



## Why is calcium important to my diet?

Eating a balanced diet with enough calcium and vitamin D is a key step in the prevention of osteoporosis.

## How much calcium do I need?

This depends on many factors, such as, age, gender, drugs, and bone mineral density. For most people, a daily intake between 1000 and 1500 mg of calcium is both safe and potent.

Minimum daily requirements for calcium are:

|                        |         |                           |              |
|------------------------|---------|---------------------------|--------------|
| Children (4-8 years)   | 800 mg  | Adults (51 or older)      | 1200 mg      |
| Teenagers (9-18 years) | 1300 mg | Pregnant or nursing women | 1200 mg      |
| Adults (19-50)         | 1000 mg | Postmenopausal women      | 1200-1500 mg |

## What foods are rich in calcium?

Dairy products are good sources of calcium. An 8-ounce glass of milk contains about 300 mg of calcium. Two slices of firm cheeses, such as American, Swiss, cheddar or mozzarella have about as much calcium as a glass of milk. Softer cheeses, like cottage cheese, most often contain 1/3 to 1/2 this amount of calcium per serving. Other calcium-rich foods are yogurt, salmon, tofu, almonds (100 mg in a 2-ounce serving), and beans. Also, many foods such as orange juice and soy milk come in calcium fortified forms. The average American daily diet contains about 200 mg of calcium in non-dairy food

| <b>Milk Products</b>               | <b>Calcium (MG)</b> | <b>Vegetables / Fruit</b>       | <b>Calcium (MG)</b> |
|------------------------------------|---------------------|---------------------------------|---------------------|
| Plain yogurt, 2%, 1 cup            | 415                 | Rhubarb, 1 cup                  | 348                 |
| Nonfat dry milk, 1/4 cup           | 377                 | Collard/mustard greens, 1/2 cup | 179                 |
| Skim milk, 1 cup                   | 302                 | Kale, 1 cup                     | 179                 |
| Buttermilk, 1 cup                  | 285                 | White beans, 1 cup              | 170                 |
| Mozzarella cheese, part-skim, 1 oz | 207                 | Beet greens, 1 cup              | 165                 |
| Ricotta cheese, part-skim, 1/4 cup | 168                 | Broccoli, 1/2 cup               | 89                  |
| Cottage cheese, 2%, 1 cup          | 155                 | Okra, 1/2 cup                   | 88                  |
| Pudding (with skim milk), 1/2 cup  | 150                 | Rutabagas, 1 cup                | 72                  |
| Parmesan cheese, 1 tbsp            | 69                  | Green beans, 1 cup              | 58                  |
|                                    |                     | Lima beans, 1 cup               | 55                  |
| <b>Bean/Grain Products</b>         |                     | Orange, 1 medium                | 52                  |
| Waffle/pancake (milk, egg added)   | 179                 | Cabbage, 1 cup                  | 50                  |
| Tofu, 3 oz                         | 150                 |                                 |                     |
| English muffin                     | 96                  | <b>Seafood</b>                  |                     |
| Soybeans, 1/2 cup cooked           | 88                  | Salmon, 3-4 oz                  | 225                 |
| Corn muffin                        | 66                  | Oyster, 3 1/2 oz                | 100                 |
| Pita bread, 1 pocket               | 49                  | Clams, 1/2 cup                  | 74                  |
| Fortified whole wheat cereal       | 48                  | Shrimp, 3 1/2 oz                | 50                  |
| Corn tortilla, one 6 inch          | 42                  | Haddock, 3 1/2 oz               | 42                  |
| Whole wheat dinner roll            | 34                  |                                 |                     |
| Brown rice, 1 cup                  | 33                  |                                 |                     |

### **What do I need to know about calcium supplements?**

If you are not able to get your daily calcium requirements from dairy products and other foods, calcium supplements are a safe and potent way to get enough calcium. Here are a few tips for choosing a calcium supplement.

- The amount of calcium in supplements varies from 200 mg to 600 mg, and should be printed on the label.
- Read the label - a supplement 'serving' may contain 400 mg of calcium, but that 'serving' may be two tablets.

- Research suggests that calcium supplements are best absorbed when taken in doses of 500 mg of calcium or less. For this reason, your calcium supplementation should most often be split over the course of the day.
- Most often, chewable tablets are absorbed better than pills that are swallowed whole.
- If you use a non-chewable pill, you can check if it can dissolve well: place the pill in a glass of warm water for 30 minutes and then stir; if the pill dissolves in the water, it should also dissolve in your stomach.
- Some people taking calcium supplements are concerned about lead content. The FDA maximum for lead intake is 6.0 mcg/day. Lead-free calcium supplements include Tums, Walgreen's, Equate, Nature Made, Sundown (all calcium carbonate) as well as Citracal (calcium citrate). Two well-known calcium supplements that contain lead are, Caltrate (3.43 mcg/day) and OsCal (1.74 mcg/day). These amounts assume an intake of 1500 mg of calcium per day.

### **Should I be taking calcium carbonate or calcium citrate?**

- In general, calcium carbonate costs less, and is just as effective.
- Calcium carbonate is best absorbed when taken with meals. Calcium citrate can be taken at any time.
- If constipation is an issue, calcium citrate (Citracal) may be a better choice for some people.
- Most experts suggest that patients taking drugs that block stomach acid (this includes medications such as Zantac, Pepcid, Prilosec, or Protonix, but these are not all of the drugs) take calcium citrate rather than calcium carbonate.

## Vitamin D

### How much vitamin D do I need?

If you have been told to take a vitamin D supplement, a dose between 800-1000 International Units (IU) per day is safe and potent. Older patients should take the 800-1000 IU/day dose. Almost all multivitamins contain 400 IU/day. Also, many vitamin D supplements can be bought at most drug stores, food stores, and health food stores. Many calcium supplements also contain vitamin D in the right amount.

### Can I get my vitamin D requirements from foods?

Very few foods are naturally rich in vitamin D. Milk is most often fortified with 125 IU of vitamin D per glass. There is also some vitamin D in eggs, organ meats, and fish such as salmon, sardines, and herring. Vitamin D is also manufactured in the skin right after direct exposure to sunlight. Sunlight exposure to the hands, face and arms for as little as 10-30 minutes, 2-3 times per week is helpful to produce vitamin D during the summer months.

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Patient Education Handout Associated with UMHS Clinical Care Guideline

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