

Banking on Strong Bones for Life



Why we need calcium

You may know that calcium plays an important role in building healthy teeth and bones. What you may not know is that calcium is vital to every cell of the body for muscle function, nerve transmission, blood clotting and many other uses. When you don't get enough calcium in your diet, the calcium stored in your bones is "stolen" to supply the rest of your body. Hence, your bones suffer the consequences of low-calcium diet and they become more susceptible to fractures.

Your bones are like a bank, you can deposit calcium until around the age of 30, and then for the rest of your life you have to withdraw the calcium that you have "saved". This is why it is critical to build strong bones when you are young.

Calcium in your body

Calcium is the most abundant mineral in the body; it makes up about 1.5% to 2% of the body weight and 39% of the total body minerals. Approximately 99% of the calcium exists in the bones and teeth. (The calcium in teeth, however, is not mobilisable for return to the blood, as the minerals of erupted teeth are "fixed for life"). The remaining 1% is in the blood and extracellular fluids and within the cells of all tissues, where it regulates many important metabolic functions.

Food sources and intake

The best source of calcium is dairy products such as milk, yoghurt, cheese, ice cream, frozen yoghurt. Dark green leafy vegetables, sardines, clams, oysters, and tinned salmon also contain ample amount of calcium. Fortified orange juice contains as much calcium as milk.

Calcium supplements

Calcium supplements are being used to increase calcium intake. The most common form is calcium carbonate, which is relatively insoluble, particularly at a neutral pH. Calcium citrate, although containing less calcium than calcium carbonate by weight, is much more soluble. Therefore, calcium citrate would be suitable for patients with achlorhydria (lack of hydrochloric acid in the stomach). The selection of the most appropriate calcium supplements depends on several factors, including physical and chemical properties, interactions with other medicines taken concurrently, current medical conditions and age.

Dietary Reference Intake (DRIs)

Calcium recommended by the food and nutrition board is based on estimates of requirements of both genders throughout the life cycle. During several periods of the female life cycle, calcium intake is critical, namely, pre-puberty, adolescence, post-menopause, and during pregnancy and lactation. Men also need adequate amount of calcium throughout the life cycle.

The DRI (daily requirement intake) for calcium is 1200 to 1500mg per day for adolescents 11 to 24 years of age; excessively high soft drinks consumption in the adolescent population contributes to low calcium intake in this age group, because of the likelihood that soda is being substituted for milk. It is therefore, highly recommended that you consume at least eight glasses of water a day. Calcium bioavailability from your water is almost similar to that from milk and induces a suppressive effect of bone resorption if children drink calcium-rich water several times a day. Rand Water purifies the water through a conventional purification process; resulting in a calcium level in your tap water, which is within the SABS 0241 water specifications limits.

Visit www.reservoir.co.za for further information on water quality in your area.

