

Calcium is a major building-block of our bone tissue, and our skeleton houses 99 per cent of our body's calcium stores By International Osteoporosis Foundation

Calcium

the calcium in our bones also acts as a 'reservoir' for maintaining calcium levels in the blood, which is essential for healthy nerve and muscle functioning. The amount of calcium we need to consume changes at different stages in our lives. Calcium requirements are high in our teenage years with the rapid growth of the skeleton, and during this time, our body's efficiency in absorbing calcium from food increases. With age, however, this absorption efficiency declines, which is one of the reasons why seniors also need to consume higher amounts of calcium (see table for calcium intake recommendations for all age groups).

Milk and other dairy products are the most readily available dietary sources of calcium. Dairy foods have the additional advantage of being good sources of protein and other micronutrients (besides calcium) that are important for bone and general health. Other good food sources of calcium include some green vegetables, like broccoli, curly kale, and bok choy; canned fish with soft, edible bones (the calcium is in the bones!) such as sardines, pilchards and salmon; nuts – especially Brazil nuts and almonds; some fruits such as oranges, apricots and dried figs; and calcium-set tofu.

See a comprehensive list of calcium-rich foods

Some calcium-fortified breads, cereals, fruit juices, soy beverages and several brands of commercial mineral water also contain significant amounts of calcium. These foods provide a suitable alternative for people who are lactose-intolerant and vegan vegetarians. Some leafy produce, like spinach and rhubarb, contain 'oxalates', which prevent the calcium present in these vegetables from being absorbed. However, they do not interfere with calcium absorption from other calcium-containing foods eaten at the same time. The same is true of 'phytates' in dried beans, cereal husks and seeds.

Caffeine and salt can increase calcium loss from the body and should not be taken in excessive amounts. Alcohol should also be taken in moderation as it detracts from bone health and is associated with falls and fractures. And while no conclusive evidence shows that fizzy soft drinks (e.g. cola drinks) weaken bones, here too, it's best not to overdo it – especially as such drinks tend to 'displace' milk in the diets of children and teenagers.

Recommended daily calcium intakes

Recommended daily calcium intakes for populations vary between countries. The FAO/WHO (2002) recommendations, based on data from several countries, are as follows:



Infants and Children	Calcium (mg/day)
0-6 months	300-400
7-12 months	400
1-3 years	500
4-6 years	600
7-9 years	700
Adolescents	Calcium (mg/day)
10-18 years	1300*
Women	Calcium (mg/day)
19 years to menopause	1000
Postmenopause	1200
During pregnancy (last trimester)	1300
Lactation	1000
Men	Calcium (mg/day)
19-65 years	1000
65+ years	1300

The 'recommended allowance' refers to the amount of calcium that each age group is advised to consume (with daily intake corresponding to an average intake over a period of time), to ensure that calcium consumed compensates for calcium excreted from the body each day. The calcium allowance figures for children and adolescents also take account of skeletal growth (net calcium gain), and those for postmenopausal women and the elderly also take account of a lower intestinal calcium absorption efficiency.

*Particularly during the growth spurt.

Figures based on Western European, American and Canadian data. Source: FAO/WHO: Human Vitamin and Mineral Requirements, 2002.

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Visit the International Osteoporosis Foundation's website at www.iofbonehealth.org or www.osteoporosis.org.sg for more information.