Calcium Fact Sheet

Calcium is a mineral that is essential for building strong bones. Unfortunately, most tweens (ages 9 to 12) and teens do not get enough calcium. In fact, fewer than one in 10 girls and only one in four boys ages 9 to 13 is at or above his or her adequate intake of calcium.

Tweens and teens need 1,300 milligrams (mg) of calcium a day to build strong bones for life. (Adults up to age 50 need about 1,000 mg a day.) Milk and milk products are excellent sources of calcium and other nutrients. Tweens and teens can get most of their daily calcium from 3 cups of low-fat or fat-free milk (approximately 900 mg), but they also need additional servings of foods that provide calcium to meet their calcium needs. Most milk is fortified with vitamin D, an important nutrient that helps the body absorb more calcium.

Calcium intake between the ages of 9 and 18 is critical for bone development because most **bone mass** (bone strength and density) accumulates during this time. Bones stop increasing in density after about age 30. But by getting the calcium they need now, tweens and teens will accomplish the following:

- *Strengthen bones now.* Our bodies continually remove and replace small amounts of calcium from our bones. If more calcium is removed than is replaced, bones will become weaker and have a greater chance of breaking. Some researchers suspect that the rise in forearm fractures in children is due to decreased bone mass because children are drinking less milk and more soda, and are getting less exercise.
- *Help prevent osteoporosis later in life.* Osteoporosis is a condition that makes bones weak so they break more easily. Bones rely on the calcium they store during the tween and teen years to stay strong throughout life. Although the effects of osteoporosis might not show up until adulthood, tweens and teens can help reduce the risk of osteoporosis by building strong bones when they are young.
- *Improve lifelong dental health.* The calcium in milk products also helps make teeth, gums, and jawbones healthy and strong. Calcium may also help protect teeth against decay.

Weight-Bearing Physical Activity

Bones are living tissue. Weight-bearing physical activity causes new bone tissue to form, which makes bones stronger. Weight-bearing activities are those that keep you active and on your feet so that your legs carry your body weight.

Activities such as walking, running, dancing, climbing stairs, and playing team sports such as basketball, soccer, and volleyball help make bones stronger. Older teenagers can build even more bone strength through weight training, but they should check with a health care provider before starting weight training.

Some activities, such as swimming, do not provide weight-bearing benefits. But they are good for cardiovascular fitness and overall good health.

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Foods That Provide Calcium

There are many foods to choose from that provide calcium.

Milk and milk products—such as low-fat or fat-free cheese and yogurt—are excellent sources because they are high in calcium. Most types of milk have approximately 300 milligrams of calcium per 8 fluid ounces (1 cup), or about 25 percent of the calcium that tweens and teens need every day.

The best choices are low-fat or fat-free milk and milk products. Because these items contain little or no fat, it's easy to get enough calcium without adding extra fat to the diet.

Flavored milk has just as much calcium as plain milk, but is higher in sugar and calories than plain milk. Young people may choose to drink chocolate or other flavored milk if they prefer the taste, but they should remember to factor in the additional calories into their overall daily needs. Whether plain or flavored, remember to choose low-fat or fat-free milk and milk products.

Here are some foods that can help tweens and teens get more calcium:

Food	Milligrams of Calcium
Yogurt, fat-free plain (1 cup)	**452**
Soy beverage with added calcium (1 cup)	**368**
Orange juice with added calcium (1 cup)	**351**
Fruit yogurt, low-fat (1 cup)	**345**
Cheese (e.g., low-fat or fat-free American, 2 oz., about 3 slices)	**323**
Milk, fat-free (1 cup)	**306**
Milk, 1% low-fat (1 cup)	**290**
Tofu, firm, with added calcium sulfate (1/2 cup)	**253**
Cheese pizza (1 slice)*	**182**
Bok choy, boiled (1 cup)	**158**
Spinach, cooked from frozen (1 cup)**	**146**
Soybeans, cooked (1 cup)	**130**
Frozen yogurt, soft-serve vanilla (1/2 cup)	**103**
Macaroni and cheese (1 cup)*	**92**
Almonds (1 oz.)	**70**
Broccoli, cooked (1 cup, chopped)	**62**
Tortillas, flour (7")	**58**
Broccoli, raw (1 cup, chopped)	**43**
Tortillas, corn (6")	**42**

*These foods are high in fat and/or sodium and should be eaten less often.

**Calcium from this food may not be as well absorbed as from some other greens.

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Lactose Intolerance

Someone with lactose intolerance has trouble digesting lactose, the natural sugar found in milk or milk products. Symptoms of lactose intolerance include stomach pain, diarrhea, bloating, and gas.

The best way for someone with lactose intolerance to get the health benefits of milk is to choose lactose-free milk and milk products.

Some food companies have added calcium to foods that don't normally contain high levels of calcium, such as soy beverages, juices, and breakfast cereals. These calcium-fortified foods offer alternatives to those who can't digest milk or milk products.

Resources

More information about calcium and bone health can be found in *Milk Matters: For Strong Bones…For Lifelong Health*. You can order free copies at http://www.nichd.nih.gov/publications/pubskey.cfm?from=milk or by calling 1-800-370-2943.

Information about maintaining a healthy weight can be found here: the National Institute of Diabetes and Digestive and Kidney Diseases fact sheet titled, *Weight-loss and Nutrition Myths*, at win.niddk.nih.gov/publications/PDFs/Myths.pdf. Or, visit the National Heart, Lung and Blood Institute's Aim for a Healthy Weight Web site at http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/index.htm.

More information on non-dairy food sources of calcium for tweens and teens can be found in the *Dietary Guidelines for Americans,* 2005, Appendix B-4, Non-Dairy Food Sources of Calcium, http://www.health.gov/dietaryguidelines/dga2005/document/html/appendixB.htm.