FN-SSB.128

Cooperative Extension Service

206 Reasons to Bone Up on Calcium

The 206 bones in your body are alive. These bones are always growing and changing. Calcium is an essential mineral needed to build strong bones and teeth. A small amount of calcium is needed for regulatory functions, such as maintenance of normal heart beat and reproduction. From birth to age 20, bones are in an active phase of growth. Everyone needs calcium. But how much depends on your age, sex, general health and other circumstances.

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

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Requirements for all ages

The calcium content of an infant's body increases faster in relation to body size than at any other time. So it is vital for an infant to receive an adequate amount of calcium. Breast milk and infant formulas that are fortified with calcium are an excellent source of calcium for infants. During the first 10 years of growth, most of a child's dietary calcium goes directly toward the development of strong, dense bones and permanent teeth.

Amounts of calcium each day for the general population are listed below in milligrams (mg) per day.

Age	Male	Female	Pregnant	Lactating
Birth to 6 months	200 mg	200 mg		
7-12 months	260 mg	260 mg		
1-3 years	700 mg	700 mg		
4-8 years	1,000 mg	1,000 mg		
9-13 years	1,300 mg	1,300 mg		
14-18 years	1,300 mg	1,300 mg	1,300 mg	1,300 mg
19-50 years	1,000 mg	1,000 mg	1,000 mg	1,000 mg
51-70 years	1,000 mg	1,200 mg		
Adults 71+ years	1,200 mg	1,200 mg		

Adapted from NIH Calcium: Fact Sheet for Consumers

An adequate intake of calcium can help protect against osteoporosis, which causes brittle, fragile bones and usually occurs later in life. Unfortunately, osteoporosis cannot be reversed, however there are steps you can take to manage the condition and to prevent it. These include eating a calcium-rich diet and incorporating weight-bearing activity into your lifestyle. This form of physical activity can foster muscle strength and help maintain bone health.

For calcium to be properly absorbed into the body, vitamin D and phosphorus are critical. Vitamin D is available in fortified milk, some foods, exposure to sunlight and in over-the-counter supplements. Phosphorus is found in many foods like meat, seafood, nuts and legumes, and dairy products. Eating whole foods as a source of phosphorus can aid in the absorption of calcium and support strong bones and teeth. Another form of phosphorus is used as an additive in processed foods and drinks like sodas, processed meats, and baked goods. More research is needed to identify the impact this form of phosphorus may have on your health.

Calcium sources

Some foods naturally contain calcium and others have calcium added, or are fortified. Dairy products are rich natural sources of calcium. Some vegetables, such as greens and broccoli, contain small amounts of calcium. Other foods are calcium-fortified, like some orange juice and breakfast cereals.

Calcium supplements

If the diet does not contain enough calcium, supplements may be an adequate alternative. If you choose a supplement, calcium carbonate is well-absorbed. Avoid supplements made with oyster shells, as they are not good calcium sources.

Cooking with calcium

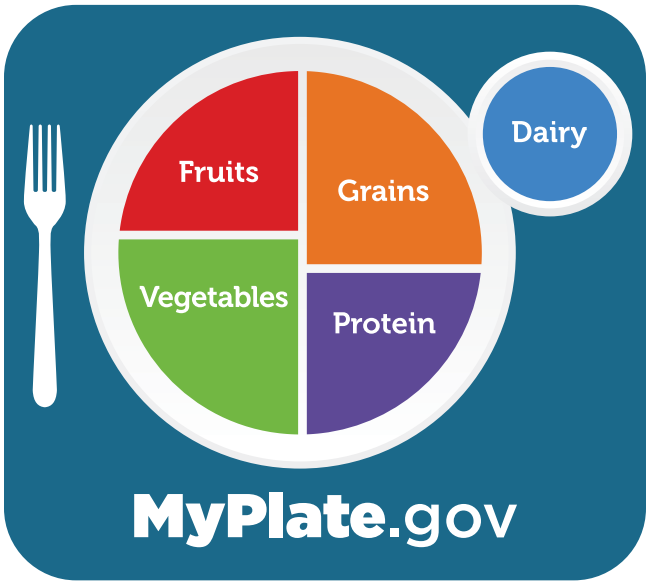
Milk, cheese and yogurt can add calcium to many foods:

- Use yogurt and milk to make salad dressings.
- Try nonfat dry milk in casseroles, meatloaf and baked goods.
- Use milk or fortified soymilk in cream soups (homemade or canned).
- Add tofu (calcium processed), cheese and cottage cheese to casseroles, lasagna and salads.

Look to the MyPlate food groups for the best sources of calcium*

Dairy group

- Yogurt, plain, 1 cup (415 mg)
- Milk, whole (3.25% milk fat), 1 cup (276 mg)
- Milk, nonfat, 1 cup (299 mg)
- Cheese, Cheddar, 1 oz. (204 mg)
- Soymilk, calcium fortified, 1 cup (299 mg)



Vegetable & Fruit group

- Turnip greens, fresh, boiled (99 mg)
- Spinach, boiled, drained, 1/2 cup (123 mg)
- Broccoli, raw, 1/2 cup (21 mg)
- Apple, golden delicious, with skin, 1 medium (10 mg)

Protein group

- Sardines (canned in oil, w/bones), 3 oz. (325 mg)
- Salmon (pink, canned, w/bones), 3 oz. (181 mg)
- Tofu (processed, w/calcium), 1/2 cup (253 mg)
- Beans, pinto, canned, drained, 1/2 cup (54 mg)

Grains group

- Tortilla, corn, 6" diameter (46 mg)
- Bread, whole wheat, 1 slice (30 mg)

**Some foods are fortified with calcium; read the nutrition label.*

Source: Adapted from NIH Calcium: Fact Sheet for Health Professionals

A note about vitamin D

As noted previously, the body needs vitamin D to absorb calcium. Without enough vitamin D, one cannot form enough of the hormone calcitriol (known as the "active vitamin D"). When that happens, the body will have to take calcium from its stores in the skeleton, which weakens existing bone and prevents the formation of strong, new bone. Although some vitamin D is formed naturally by the body after exposure to direct sunlight, many factors play a role in this like season, time of day, cloud cover, skin melanin content, and sunscreen. Experts recommend a daily intake of between 400 and 600 IU (International Units) of vitamin D, which also can be obtained from supplements, or vitamin D-rich foods such as egg yolks, saltwater fish, liver and fortified milk.

From infancy to older adulthood, proper calcium intake supports bone and teeth health, overall strength, and an active and healthy lifestyle. Food sources of calcium are a great option to incorporate into your daily eating pattern. In the case that diet does not provide enough calcium, a supplement may be necessary. Talk to your health-care provider before starting any supplement routine.

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2009 REV-RM0224