

OPTIMAL HEALTH UNIVERSITY™

Presented by NOVA Pain & Rehab Center

Building Bone Strength Naturally

Osteoporosis is a disease that weakens bones, leaving them susceptible to fracture. In the US, about 8 million women and 2 million men have osteoporosis. Millions more have low bone mass (osteopenia), a pre-cursor to osteoporosis.

Osteoporosis is a major health threat because many osteoporosis sufferers endure bone fractures, which leave them seriously disabled for the remainder of their lives.

Dangers of Osteoporosis Drugs

Your doctor at NOVA Pain & Rehab Center is also extremely concerned about the aggressive marketing of many new osteoporosis drugs.

Although the drug manufacturers would like you to believe that osteoporosis medications are appropriate for all stages of osteoporosis, should be used for prevention, and are without dangerous side effects — none of those claims are true.

In fact, in 2008, the US Food and Drug Administration (FDA) issued an advisory to health-care professionals and patients about a possible side effect of some osteoporosis medications. Bisphosphonates — which include such drugs as Actonel®, Boniva®, Fosamax®, Reclast® and Zometa® — have been linked to severe and sometimes incapacitating bone, joint or muscle pain in patients.

The use of bisphosphonates has also been linked to osteonecrosis of the jaw, more commonly known as “dead jaw.” Osteonecrosis occurs when part of the jawbone essentially dies and becomes exposed.

“This is a very complex issue, and our understanding of it continues to grow,” explains Temple University researcher Jon Suzuki, DDS, PhD, MBA. “Both dental and medical professionals need to maintain open lines

of communication with each other to ensure the best care for their patients who are taking bisphosphonates.”

In addition, a 2008 study found that long-term use of Fosamax is associated with unusual fractures of the thigh bone (*N Engl J Med* 2008;358:1304-6). Another 2008 study found that Fosamax appears to double a woman’s odds of developing atrial fibrillation (a chronic irregular heartbeat) (*Arch Intern Med* 2008;168:826-31).

Disturbingly, the drug companies not only downplay the risks of these medications, but they also exaggerate the benefits. They’ve recently been aggressively marketing these drugs to both those with osteoporosis and those with osteopenia — weakened bones, but not full-blown osteoporosis. A recent report in the prestigious *British Medical Journal* found that the risk of fracture among women with osteopenia is so low that these drugs would provide almost no benefit — but *would* provide dangerous side effects (*BMJ* 2008;336:126-9).

Preventing Osteoporosis Naturally

Get Regular Chiropractic Checkups

Regular exercise is essential to keeping bones healthy and strong. And chiropractic care is key to keeping your body in top exercising form. Chiropractic adjustments keep joints in optimal health, allowing for bone-

friendly weight-bearing exercise.

In addition, chiropractic care helps to preserve and maximize range of motion. One recent study that looked at the effect of spinal manipulation on active spinal range of motion concluded that “spinal manipulation of the cervical spine increases active range of motion.” (*J Manipulative Physiol Ther* 2001;24:552-5.) Optimizing range of motion allows you to exercise more effectively and work more muscle groups, in turn keeping more bones strong.

Get Enough Calcium and Vitamin D

Calcium and vitamin D are necessary to safeguard bones. Adults need at least 1,000 milligrams of calcium and 200 IU of vitamin D per day. A recent study conducted in Australia found that daily calcium doses of more than 1,200 milligrams reduced fracture risk by 20 percent, compared to 6 percent for doses of less than 1,200 milligrams (*Lancet* 2007;370:657-66).

Good sources of calcium include low-fat milk, yogurt and cheese; collard greens; kale; broccoli; and almonds. A daily calcium supplement can also help you reach your 1,000 mg. To maximize the effectiveness of calcium, take it in conjunction with magnesium.



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Osteoporosis Is More Likely to Attack:

- Women
- Older people
- Postmenopausal women, mostly because the body has less estrogen
- Smaller and thinner individuals
- Caucasians or Asians
- Those with a family history of osteoporosis-related fracture
- People who smoke tobacco or drink excessive alcohol
- People who take certain medicines (i.e., thyroid drugs or steroids)
- Individuals who are sedentary
- People who don't get enough calcium or vitamin D

Nutritionists typically suggest a 2:1 ratio of calcium to magnesium, and many formulations adhere to this recommendation. Some people get all the vitamin D they need from sun exposure; others need to take it in supplement form.

Remember to never start any supplementation program without first consulting your doctor of chiropractic.

Exercise

Exercise, especially weight-bearing and resistance exercises, is crucial to preserving healthy bones. A recent study out of the University of Arizona found that weight-bearing and resistance exercises combined with calcium citrate supplementation over one year provided significant improvement in bone mineral density of postmenopausal women (*Osteoporos Int* 2003;14:637-43).

Strive to get at least 30 minutes of bone-strengthening activity, such as brisk walking, most days.

Exercise can also help prevent falls since it improves muscle strength and balance. And exercising on a vibrating platform may be especially advantageous for reducing the risk of falls. A 2008 study found that exercising for a few minutes on a vibrating platform twice per week may reduce the risk of falls among the elderly by improving their balance (*J Sci Med Sport* 2008 Epub ahead of print).

Bulk up on B Vitamins

New research reveals that B vitamins are crucial to optimizing bone density

(*J Clin Endocrinol Metab* 2008;93:2206-12). Vitamin B6 is found in foods like potatoes, bananas, beans and fortified cereals. Vitamin B12 is found mainly in meat, fish and poultry.

Increase Potassium Consumption

Late-breaking research identifies a relationship between potassium and bone density. A 2008 study published in the journal *Osteoporosis International* concludes: "Potassium intake shows positive association with bone density in elderly women, suggesting that increasing consumption of food rich in potassium may play a role in osteoporosis prevention." (*Osteoporos Int* 2008 Epub.)

Drink Tea

Older women may want to wash down their calcium supplements with a cup of tea. A recent study found that "tea drinking is associated with preservation of hip structure in elderly women." In the four-year study of 1,500 elderly (70 to 85 years old) women, non-tea drinkers lost 4% of their total hip BMD (bone mineral density); tea drinkers lost only 1.6%." (*Am J Clin Nutr* 2007;86:1243-7.)

Avoid Cola

Women definitely **don't** want to wash down their calcium with cola. A recent study published in the *American Journal of Clinical Nutrition* concluded that "intake of cola, but not of other carbonated soft drinks, is associated with low BMD in women." (*Am J Clin Nutr* 2006;84:936-42.) One possible culprit is phosphoric acid in cola. The body tries to neutralize the phosphoric

acid with calcium, and if there isn't enough calcium in the diet, it will steal it from the bones.

Limit Chocolate

Sadly, frequent chocolate consumption is linked to weak bones. A 2008 study of 1,001 women aged 70 to 85 concluded that "Older women who consume chocolate daily had lower bone density and strength." (*Am J Clin Nutr* 2008;87:175-80.)

Avoid Excess Alcohol — Consider Small Amounts

Although excessive alcohol is associated with poor bone health, new research suggests that one drink per day may actually make bones stronger. A 2008 report found that "compared with abstainers and heavier drinkers, persons who consume 0.5 to 1.0 drink per day have a lower risk of hip fracture." (*Am J Med* 2008;121:406-18.)

Don't Smoke

Numerous studies over the last 20 years demonstrate that cigarette smoking decreases bone density. Exactly how smoking affects bones is still unclear. Although smokers are thinner and exercise less, and females who smoke have earlier menopause (all of which are associated with lower bone density), smoking does appear to have other independent effects on bone.

Manage Depression

Recent research links depression with bone loss. A 2007 study published in the *Archives of Internal Medicine* concluded that "Low BMD is more prevalent in premenopausal women with MDD [major depressive disorder]. The BMD deficits are of clinical significance and comparable in magnitude to those resulting from established risk factors for osteoporosis, such as smoking and reduced calcium intake." (*Arch Intern Med* 2007;167:2329-36.)

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