



# Calcium

Calcium is an essential nutrient which has many important roles in the body; it's needed to build and maintain healthy bones and teeth, to help muscles and nerves work properly and to keep teeth healthy. It also has a role in blood clotting and in helping digestion.

### BONE HEALTH

#### **Children and teenagers**

Childhood is an important time for building strong, healthy bones, and getting enough calcium is an essential part of this. Teenage years in particular are crucial for bone building, so calcium requirements are high at this time. Bones are growing in both length and strength; around 90% of the adult skeleton is formed by the age of 18.

The National Diet and Nutrition Survey reported that 15% of all 11-18 year olds are not getting enough calcium from their food. This figure is higher for girls – almost 20%.

#### **Adults**

An adequate calcium intake is important throughout adult life. Although the majority of our skeleton is laid down during the teenage years, bones continue to strengthen until our mid-thirties. After this, we naturally begin to lose bone, and for women there is a marked increase in bone loss around the time of the menopause. The loss of bone as we age can eventually result in fragile bones which are at an increased risk of fracture. Getting enough calcium is important for both men and women throughout our later years to help keep bones healthy.



## PREGNANCY AND BREASTFEEDING

During pregnancy, a woman's body will change to absorb more calcium from the food she eats, so her recommended calcium intake isn't any higher than before pregnancy. **But it is still important to get enough calcium in her diet to help build strong, healthy bones in her developing baby.** 

During breastfeeding, the demands for calcium are higher and breastfeeding women need an additional 550mg of calcium a day (see p14/15).

#### A BALANCED LIFESTYLE

Other nutrients in a balanced diet including protein and vitamin D are also important for bone health.

And healthy bones need regular exercise to keep them strong too; like muscles, bones suffer if they're not used.

Weight-bearing activities, where our feet and legs support our weight, are particularly good for bones; these include running, skipping and dancing – even brisk walking. We should aim for 2½ hours per week.

Quitting smoking and limiting alcohol intake is also good for bone health.

## DAIRY FOODS & CALCIUM

Including milk, cheese and yogurt in the diet is a great way to help meet our calcium needs. Dairy foods contribute the most calcium to the UK diet, and the calcium they contain is easy for the body to absorb and use.

The table on the next page shows the recommended calcium intake at different ages, and the portion sizes of dairy that can help meet these needs.

It's not just calcium that milk, hard cheese and yogurt provide; they also contain protein and phosphorus, both of which help keep bones strong and healthy.

Breastfeeding women As listed for age group plus another 550mg	Age	<b>Calcium needs</b> (RNI*, mg/day)	Portion sizes	Calcium content mg
<b>18 years and under</b> 800 + 550 = 1350mg/day <b>19 years and over</b> 700 + 550 = 1250mg/day	1-3 years	350	100ml (½ adult glass) whole/semi-skimmed milk 80g (2 tablespoons) whole plain yogurt 15g (small cube) hard cheese These portion sizes provide approximately 391mg of calcium	120 160 111
The Department of Health recommends that children under two need whole milk and full-fat cheese and yogurt. If they're over two, they can have semi-skimmed milk and lower-fat dairy products if they are good eaters and growing well. Skimmed and 1% milk are not suitable for children under five.	4-6 years	450	189ml (1/3 pint) semi-skimmed milk 80g (2 tablespoons) whole plain yogurt 20g (2 tablespoons grated) hard cheese These portion sizes provide approximately 535mg of calcium	227 160 148
	7-10 years	550	189ml (1⁄3 pint) semi-skimmed milk 125g pot low-fat plain yogurt 20g (2 tablespoons grated) reduced-fat hard cheese These portion sizes provide approximately 600mg of calcium	227 203 168
	11-18 years Male	1000	284ml (½ pint) semi-skimmed milk 200g (5 tablespoons) low-fat plain yogurt 45g (sandwich portion) reduced-fat hard cheese These portion sizes provide approximately 1043mg of calcium	341 324 378
* RNI, Reference Nutrient Intake, is a figure set by the Department of Health for the amount of a nutrient that is enough to meet the dietary needs of most people (97.5%).	11-18 years Female	800	250ml (large glass) semi-skimmed milk 200g (5 tablespoons) low-fat plain yogurt 30g (small matchbox) reduced-fat hard cheese These portion sizes provide approximately 832mg of calcium	300 280 252
	19 years and over	700	200ml (glass) semi-skimmed milk 150g pot low-fat plain yogurt 30g (small matchbox) reduced-fat hard cheese These portion sizes provide approximately 735mg of calcium	240 243 252

## OTHER FOOD SOURCES OF CALCIUM

- Oily fish with soft edible bones such as sardines and pilchards
- Calcium-fortified drinks including soya drinks and fortified orange juices
- Calcium-fortified soya and rice desserts
- Tofu

- Some nuts and seeds

   including almonds, brazil nuts, hazelnuts and sesame seeds
- Dried figs
- Okra
- Some types of beans and peas
- White bread
- Kale

A balanced and varied diet should provide enough calcium to meet our requirements. If you take a calcium supplement, make sure your total intake doesn't exceed 1500mg/day as this may cause stomach pain and diarrhoea.

Children under five years old shouldn't be given whole nuts because of the risk of choking. People with a medically diagnosed allergy to any of the above foods should avoid them.



#### References

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