



5 Questions every woman should ask about **Osteoporosis**

by Tracey Karele

As recently as 30 years ago, it was thought that little could be done about osteoporosis, and that it was an inevitable part of old age. We now know that there are means of treating and preventing this dreaded disease, and it need not be an unavoidable part of later life.

WHAT is Osteoporosis ?

Osteoporosis (meaning "porous bone") is a disease characterised by low bone mass and the deterioration of bone tissue, leading to bone fragility and a subsequent increase in fracture risk. Over time, bones become so weak and brittle that even the lightest knock or fall can cause them to break.

Many people are under the incorrect impression that bones are stony or lifeless, and that once a bone is built, it stays that way forever. In fact, the minerals of bones are in constant motion, with formation and dissolution taking place all the time. Two kinds of cells are responsible for this continuous remodelling of bone – osteoclasts (break down bone) and osteoblasts (build bone).

Osteoblasts are predominant in youth, and bones gain strength and density all throughout childhood and young adulthood. Bone mass peaks at about 30 years of age. Thereafter, bone breakdown exceeds formation, bone mass diminishes and bones lose strength and density. As a result of these brittle bones, when the bone breaks, the fracture is seldom a clean break and the bone can shatter into hundreds of tiny fragments that are impossible to reassemble.

WHO does it affect ?

Women are five times more likely than men to get osteoporosis, according to the U.S. Food & Drug Administration. The reason for this is that menopause results in a sharp decline in oestrogen secretion, which in turn produces a surge of bone loss. This sharp surge slows down after a few years, although it does continue at a slower rate.

SOME RISK FACTORS FOR OSTEOPOROSIS INCLUDE:

Age - The older you get, the higher your risk of osteoporosis.

Small and underweight - Those with heavier frames put weight-bearing stress on their bones. This actually builds bone strength and promotes their maintenance.

Family history of osteoporosis - Studies indicate that the condition may have a strong genetic component.

Caucasian or Asian race - These tend to have a higher osteoporosis risk than those of, for example, African descent.

Eating disorder e.g. anorexia nervosa - These can cause menstrual periods to stop before menopause, thereby increasing osteoporosis risk.

WHY does it happen ?

Although some of the above mentioned risk factors for osteoporosis are all but inescapable, many of the causes can in fact be avoided.

Diet low in calcium - Calcium is the most abundant mineral in the body and 99% of it is stored in our bones, where it plays an integral part in bone structure. The cells in our body need continuous access to calcium, and our bones serve as a "bank" from which the blood can borrow and return calcium as needed. Without adequate dietary calcium, this "bank" can be slowly depleted, leading to reduced bone density and fragile bones. Dietary sources of calcium include leafy green vegetables, sardines, milk and dairy products.

Insufficient vitamin D - Vitamin D acts in the digestive tract and in the kidneys to raise calcium levels. It plays an essential role in maintaining blood calcium levels and therefore bone integrity. Vitamin D, nicknamed the “sunshine vitamin,” is distinctive in that it is synthesized in the skin on exposure to sunlight. Just being outdoors for a few minutes, even in light clothing, is sufficient for this process - there is no need for a lengthy sunbathing session! Dietary sources of vitamin D include fortified margarine, milk and salmon.

Sedentary lifestyle - Weight-bearing exercise i.e. any activity where your body works against gravity, is essential for bone health. Astronauts who spend months in space (where there is no gravity) experience extensive bone mineral loss. Examples of weight-bearing physical activity include walking, jogging, hiking and weight-lifting.

Other poor lifestyle choices also contribute to a loss in bone density. **Smoking** is particularly hard on the bones. Women who smoke lose 5 – 10% more of their bone density than non-smokers by the time they reach menopause. **Excessive alcohol consumption** can also result in diminished bone density, as can heavy use of caffeinated beverages like tea, coffee and soft drinks. **Cola drinks**, in particular, are major culprits. A study published in the American Journal of Nutrition linked phosphoric acid (used extensively in cola drinks to lower bone density) The phosphoric acid is thought to bind with calcium in the digestive tract and prevent it from being absorbed.

HOW will I know if I have it ?

Osteoporosis is a silent disease; there may be no noticeable symptoms for many years until one day, seemingly out of the blue, you break a bone. However, a **bone density test** or DEXA (Dual Energy X-ray Absorptiometry) scan can determine if you have or are at risk for osteoporosis before you break any bones.

Although a lifetime of adequate calcium intake, exercise and sober habits will contribute to an increased bone density, other uncontrollable factors may counteract this. Thyroid conditions, for example, especially those that produce too much thyroid hormone (hyperthyroidism) can accelerate

bone mineral loss. A bone density test measures bone mineral density and can determine relative osteoporosis risk. If any of the previously mentioned causes or risk factors apply to you, and if you are already 65 years or older, you should get a bone density test.

WHERE can I get enough Calcium ?

AIM's BarleyLife™ and Leafgreens™ are our primary sources of Calcium and the best delivery systems. Calcium plays a crucial role in building dense and strong bones. Obtaining sufficient calcium during the younger years will ensure optimal bone density, and obtaining enough calcium in later years will help to minimise losses.



Calcium supplementation has become extremely popular and doctors commonly recommend these supplements to patients. Not all calcium supplements are the same, however, and the average person only absorbs 20-30% of calcium from commercially available tablets or capsules. For those who need additional Calcium over and above what they are receiving from BarleyLife or Leafgreens™ then you can consider....

AIM's CalciAIM™ is a delicious natural citrus drink that provides a combination of nutrients ideal for bone maintenance. Once mixed with water, it contains calcium in its ionic form which is highly available for absorption by the body. As AIM knows, no nutrient works independently, and **CalciAIM™** also contains vitamin D, which is essential for the regulation of calcium absorption, utilisation and excretion. It also contains magnesium, which is involved in bone mineralization and directly affects the metabolism (use or change) of calcium and vitamin D.

