

FACTSHEET No. 10

CALCIUM

What is calcium?

- Calcium is an essential nutrient for strong bones and healthy teeth but is equally vital as a regulator in most of our body tissues, helping nerves and muscles to work properly.
- Calcium is the most abundant mineral in the body and nearly all of it (99%) is in the bones, teeth, soft tissues and blood. It accounts for about 2% of body weight.

Bread

- By law white and brown flour are fortified with calcium therefore white or brown breads are preferable to wholemeal for people whose calcium intake may be inadequate.

Amount of Calcium in Bread

White	177 mg per 100g
Brown	185 mg per 100g
Wholemeal	106 mg per 100g

Source: McCance & Widdowson's The Composition of Foods 6th Summary Edition (2002)

- Four medium slices of white bread per day would provide more than 30% of the RDA for calcium.

How much calcium do we need?

- All calcium required for bones and teeth comes from our diet. Milk and milk products are the major source in the British diet. White and brown bread (by law fortified with calcium), cereal products, vegetables and hard water also provide significant amounts. A healthy balanced diet should provide all the calcium we need.
- Consumption of vegetables in the UK is relatively low and accounts for less than 15% of calcium intake. Vegans, who do not consume milk or milk products and who often prefer wholemeal bread, have lower calcium intakes, consuming an average 537 mg calcium per day mainly from vegetable sources. Calcium from wholemeal bread and some vegetable sources is not as easily absorbed by the body.
- We should ensure we have an adequate intake of calcium throughout our life. Calcium is a vital mineral that helps our bodies to function, as well as being a 'bone builder' in the early years of our lives.

- Peak bone mass is reached at the age of about 30-35 years. It is the stage at which bone is strongest. After this age bone mass gradually decreases. Achieving a good peak bone mass is important in reducing the risk of osteoporosis in later life because it means that bones are strong before bone loss increases as part of the natural ageing process.
- The Recommended Daily Allowance (RDA) for calcium is 800 mg. but older people may require more.
- Surveys show that adults generally take in satisfactory levels of calcium but the intakes of 16-24 year olds are significantly lower than those of people aged over 35.
- **A survey of British schoolchildren aged 10-15 showed that the intakes of both boys and girls (intakes for boys were greater) were considerably lower than recommended. In particular the intakes of some girls who consumed very little milk or cereal products were less than 300 mg per day. This is a cause for concern. Young people whose intake is regularly as low as 300 mg per day are not getting sufficient calcium at a crucial age for the development of bones and teeth.**

Osteoporosis

- Osteoporosis is a condition in which the density of bones is reduced. This is due to a loss of both protein and calcium from the bone. Because of the osteoporosis the bones are weaker and break more easily.
- Osteoporosis occurs usually as a result of the ageing process, in both men and women, and in the years following menopause for women as a result of oestrogen deficiency. In the UK 1 in 3 women and at least 1 in 12 men will develop osteoporosis during their lifetime.
- Calcium deficiency has been implicated in the development of osteoporosis through failure to achieve an adequate peak bone mass during early years (usually by the age of 30-35), or an increased rate of bone loss in later life. There does not appear to be any relationship between current calcium intake and present bone mass.
- Bone loss following the menopause cannot be prevented by extra calcium alone. However, calcium supplements may reduce the dose of oestrogen necessary to prevent bone loss.
- Regular weight bearing exercise, such as brisk walking or dancing, reduces the risk of osteoporosis.

Further information

Further information on osteoporosis is available from:

National Osteoporosis Society (NOS)

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Helpline: 0845 450 0230

Website: www.nos.org.uk