Calcium and Vitamin D: Important at Every Age

The foods we eat contain a variety of vitamins, minerals, and other important nutrients that help keep our bodies healthy. Two nutrients in particular, calcium and vitamin D, are needed for strong bones.

The Role of Calcium

Calcium is needed for our heart, muscles, and nerves to function properly and for blood to clot. Inadequate calcium significantly contributes to the development of osteoporosis. Many published studies show that low calcium intake throughout life is associated with low bone mass and high fracture rates. National nutrition surveys have shown that most people are not getting the calcium they need to grow and maintain healthy bones. To find out how much calcium you need, see the Recommended Calcium Intakes (in milligrams) chart on the right.

To learn how easily you can include more calcium in your diet without adding much fat, see the Selected Calcium-Rich Foods list on the next page.

Calcium Culprits

Although a balanced diet aids calcium absorption, high levels of protein and sodium (salt) in the diet are thought to increase calcium excretion through the kidneys. Excessive amounts of these substances should be avoided, especially in those with low calcium intake.
Lactose intolerance also can lead to inadequate calcium intake. Those who are lactose intolerant have insufficient amounts of the enzyme lactase, which is needed to break down the lactose found in dairy products. To include dairy products in the diet, dairy foods can be taken in small quantities or treated with lactase drops, or lactase can be taken as a pill. Some milk products on the market already have been treated with lactase.

**Calcium Supplements**

If you have trouble getting enough calcium in your diet, you may need to take a calcium supplement. The amount of calcium you will need from a supplement depends on how much calcium you obtain from food sources. There are several different calcium compounds from which to choose, such as calcium carbonate and calcium citrate, among others. Except in people with gastrointestinal disease, all major forms of calcium supplements are absorbed equally well when taken with food. Calcium supplements are better absorbed when taken in small doses (500 mg or less) several times throughout the day. In many individuals, calcium supplements are better absorbed when taken with food. It is important to check supplement labels to ensure that the product meets United States Pharmacopeia (USP) standards.

**Vitamin D**

The body needs vitamin D to absorb calcium. Without enough vitamin D, one can’t form enough of the hormone calcitriol (known as the “active vitamin D”). This in turn leads to insufficient calcium absorption from the diet. In this situation, the body must take calcium from its stores in the skeleton, which weakens existing bone and prevents the formation of strong, new bone.

You can get vitamin D in three ways: through the skin, from the diet, and from supplements. Experts recommend a daily intake of 600 IU (International Units) of vitamin D up to age 70. Men and women over age 70 should increase their uptake to 800 IU daily, which also can be obtained from supplements or vitamin D-rich foods such as egg yolks, saltwater fish, liver, and fortified milk. The Institute of Medicine recommends no more than 4,000 IU per day for adults. However, sometimes doctors prescribe higher doses for people who are deficient in vitamin D.
A Complete Osteoporosis Program

Remember, a balanced diet rich in calcium and vitamin D is only one part of an osteoporosis prevention or treatment program. Like exercise, getting enough calcium is a strategy that helps strengthen bones at any age. But these strategies may not be enough to stop bone loss caused by lifestyle, medications, or menopause. Your doctor can determine the need for an osteoporosis medication in addition to diet and exercise.

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For Your Information

This publication contains information about medications used to treat the health condition discussed here. When this publication sheet was developed, we included the most up-to-date (accurate) information available. Occasionally, new information on medication is released.

For updates and for any questions about any medications you are taking, please contact the Food and Drug Administration toll free at 888–INFO–FDA (463–6332) or visit its website at www.fda.gov. For additional information on specific medications, visit Drugs@FDA at www.accessdata.fda.gov/scripts/cder/drugsatfda. Drugs@FDA is a searchable catalog of FDA-approved drug products.

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