

Calcium and Vitamin D

The Importance of Calcium

Calcium has many jobs in your body: it helps muscles contract (including your heart!), helps blood clot, sends nerve messages, and keeps bones strong. In fact, 99% of the calcium in your body is in your bones and teeth. You must eat calcium every day; otherwise your body will take it from your bones. Over time, this will cause you to have fragile bones that break easily.

Osteoporosis is a disease in which bones lose calcium and become weak. People with osteoporosis have a higher risk of fractures, developing kyphosis (i.e., a “hump back”), and losing height. Some people are at higher risk for osteoporosis.

Factors you cannot control:

- Being female
- Post-menopausal
- Over age 50
- Family history
- Small bone frame and/or lean build

Factors you can control:

- Not enough calcium and vitamin D in your diet
- Not enough fruits and vegetables in your diet
- Not enough exercise
- Smoking and drinking alcohol
- Losing weight if you are overweight

Recommended Calcium Intake

How much calcium you need depends mainly on your age and gender. If you are keeping track of your calcium intake, don't forget to count food sources and calcium in supplements.

Women under 50: 1000 mg daily
Women over 50: 1200 mg daily

Men under 70: 1000 mg daily
Men over 70: 1200 mg daily

Calcium Content of Foods

Dairy products like milk, yogurt, and cheese are rich in calcium and also tend to be the best absorbed sources. There are also some good non-dairy sources.

Food	Serving Size	Calcium Content* (mg)
Plain yogurt (NOT Greek)	1 cup	400
Calcium fortified orange juice	1 cup	350
Milk	1 cup	300
String cheese	1 stick	200
Feta cheese, crumbled	¼ cup	185
Kidney beans	½ cup	180
Collard greens (cooked)	½ cup	175
Low fat cottage cheese	1 cup	150
Spinach (cooked)	½ cup	120
Frozen yogurt	½ cup	105
Turnip greens (cooked)	½ cup	100
Edamame	1 cup	70
Broccoli spears (cooked)	½ cup	45
Soy milk**	1 cup	Up to 350; varies widely by brand
Fortified cereals	1 serving	Up to 1000; varies widely by brand

*Calcium content of foods may vary; read labels to determine the actual calcium content of a certain food.

** The nutrient content of soy milk varies greatly depending on the manufacturing process and whether the product is fortified.

The Importance of Vitamin D

You cannot absorb the calcium you eat without enough vitamin D. Vitamin D is called “the sunshine vitamin” because under some conditions, your body can make enough of it if you expose your skin to the sun. However, this depends on the time of the year, where you live, your skin color, and if you are wearing sunscreen. Many people don’t spend enough time with their skin exposed to the sun to get enough vitamin D.

Vitamin D is also found in a few foods: mainly dairy products that have been fortified, egg yolks, and fatty fish like salmon and herring. Many foods are now fortified with calcium and vitamin D, too. Breakfast cereals, orange juice, breakfast bars, soy milk, tofu, and even some margarine now contain added calcium or calcium plus vitamin D.

If you don’t eat enough vitamin D foods and if you do not get enough sunlight exposure, you may need a vitamin D supplement. Ask your doctor and/or Registered Dietitian.

Recommended Vitamin D Intake

Age group	Vitamin D (IU)
Infants (up to 12 months)	400
Children & adults ages 1-70	600
Adults over age 70	800

Select Food Sources of Vitamin D

Food	Serving size	Vitamin D (IU)
Salmon, pink, canned (without skin & bones)	3 oz	480
Fortified milk (skim, low fat, whole, or soy)	1 cup	100-120
Fortified breakfast cereals (check labels)	1 oz	40-50
Egg with yolk	1 large	40
Cheddar cheese	1 oz	7

Other Considerations

Some people may benefit from higher doses of calcium and vitamin D. Ask your physician and/or Registered Dietitian about how much you should be getting:

- If you are a post-menopausal woman
- If you have inflammatory bowel disease (IBD), celiac disease, gastric bypass, or nutrient malabsorption
- If you are taking corticosteroid or certain antibiotic medications (“steroids”)

You may also want to ask your doctor whether you need a bone density study if you have any of these conditions.

Calcium and Vitamin D Supplements

If you are unable to get enough calcium through diet alone, calcium supplements are available. The most common types of calcium supplements are calcium carbonate and calcium citrate. Calcium carbonate is more commonly available and less expensive. Calcium is best absorbed in doses of *500 mg or less and when taken with meals*. If you need to take more than 500 mg per day, consider taking several smaller doses throughout the day.

Because they work together, many calcium supplements come with some vitamin D. Vitamin D also commonly comes in multivitamin supplements as well as alone in higher doses. *Ask your doctor or Registered Dietitian before starting a vitamin D supplement because it is possible to take too much – very high levels may be toxic.*

Commonly Available Combined Calcium and Vitamin D Supplements

Type of Calcium	Calcium (mg)	Vitamin D (IU)
<i>Calcium Carbonate</i>		
Tums®	200	0
Extra Strength Tums®	300	0
Tums® Ultra	400	0
Oscal® Calcium + D3	500	200
Oscal® Extra + D3 ¹	500	600
Oscal® Ultra ²	600	500
Citracal Calcium Pearls	200	500
Caltrate® 600 + D3	600	800
Caltrate® 600 + D3 Plus Minerals ^{1, 2}	600	800
Viactiv® ²	500	500
<i>Calcium Citrate</i>		
Citracal® regular	250	200
Citracal® Maximum	315	250
Citracal® Petites with Vitamin D	200	250
Citracal® Plus Magnesium ²	250	125

¹Available in chewable form.

²Contains additional vitamins &/or minerals; also, Viactiv® contains 20 calories per piece.

Additional Resources

For more information on Calcium and Vitamin D, see the National Osteoporosis Foundation and the National Institute of Health websites: www.nof.org and www.nih.gov/