

## The Shocking Truth About Osteoporosis

Osteoporosis is the condition of accelerated bone loss often associated with decreased physical activity, hormonal changes, inadequate nutritional intake and bad diet. Many mistakenly think of this as “a disease of women,” but the fact is both men and women lose bone steadily throughout life. Women do tend to lose more bone rapidly around the time of menopause due to decreased estrogen production, but women also start with less total bone mass than men do.

Think of your skeleton as a bank in which calcium and other important trace minerals receive most of its ‘deposits’ during the “working years,” especially in the teens and early twenties. Clearly most (98%), skeletal bone mass is achieved by early to mid-20s with a peak bone mass achieved at age 35. So bone health is a lot like planning retirement. Constant withdrawals will be made throughout your life, but the more deposits you have made the better reserve you have for the retirement years.

Left untreated the total bone loss in post-menopausal women can be more than half their total normal bone mass levels. This is where I start to lose many people’s attention because they feel the conversation is going off track in terms of how it applies to them directly. The fact is, men also have problems with bone health and thinning of bones and the best time to effectively treat this problem is in the younger years. Unfortunately by the time most people realize they have low bone mass it’s often too late to catch back up effectively.

### ***Risk factors associated with accelerated bone loss include:***

- Family history of bone thinning or osteoporosis
- Caucasian or Asian heritage are especially at risk
- Inadequate exercise
- Inadequate calcium, vitamin D and trace minerals
- Thin, small bone frame
- Menopause, or ovary removal
- Long-term use of certain drugs, especially steroids and diuretics
- History of certain diseases of the liver or hormone systems, such as elevated thyroid level
- Excessive caffeine consumption
- Excessive alcohol consumption
- Smoking

### ***Additional risk factors, which are often overlooked in the youthful are:***

- High level athletes who over train, both male and female
- Female athletes who train so heavily as to delay the onset of menses or no longer have menstrual cycles.

These young athletes often have loss of bone, consistent with someone 30 years older, which explains a lot of the unnecessary stress fractures that occur in young athletes. A high frequency of this syndrome is seen in gymnastics, ballet and distance runners. The bottom line is, the greater the bone mass achieved at skeletal maturity (by age 20), the more one can afford to lose later, which is inevitable. Children who experienced accidental fractures (broken bones) have been studied and not surprisingly, 71% of these kids had low bone mineral content compared to kids their same age who had not experienced fractures. Getting kids up to their peak bone mass in adolescence is a big challenge as well as getting adults to behave and not do detrimental habits. On average, adolescents in the United States consume less than

half of the recommended daily allowance for calcium, not to mention the lack of other critical minerals and often have a lack of exercise.

**Women over the age of 35** are encouraged to have a bone density test every two years unless her scores are less than normal, in which case she should receive a bone density test more frequently. (Every 6-9 months for T-scores, indicating osteopenia or osteoporosis.)

At menopause when estrogen production declines, calcium metabolism changes dramatically. Bone turnover increases, i.e. the processes of both bone resorption and bone formation. The critical point is when bone resorption increases faster than bone formation resulting in postmenopausal bone loss.

Some postmenopausal women are **fast bone losers**. Postmenopausal bone loss averages 2% per year but it varies substantially from one woman to another. While one woman may lose only 1% per year, another woman may lose 6% per year or more. The woman with fast bone loss will be at a higher risk of developing osteoporosis later in life. It's therefore important to be able to identify these 'fast bone losers' as early as possible after menopause in order to institute preventative therapy in due time.

Osteoporosis is less common in men than women for several reasons. They have larger skeletons, bone loss starts later in life and progresses more slowly and they don't experience the rapid bone loss associated with the decrease in estrogen production at menopause. However, they can experience a marked bone loss as they age due to declining testosterone levels similar to the bone loss that occurs in women at menopause. In addition, estrogen may play a critical role in bone health in men. Other factors include a decrease in activity and exercise and a decrease in calcium. There are also changes in bone metabolic activity. **Men over the age of 50** should have a scan regularly.

Approximately 50-60% of men with osteoporosis have disorders or conditions that can produce bone loss including hypogonadism (low testosterone production), hyperpara-thyroidism, intestinal disorders, malignancies (cancer), steroid therapy, immobilization and unhealthy lifestyle activities.

To compound the problem of guaranteed bone loss as we age, we also lose our ability to absorb calcium steadily as we get older. Frequently people in their 30s, 40s, 50s and older need nutritional support to aid digestion. **GastrAcid**, a product by Xymogen, available in our office is known to stimulate the parietal cells' acid producing ability for the stomach, which aids the breakdown of food for nutrient absorption.

For those of you who are trying to do the right thing and supplement your healthy eating habits with calcium tablets, often the wrong type of the mineral is chosen. Quality is especially important when it comes to the form of calcium, as it dramatically affects the absorption and utilization of the calcium by the body. Most people are fooled by marketing and a cheap price. Calcium carbonate and calcium gluconate are poorly absorbed supplements that can cause increased gas in the stomach as well as decrease the acid function for nutrient breakdown. One of the best forms of calcium supplements is the microcrystalline hydroxyapatite, an excellent bioavailable source of calcium often abbreviated MCHC. This is essentially a whole bone extract, which in addition to the metal calcium, contains the organic nutrients necessary for the bone forming collagen and also has several other important minerals, including phosphorus and fluoride found in the appropriate proportions for growing bone.

Again the quality of the supplement really matters and that's why we primarily rely on **Ossopan**, "a bone building" formula which is certified for quality by special testing and analysis.

Knowing exactly how much you need is a very individualized estimate. Almost everyone eating a proper diet, including lots of healthy vegetables, should be additionally supplementing 1,000 milligrams per day. Those who are less than healthy eaters should push upwards of 2,000 milligrams per day to counteract a poor diet.

Ideally everyone should get moderate, regular weight-bearing exercise such as walking, jogging, stair climbing and cross-country skiing, which can help improve and maintain bone density and stimulate the deposition of calcium into the bones for strength. It is largely an advertising supported myth that drinking milk alone is going to satisfy your bone health needs, which is absolutely false. Additionally, Tums and other antacid forms of calcium are inappropriate for bone health. **Chewable** forms of a **Calcium** supplement are available for **children** and adults who can't swallow pills.

Eat a diet rich in calcium and Vitamin D. Foods high in calcium include dark-green leafy vegetables, broccoli, salmon, cheese, sardines and tofu. Get enough Vitamin D from egg yolk or fish oils, at least 400 IU per day with at least 45 minutes of sunlight exposure per week to help the body produce Vitamin D effectively.

This is truly one of those instances where an ounce of prevention is worth much more than a pound of cure when it comes to dealing with osteoporosis. Often, by the time osteoporosis is diagnosed the bones are so brittle that even the slightest trauma causes a fracture. This is a major health problem in the United States and is responsible for well over 1 million bone fractures each year. The costs associated with this problem are estimated to exceed 18 billion dollars per year based on hospitalization costs and short and long term care.

So eat your vegetables, get regular weight bearing exercise and supplement your calcium intake. **AND DON'T SMOKE, OR QUIT IF YOU DO!** Smoking decreases the body's ability to process calcium. Smokers have double the risk of hip fractures than nonsmokers.

- Osteoporosis is a "silent" disease. It gives few symptoms and little warning – until it's too late.
- Osteoporosis is preventable if diagnosed early.
- 1 in 20 men over age 50 is at risk for an osteoporotic fracture; one-third will die within one year from complications.
- A woman's risk of developing a hip fracture is equal to her combined risk of developing **breast, uterine** and **ovarian cancer**.
- A recent Galup survey of women ages 45-75 indicated that **3 out of 4** had **never** spoken to a doctor about osteoporosis.