

## **Osteoporosis: Evidence-based Natural Medicine**

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04/05/06

### Osteoporosis: Evidence-Based Natural Medicine

With limited options, patients are looking for safe and effective treatments of osteoporosis. This article discusses evidence-based, non-drug alternatives in the treatment of osteoporosis.

## **A General Introduction to Natural Medicine**

Although slight differences exist, this type of medicine is known by a variety of names: holistic, alternative, complementary, functional, nutritional. The underlying philosophy behind all of these types of medicines is the recognition and respect of the body's innate ability to heal itself. Therefore, any of the modalities that fall under these headings, whether they be acupuncture, chiropractic, homeopathic, or osteopathic, the practitioner is either providing the raw materials or removing obstacles in order to allow the body to step up its own healing processes. As a corollary to this idea is the constant attempt to rectify the root of the problem and not just the symptoms. A common example would be the use of glucosamine vs. an analgesic drug in the treatment of arthritis. The glucosamine is attempting to provide the joint with the raw material necessary to produce better cartilage, while the drug is only reducing the sensation of pain and not bettering the joint whatsoever.

## **Bone: A Living Tissue**

Bones are more active than many people think. New bone is constantly being formed and old bone is constantly being removed. Many factors influence this remodeling process. While many of these are beyond our control, others we can affect. Here are some of the factors influencing the rate of bone growth: dietary intake, nutritional supplementation, hormonal levels, genetics, steroid usage, and exercise.

## **Nutritional Supplements**

Calcium has become almost synonymous with healthy bones. However, it is by far the only needed nutrient. As a matter of fact, the countries that drink the most milk, have the most incidences of osteoporosis. The countries that consume the least dairy have virtually no osteoporosis. This interesting fact is not brought to degrade the milk industry, but rather to illustrate that there must be other important factors in bone health. However, calcium must be addressed since it is the most abundant mineral in bone.

## **Calcium : Not all Calcium is created equally**

Calcium is always bonded to another molecule (calcium carbonate, calcium citrate, etc.). This other molecule has a lot to do with how well the calcium is absorbed by the digestive tract. Calcium carbonate is by far the most common and cheapest form on the market. It is the main ingredient in Tums, Viactiv, and chalk. Since this form of calcium depends upon the levels of enzymes and acids in the digestive tract to be broken down, it is often not well absorbed. This is especially true in the aging population, where it is common to have lower levels of these enzymes. Therefore, we do not recommend this form. Better forms are calcium citrate, calcium hydroxyapatite, and calcium malate. The general recommendation of 1500mg of calcium per day for menopausal women includes the combination of dietary and supplemental sources. If a better form of calcium is utilized that means more is being absorbed and the total amount necessary could be reduced. We have a number of calcium supplements that we stock in our facility, as well as on our health store website. I will summarize them at the end of this article.

## **Vitamin D: Health from the Sun**

We have known for many decades that insufficient sunlight can impact bones. In children this disorder is called rickets. Vitamin D allows calcium to be absorbed in the intestines. In one study, vitamin D taken at a dose of 700IU per day reduced hip fractures by 60%.

In another study, the patients were given only 400IU of Vitamin D per day. At the end of two years, the bone density actually increased while the group taking a placebo experienced an average decrease.

Vitamin D is important in many other aspects of our health. It is now known that vitamin D is one of the strongest antioxidants against a variety of cancers. Total vitamin D intake should be between 400-1000IU per day. Though many of our calcium supplements already contain Vitamin D, we carry a few varieties of this vitamin.

## **Magnesium**

Magnesium might turn out to be an all-star in bone health. Not only is it a component of bone, but it is used by the body to activate vitamin D. People with osteoporosis tend to have lower levels of magnesium. In a 1993 study, magnesium alone was found to increase bone density.

We recommend half as much magnesium as calcium, approximately 400-800mg per day. See below for list of supplements that we stock in the office or on our website.

## **Boron**

Boron is a non-essential mineral. However, it is very active in the body. First, it can prevent calcium from being lost in the urine. Second, it can increase estrogen levels, a crucial hormone for supporting the bones. Third, boron is required for the activation of Vitamin D. 3-5mg per day is recommended in a supplemental form. Most of our calcium supplements already contain boron.

## **Strontium**

This mineral might be the strongest, safest natural medicine for osteoporosis. In numerous studies, it has been found to increase bone density and prevent fractures. Strontium has a unique ability to enhance the bone-producing cells while inhibiting the bone-destroying cells.

Since this mineral is similar to calcium in a number of chemical ways, it is best to take it two hours away from any calcium supplements. We carry strontium in a product called BioStrong. This formula also contains bioperine, which aids the absorption of strontium. Two capsules per day are sufficient.

Ipriflavone This semi-synthetic substance is similar to those found in soy. There have been some very impressive studies done with ipriflavone, demonstrating its ability to increase bone density. The usual dose is 200mg, three times per day. See below for some of the calcium supplements that contain ipriflavone.

## **Other Minerals**

Many other minerals are involved with bone health. These include: Copper, Zinc, Manganese, Molybdenum, and Silicon.

## **Vitamin K**

This vitamin is crucial in the production of the protein that anchors calcium into bone. It has emerged very effective in treating osteoporosis and preventing fractures.

Green leafy vegetables are the best source of this vitamin. Besides the low amount found in many multi-vitamins, only supplement under a health care practitioners guidance.

### **Important, Yet Uncommon Tests**

Tests to measure bone density, like the DEXA scan, are a snapshot of the persons bones. Though important, they do not tell of the speed of progression, nor do they give any indication of the cause of the disorder. In addition, these tests only report bone density and, not necessarily, bone quality. The following tests, which can be performed at our center, are functional tests. This means they report on the degree of functionality, thereby determining the course of action. In line with the thinking of natural medicine, we are aiming at the cause and not just the symptom.

**Spectracell:** This highly technological test assesses 30 different nutrients including vitamins, minerals, amino acids, antioxidants. Many of these nutrients are involved in bone health. This guides the practitioner to individualize the care of the patient.

25, hydroxy - vitamin D: This is a measurement of one of the more active forms of vitamin D.

A comprehensive approach to osteoporosis is crucial to the cure.