HEALTH CARE FOR OUR BONES: A PRACTICAL NUTRITIONAL APPROACH TO PREVENTING OSTEOPOROSIS

To the Editor:

I appreciate Dr Seaman's recent survey of the literature on osteoporosis.[1] His emphasis on the importance of a "whole-food" approach to nutrition is commendable as is his earlier review of the literature on the proinflammatory nature of the American/Western diet.[2] However, his recent review on osteoporosis lacked any mention of vitamin D, and I am writing to provide supplementary information based on research that our group has recently published elsewhere.[3-5]

Vitamin D deficiency is epidemic in the United States and in other industrialized nations where dietary sources of vitamin D are inadequate and where people spend most of their time indoors and/or otherwise "protected" from ultraviolet radiation by either clothes or sunscreen. Hypovitaminosis D impairs calcium absorption, increases calcium resorption from bone, and contributes significantly to a wide variety of common clinical disorders, including low back pain and generalized musculoskeletal pain.[6]

Not surprisingly, subclinical vitamin D deficiency contributes significantly to the high prevalence of osteoporosis, and when left untreated, vitamin D deficiency impairs responsiveness to bone-building interventions, including bisphosphonate treatment[7] and nutritional-botanical interventions, as we have recently pointed out elsewhere.[5] In our recent review of the literature,[3] we concluded that optimal vitamin D status correlates with serum levels of 25-OH-vitamin D in the range of 40 to 65 ng/mL (100-160 nmol/L). Serum levels of 25-OH-vitamin D must equal or exceed 40 ng/mL (100 nmol/L) to attain effective reduction of serum parathyroid hormone, and our optimal range for vitamin D is consistent with the serum levels seen in populations with adequate sun exposure and is not associated with adverse effects. To attain and maintain optimal vitamin D serum levels in the absence of frequent full-body sun exposure, oral supplementation at levels of 1000 IU/d for infants, 2000 IU/d for children, and 4000 IU/d for adults is required; these dosages are safe and are well supported by peer-reviewed research and clinical trials. Vitamin D toxicity is exceedingly rare at the physiological doses suggested here, provided that the patient does not have hypersensitivity to vitamin D (such as with sarcoidosis) and is not taking medications that promote hypercalcemia (such as thiazide diuretics). Nonetheless, clinicians should periodically monitor serum calcium levels to ensure safety and avoid toxicity.

The addition of vitamin D to the plan suggested by Dr Seaman for the prevention of osteoporosis will certainly improve the efficacy of the nutritional and botanical interventions he reviewed. Vitamin D supplementation, when used at the doses recommended here to attain optimal serum levels and when used along with adjunctive nutritional support, botanical interventions, and a foundational whole-food diet, improves the health of our patients who seek integrative chiropractic care.[8]

Alex Vasquez, DC, ND
Biotics Research Corporation
Rosenberg, TX 77471

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