

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 amount of dietary calcium for children

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

- **Babies** – 0 to 6 months (breastfed) at least 210mg per day. (Bottle fed babies require more than this amount as the calcium in infant formula may not be absorbed as efficiently as that found in breast milk.)
- **Babies** – 7 to 12 months (breastfed) at least 270mg per day, (bottle fed) at least 350mg per day.
- **Children** – 1 to 3 years 500mg per day.
- **Children** – 4 to 8 years 700mg per day.
- **Children** – 9 to 11 years (girls and boys) 1,000mg per day.
- **Children and teenagers** – 12 to 18 years (girls and boys) 1,300mg per day.

If children consume around the amount recommended for their particular age and gender, and they are generally healthy, it is unlikely they will be calcium deficient.

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.

Pregnancy and breastfeeding

Previously it was thought that pregnant and breastfeeding (lactating) mothers needed to consume higher levels of dietary calcium to cover their own needs and those of the growing baby. This advice was revised in 2006. Although a developing baby needs a lot of calcium and this is taken from the mother's bones, most women rapidly replace this bone loss once the baby has stopped breastfeeding.

There is no additional dietary calcium requirement for pregnant or lactating women. All adult women under 50 years of age need 1,000mg per day, while adolescents require 1,300mg per 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, contact the Dietitians Association of Australia
- 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.

Want to know more?

Go to More information for support groups, related links and references.

This page has been produced in consultation with, and approved by:

Better Health Channel

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