

CALCIUM AND CALORIE CONTENT OF SELECTED FOODS

Vanessa A. Farrell, Linda Houtkooper



Healthy bone growth and maintenance requires adequate calcium intake. You can meet your calcium needs from foods, beverages, and, if necessary, supplements.

How much calcium do I need each day?

Adequate Intake for calcium, according to the Dietary Reference Intakes (DRIs), is 1000 milligrams (mg) per day for children 4-8 years old, 1300 mg per day for adolescents and teenagers 9-18 years old, 1000 mg per day for adults 19-50 years old, males 51-70 need 1000 mg per day, females 51-70 need 1200 mg per day, and anyone older than 70 should get 1200 mg per day.

How do I find the calcium content of a labeled food?

Use the Percent Daily Value listed on the Nutrition Facts panel of a food label to find the milligrams of calcium per serving. *See the circled portion of the sample label on the right for Vanilla Low-fat Yogurt.*

To find the milligrams of calcium in a standard serving of a food, drop the % sign from the Percent Daily Value for calcium and add a zero. For example: 40% Daily Value = 400 mg. This is the amount of calcium in an 8 oz serving of Vanilla Low-fat Yogurt. (Note: this only works with calcium)

How can I tell if a food is a good source of calcium?

A good source of calcium contributes at least 100 milligrams of calcium in a standard serving. Reduced fat milk, calcium fortified orange juice, canned salmon, and Blackstrap molasses are examples of foods that are rich sources of calcium and relatively low in calories.

What are some good food choices that contain calcium?

You can get the calcium you need by consuming a variety of foods from each of the five food groups in MyPyramid.gov. This handout contains the calorie and calcium content of some foods from each group of MyPyramid.gov. (Grains, Vegetables, Fruits, Milk, Meat & Beans.)

Vanilla Low-fat Yogurt

Nutrition Facts

Serving Size 8 oz (227 g)
Servings Per Container 1

Amount Per Serving
Calories 210

Calories From Fat 30
% Daily Value*

Total Fat 3 g	5%
Saturated Fat 2 g	10%
Cholesterol 15 mg	5%
Sodium 160 mg	7%
Total Carbohydrate 36g	12%
Dietary Fiber 0g	0%
Sugars 34 g	

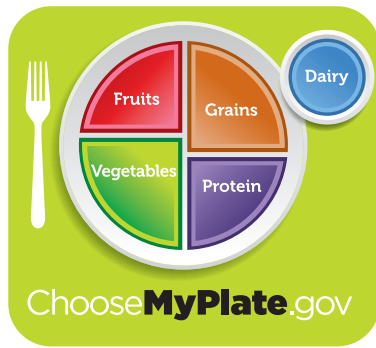
Protein 10g

Vitamin A	2%	Vitamin C	4%
Calcium	40%	Iron	0%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may vary higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65 g	80 g
Saturated Fat	Less than	20 g	25 g
Cholesterol	Less than	300 mg	300mg
Sodium	Less than	2,400 mg	2,400 mg
Total Carbohydrate		300 mg	375 g
Fiber		25 g	30 g

Calories per gram:
Fat 9 Carbohydrate 4 Protein 4



Grains- Make half your gains whole

Food	Serving Size	Calcium Content (mg)	Calorie Content
Biscuit	1 medium	45	239
Bread, Cornbread	1 slice	150	120
Bread, Spoonbread ¹	1 slice	150	150
Bread, White	1 slice	50	65
Bread White-calcium fortified ²	1 slice	100	60
Bread White-calcium fortified, diet ²	1 slice	150	40
Bread, Whole Wheat	1 slice	0	7
Bread Whole Wheat-calcium fortified ²	1 slice	80	90
Cereal, Total, corn flakes	1 cup	750	84
Muffin, English	1 whole	0	130
Pancake, homemade	1, 4 inch	60	86
Rolls, Hamburger	1	60	120
Spaghetti, calcium fortified	2/3 cup	33	579
Tortilla, Corn. ³	1, 6 inch	46	57
Waffles, Frozen	1, 4"medium	108	100

Vegetables- Vary your veggies

Food	Serving Size	Calcium Content (mg)	Calorie Content
Artichoke ³	½ cup	19	21
Asparagus, cooked, drained ³	½ cup	10	10
Broccoli-cooked	½ cup	31	27
Broccoli-raw	½ cup	17	12
Cabbage, Bok Choy-Cooked	½ cup	79	10
Cabbage, Bok Choy-raw	½ cup	37	5
Cabbage, Green-cooked	½ cup	36	17
Cabbage, Green-raw	½ cup	16	8
Celery-raw	1-5inch stalk	7	3
Chard-cooked	½ cup	51	18
Chard-raw	½ cup	9	3

Greens, Beet-cooked	½ cup	82	19
Greens, Beet-raw	½ cup	22	4
Greens, Collard-cooked	½ cup	112	21
Greens, Collard-raw	½ cup	26	5
Greens, Mustard-cooked	½ cup	52	11
Greens, Mustard-raw	½ cup	29	7
Greens, Turnip-cooked	½ cup	99	14
Greens-Turnip-raw	½ cup	52	9
Kale-cooked	½ cup	47	18
Kale-raw	½ cup	45	17
Kohlrabi-cooked	½ cup	21	24
Kohlrabi-raw	½ cup	16	18
Okra-cooked	½ cup	62	19
Okra-raw	½ cup	41	16
Parsley-raw	½ cup	41	11
Rhubarb-cooked w/ sugar ³	½ cup	174	139
Rhubarb-raw ³	½ cup	52	13
Rutabaga-cooked	½ cup	41	33
Rutabaga-raw	½ cup	33	25
Seaweed Kelp-raw	½ cup	67	17
Summer Squash-cooked	½ cup	24	18
Watercress-raw	½ cup	20	2

Fruits- Focus on fruits

Food	Serving Size	Calcium Content (mg)	Calorie Content
Figs, dried	5 each	154	237
Grapefruit	½ fruit	40	60
Grapefruit	1 cup sections	28	74
Orange	1 medium	60	70
Orange Juice	1 cup	27	112
Orange Juice, calcium fortified	1 cup	351	110
Orange Slices	1 cup	72	85

Oils- Know your fats

Food	Serving Size	Calcium Content (mg)	Calorie Content
Cream, half & half	1 T	16	20
Half & Half, non-fat	1 T	20	10
Molasses, Blackstrap	1 T	41	58

Milk- Get your calcium rich foods

Food	Serving Size	Calcium Content (mg)	Calorie Content
Cheese, American-processed	1 oz	162	94

Cheese, American-fat-free	1 oz	195	42
Cheese, American-low-fat	1 oz	202	54
Cheese, Cheddar ⁴	1 oz	204	114
Cheese, Cheddar-fat-free	1 oz	244	44
Cheese, Cheddar-low-fat	1 oz	118	49
Cheese, Cottage 4% (whole)	½ cup	80	120
Cheese, Cottage 1% low-fat	½ cup	69	81
Cheese, Cottage 2% reduced fat	½ cup	78	102
Cheese, Mexican, ⁴ cheese	1 oz	203	101
Cheese, Mozzarella-whole	1 oz	143	85
Cheese, Mozzarella-part skim	1 oz	203	81
Cheese, Muenster	1 oz	203	104
Cheese, Muenster-low-fat	1 oz	150	78
Cheese, Parmesan, grated	2 T	56	22
Cheese, Romano, grated	2 T	90	30
Cheese, Ricotta-whole	½ cup	257	216
Cheese, Ricotta-fat-free	½ cup	200	100
Cheese, Ricotta-part skim	½ cup	337	171
Cheese, Swiss	1 oz	250	110
Cheese, Swiss-low-fat	1 oz	272	51
Ice Cream- regular, vanilla	½ cup	84	133
Ice Cream- 7% fat, light, vanilla	½ cup	106	109
Ice Milk, vanilla ⁴	½ cup	153	164
Milk-whole	1 cup	276	146
Milk-non-fat	1 cup	301	86
Milk-1% low-fat	1 cup	300	110
Milk-2% reduced fat	1 cup	26	122
Milk, Buttermilk- 2% reduced fat	1 cup(8froz)	137	350
Milk, Buttermilk- 1% low-fat ⁴	1 cup(8froz)	98	284
Milk, Chocolate-whole ⁴	1 cup	280	208
Milk, Chocolate-non-fat	1 cup	272	148
Milk, Chocolate-2% reduced fat ⁴	1 cup	288	158
Milk, Dry powder-whole ⁴	2 T	146	80

Milk, Dry powder-non-fat ⁴	2 T	189	54
Milk, evaporated-whole	½ cup	320	160
Milk, evaporated-non-fat	½ cup	320	10
Milk, Goat	1 cup	327	16
Milk, Soy, canned-vanilla ¹	1 cup	61	131
Milk, Soy, canned-fat-free (fortified) ⁴	1 cup	530	123
Pudding, ready to eat Chocolate ⁴	4 oz	55	153
Yogurt, plain, whole ⁴	1 cup	296	149
Yogurt, plain- non-fat	1 cup	300	100
Yogurt, plain- low-fat	1 cup	400	150
Yogurt, fruit-non-fat	1 cup	372	230
Yogurt, blueberry-reduced fat	1 cup	300	240
Yogurt, frozen- low-fat	1 cup	500	400

Meat- Go lean on protein

Food	Serving Size	Calcium Content (mg)	Calorie Content
Almonds, raw ³	2 oz	129	322
Beans, Black, cooked	1 cup	46	227
Beans, Navy, cooked	1 cup	126	255
Beans, Northern, cooked	1 cup	120	209
Beans, Pinto, cooked	1 cup	79	245
Beans, Soy	1 cup	175	298
Chickpeas, cooked ⁴	1 cup	80	269
Oysters-cooked	3 oz	61	101
Oysters-raw	3 oz	7	69
Salmon, canned w/ bones	3 oz	212	120
Sardines, canned oil, w/ bones ³	3 oz	321	174
Shrimp, cooked	3 oz	61	101
Tempeh	½ cup	92	160
Textured Vegetable Protein	½ cup	160	160
Tofu Soybean Curd, raw, firm, fortified ³	½ cup, 126 grams	861	182

References: The Food Processor SQL ed.-Nutrition Analysis & Fitness Software, Copy write 2007-2008 ESHA Research- Version 10.2, Calorifica.com/food/parsley-cooked 2007-2008.
1 Spoonbread-Combread recipes. The New York Times Company. 21 January 2009. <<http://southernfood.about.com/od/spoonbreadrecipes/r/bl01002a.htm>>.
2 Wonder Bread-Products. Interstate Bakeries Corporation. 21 January 2009. <<http://www.wonderbread.com/#/products>>.
3 Nutritional Information. ELook.org. 19 May 2008. <<http://www.elook.org/nutrition/>>.
4 Nutrient Data Laboratory. United State's Department of Agriculture. 19 December 2008. <<http://dearech.nal.usda.gov/cgi-bin/dexpldcgi?qry1944624020;5>>.
1 cup = 8 fluid ounces; oz = ounce; t = teaspoon; T = tablespoon

How can I get 1000 mg of calcium per day from food?

Below are examples of how to get 1000 milligrams of calcium from calcium-rich foods. Use the table of calcium and calorie content of foods to plan your own high-calcium, low calorie food choices for one day.

Example 1

Food	Serving Size	Calcium Content (mg)	Calorie Content
Yogurt, plain- nonfat	1 cup	300	100
Grapefruit	½ fruit	40	60
Milk, skim	1 ½ cup	452	129
Cheese, Cheddar- low-fat	1oz	118	49
Tortillas, corn	2, 6" dia	92	114
Total		1102 mg	452 kcals

Example 2

Food	Serving Size	Calcium Content (mg)	Calorie Content
Orange juice, calcium fortified	1 cup	351	110
Greens, mustard, cooked	½ cup	52	11
Milk, soy - fat-free, fortified	1 cup	530	123
Salmon, canned with bones	3 oz	212	120
Total		1145 mg	364 kcals

Example 2

Food	Serving Size	Calcium Content (mg)	Calorie Content
Total			

How do I identify low-fat milk products?

The best way to identify low-fat milk products is to read the food label. The Food and Drug Administration regulates milk labeling:

- Whole or full-fat milk is labeled “milk” and contains 8 grams of fat per cup.
- 2% reduced fat milk contains 4.5 grams of fat per cup.
- 1% low-fat milk contains 2.5 grams of fat per cup.
- Fat-free milk contains less than ½ gram of fat per cup.

(Note: The calcium content of a food is unrelated to its fat content. One cup of whole, 2%, 1% or fat-free milk all contain about the same amount of calcium.)

How can I get the calcium I need without getting too many calories?

By eating reduced fat or fat-free milk products or a variety of other foods that are rich sources of calcium, you can get the calcium you need every day without consuming excessive calories.

Is the calcium in a non-milk food easily absorbed by the body?

Yes and no. Some of the non-milk foods, such as leafy green vegetables (spinach) and beans, contain oxalates, phytates or both. Oxalates bind to the calcium in a plant-food directly reducing the amount of calcium available for absorption. Phytates bind to the calcium in other foods in the intestines and reduce the amount of calcium available for absorption.

The amount of food from some plant sources needed to meet the daily requirements of calcium is more than most people can eat. A person can get enough calcium without milk or foods made from milk, but it takes a lot of knowledge and planning.

What if I am lactose intolerant or have lactose maldigestion?

The good news is you don't need to give up milk or foods made from milk. Research shows that most people who have trouble digesting lactose (the sugar in milk) can tolerate at least ½ to 1 cup of milk at mealtime without any problems. Start adding back small amounts of milk and milk products with a meal or a snack. Also, try to drink small amounts of milk and eat small amounts of food made with milk more often.

Some other good food sources of calcium for people with lactose intolerance or maldigestion include corn tortillas, fish with soft, edible bones, such as salmon and sardines; yogurt with active cultures; and processed hard cheeses. Corn tortillas, salmon and sardines do not contain lactose. Yogurt with active cultures does contain lactose, but it also contains lactase, an enzyme that digests lactose. Processed hard cheese such as Cheddar and Swiss have more than half the lactose removed, making it more tolerable for people with lactose intolerance or maldigestion. Plant foods that contain calcium, lactose reduced or lactose free milk, lactase tablets which help digest milk sugar, and calcium fortified food products can help to add variety to a diet for a person who is lactose intolerant or who has lactose maldigestion.

Tips for increasing calcium in your diet:

- Read food labels to find which of your favorite foods are good sources of calcium and try to eat them often.
- Purchase and eat foods labeled “high,” “rich in,” “excellent source,” or “good source” of calcium.
- Eat and drink 3 servings of reduced fat milk products.
- Fortify your foods with calcium by adding fat-free powdered milk to foods such as meat loaf,

sauces, gravies, soups, stuffing, casseroles, blended beverages, puddings, breads, cookies, brownies, mashed potatoes, milk, cooked cereal, and scrambled eggs.

- Cook with more leafy green vegetables that are good sources of calcium.
- Use reduced fat cheeses as toppings and snacks.
- Add reduced fat milk to your coffee or tea.

What if I can not get enough calcium in the food I eat?

Calcium is an essential mineral for healthy bones. Your body cannot make calcium, so you must get it from what you eat or drink. If what you eat and drink does not adequately meet your calcium needs, a calcium supplement may be used to provide the calcium you need.

For guidelines on taking calcium supplements, see the University of Arizona's Cooperative Extension handout, Calcium Supplement Guidelines, at the website: ag.arizona.edu/pubs/health/az1042.pdf.



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

VANESSA A. FARRELL, Ph.D., R.D.
Associate in Extension, Department of Nutritional Sciences

LINDA HOUTKOOPER, Ph.D., R.D.
Professor, 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/az1128.pdf

Other titles from Arizona Cooperative Extension can be found at:
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.