

# Do all you can to build strong bones

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## Osteoporosis and Bone Loss

Osteoporosis is a condition of accelerated bone loss, enhanced bone fragility, and increased susceptibility to bone fractures. It is a major health problem affecting more than 20 million individuals in the United States and is responsible for well over one million bone fractures each year. Osteoporosis is one of the most prevalent health hazards facing women past menopause - more common than heart disease, strokes, diabetes, rheumatism, arthritis, or breast cancer.

Difficult to diagnose in its early stages due to a lack of symptoms, osteoporosis often goes undetected until bones become so brittle that even the slightest trauma may cause a fracture. One third of women 65 years and older have sustained a fracture of the hip, the most common region of fracture, leading to loss of height, chronic pain, and disability. By extreme old age, one of every three women and one of every six men will have sustained a hip fracture, which is the most devastating of all osteoporotic fractures.

Bone loss occurs with age in both sexes; however, women experience a pronounced acceleration of bone loss for about 5-10 years following menopause. The results can be dramatic, with the average woman losing 30-40% of her bone mass by the age of 70.

## Reducing the Risk of Osteoporosis

Recent scientific evidence reveals good news: much of this suffering may be preventable! Along with regular exercise, proper nutrition helps maintain good bone health and may reduce the risk of developing osteoporosis. The two approaches to prevention of osteoporosis are:

- **Maximizing Peak Bone Mass at Skeletal Maturity.**

Although osteoporosis is associated with old age, prevention begins in childhood. Bone mass is continually acquired during the first three decades of life, reaching a peak bone mass between the ages of 30-35. Studies have shown that maximizing calcium intake during the growth years and up to age 30-35 can greatly affect an individual's peak bone mass. Children and young adults who do not get adequate calcium may have suboptimal bone density by the time they reach skeletal maturity. This not only creates a greater risk for fractures at a young age but it increases the chance for developing osteoporosis later in life.

- **Minimizing Age and Menopause-Related Bone Loss**

It is never too late to think about reducing your risk of osteoporosis. There is now evidence that adequate intake of calcium may help reduce the progression of bone loss already begun in post-menopausal women. Because many of us do not receive adequate calcium from our diets and because our ability to absorb calcium declines with age, a calcium supplement may help ensure adequate calcium intake. One study group of postmenopausal women experienced a 43% reduction in bone loss when they supplemented their normal diet with 1,000 mg of calcium compared to a control group. The researchers concluded that adequate calcium intake, achieved through supplementation, may help reduce bone loss and the risk of osteoporosis.

## A More Comprehensive Way to Nourish Your Bones

Calcium and vitamin D are the primary nutrients involved in healthy bone formation. In addition, certain trace minerals such as zinc, copper, and manganese are important for proper bone metabolism and magnesium plays an important role in calcium metabolism. Thus, adequate calcium intake alone may not ensure proper bone health.

Recent food surveys demonstrate a majority of Americans, especially women, fail to consume adequate amounts of certain minerals including calcium, magnesium, iron, zinc, copper, and manganese. Considering the important roles these minerals play in building maintaining strong and healthy bones, comprehensive bone nourishment is essential for all Americans.

Good bone nourishment provides a broad range of essential nutrients needed to build and maintain strong bones. While calcium supplementation alone is valuable, a calcium-rich supplement known as microcrystalline hydroxyapatite concentrate (MCHC) provides more comprehensive bone nourishment. Derived from whole bone, MCHC contains calcium, magnesium, zinc, silica,

manganese, and many other trace minerals in the same proportions naturally found in healthy bone, along with proteins and other organic factors.

Taking a comprehensive, calcium-rich supplement such as MCHC can help maintain good bone health and reduce the risk of osteoporosis. One study of osteoporotic postmenopausal women, with the complication of primary biliary cirrhosis, showed that MCHC not only helped reduce bone loss but it actually helped increase cortical bone thickness. Those taking MCHC showed a remarkable 6.1 increase in bone thickness. Conversely, calcium gluconate halted the bone loss but did not restore it, and the group receiving no supplementation continued to show accelerated loss of bone.

## Are You at Risk for Osteoporosis?

Research studies point to a number of factors that may have a strong influence on peak bone mass and the rate of bone loss, and thus the development of osteoporosis.

Check any of the risk factors below that may apply to you:

- Family history of osteoporosis
  - White or Asian
  - Thin or small body frame
  - Postmenopausal
  - Hysterectomy
  - Inadequate intake of calcium magnesium, zinc, manganese, etc.
  - Excess protein in the diet
  - Digestive problems
  - Inadequate exercise or sedentary lifestyle
  - Smoking
  - Excessive alcohol consumption
  - High caffeine intake (coffee, soft drinks, tea)
  - Regular use of drugs such as Dilantin, Prednisone, Lasix, Synthroid, or other steroids
  - Anti-ulcer medication
  - Regular use of antacids containing aluminum
  - Hyperparathyroidism, diabetes, thyrotoxicosis, or Cushing's syndrome
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**If you checked two or more of the risk factors listed above, ask us about an osteoporosis risk reduction program for your bones. Remember, it is never too late to think about prevention!**

## Recommendations for Promoting Optimal Bone Health

- \* Exercise regularly.
  - \* Reduce excessive protein and fat intake.
  - \* Increase intake of green, leafy vegetables; legumes, nuts and seeds; and whole, fresh foods.
  - \* Take microcrystalline hydroxyapatite concentrate (MCHC) to provide excellent bone nourishment.
  - \* Avoid excess alcohol consumption.
  - \* Don't smoke.
  - \* Avoid aluminum cookware and aluminum-containing antacids.
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