

# Calcium

Especially important for older women

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**Calcium** is the most abundant mineral in the body, accounting for about 2% of body weight. This amounts to approximately 1,250 grams (2-3/4 pounds for someone 140 pounds in weight), of which 99% is in the bones and teeth. Calcium is an essential mineral nutrient, although-it is not exactly a popular ingredient in the diet typically consumed by adults. Calcium is not only needed to maximize your bone mass but is required for metabolic functions. Your body uses calcium for many of its vital functions and if you don't give it enough calcium for these other purposes, it robs it from the teeth and bones. It has been found that the body first robs the jaw bones, which may account for the prevalence of periodontal disease, particularly among older women.

Bone loss is not always bad. In fact, it is necessary. In the living bone tissue, one type of cell--osteoclasts--breaks down the tissue, and another **type--osteoblasts--builds** it back up. These two cells work together. The osteoblasts build new bone tissue in response to the bone loss from the osteoclasts. The problem and the cause of osteoporosis occurs when the bone loss begins to exceed the bone gain.

Our bones replace about one-fifth of their total calcium each year, and there is a constant movement of calcium in and out of the bones both for repair and to maintain a constant level of calcium in the blood and other body fluids. To meet these needs, bone experts claim adult women should consume 1200 to 1500 mg (milligrams) of calcium per day. Studies show that the average adult female consumes only a third of the calcium needed to maintain normal bone strength. If calcium intake is not at the higher level, in the first decade after menopause a women could lose 15% of her bone structure. The price being paid by many women for neglect of this vital nutrient is osteoporosis.

**Osteoporosis**, a debilitating bone disorder, is a virtual epidemic among American women past the age of 60, has its roots in young adulthood, and is caused by insufficient calcium. After menopause, the average American woman loses an inch and a half in height each decade as a result of vertebral collapse. Far more serious, millions of fractures and tens of thousands of deaths occur annually because of osteoporosis.

**Osteoporosis literally means porous bones.** It is a weakened condition of the bones that results from a slow, insidious loss of calcium, the mineral that builds strong bones. Weak bones break easily, and the overwhelming majority of fractures that beset older Americans are the result of osteoporosis--bones too weak to withstand the stresses of normal living. The first sign of osteoporosis is usually a broken bone or collapsed vertebra.

**Taking more calcium than you need  
does no good  
and any more than twice as much  
could be harmful.**

**SOURCES OF CALCIUM:** The best source of calcium is dairy products. One cup of skim milk supplies over 300 milligrams of calcium. Other good sources are yogurt, cheese, ice cream, and leafy green vegetables. Women trying to consume 1,200 milligrams of calcium daily may find it difficult to get all of it from foods and must then turn to supplements.

**CALCIUM SUPPLEMENTS:** Calcium comes in many forms: calcium carbonate, calcium lactate, calcium phosphate, calcium gluconate, and bone meal. It comes fortified with vitamins and minerals, chewable, swallowable, and in liquid. All forms of calcium are absorbable, but vary widely in cost and the amount of elemental calcium they supply per tablet. Depending on the type you choose your 1,200 milligrams can cost anywhere from a few cents to two dollars per day. Here are some tips:

- If you have kidney stones, see a doctor before taking supplements.
- Consider the amount of calcium received by your diet and only add your additional needs.
- Check the labels. The fine print on a "500-milligram" tablet may reveal only 45 milligrams of elemental calcium. Most products should contain usually 250 to 500 milligrams per pill. The highest level of elemental calcium (40%) is found in calcium carbonate, which is frequently derived from oyster shells. Others are calcium lactate 13% and calcium gluconate 9%.
- Calcium products can also contain other additives you don't want in your diet such as sugar, flavoring, and vegetable oils, so check labels carefully.
- Avoid compounds fortified with vitamins and minerals. You can easily get all the vitamins and minerals from your diet and these products cost more.
- Calcium is calcium so select store brands or generics as they will cost you much less.
- Bone meal, oyster shells, and dolomite products are not recommended as they may contain other minerals or contaminants that you may not need.

FOODS HIGH IN CALCIUM		
Food	Serving size (oz)	Calcium content (mg)
Bean Curd (tofu)	4	154
Broccoli	8	136
Buttermilk	8	285
Cheese, American	1	174
Cheese, Cheddar	1	204
Cheese, Low-fat cottage	8	136
Cheese, Swiss	1	272
Ice Cream	8	176
Milk	8	300
Salmon (canned)	3	285
Sardines (with bones)	3	372
Shrimp	8	147
Turnip greens (cooked)	8	267
Yogurt, low-fat plain	8	415
Yogurt, low-fat fruited	8	314
Yogurt, frozen	8	200

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VITAMIN D: Your body can't absorb or utilize calcium without vitamin D. The recommended daily allowance is 400 I.U., which you can get from a quart of milk, an average multivitamin pill, or 30 to 60 minutes of sunshine. Brief exposure to sunlight each day, which causes the body to manufacture vitamin D, and eating a balanced diet are usually enough to ensure an adequate intake. Too much vitamin D can be harmful.

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