

## Calcium - children

Calcium is an important part of the daily diet, especially for children. It is essential for the growth of strong bones and teeth. Dietitians and dentists recommend that children should meet their calcium needs by eating dairy foods and having a well balanced diet.

Severe calcium deficiency can result in diseases like rickets in children and osteoporosis later in life.

### Bones need calcium

Calcium is the most common mineral in the body. Around 99 per cent of the calcium in the body is found in the bones or skeleton; the rest is in teeth, soft tissues and blood. The skeleton is a living tissue and acts as a calcium reservoir, which needs to be topped up daily. A high intake of dietary calcium is essential for growth of strong bones and teeth.

Calcium, phosphorus and vitamin D work together in the body to achieve the right calcium levels that your body needs. Dietitians and dentists recommend that children should get calcium from eating dairy foods and having a well balanced diet.

A low calcium diet in childhood may be linked with osteoporosis later in life. Osteoporosis can lead to fragile bones and an increased risk of fractures.

### Milk promotes calcium absorption

Dairy foods are the richest source of calcium in the Australian diet. Calcium absorption is helped by the milk sugar (lactose), which seems to assist in uptake of calcium by the body. Vitamin D and phosphorus also help the body absorb calcium.

### Don't offer too much milk

Too much milk can cause problems. Drinking more than 600ml to 800ml of milk a day may decrease your child's appetite. They may eat less of other foods and it may affect how their body absorbs iron.

### Children who don't drink milk

If your child refuses to drink milk, calcium can be obtained from the following foods:

- Cheese, yoghurt or milk-based custards.
- Sardines and other fish that contain fine bones that can be eaten.
- Nuts (such as almonds) have moderate amount of calcium and protein; however nuts are not suitable for very young children.
- Leafy green vegetables such as broccoli, spinach and bok choy.
- Some breakfast cereals are fortified with calcium – read the label carefully.
- Some soy drinks are fortified with calcium – read the label carefully.

### Reduced fat milk

Milk is a major energy source during the rapid growth experienced by young children. Reduced fat milk is only suitable for certain age groups.

- **Children one to two years** – low fat milk is not suitable; they should have full fat milk and dairy products.
- **Children over two years** – can consume reduced fat milk and dairy products.

### Recommended dietary intake of calcium for children

Babies, children and teenagers require the following amounts of calcium:

- **Babies** – 0 to 6 months (breastfed) recommended dietary intake (RDI) 300mg
- **Babies** – 0 to 6 months (formula-fed) RDI 500mg
- **Babies** – 7 to 12 months RDI 550mg
- **Children** – 1 to 3 years RDI 700mg
- **Children** – 4 to 7 years RDI 800mg
- **Children** – 8 to 11 years (girls) RDI 900mg, (boys) RDI 800mg
- **Children and teenagers** – 12 to 15 years (girls) RDI 1000mg, (boys) RDI 1200mg
- **Teenagers** – 16 to 18 years (girls) RDI 800mg, (boys) RDI 1000mg.

See over ...

## Best sources of calcium in food

Breast milk and infant formulas are the main source of calcium for children under one year of age.

The current recommendation for children aged four to 11 years is to eat two to three servings of dairy products per day.

Foods that provide a good source of calcium include:

- **Milk** – whole milk, one cup – 295mg calcium
- **Milk** – reduced fat, one cup – 350mg calcium
- **Cheese** – cheddar, one slice (20g) – 155mg calcium
- **Cheese** – cheddar reduced fat, one slice (20g) – 170mg calcium
- **Yoghurt** – one tub (200g) – 300mg calcium
- **Cottage cheese** – two tablespoons – 27mg calcium
- **Spinach** – half cup, cooked – 36mg calcium
- **Sardines** – with bones (60g) – 230mg calcium
- **Salmon** – canned with bones (60g) – 240mg calcium
- **Almonds** – one tablespoon (15g) – 31mg calcium
- **Soy drink** – with added calcium, one cup – 300mg calcium
- **Soy drink** – no calcium added, one cup – 33mg calcium.

## Calcium is essential during pregnancy and lactation

During pregnancy and breastfeeding the mother must consume enough dietary calcium to cover her own needs and those of the growing baby. If the mother isn't getting enough calcium, the calcium needed by the developing baby is drawn from the mother's bones.

The recommended dietary intake of calcium for pregnant women is 1,100 mg each day, or 300 mg more than for non-pregnant women. The RDI of calcium for breastfeeding women is 1,200 mg each day. You should seek medical advice before supplementing your diet with calcium tablets.

## Lactose intolerance

Lactose intolerance is usually a temporary, acquired condition in young children; it often follows acute gastroenteritis. It is common in Asian communities (80 to 90 per cent), but is less common in adult Caucasians (10 to 20 per cent).

There are a variety of low lactose milks, fortified soy drinks and formulas available for children with lactose intolerance so that calcium intake is not reduced.

## Where to get help

- Your doctor
- Your dentist
- Your Maternal and Child Health nurse
- An Accredited Practising Dietitian (APD) [www.daa.asn.au](http://www.daa.asn.au)
- Royal Children's Hospital Tel. (03) 9345 5522
- Dental Health Services Victoria Tel. (03) 9341 1000.

## Things to remember

- Calcium is essential for the development of strong teeth and bones.
- Milk and dairy products are the best sources of dietary calcium.
- Soy drinks are not a natural source of dietary calcium.

This page has been produced in consultation with, and approved by, Department of Human Services – Public Health Nutrition Unit. The Better Health Channel is part of the Department of Human Services, Victoria

### Updates

This is a copy of an article from the Better Health Channel website. Articles on the Better Health Channel are updated regularly. For the most recent information on this topic, go to [www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)

### Quality assurance

This article, like all articles on the Better Health Channel, has passed through a rigorous and exhaustive approval process.

### Copyright

Copyright © 2000/2004 State of Victoria. Reproduced from the Better Health Channel ([www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)) at no cost with Permission of the Victorian Minister for Health. Unauthorized reproduction and other uses comprised in the copyright are prohibited without permission.