



Weekly Practice Builder

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In response to increasing demand from Practitioners, Biotics Research has introduced the Weekly Practice Builder program to bring important, leading-edge information and literature to you, thereby helping facilitate the growth of your practice. Biotics Research products are available exclusively through Healthcare Providers.

Our featured supplement of the week is Bio-K-Mulsion™

Why do your patients need Bio-K-Mulsion™? Vitamin K₁ is the primary dietary source of vitamin K, estimated to contribute about 40-50% of the total dietary intake. Functionally, vitamin K is required as a cofactor in the posttranslational conversion of specific glutamate residues into γ -carboxylglutamic acid (Gla). In this function, the vitamin K dependent proteins play a diverse physiological role in cellular proliferation. Vitamin K dependent proteins also play an important role in the activation of the coagulation cascade, and in the maintenance of both the flow and the structural integrity of vascular tissues. For the past two decades, research in humans has correlated the risk of osteoporotic fractures with vitamin K insufficiency. Patients demonstrating osteoporotic fractures were shown to have a 70% decrease in vitamin K, as compared to age-matched controls. Consequently, mounting evidence suggests that higher intakes of vitamin K than previously recommended are needed for optimal bone health, as the current RDI may be too low to support the carboxylation of osteocalcin. Supplemental vitamin K (10mg/day) in female athletes with low-estrogen was demonstrated to increase the calcium-binding capacity of osteocalcin, resulting in a 15-20% increase in bone formation markers, along with a 20-25% decrease in bone resorption markers.



Why Bio-K-Mulsion™ from Biotics Research Corporation? Vitamin-K absorption depends on normal consumption and digestion of dietary fat. As an essential fat soluble nutrient, vitamin K may be inadequately absorbed, due to insufficiency in these factors. Biotics Research Corporation's **Bio-K-Mulsion™** is emulsified for enhanced absorption, thus may be especially important in patients with fat malabsorption issues. As always, you can count on Biotics Research Corporation to provide you with the "Best of Science and Nature".

Studies You Should Know About

Bone health is known to encompass many factors. In one study magnesium, zinc and vitamin C were implicated as being significantly correlated to bone mineral density in multiple regression models, which were controlled for age, fat and lean tissue, physical activity and energy intake. As such, a comprehensive approach, encompassing multiple vitamins and minerals must be considered for optimal bone health. Ilich JZ, Brownbill RA, Tamborini L. Bone and nutrition in elderly women: protein, energy, and calcium as main determinants of bone mineral density. *Eur J Clin Nutr.* 2003 Apr;57(4):554-65.

A known feature associated with aging is a change in body composition, including a decrease in both lean body mass and total body water, and an increase in body fat, along with a corresponding reduction in the basal metabolic rate. Basic nutritional requirements, however, are not reduced. As such in this population, critical dietary nutrients include antioxidants, such as vitamin C, carotenoids and zinc, as well as vitamins and minerals, which serve to provide immune support, and to reduce the risk of disease in this population. Karger AG, Basel. Elmadfa I, Meyer AL. Body composition, changing physiological functions and nutrient requirements of the elderly. *Ann Nutr Metab.* 2008;52 Suppl 1:2-5. Epub 2008 Mar 7.

Questions? Concerns?
Comments? Biotics Research
wants to hear from you!



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