



PREVENTING AND REVERSING OSTEOPOROSIS

In the United States, osteoporosis management could easily be reversed if we were vigilant about eating proven doses of critical bone-support nutrients. Sadly, most people are not getting sufficient nutrients to support optimal bone strength.

Recent evidence has shown that specific doses of Calcium, Vitamin D and the icariin flavonoid (Epimedium herb) can not only prevent osteoporosis, but reverse bone loss in those with osteoporosis. Conveniently, the supplement dose that reverses osteoporosis is the same as those shown to prevent this disease. This means all adults should follow the same regimen whether or not they have osteoporosis or are taking bisphosphonate drugs to treat osteoporosis.

The following intake levels of calcium, vitamin D and icariin flavonoid have been shown to prevent osteoporosis and can even help patients with osteoporosis regain some of their bone density back:

Calcium - minimum 1,500 mg (1,100 from supplementation; 500-900 mg is typically ingested in North America).

Vit D - 1,200-1,400 IU

Icariin flavonoid: 60 mg (from Epimedium)

Vit C - 1,000 mg

Magnesium - 500 mg

Copper - 2 mg

Zinc - 15 mg

B-50 complex

Silica - 2-3 mg

Boron - 1.5 mg

As a practitioner concerned with bone health, I encourage you to take a high-potency multivitamin/mineral and a well-designed bone support formula beginning at age 16 to be sure you are getting the bone nutrients required for prevention and reversal of osteoporosis.

Long-Term Bisphosphonate Use and Increased Fracture Risk

A flurry of recent reports associates femoral fractures with long-term treatment with biophosphonates. Several studies report rare types of femur fractures in individuals (mostly women) taking bisphosphonates, specifically alendronate (Fosamax), for approximately 4-8 years. [1-9] It should be noted that the fractures occurred with no apparent trauma or from falls. In most cases, individuals were performing low-energy exercise, sometimes just walking down a flight of stairs. [10-11] Fosamax (Alendronate) is used by large numbers of post - menopausal women with osteoporosis. In 2008, bisphosphonate sales exceeded \$3.5 billion, according to data from IMS Health.

Impact on Bone Quality

Bisphosphonates accumulate and suppress bone turnover, so it "appears" initially, that bone increases in density. However, this does not equate with good bone quality. Bone remodeling is a natural part of bone health. By decreasing bone cell activity, bone formation is decreased. After long-term use, the quality of bone is not maintained.

The concern is even greater when bisphosphonate is taken with another agent that may inhibit bone turnover, such as estrogen. The current patient package insert for Fosamax (alendronate) states, "The long-term effects of combined Fosamax and Estrogen Replacement Therapy on fracture occurrence have not been studied." The drug company admits the long-term effects are unknown.



Recent Research Findings

Two studies presented at the 2010 annual meeting of the American Academy of Orthopedic Surgeons (AAOS) suggest that long-term suppression of bone remodeling by bisphosphonates may alter material properties of bone, potentially affect the bone's mechanical integrity and could contribute to the risk for atypical fractures. Researchers at Columbia University evaluated 111 postmenopausal women with primary osteoporosis; 61 took bisphosphonates while 50 took calcium and vitamin D. Melvin Rosenwasser, MD, orthopedic surgeon, Columbia University states "... an association between prolonged therapy and declining cortical bone structural integrity."

Reports and studies are now demonstrating that bisphosphonates should not be used long term, and it is highly questionable whether patients with osteopenia should be prescribed the drug at all. It has been popular to give bisphosphonates to perimenopausal and menopausal women who have T-scores of between -1 and -2.5, indicating osteopenia. The idea was to head off the bone loss by suppressing bone resorption, but unfortunately, this also indirectly suppresses the normal process of bone remodeling and formation.

It is important to practice good dietary practices and get enough weight-bearing exercise to complete the lifestyle management protocol for osteoporosis prevention and management. As well, regular chiropractic treatments help to keep the patient more functional, enabling them maintain pain-free movement patterns. This allows them to participate in physical activity at the level required for optimal osteoporosis protection.

Take-Home Points

Present conclusions are that during long-term alendronate therapy, severe suppression of bone turnover may occur, resulting in increased susceptibility to nonspinal fractures along with delayed healing. Current evidence suggests that bisphosphonates should be stopped after five years. Patients who remain at a high risk of fractures or who have had fractures despite bisphosphonate therapy could be considered for treatment with intermittent PTH (parathyroid hormone). In otherwise healthy perimenopausal women who merely have osteopenia, the best therapeutic option is probably not bisphosphonates.

Studies have shown the efficacy of bisphosphonates in the first five years of therapy in improving bone density and diminishing the risk of fractures. After that, however, until additional studies are done that clarify the risks of nontraumatic fractures, the delayed healing of bone fractures associated with long-term treatment with bisphosphonates, and which risk factors, if any, can help predict which patients are at increased risk for these adverse effects, it is reasonable to suggest patients stop the drug, continue weight-bearing exercise, take calcium supplements and have their bone density monitored with DEXA.

Weight-bearing exercise is essential for the prevention and treatment of osteoporosis and unfortunately, it is often overlooked or underemphasized. Muscle strength is an accurate predictor of bone strength. Weight-bearing exercise has been shown to be the most effective way to strengthen bone and protect against osteoporosis-related fractures.¹⁴⁻¹⁵ Medication is not the best way to prevent osteoporosis; nutrition and exercise are key for bone health (and overall health).

References

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