

## Build Healthier Bones With A Good Diet Of Fruits And Vegetables

Although we are a generation of excessive calcium supplementation and cheese consumption, we have not been able to make a dent in osteoporosis or hip fractures. In 2008, osteoporosis will cost \$17.8 billion in the United States. By the time they reach their 90s, one out of every three women and one out of every six men will suffer from a hip fracture. About fifty percent of these will have permanent disabilities, while fifteen to twenty-five percent will require nursing home care; and ten to twenty percent will die within a year. Mainstream medicine is now catching up, after warning for years that no amount of calcium supplementation or dairy products could make up for the damage done by the Western diet and sedentary lifestyle.

The bones in your body are made up of crystals of the calcium-phosphorus mineral apatite imbedded in a connective tissue matrix, which produces a material of unique toughness. Bone formation requires a constant supply of protein, calcium, magnesium, phosphorus, vitamin D, potassium, and fluoride. Additionally, manganese, copper, boron, iron, zinc, silicon, and vitamins A, K, C, and all B's are required.

The Western diet often provides inadequate amounts of magnesium, boron, copper, silicon, and vitamins D and K and has high ratios of sodium to potassium, which favors the excretion of calcium and magnesium by the kidneys, instead of retention. Diets that are high in animal foods, grains, and sugars make the blood slightly acidic, which draws more calcium, magnesium, copper, manganese, and zinc out of bone storage than is wanted. There are other metabolic factors that are associated with acidic blood which contribute to bone loss. These include increased cortisol and reduced muscle strength.

If you're inactive and don't eat enough fruits and vegetables, all the calcium and magnesium in the world will not be able to help you. By balancing produce with animal foods and refined carbohydrates, one can keep blood pH levels slightly alkaline, like they should be, and keep potassium and sodium intakes about equal.

Dairy products are the best sources of calcium, magnesium, and vitamins A and D. Children and adolescents who do not consume dairy products cannot get enough calcium unless they supplement or choose foods that are supplemented. Females and males establish peak bone mineral density between the ages of ten and twenty. A bone-growth diet must be combined with exercise in order to achieve appropriate bone mineral density. In adulthood, it is possible to maintain BMD without substantially increasing it, especially for women. After menopause, exercise is strongly encouraged, as they help to increase BMD and reduce falling injuries by improving strength and coordination. It is absolutely necessary that women and men exercise regularly and intensely throughout life so that they can build a high peak BMD and retain it into old age.

Other bone-supporting nutrients are currently being researched for their role in preventing BMD loss and the fractures that result. Silicon, which is used to construct the bone protein matrix, is a marker of low hip BMD and a diet low in plant foods when found in low quantities. Vitamin D, which is a growing deficiency, is manufactured in our skin and requires about twenty to thirty minutes of sun exposure three times per week for whites to produce and darker skinned people require ten to fifty times as much sun to make the same amount of vitamin D.

Vitamin K is found in fruits and vegetables and is another reason why high produce intake is so important, as it is associated with increased BMD and a decreased fracture risk. Recent studies have found that a daily combined supplementation of 400mg Magnesium, 200 mcg of vitamin K, 400 iu of vitamin D, and 1000 mg of Calcium increased BMD in individuals over time as well as those who consumed two servings of fruits and two servings of vegetables each day.

### About the Author

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