

# CALCIUM: A SIMPLE GUIDE

*Vanessa A. Farrell, Jaclyn Maurer Abbott*

## Why do I need Calcium?

A daily supply of calcium is important for:

- Healthy bones
- Healthy teeth
- Muscle movement
- Nerve conduction
- Blood clotting

Not enough calcium puts you at risk for:

- Weak or brittle bones that can easily break
- Muscle cramps

## How much calcium do I need each day?

| Age                     | Milligram (mg)/day | Tolerable Upper Intake Level (UL) mg/day |
|-------------------------|--------------------|--|
| 4 - 8                   | 1,000              | 2,500                                    |
| 9 - 18                  | 1,300              | 3,000                                    |
| 19 - 50                 | 1,000              | 2,500                                    |
| Males 51 - 70           | 1,000              | 2,000                                    |
| Females 51 - 70         | 1,200              | 2,000                                    |
| > 70                    | 1,200              | 2,000                                    |
| Pregnancy and Lactation |                    |  |
| 14 - 18                 | 1,300              | 3,000                                    |
| 19 - 50                 | 1,000              | 2,500                                    |

Source: Institute of Medicine, National Academy of Science, 2011.

## How much calcium is too much?

Do not take more than the UL of calcium each day from food supplements. High calcium intakes can lead to:

- Constipation
- Increased risk for calcium kidney stones
- Stopping the absorption of iron and zinc from food

## How should I get my calcium?

The best way to get the calcium you need each day is by eating foods with calcium. Calcium rich foods not only give your body calcium, but also other important nutrients that help your body absorb the calcium in food. Lactose in milk helps your body absorb the calcium in milk and milk products.

## Some good food sources of calcium are:

| FOOD SOURCE   | SERVING SIZE              | CALCIUM (mg) |
|---|---------------------------|--------------|
| Milk & Yogurt   | 8 oz or 1 cup             | 300 - 450    |
| Cheese  | 3 ounces                  | 300 - 450    |
| Bones in canned sardines and salmon                         | 3 ounces                  | 181 - 325    |
| Calcium fortified foods (i.e. orange juice, soy milk, tofu) | 8 ounces                  | 200 - 300    |
| Dark green, leafy vegetables                                | 1/2 cup cooked, 1 cup raw | 50 - 100     |
| Nuts and Seeds  | 1 ounce                   | 25 - 75      |

## What if I cannot get enough calcium from the foods I eat?

If you cannot get enough calcium from food, calcium supplements may be helpful.

## Which type of calcium supplement is the best?

| SUPPLEMENT FORM  | COMMENTS  |
|--|---|
| Calcium Citrate:<br>Citrical®                                    | BEST absorbed supplemental form of calcium. It can be taken on an empty stomach because it does not require stomach acid to break apart. Good for older people who may have decreased stomach acid production |
| Calcium Carbonate:<br>Tums®<br>Caltrate®<br>Viactive®<br>Os-Cal® | Most common type of calcium supplement on the market. Usually needs extra stomach acid to break apart, so take with food.   |

## What calcium supplements should I avoid?

- Dolomite, Oyster shell, and Bone Meal are naturally occurring calcium carbonate sources. They may contain heavy metals, like lead. Lead is stored in bones and can cause serious health problems.
- Calcium Phosphate, Calcium Lactate, and Calcium Gluconate. They are not rich sources of calcium. Very small amounts of calcium are in each supplement tablet.

## Get more calcium from your food - Definition of terms

- *Stomach acid*: Eating foods with a calcium carbonate tablet helps increase calcium absorption.
- *Vitamin D*: vitamin D helps the body absorb calcium. You can get vitamin D from milk, fish, and egg yolks or some supplements with vitamin D. In general, you can get enough vitamin D by spending 10 -15 minutes in the sun each day.

- *Estrogen*: estrogen is a hormone that helps increase calcium absorption. After menopause, estrogen levels drop and so may calcium absorption. Replacing this estrogen through hormone replacement therapy has been shown to increase making vitamin D and calcium absorption.
- *Low calcium intakes*: Your body absorbs more calcium when your daily intake is low. Because of this it is best to take no more than 500 milligrams of calcium at one time.
- *Low blood calcium*: if the levels of calcium in your blood are low, your body increases calcium absorption with the help of vitamin D.
- *Lactose*: lactose is a sugar found in milk and milk products. It helps absorb calcium.
- *Type of calcium supplement*: Choose calcium supplements with USP on the label. This means that the supplements will dissolve and that each tablet has the amount of calcium that is on the label.

## The following decrease calcium absorption in your body:

- *Oxalic acid*: oxalic acid is found in spinach, soybeans, cocoa, and kale, and decreases the absorption of calcium in these foods.
- Plant foods high in insoluble fiber, such as whole grains and wheat bran.
- Laxatives
- High intake of the minerals, magnesium and phosphorus, with calcium
- Tea
- Some medications (corticoid steroids, *prednisone*)
- Caffeine

## Bottom Line

- Know how much calcium you need to consume each day (See the chart on page 1).
- Do not eat more than the UL of calcium each day.
- Get calcium from foods and beverages first, then from supplements if necessary.
- Avoid taking more than 500 mg of calcium at one time.
- If you choose to take a calcium supplement, choose calcium citrate or calcium carbonate.



**THE UNIVERSITY OF ARIZONA**  
**COLLEGE OF AGRICULTURE AND LIFE SCIENCES**  
**TUCSON, ARIZONA 85721**

**VANESSA A. FARRELL PhD, RD**  
*ASSOCIATE IN EXTENSION, DEPARTMENT OF NUTRITIONAL SCIENCES*

**JACLYN MAURER ABBOTT PhD, RD**  
*SR. RESEARCH SPECIALIST, DEPARTMENT OF NUTRITIONAL SCIENCES*

**CONTACT:**  
**VANESSA A. FARRELL**  
**stanford@u.arizona.edu**

**This information has been reviewed by University faculty.**  
**[cals.arizona.edu/pubs/health/az1296.pdf](http://cals.arizona.edu/pubs/health/az1296.pdf)**

**Originally published: 2002**

**Other titles from Arizona Cooperative Extension can be found at:**  
**[cals.arizona.edu/pubs](http://cals.arizona.edu/pubs)**

---

*Any products, services or organizations that are mentioned, shown or indirectly implied in this publication do not imply endorsement by The University of Arizona.*

---

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James A. Christenson, Director, Cooperative Extension, College of Agriculture & Life Sciences, The University of Arizona.

The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities.