breakage itself. This time of recovery can elicit fear of falling, post-traumatic stress disorder, acute stress disorder, depression and anxiety.

Steady state

If you look around your home, you might be astonished at how much there is that can trip you up: loose rugs; trailing cables from heaters or computers or the television; poor lighting – so don't save electricity at the expense of being able to see properly as you get around. Poor eyesight is a key problem, especially when trying to look where you're



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going. So get tested regularly and ensure you have good spectacles. Some medicines can cause drowsiness or lack of concentration, or make you feel faint. Losing control of your balance is a high risk factor when taking certain medications. Wear flatter, more comfortable shoes with secure straps and non-slip soles.

Inarguably, exercise is a key factor in maintaining independence and keeping us steady on our own two feet. Exercise challenges the bones and muscle structure to strengthen balance – and anything that builds greater power in our leg muscles can certainly help to reduce the risk of falling.

Post-fracture care is vital if a patient is to avoid further fractures, which presents great expense to both quality of life and the healthcare system.

Tried and tested

To find out if you have osteoporosis, you need to have your bone density (BMD) measured. A BMD test indicates whether someone has a normal, low or osteoporotic bone density level, and a low reading means that you're at risk for developing fractures. Based on the results, a doctor may prescribe medication.

The scan is a high-precision type of X-ray (Dual-energy X-ray Absorptiometry, or DXA) that measures your bone mineral density and bone loss. If your bone density is lower than normal for your age, it indicates a risk for osteoporosis and bone fractures. A bone mineral density assessment should be considered every two years, depending on age, gender, and other risk factors.



Back to basics

Although there's no cure, there are a number of things you can do to help prevent this bone disease from developing, or to help improve or maintain existing bone once osteoporosis has developed.

Calcium is a major building block of our bone tissue and is important for preventing osteoporosis and bone disease.

Calcium-rich foods include:

- dairy products, such as low-fat/skimmed milk, yoghurt and cheese
- green vegetables (kale, broccoli, bok choy or spinach, for example)
- canned fish with soft, edible bones (the calcium is in their bones), such as salmon, pilchards and sardines, and
- nuts – especially almonds and Brazil nuts.

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In many cases, the first real symptom of osteoporosis is a broken bone



Vitamin D assists the absorption of calcium from food in your intestines, and ensures the correct renewal and mineralisation of bone tissue, so it is essential for the maintenance and development of bone.

Vitamin D is manufactured in your skin when exposed to ultraviolet rays, but it can also be obtained from food and dietary supplements, which include oily fish, such as salmon, sardines and mackerel, and eggs and liver. An average older man or woman would need a vitamin D intake of at least 800-1 000 IU/day (20-25µg/day), which is approximately double the intake recommended in most countries.

Exercise is essential for bone health at any age. It's never too late to start a healthy bone exercise programme, especially if you are at high risk for the disease, or have already developed osteoporosis. Because exercise strengthens bones and muscles, it can help prevent the falls and fall-related fractures that so often result in disability or premature death.

Exercise also helps improve balance, coordination and flexibility. According to the National Osteoporosis Foundation of South Africa (NOFSA), weight-bearing and muscle-strengthening exercise are two of the best exercises you can do to help with building and maintaining bone density.



The way forward

Although there's no cure for osteoporosis, there are a number of treatments and medications that can assist those living with the disease. However, getting the right osteoporosis medication will depend on a number of factors – these include:

- age – certain medications are more appropriate for post-menopausal women
- gender – some medications are specifically – and only – approved for women
- how far along the osteoporosis disease is – health practitioners should take into consideration other health elements (such as breast cancer, blood clots, radiation treatment, for example) before recommending the right osteoporosis medication, and
- personal preferences – medications are available as pills, sub-cutaneous injections, or IV medicines, and preference of this will vary from person to person. ☺



The National Osteoporosis Foundation of South Africa (NOFSA) is the only non-profit, voluntary health organisation in South Africa that is dedicated to promoting lifelong bone health. NOFSA focuses on reducing the widespread prevalence of osteoporosis while working to find a cure for the disease, and by supporting research and developing programmes of education and advocacy.

Find out more at www.osteoporosis.org.za, email info@osteoporosis.org.za, WhatsApp **068 491 3543**, or call the helpline on **0861 102 265**.