

Supplemental Sources of Calcium

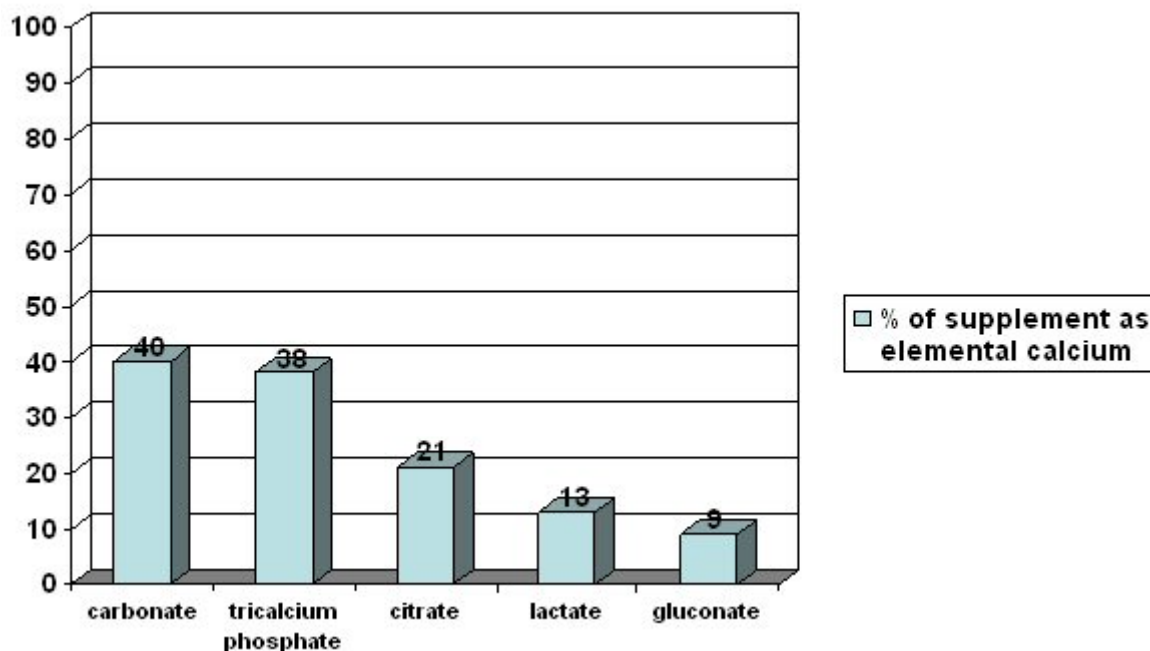
The 2000 Dietary Guidelines for Americans recommend that individuals consume a variety of foods to meet their nutrient needs since no single food can supply all the nutrients in the amounts needed by an individual [114]. However, for some people it may be necessary to take supplements in order to meet the recommended intakes for calcium.

The two main forms of calcium found in supplements are carbonate and citrate. Calcium carbonate is the most common because it is inexpensive and convenient. The absorption of calcium citrate is similar to calcium carbonate. For instance, a calcium carbonate supplement contains 40% calcium while a calcium citrate supplement only contains 21% calcium. However, you have to take more pills of calcium citrate to get the same amount of calcium as you would get from a calcium carbonate pill since citrate is a larger molecule than carbonate. One advantage of calcium citrate over calcium carbonate is better absorption in those individuals who have decreased stomach acid. Calcium citrate malate is a form of calcium used in the fortification of certain juices and is also well absorbed [116]. Other forms of calcium in supplements or fortified foods include calcium gluconate, lactate, and phosphate.

The amount of calcium your body obtains from various supplements depends on the amount of elemental calcium in the tablet. The amount of elemental calcium is the amount of calcium that actually is in the supplement. Calcium absorption also depends on the total amount of calcium consumed at one time and whether the calcium is taken with food or on an empty stomach. Absorption from supplements is best in doses 500 mg or less because the percent of calcium absorbed decreases as the amount of calcium in the supplement increases [117,118]. Therefore, someone taking 1000 mg of calcium in a supplement should take 500 mg twice a day instead of 1000 mg calcium at one time. Some common complaints of calcium supplement use are gas, bloating and constipation. If you have such symptoms, you may want to spread the calcium dose out throughout the day, change supplement brands, take the supplement with meals and/or check with your pharmacist or health care provider.

Figure 3 compares the amount of calcium (elemental calcium) found in some different forms of calcium supplements [119].

Figure 3: Comparison of Calcium Content of Various Supplements



Adapted from Office of Dietary Supplements.

For references and more information, visit <http://ods.od.nih.gov/factsheets/calcium.asp> or ask your midwife.