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April 2006

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The Importance of Calcium Supplementation

Calcium is one of the most important minerals the body needs to maintain health, yet most Americans fail to meet currently recommended guidelines for optimal calcium intake. Calcium is required for normal growth and development of the skeleton and teeth and in adulthood, it is used to prevent osteoporosis. Calcium supplements are hence used to ensure an adequate intake of calcium during important periods of bone growth.

Calcium requirements vary throughout an individual's lifetime, with greater needs during the periods of rapid growth in childhood and adolescence, during pregnancy and lactation, and in later adult life. When the body does not get enough calcium from dietary measures, it begins to take it from the bones, which in turn can lead to osteoporosis. Osteoporosis is a condition where the bones get thin and brittle, especially at the spine and hip. It is a major underlying cause of bone fractures among adults, especially post-menopausal women and the elderly. However, calcium is an important nutrient at any age. For children, it is essential to ensure proper growth and bone development. Developing strong bones early in life helps prevent the weakening that

naturally occurs later on, therefore it is beneficial to start calcium supplementation as early on in life as our teenage years.

It is important to know individual daily calcium needs and the means of obtaining it. Calcium is not produced within the body so it must come from outside sources, with the diet being the easiest as well as the best source. A good strategy, to help achieve the Recommended Daily Allowance (RDA), is to include 300-500 mg of calcium containing foods, such as dairy products, with each meal and as a bedtime snack. The RDA for each age group is as follows: 0-6 months is 210 mg/d, 7-12 months is 270 mg/d, 1-3 years is 500 mg/d, 4-8 years is 800 mg/d, ages 9-18 is 1,300 mg/d, ages 19-50 is 1,000 mg/d, ages 50+ is 1,200 mg/d. If your calcium intake is too low, first try to increase the calcium in your diet. However, if adequate dietary sources of calcium are not possible, a calcium supplement should be used to help achieve the RDA. If you consume more calcium than recommended, there is

no proof that it will benefit your bones. High calcium intakes consumed on a regular basis may be harmful. It is important to get your daily recommended calcium and not to consume more than 2500 milligrams of calcium per day. The adverse effects of excessive calcium intake may include high blood calcium levels, kidney stone formation and kidney complications.

Calcium, as a supplement, is available in different combinations including calcium citrate, calcium carbonate, calcium lactate, calcium phosphate, and calcium gluconate. Each combination differs in its rate of absorption as well as its effect on the gastrointestinal tract. The RDA for calcium intake is based on the amount of elemental calcium within the supplement. Therefore, taking a careful look at the packaging of the supplement maybe helpful in determining the amount of elemental calcium that will be consumed. For example, Tums® contains 500mg of calcium carbonate, but only 200mg of its calcium carbonate is in the elemental form. In order to

get 1000 mg of elemental calcium, one would need to take five Tums® per day, not just two.

Whatever form of calcium supplementation an individual decides on, calcium typically is absorbed better when taken with meals. Studies have also shown that when taken with meals calcium may reduce the risk of kidney stones, while supplementing with calcium between meals might actually increase the risk. The presence of Vitamin D and certain amino acids also promotes absorption. Approximately 500 mg of calcium is absorbed at one time, therefore it is advised not to consume more than this amount at a time.

The importance of calcium is often overlooked. Fortunately it is quite easy to add calcium rich foods into one's dietary regimen, or take a calcium supplement during periods of greater need. The prevention of future problems, such as osteoporosis, is important. To keep your body functioning properly today and in the future make sure your calcium intake is sufficient.

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