

# Osteoporosis

February 2009

Osteoporosis occurs in 1 in 4 women and 1 in 20 men. Osteoporosis is a major cause of morbidity and mortality in the elderly. Both sexes show gradual bone loss throughout life but women start to lose bone more quickly in post-menopausal years. Men lose bone density throughout life but because they start out with higher bone density, they exhibit osteoporotic levels at later ages than females.

Accelerated bone loss in post-menopausal years is known as Primary Osteoporosis. Secondary Osteoporosis is accelerated bone loss as a result of certain lifestyle habits or existing disease such as long term corticosteroid and anticonvulsant use, inactivity, smoking, heavy alcohol consumption, Cushing's syndrome, hyperthyroidism, gastrointestinal disease, excessive weight loss or low body weight, and never having children.

Osteoporosis is inarguably a multi-factoral disorder involving the inorganic (mineral) and organic (protein) components of bone. Most people think of calcium loss or low calcium intake when concerning Osteoporosis but it is much more than that.

**Stomach acid:** the absorption of calcium is in part dependant upon ionization in the intestines. The most commonly used form of calcium supplementation is calcium carbonate which must first be solubilized and ionized by stomach acid. Those with low stomach acid production will obviously have a harder time with this form of calcium. It's been shown those with low stomach acid may only absorb 4% of an oral dose of calcium carbonate where as those with normal stomach acid can absorb 22%. Calcium citrate, lactate or gluconate are the better forms of calcium supplementation to use. Upwards of 45% of calcium lactate can be absorbed even in those with low stomach acid.

**Vitamin D<sub>3</sub>:** Lack of vitamin D can interfere with calcium status. Many patients with Osteoporosis, one may find high levels of 25-OHD<sub>3</sub> (the common Vitamin D test used) yet low levels of 1,25-(OH)<sub>2</sub>D<sub>3</sub> which reveals an issue of converting cholecalciferol (whether via supplementation or sunlight) to the usable form of Vitamin D because of poor kidney or liver function. Boron has also been theorized to play a role in this conversion.

**Hormonal Factors:** decreasing estrogen production increases the amount of calcium taken from bone to maintain blood calcium levels. This in turn decreases certain hormones that are necessary for proper Vitamin D utilization. Simply replacing estrogen is not the solution. The best approach is to seek out a professional who can analyze your system correctly and make recommendations for healthy lifestyle habits and supplementation so you can regulate hormones naturally.

**Vitamin K:** found in green leafy vegetables. Osteocalcin (a protein found in bone) anchors calcium to hold it in place within the bone structure. Vitamin K has a primary role in converting the inactive form of osteocalcin into it's active form. Green leafy vegetables are also a source of calcium and boron.



9299 S. Broadway Ste 100  
Highlands Ranch, Co 80129  
303.683.3377  
[www.kesnerchiropractic.com](http://www.kesnerchiropractic.com)



# Osteoporosis

February 2009

## Dietary and Lifestyle Habits for Preventing Bone Loss

### Try this:

Avoid canned foods and bottom feeders (crab, shrimp, lobster, oysters, catfish, etc). These can be sources of cadmium.

If you smoke, STOP!

Avoid white sugar and white flour. These will interfere with your body's ability to absorb calcium and magnesium.

Avoid coffee and pop.

EAT a minimum of 7 fruits and vegetables per day and focus on lots of dark, leafy green vegetables.

DRINK only water filtered by reverse osmosis. Milk is not your best source of calcium. See our newsletters on dairy products from March & April 2008

### SUPPLEMENT:

Ultra Preventive X from Douglas Labs (a very good multiple vitamin)

Calcium MCHC, Lactate or Citrate  
1000mg/day

Magnesium Glycinate 200-300mg/day

Vitamin D<sub>3</sub> 5000-10,000IU/day

Boron 3-5mg/day

Fish oil 3000-4000mg/day

EXERCISE: At least three, 30 minute aerobic sessions per week.

Resistance training program is a must. Try hiring a personal trainer to teach you how to properly use weight training to reduce bone loss.

**Don't Guess About Your Health...  
Schedule a Nutritional Consultation Today!**

Our office provides this monthly newsletter free of charge. If you would like to sign up to receive our monthly newsletter and announcements via email, please contact our office.

**Magnesium:** magnesium deficiency as associated with osteoporosis plays a role in a couple of ways. One, the enzyme responsible for converting inactive Vitamin D into its active form is dependant upon Magnesium. Two, magnesium plays a role in the mediation of certain hormones that regulate blood calcium levels.

**Environmental:** Cadmium causes calcium loss within hours of exposure. Bone is a long term storage site for lead. Lead and calcium have the same transport sites for absorption and transportation within the body. Lead also has a direct (affects the way bone cells tear down and build bone) and indirect (kidney function) influence on bone turnover.

Do you have bone loss? How do you know which one of these is causing your problem? Some simple tests can help you zone in on exactly what you need to do to reduce your bone loss. The best place to start is with a DEXA scan. This is the diagnostic tool for osteoporosis or establishing if you have bone loss. A point to remember, is that it doesn't tell you "why" you have bone loss but it is a very effective marker to use to monitor bone loss and treatment for bone loss.

Next, you need a comprehensive blood panel performed. A good foundational panel is going to check for diabetes (hemoglobin A1C), mineral levels, thyroid, liver, pancreas, gall bladder and kidney function, inflammatory markers such as C-Reactive Protein and Erythrocyte Sed Rate, Complete Blood Count to check for infections and anemias, and heart disease markers. When ordered properly, if you are experiencing bone loss, your tests may reveal low mineral levels and low Vitamin D. Poor liver function or kidney function will affect your body's ability to make the active form of Vitamin D. Alkaline phosphatase is a marker for bone formation. Low alkaline phosphatase among other things can indicate decreased bone formation. High levels can indicate bone cancer. Low creatine kinase indicates low muscle mass. Low muscle mass can contribute to decreased bone density. In older populations, if this can be maintained it translates into longer, healthier life.

A hair analysis is an effective tool to use for checking environmental exposures to heavy metals and most importantly, your ability to excrete these metals. There is no way to eliminate exposure to these toxic metals but you can reduce your exposure. The hair analysis will help you identify what you're being exposed to in your environment and is good tool to use to make sure you are excreting as you should. Are you being exposed to lead or cadmium? You won't know until you test!

If you are experiencing bone loss or want to find ways to prevent possible bone loss, the only way to know what you need to do is to get tested...and tested properly. The cause of your bone loss could be any number of reasons explained in this newsletter. Call our office today to set up an appointment and we can help you get these tests performed and make nutritional and lifestyle recommendations based upon your test results to help you have stronger healthier bones to last your lifetime!

Federal Law requires that we warn you of the following:

1. Your individual health status and any required health care treatments can only be properly addressed by a professional healthcare provider of your choice. Remember: There is no adequate substitution for a personal consultation with your chosen health care provider. Therefore, we encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.
2. The Constitution guarantees you the right to be your own physician and to prescribe for your own health.