

What You Should Know About Calcium

Why Is Calcium Important?

Calcium is a mineral that is essential for life, yet the majority of Americans do not get enough calcium on a daily basis. Calcium plays an important role in building stronger, denser bones early in life and keeping bones strong and healthy later in life. Each day, our bodies lose calcium through skin, nails, hair, sweat, urine and feces, but our bodies can't produce new calcium. That's why it's important to try to get calcium from the food we eat. When we don't get enough calcium for our body's needs, it is taken from our bones, which can lead to osteoporosis and broken bones.

Sources of Calcium

Food is the best source of calcium. Low-fat and non-fat dairy products are high in calcium and certain green vegetables and other foods contain calcium in smaller amounts. If you have trouble digesting dairy products because of lactose intolerance, lactose-free dairy products that contain calcium and lactase enzyme pills and drops are available.

Calcium-fortified foods and calcium supplements are helpful if you're not able to get enough calcium from your diet. Some brands of juices, milk substitutes (e.g. soymilk and almond milk), cereals, waffles, breads and snacks are fortified with calcium.

To learn how much calcium is in a product, check the nutrition facts panel of the food label for the daily value (DV) of calcium. Food labels list calcium as a percentage of the DV. This amount is based on 1,000 milligrams (mg) of calcium per day. For example: 30% DV of calcium equals 300 mg, 20% DV of calcium equals 200 mg of calcium and 15% of DV equals 150 mg of calcium.

Daily Calcium Recommendations

Women	
Age 50 and younger	1,000 mg of calcium from all sources daily
Age 51 and older	1,200 mg from all sources daily
Men	
Age 70 and younger	1,000 mg from all sources daily
Age 71 and older	1,200 mg from all sources daily

If you get the recommended amount of calcium from the food you eat, you don't need to take a calcium supplement. Vitamin D is harder to get from food alone, so you may still need to take a vitamin D supplement. The National Osteoporosis Foundation (NOF) recommends 400-800 international units (IUs) for adults under age 50 and 800-1,000 IUs for adults age 50 and older. Some individuals need to take more vitamin D. Talk to your healthcare provider about how much vitamin D you should be taking each day.

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Calcium Supplements

The amount of calcium you need from a supplement depends on how much you get from food. Use the calcium calculator on page 4 to estimate your calcium intake. If you get enough calcium from your diet, you probably don't need a supplement. Taking more calcium than you need from supplements does not have added benefits and may increase your risk of kidney stones and other problems. The safe upper limit for total daily calcium intake from all sources is 2,000 - 2,500 mg.

Calcium exists in nature only in combination with other substances called compounds. Several different calcium compounds are used in supplements, including calcium carbonate, calcium citrate, calcium lactate and calcium phosphate. These compounds contain different amounts of elemental calcium, which is the actual amount of calcium in the supplement.

It's important to read the product label to find out how much elemental calcium is in the supplement and how many doses or pills to take. Pay attention to the "amount per serving" and "serving size." Many people ask which calcium supplement is best. The best supplement is the one that meets your individual needs. Calcium supplements are available in different amounts or doses in a variety of types including tablets, capsules, chewables and liquids.

Other Vitamins and Minerals

Calcium supplements are also available in combination with other vitamins and minerals. Although you need vitamin D to absorb calcium, it does not need to be taken at the same time as a calcium supplement. Vitamin K, magnesium, B vitamins, potassium and other nutrients may also be important for bone health. You can usually get enough of these vitamins and minerals from a well-balanced diet, rich in fruits and vegetables. If not, you may need to take multivitamins or supplements under the direction of your healthcare provider.

Safety

Calcium supplements prepared from unrefined oyster shell, bone meal or dolomite may contain lead or other toxic metals. Choose supplements that are known brand names with proven reliability.

If you are not familiar with the brand, look for labels that state "purified" or have the USP (United States Pharmacopeia) symbol. The "USP Verified Mark" on the supplement label means that the USP has tested and found the calcium supplement to meet certain standards for purity and quality. Because applying for the USP symbol is voluntary, many fine products may not display this symbol. The USP symbol is helpful when you don't know the brand.

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Calcium Absorption

The body absorbs most brand name calcium products. Calcium supplements need to dissolve in the stomach for calcium to absorb. Chewable and liquid supplements dissolve well because they break down before entering the stomach. The USP symbol on the label also lets you know that the supplement will break down and dissolve so that the body can use it.

Your body can absorb 500-600 mg of calcium at a time. Try to get calcium-rich foods and supplements in small amounts throughout the day. It's best to take most calcium supplements with food. Eating food produces stomach acid that helps you dissolve the supplement and absorb the calcium. Calcium citrate supplements, however, absorb well with or without food.

Side Effects

Taking calcium supplements can cause gas or constipation. If increasing your fluids does not solve the problem, try another type or brand of calcium. It may require trial and error, but fortunately there are many choices. When you take a new supplement, start with smaller amounts. For example, start with 200-300 mg of calcium a day for a week, and drink an extra 6-8 ounces of water with it. Then gradually add more calcium each week.

Calcium Interactions

Talk with your healthcare provider or pharmacist about possible interactions between prescription or over-the-counter medicines and calcium supplements. Here are a few examples:

- Calcium supplements may reduce the absorption of the antibiotic tetracycline.
- Calcium supplements should not be taken at the same time as iron supplements.
- Thyroid hormones should not be taken within four hours of calcium supplements to prevent interactions (unless directed otherwise by a healthcare provider or pharmacist).
- Medicines that need to be taken on an empty stomach should not be taken at the same time as a calcium supplement.
- People who take proton pump inhibitors (PPIs) like Prevacid®, Prilosec® and Nexium® may absorb calcium citrate supplements better than other calcium supplements.

Calcium Calculator

Our Calcium Calculator (page 4) can help you estimate the amount of calcium you get from food on a typical day. It can also help you learn how much more calcium you need each day from other food sources or supplements.

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How to Use the Calcium Calculator

Step 1: Estimate the number of servings you have on a typical day for each type of food. One serving is equal to approximately:

- 8 oz. or one cup of milk
- 6 oz. of yogurt
- 1 oz. or 1 cubic inch of cheese

The amount of calcium in fortified foods and juices ranges from 80 - 1,000 mg. Some examples are juices, soymilk and other milk substitutes and cereals.

Step 2: List the estimated number of servings of each food item under "Servings per Day."

Step 3: Multiply the number of "Servings per Day" by the number of milligrams (mg) under "Calcium." For example: if you have about two servings of milk per day, multiply 2 x 300 to get a total of 600 mg of calcium from milk.

Step 4: After you have calculated the total amount of calcium for each product, add these totals in the right hand column to get your Total Daily Calcium Intake.

Note: 250 mg of calcium is automatically added under "Estimated total from other foods." Most of us get about this amount of calcium each day from other foods like broccoli.

Step 5: Subtract your final total daily calcium intake from the recommended amount of calcium you need each day (see page 1). This number is the additional calcium you need each day. You can get this additional calcium by adding calcium-rich foods to your diet and/or by taking a calcium supplement.

Product	Servings Per Day	Calcium (mg)	Total
Milk (8 oz.)		X 300	=
Yogurt (6 oz.)		X 300	=
Cheese (1 oz. or 1 cubic inch)		X 200	=
Fortified Foods & Juices		X 80 - 1,000	=
Estimated total from other foods Note: Increase this amount if you get more than 250 mg of calcium from other foods.			= 250
Total Daily Calcium Intake, in mg			=

Summary

Getting enough calcium is one of the many things you can do to help reduce bone loss. You can also protect your bones by getting enough vitamin D, doing weight-bearing and muscle-strengthening exercises, not smoking or drinking too much alcohol and taking a prescribed osteoporosis medication, if needed. To learn more about what you can do to protect your bones, visit our website: www.nof.org.