

Calcium

Fact sheet

Calcium is the most common mineral in the body, with most of it found in the skeleton and the rest in teeth, blood and soft tissues. During childhood and adolescence, the skeleton undergoes a rapid rate of growth. Getting enough calcium during this time is important for growth and to help achieve maximum bone density (strength). Our bone mass starts to decline between the ages of 19-30, which means building stronger bones during childhood and adolescence is important for our bones later in life.



Good nutrition is part of the Nestle heritage

Here at Nestle we have a dedicated team of dietitians and nutritionists helping people enjoy healthy foods and the benefits of a healthier lifestyle.

Visit www.nestle.nutrition.com.au today.

Receive a FREE copy of our "Get Out! Get Active! Get Healthy!" booklet for kids. <http://www.nestle.com.au/Fun/GetOutGetActive>



The official AIS Survival Cook Books, each feature a superb collection of recipes perfect for busy families who want healthy and tasty food. <http://www.nestle.com.au/Recipes/Survival>



Page 1

WHY IS IT IMPORTANT?

Calcium makes up around 2% of an average adult's weight and is important for a number of functions in the body. It is essential for the growth and maintenance of bones and teeth and is involved in a number of processes in the body, like helping muscles to function properly.

The skeleton is made of calcium and the body is constantly adding and removing calcium from the bones. The calcium levels in the blood are tightly regulated such that if dietary calcium intake is inadequate, calcium is released from the bones. An inadequate calcium intake can therefore cause a number of problems:

- › In growing children and adolescents, the body requires additional calcium for bone growth. Not getting enough can lead to stunted growth and a reduced peak bone density.
- › The body needs more calcium during pregnancy and lactation. The mother's body will use its calcium stores to meet the babies calcium needs, putting the condition of the mother's bones and teeth at risk if her calcium intake is inadequate
- › In adulthood calcium is lost from the bones and will not be replaced if the dietary intake is not sufficient.
- › After menopause and in the aging person, the bone mass is reduced, increasing the risk of osteoporosis, so an adequate intake is essential

HOW MUCH DO I NEED?

The Recommended Daily Intakes¹ for Australia and New Zealand

Population Group	RDI (mg/day)
Children aged 1-3yrs	500
Children aged 4-8yrs	700
Children aged 9-13yrs	1000-1300
Children aged 14-18yrs	1300
Adults	1000
Pregnancy/lactation aged 14-18yrs	1300
Pregnancy/lactation aged >14yrs	1000
Adult males >70years	1300
Adult females > 51years	1300

Three serves of dairy can provide you with your recommended daily intake of calcium.

Studies show that consumption of dairy products in childhood and adolescence can have positive effects on bone density². It is recommended that kids meet their calcium needs by eating a balanced diet that includes two to three serves of dairy each day. Full fat dairy products are recommended for children under the age of two however over the age of two reduced-fat dairy products are recommended.

WHERE DO I GET CALCIUM FROM?

Calcium is found in a variety of foods such as dairy products including milk, yoghurt and cheese, the soft edible bones in canned fish (e.g. sardines & salmon), leafy green vegetables, almonds and calcium fortified soy milk. Dairy products are the best sources because they contain high amounts of calcium and also contain the sugar, lactose and the casein protein to help the calcium be absorbed.

Food	Serving size	Calcium (mg)
Full cream Milk	250 ml (1 glass)	285
Natural Yoghurt	200g (1 tub)	340
Cheddar cheese	2 slices (40g)	310
Cooked Spinach	1 cup (100g)	170
Cooked broccoli	1 cup (100g)	30
Canned salmon (plus bones)	100g	230
Almonds	45g	50

Calcium levels sourced from the Dairy Australia website www.dairyaustralia.com.au

It is interesting to note that low fat varieties are often higher in calcium.

Calcium supplements may be beneficial if a diet is low in calcium, such as for people with low calorie intakes, milk allergies and lactose intolerance, or when there are increased requirements, in pregnancy, lactation and the elderly. Fortified foods may also assist with calcium intake, including soymilk, citrus drinks, bread and breakfast cereals.

AVAILABILITY IN THE DIET

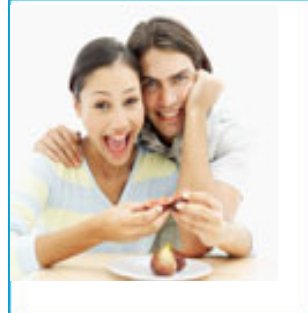
There are many factors that may affect the availability of the calcium in the intestine. When the following factors are consumed at the same time as calcium, they reduce calcium's availability and absorption in the gut:

- › Fibre - soluble pectin fibre binds with the calcium
- › Fat - binds with calcium in the stomach
- › Phytic acid - found in breakfast cereals
- › Oxalic acid - found in high concentrations in spinach and rhubarb, and in smaller amounts in sweet potatoes and dried beans.

HOW DO I INCLUDE ENOUGH CALCIUM IN MY DIET?

Here's some easy ideas to include calcium rich foods in a healthy, balanced diet:

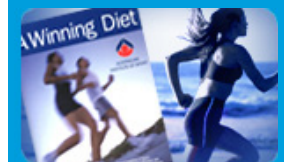
- › Start your day with breakfast cereal and milk
- › Wake up to a home-made banana, mango or strawberry smoothie
- › Nothing beats cream cheese on a bagel
- › Add some cheese on your toast or to a sandwich
- › Sprinkle some cheese on your potato
- › Reach for a yoghurt at morning tea to keep you going until lunch
- › Have some fresh fruit and yoghurt for dessert
- › Enjoy a warm cup of milk before bed



Over 400 delicious recipes to choose from. Visit our website : www.nestle.com.au/Recipes to find your new favourite.



The AIS 'A Winning Diet' is a FREE booklet to help you perform at your best <http://www.nestle.com.au/Nutrition/SportsNutrition/Winning>



Nestlé has always maintained a commitment to advances in nutrition and is continuing this through its partnership with the Dietitians Association of Australia (DAA) and the Australian Institute of Sport (AIS)

If dairy foods are not consumed there are many other ways to incorporate calcium into your diet:

- › Try some calcium-enriched soymilk with muesli
- › Have tuna and tomato on toast for breakfast
- › Use calcium-fortified bread to make a sandwich
- › Snack on a handful of nuts
- › Have a stirfry of Asian green vegies
- › Use tahini as a spread instead of margarine



CALCIUM-BOOSTING FOODS FOR SCHOOL

Active, growing kids need calcium for the development of strong bones and teeth. Try these ways to include calcium in their day:

- › Plain or flavoured reduced-fat milk or calcium fortified soy milk
- › Salmon sandwiches on wholegrain bread
(crush the soft edible bones through the salmon)
- › Mini pizza s made with English muffins and topped with reduced-fat grated cheese
- › Although water is the beverage of choice, daily fluid needs can be supplemented through other beverages such as milk and juice, as well as foods with a high fluid content like fruit, vegetables, soup and yoghurt.
- › Almonds mixed with dried fruit

References

1. The National Health and Medical Research Council (NH&MRC) Nutrient Reference values for Australia and New Zealand. Canberra: Australian Government Publishing Services 2005
2. Gueguen L: The bioavailability of dietary calcium. J Am Coll Nutr. 2000 Apr; 19(2 Suppl):119S-136S. http://www.jacn.org/cgi/content/full/19/suppl_2/119S

Good nutrition is part of the Nestle heritage

Here at Nestle we have a dedicated team of dieticians and nutritionists helping people enjoy healthy foods and the benefits of a healthier lifestyle.

Visit
www.nestle.nutrition.com
today.