

calcium and you



As you grow, you need calcium

to build strong bones and a healthy body. Getting plenty of calcium while you are young also makes your bones strong and keeps them strong for your entire lifetime.

In fact, your body's need for calcium is at its highest point between the ages of 9 and 18 years. However, most young people in the United States don't get enough calcium in their diets.

What is calcium?

Calcium is a mineral that many parts of your body need. Its main job is to build strong bones and teeth, which contain 99% of your body's calcium. Your bones are a bank for calcium. A very small amount of calcium is in body fluids such as blood. But this small amount of calcium does important things. It has a role in helping your muscles move and in controlling your blood pressure.

If you make the right choices, the foods you eat or the things you drink can provide the calcium you need. If you don't get enough calcium, your bones will weaken. This is because your body will take calcium from your bones to meet its needs.

Why should I bank calcium?

When you are young, your body can deposit calcium in your "bone bank" by increasing your bone density. *Density* is a measure of how thick your bones are. Higher density bones are stronger and less likely to break.

As you get older, you lose the ability to bank calcium. By the time you reach young adulthood, your bones reach their *peak bone density*. That means your bones are as dense (or packed with calcium) as they will get—for life. Then your body mainly withdraws calcium from your bone bank.

People who do not have enough calcium in their bone bank can get osteoporosis when they get older. *Osteoporosis* is a disease that can make bones so fragile that they can break from the stress of just bending over. People with osteoporosis may not know they have the disease until 1 or more bones fracture. By this time, it is usually too late to undo the damage to their bones.

Is calcium all I need for strong bones?

Calcium does not work alone. A healthy diet, weight-bearing physical activity, and vitamin D are also important for developing strong bones.

- **Healthy diet**—Proper nutrition is very important to keep bones healthy.

- **Physical activity**—Studies show that regular, weight-bearing activities such as walking, running, jumping, and playing tennis, basketball, or soccer help you build strong bones.
- **Vitamin D**—Sources of vitamin D include
 - Sunlight (Your body makes vitamin D when your skin is exposed to sunlight.)
 - Milk and other dairy products fortified with vitamin D
 - Vitamin D-fortified drinks and other foods, such as cereals (check the label)
 - Multivitamins

How much calcium do I need?

How much calcium your body needs varies according to age. You need the most calcium between 9 and 18 years of age.

The American Academy of Pediatrics recommends the following daily intake of calcium:

Age	Calcium Need (mg per day)	Servings of Low-Fat Dairy Products to Meet Need
4–8 years	800	3 servings
9–18 years	1,300	4 servings
19–50 years	1,000	3–4 servings

How can I get calcium?

The best way to get the calcium that you need is by eating and drinking foods that naturally contain calcium. Many foods contain calcium.

Low-fat milk and other dairy products are very good sources of calcium. They naturally offer the most calcium per serving. For example, 1 cup of milk has about the same amount of calcium as 4 cups of broccoli.

Many foods contain some calcium, but the best sources include the following:

- Low-fat milk, yogurt, and other milk products are generally super sources of calcium.
- Flavored milks, such as chocolate or strawberry, have as much calcium as plain milk but may have more calories.
- Dark-green, leafy vegetables such as kale and turnip greens are low in calories and high in calcium. However, spinach is not a good source of calcium.
- Broccoli, tofu, chickpeas, lentils, split peas, and canned salmon and sardines (and other fish with bones) also are good sources of calcium.

- Calcium-fortified juices and cereals can help boost the calcium in your diet, but limit yourself to 8 to 12 ounces (1½ cups) of juice a day.

(See “Counting calcium” at the end of this publication.)

Calcium supplements

Certain medical conditions, diets, or lifestyle choices can make it hard for you to get enough calcium by eating the right foods. In some cases, your pediatrician may recommend a calcium supplement, such as a daily dose of a calcium-containing antacid or another type of calcium supplement. If you take calcium supplements, don’t take more than a total of 1,000 mg of them a day.

Lactose intolerance

Some young people have significant lactose intolerance, which means they have trouble digesting lactose (the sugar in milk). In most people, lactose intolerance is of a mild form. These people can digest dairy products in small amounts with a meal. Cheeses and yogurts in which the lactose is partially broken down can provide good sources of calcium for them. There are preparations of the enzyme lactase that make lactose easier to digest. Also available is milk with reduced lactose. Nondairy foods that are rich in calcium, as well as calcium-fortified foods, also can be good choices for people who have lactose intolerance.

In some cases, your pediatrician may recommend a calcium supplement.

What decreases my calcium intake?

The following can hurt your bone health:

- **Drinking a lot of soda (pop or soft drinks)**—Studies show that this may make you more prone to bone fractures. This may be because sodas often take the place of milk or other calcium-rich drinks. Cola-type sodas also contain phosphorus, which may interfere with how your body handles calcium.
- **Certain diets**—Some diets may not provide enough calcium, such as a vegetarian diet that excludes dairy products. Before you start any diet, check with your pediatrician to make sure it includes enough calcium.
- **Caffeine, alcohol, and tobacco**—All of these can cause you to lose calcium from your bones.
- **Certain medicines and diseases**—Some medicines and kidney and intestinal diseases can cause you to lose calcium from your bones. Ask your pediatrician if any of the medicines you are taking affect your bones and what you can do to protect them.

What can I do to get more calcium?

There are many ways to get more calcium, such as

- Choose low-fat milk instead of soda at restaurants or school cafeterias.
- Boost the calcium in salads with beans (such as garbanzo or kidney), cheese, broccoli, almonds, or tofu.
- Choose yogurt as a light meal or snack.

- Create special drinks with low-fat milk. Add flavorings. Make shakes or smoothies with low-fat dairy products.
- Use low-fat yogurt on its own or with fresh fruit. Add it to shakes, salad dressings, dips, and sauces or use it to top pancakes or waffles.
- Try calcium-rich foods that may be new to you and your family.
- Try calcium-fortified juice and calcium-fortified waffles or cereal for breakfast.

When possible, choose sources of calcium that are low in fat or have no fat at all. (Removing fat from a food does not take away calcium.)

Or make trade-offs in your food choices. For example, if you go for a thick, chocolate milk shake, skip the French fries.

How to read food labels

Food labels list the amount of calcium in a serving as “% Daily Value,” not as milligrams (mg). Though this % Daily Value only pertains to adults, it can serve as a guide to choose healthier foods for children.

100% Daily Value = 1,000 mg of calcium per day

To find out how many milligrams of calcium are in a serving, place a zero (0) at the end of the number listed for the daily value. For example, a serving of calcium-fortified orange juice might list the amount of calcium as 30% of the daily value.

30% Daily Value = 300 mg calcium

In general, a food that lists a daily value of 20% or more for calcium is high in calcium. Any food that contains less than 5% of the daily value is low in calcium.

Counting calcium

If you are between the ages of 9 and 18 years, you need about 1,300 mg of calcium each day. Keep track of what you eat for a few days to see if you are getting enough calcium.

If a medical condition or restricted diet is keeping you from getting the calcium you need, talk with your pediatrician.

The following tables show the amount of calcium in a variety of foods. Note: Calcium amounts may vary. Check nutrition labels on products for exact amounts.

Milk Group	Calcium (mg)
Milk*, regular or low-fat, 1 cup	245–265
Yogurt, nonfat, fruit, 1 cup	260
Cheese, 1-oz slice	200
Cheese, pasteurized, ¾-oz slice	145
Ice cream, ½ cup	90
Ice cream, soft-serve, ½ cup	115
Frozen yogurt, ½ cup	105
Pudding, instant, ½ cup	150
Soy milk, calcium-fortified, 1 cup	200–500

*Low-fat milk has as much or more calcium than whole milk.

Protein Group	Calcium (mg)
Almonds, chopped, 1 oz	65
White beans, cooked, boiled, 1 cup	160
Salmon, canned with bones, 3 oz	205
Tofu, firm, calcium-fortified, ½ cup	205

Vegetables/Fruits	Calcium (mg)
Broccoli, cooked, 1 cup	60
Collards, cooked, 1 cup	265
Tomatoes, canned, stewed, 1 cup	85
Orange juice, calcium-fortified, 1 cup	300
Orange, 1 medium	50

Grains	Calcium (mg)
English muffin, plain, enriched, 1	95
Pancakes (made with milk), 1	80
Corn tortilla, 1	45
Selected breakfast cereals, calcium-fortified, ¾–1 cup	100
Instant oatmeal (made with water), calcium-fortified, ½ cup	65

Prepared Foods	Calcium (mg)
Bean and cheese burrito	110
Cheese pizza, 1 slice	120
Cheeseburger	140
Taco, 1 small	220

Source: US Department of Agriculture

The persons whose photographs are depicted in this publication are professional models. They have no relation to the issues discussed. Any characters they are portraying are fictional.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.



American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

The American Academy of Pediatrics is an organization of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults.

American Academy of Pediatrics
Web site—www.HealthyChildren.org

Copyright © 2006
American Academy of Pediatrics
Updated 11/2008, Reaffirmed 2/2013
All rights reserved.