



HEALTH UPDATE

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Calcium

Why is calcium important?

Calcium is a mineral that is essential to bone and tooth structure and strength.

- The bones also act as a calcium bank, storing about 99% of the calcium in the body. Peak bone mass is acquired between the ages of 20-35. Inadequate calcium intake, especially at these ages, may result in sub-optimal bone density.
- Calcium is also necessary for nerve function, muscular contraction and blood clotting.
- If there is insufficient dietary calcium, the body will take calcium from the bones to meet its needs. A long-standing calcium deficiency may result in weakened bones, a condition called *osteoporosis*. Osteoporosis is a significant contributor to broken bones.
- Young women with amenorrhea (lack of menstrual periods) or eating disorders are also at increased risk for osteoporosis. Additional calcium may be warranted in these conditions.
- Women are 8x more likely than men to develop osteoporosis. Women have less bone mass than men and hormonal changes occurring at menopause tend to speed calcium loss.

What can I do to help prevent osteoporosis?

- Eat adequate amounts of food high in calcium each day (see back of handout).
- Engage in weight-bearing exercise such as walking, dancing, running, or weight-lifting on a regular basis.

How much calcium do women need each day?

<u>Women ages</u>	<u>Calcium (mg per day)</u>
14 - 18	1300
19 - 50	1000
Pregnant or breastfeeding, ≤ 18	1300
Pregnant or breastfeeding, 19-50	1000
Over 50	1200

Can I get too much calcium?

- The Tolerable Upper Limit for calcium from foods and supplements combined is 2,500 mg per day.
- Excess calcium offers no health advantage, can impair kidney function, and may interfere with the absorption of other nutrients, including iron, zinc, magnesium and phosphorus.

What foods contain calcium?

≥ 300 mg Ca	200-300 mg Ca	100-200 mg Ca	< 100 mg Ca
Yogurt, 1 cup	Milk, 1 cup (whole, 2%, 1%, skim)	Mac & cheese, ½ cup	Ice cream, ½ cup
Tofu, ½ cup (processed with calcium)	Chocolate milk, 1 cup	Pudding, ½ cup (made with milk)	Frozen yogurt, ½ cup
Sardines, 4 oz	Soy milk, 1 cup (fortified)	Tofu, ½ cup (processed without calcium)	Cottage cheese, ½ cup
	Swiss cheese, 1 oz	American cheese, 1 oz	Orange, 1 whole
	Cheddar cheese, 1 oz	Dried figs, 5 medium	Broccoli, 1/2 cup
	Calcium-fortified OJ, 1 cup		Beans, ½ cup
	Salmon, canned, 3 oz		Almonds, ¼ cup

Should I take a calcium supplement?

- Aim first to get adequate calcium by eating enough calcium-rich foods daily. Food contains other vital nutrients in addition to calcium. For example, dairy products, which have the highest calcium concentration of all foods, also contain lactose and Vitamin D which enhance calcium absorption.
- Calculate your average daily dietary calcium intake, using the chart above as a guide.
- If you are not consistently getting sufficient calcium through dietary sources, add a supplement.

What else should I know about calcium supplements?

- Most multivitamins contain less than 20% of the Daily Value for calcium (about 200 mg).
- There are many forms of calcium supplements available, including calcium carbonate, citrate, malate, and gluconate.
 - The most common and cheapest form is calcium carbonate.
 - Calcium citrate may be better absorbed than calcium carbonate; however, it is more expensive and more bulky, requiring more pills be taken.
- Calcium supplements come in tablets, soft chewable cubes (Viactiv), chewable tablets, and in antacids (Tums, Rolaids).
- For best absorption, take no more than about 500 mg calcium at one time. If you take a multivitamin or iron supplement, take them separately from calcium.
- Calcium supplements can interact with some medications, including certain antibiotics and thyroid drugs. Talk to your pharmacist or health care provider about calcium supplements and any medications you have been prescribed.
- Calcium supplements are available at the Student Health Center Pharmacy.

Resources & References:

National Institutes of Health, Office of Dietary Supplements, <http://ods.od.nih.gov/factsheets/calcium.asp>
 Consumer Labs, www.consumerlab.com