

Making Sure You Get Enough Calcium

New recommended dietary allowances (RDAs) issued last summer make official what *Health After 50* has long advised: That postmenopausal women and men over age 65 get 1,200 mg of calcium daily to keep bones strong and prevent osteoporosis. The new RDAs include a calcium ceiling of 2,400 mg daily to avoid the problems associated with higher doses, such as kidney stones. The guidelines also boost the recommendation for vitamin D, which is needed for proper calcium absorption, to 400 international units (IUs) for adults between ages 51 and 79, and 600 IUs for those age 80 and over.

Low-fat dairy products (especially milk, which contains about 300 mg of calcium per cup) are by far the best sources of calcium. Not only do these calcium-rich foods contain many other important nutrients, the calcium they deliver may be less likely to lead to kidney stones than the calcium obtained from supplements. But in a recent survey of 751 women over age 50, by the National Osteoporosis Foundation, three quarters of those questioned drank only one glass of milk a day or less. Another recent study, in the *American Journal of Public Health*, found that nearly half of 581 older women had stopped drinking milk by menopause, and that the nondrinkers

clearly had weaker bones. In line with these findings, studies consistently show that most Americans take in only 500 to 700 mg of calcium a day.

Although all people should try to meet their calcium needs through their diet, more than half of older adults need a boost from supplements (see box, below). Manufacturers have responded with a dazzling variety of products. In one store alone, Tufts University researchers counted 36 different types of calcium supplements.

The truth is that all the supplements on the market work well, and most marketing claims are meaningless because they apply equally to all products. However, some supplements are far less expensive and more convenient to use than others. Here's some advice about what to consider when making a selection.

SMART SHOPPING

All calcium supplements are sold as compounds. The five most common are calcium carbonate, citrate, gluconate, phosphate, and lactate—each containing a different amount of pure calcium (termed “elemental” calcium). Calcium carbonate, which is 40% calcium, contains the most, followed by calcium citrate, with 24%. Calcium gluconate, with only 9%, contains the least.

Because most manufacturers list the total weight of each pill rather than the amount of calcium the pill contains, you may have to do some math to determine how much calcium is in each compound. For example, if the total weight of a calcium carbonate tablet is 600 mg, it contains 240 mg of calcium (40% of the total). Similarly, a 600 mg tablet of calcium citrate contains 144 mg of calcium (24% of the total).

Calcium carbonate compounds such as Caltrate, OS-Cal, and Turns are generally the most economical and convenient supplements to use. Each pill usually contains at least 200 mg of calcium at a cost of as little as \$2 per month for some generic brands. However, about 20% of those over age 60, and 40% of those over age 80, may not produce enough stomach acid to promote sufficient calcium carbonate absorption between meals. Therefore, calcium carbonate should always be taken with either food (which stimulates the secretion of stomach acids) or orange juice (which has a high acid content) to be certain that the calcium is absorbed by the body.

Calcium citrate (Citracal and others) is easier to absorb than calcium carbonate, but you have to take more, and it's usually more expensive. Calcium citrate pills contain about a third less calcium than calcium carbonate pills. Although acceptable, calcium gluconate, lactate, and phosphate supplements are generally less convenient to use and more expensive than either calcium carbonate or calcium citrate. Calcium gluconate is too difficult to break down, while the other two contain less than 100 mg of calcium each—too little per pill to be practical for most people.

