

Healthy Bones



Bones are living tissue and are constantly being broken down and rebuilt throughout our lives. Like any living tissue, this process requires ongoing nourishment. When we are young, our bones remodel themselves and repair damage very quickly. In fact, bone size and strength typically peak between the age of 30 and 35. As we age our bones can lose density, as the careful balance of bone formation and loss changes, leading to slightly increased bone loss in

comparison to bone growth. Whilst this is thought to be a normal part of ageing, for some people it can lead to osteopenia, osteoporosis and an increased risk of fractures. It occurs due to a number of factors and not just a lack of dietary calcium as is commonly believed.

Bone loss occurs in both men and women, but the patterns of loss are different. In men it is a steadier, gradual process. Whilst women tend to see an acceleration of bone loss post menopause, due to more significant changes in hormone levels. The good news is that there is growing agreement amongst experts that plenty can be done to reduce the severity of bone density loss by following a few key diet and lifestyle pointers. Although prevention from an early age is the best protection, there is positive research into reducing the rate of age-related bone loss, which can be done from any age.

Key Advice:

- **Reduce alcohol intake** - alcohol interferes with how our bodies absorb and use calcium.
- **Quit smoking** - cigarettes are a known risk factor in developing osteoporosis.
- **Reduce caffeine intake** - caffeine can increase the amount of calcium we excrete in our urine and also interferes with absorption of nutrients.
- **Take regular exercise** - weight-bearing and resistance exercise, such as walking, jogging, dancing and light weight-lifting are particularly good at maintaining bone density.
- **Get adequate sun exposure** - although we are all well aware of the dangers of sitting out in the midday sun, it is actually important for us to get a reasonable level of sun exposure in order to maintain healthy bones. This is because the sun triggers our bodies to make vitamin D, which is just as essential in bone health as calcium. Catching the sun at the start of the day or later in the afternoon would be preferable. If you burn, this means you've been out too long. Also note that as we age, our bodies are less efficient at making vitamin D, and although we can get it directly from our diet (mainly from oily fish such as salmon, mackerel and sardines), it is sometimes necessary to take a supplement.
- **Maintaining a healthy body weight** - those with a low body weight, particularly women, are more at risk of developing osteoporosis. Therefore it is essential to maintain a healthy body weight.

- **Get enough calcium** - the most abundant mineral in our bones. It is important to get calcium from a wide range of foods, not simply dairy. In fact, it is quite possible to get enough calcium in the diet even when avoiding dairy altogether, as is advisable for some people. See below for list of non-dairy foods containing calcium.
- **Don't forget magnesium and vitamin K** - argued by some to be equally, if not more, important as calcium and vitamin D in bone health. The following foods are essential to add into your diet on a regular basis: broccoli, spinach, peas, celery, tomatoes, onions, garlic, eggs, chicken breast, sauerkraut, dried figs, apricots and prunes, bananas, pineapple and oranges. Also include almonds, cashews, Brazils, pecans and sunflower seeds, as well as buckwheat, rye and barley. Try the traditional Japanese fermented soy food, natto. It's an acquired taste, but has extremely high levels of vitamin K and magnesium, as well as calcium and vitamin A.
- **Phytoestrogens** - may provide benefit in maintaining bone density in post-menopausal women. They tend to be found in healthy foods containing many other nutrients, so are good things to regularly include in your diet. Phytoestrogens can be found in flaxseeds in particular, but also sesame, sunflower seeds, chestnuts and almonds. Legumes are a good source, try hummus, or add kidney beans and lentils to soups and stews. Soy products are very high in phytoestrogens, but make sure you get organic, non GM soy products, such as organic tofu or tempeh.



Non-dairy Sources of Calcium

<i>Fruit and vegetables:</i> Spinach, chard, rhubarb, greens, kale, bok choy, bean sprouts, broccoli, French beans, oranges, grapefruit, dried dates and figs	<i>Fish:</i> Sardines, mackerel and salmon Use fish that comes with bones
<i>Nuts and seeds:</i> Sesame, almonds, chestnuts, walnuts and sunflower seeds Nut butters Nut milks such as almonds or oat milk (often fortified with calcium)	<i>Other:</i> Oats, tofu (ensure it contains calcium sulphate in the ingredients list), edamame beans (soybeans), garbanzo beans, navy beans and white beans

Sources and further information: www.nos.org.uk (National Osteoporosis Society) and www.mayoclinic.com