

Osteo-B Plus®

Multi-Nutrient Support from Biotics Research Corporation



Nearly 30% of American women will develop osteoporosis

The importance of calcium has long been recognized in bone health. However, as important as calcium is to bone health, only 25% of women with osteoporosis are calcium deficient. New evidence clearly supports the view that multiple nutrients are essential to nurture the skeletal system. **Osteo-B Plus®** provides these essential nutrients.

Bone is a dynamic tissue that requires adequate nutrition for maintenance and growth. Because of the balance between bone building, performed by osteoblasts, and bone dissolution, carried out by osteoclasts, bone growth and maintenance possess distinctive nutritional needs. Key nutrient deficiencies increase the risk of osteoporosis.



Osteo-B Plus® in a 180 tablet bottle.

Osteo-B Plus® preserves existing mineral mass and protein matrix and supports repair mechanisms

Supplement Facts

Serving Size: 3 Tablets
Servings Per Container: 60

	Amount Per Serving	% Daily Value		Amount Per Serving	% Daily Value
Vitamin C (as ascorbic acid)	120 mg	133%	Calcium (as calcium citrate)	500 mg	38%
Vitamin D (as cholecalciferol)	5 mcg	25%	Magnesium (as magnesium oxide)	200 mg	48%
Vitamin K (as phytonadione)	65 mg	54%	Zinc (as zinc gluconate)	5 mg	45%
Thiamin (B1) (as thiamin mononitrate)	1.5 mg	125%	Copper (as copper gluconate)	2 mg	222%
Riboflavin (B2)	1.7 mg	131%	Manganese (as manganese gluconate)	5 mg	217%
Niacin (as niacinamide)	20 mg	125%			
Vitamin B6 (as pyridoxine HCl)	2 mg	118%	Purified Chondroitin Sulfates (bovine)	200 mg	*
Folate (400 mcg calcium folinate)	680 mcg DFE	170%	Boron (as calcium borogluconate)	3 mg	*
Vitamin B12 (as methylcobalamin)	6 mcg	250%	Sugarcane Extract (Saccharum officinarum) (shoot)	30 mg	*
Biotin	300 mcg	1,000%			
Pantothenic Acid (as calcium pantothenate)	10 mg	200%			

*Daily Value not established
Other ingredients: Stearic acid (vegetable source), magnesium stearate (vegetable source), modified cellulose gum and food glaze.

This product is gluten and dairy free.

To place your order for **Osteo-B Plus®** or for additional information please contact us:

(905) 476-3554



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Osteo-B Plus® supplies:

Calcium: Supplementation may help prevent bone loss in calcium-deficient people.¹ Those having demineralized bones may have difficulty absorbing calcium due to low stomach acid production (hypochlorhydria or achlorhydria). Some forms of calcium are poorly absorbed. **Osteo-B Plus®** supplies calcium as calcium citrate, the most absorbable form of calcium, particularly beneficial for those with low stomach acid.

Magnesium: In addition to being a co-factor for key enzymes in bone, including alkaline phosphatase, employed in bone remodeling, magnesium is also a co-factor in enzymes involved in converting vitamin D to its hormone form. Abnormal mineralization has been correlated with osteoporotic women found to be low in magnesium.² Magnesium supplementation along with calcium may increase bone mineralization.³

Boron: Boron affects the actions of estrogen and cholecalciferol. A combined deficiency of magnesium and boron causes detrimental changes in bone in animals. In human subjects, boron deprivation lowered plasma calcitonin levels, increased total plasma levels and increased excretion of calcium.⁴ Normalization of steroidal hormone levels, which is closely related to bone mineralization, was observed in postmenopausal women supplemented with 3 mg of boron daily.⁵

Manganese: Deficiency can lead to bone malformation and thinning. Manganese is required for the synthesis of connective tissue glycosaminoglycans (chondroitin sulfates) that form the matrix upon which mineral deposition occurs. Osteoporotic women were found to have only 25% of the manganese levels observed in control groups.⁶

Copper: Deficiency may lead to abnormal bone deposition. Collagen is laid down prior to mineralization in order to establish a protein matrix for mineralization. Copper is a co-factor for lysyl oxidase, the enzyme that forms cross links between collagen in connective tissue. The typical diet supplies as little as 50% of the recommended daily intake of copper.⁷

Zinc: Low levels of serum zinc and bone zinc were observed in osteoporotic patients.⁸ Zinc supports bone formation by enhancing the action of vitamin D, and is a co-factor for alkaline phosphatase. Typical diets contain less than the optimal amounts of zinc.

Vitamin D: Vitamin D is the primary factor regulating calcium absorption by the intestine. Administration of the hormone derived from vitamin D, cholecalciferol, significantly decreased the rate of bone loss and increased calcium uptake.⁹ Low levels of vitamin D are common in elderly women. Deficiencies of vitamin D can lead to calcium deficiencies, leading to soft bones (osteomalacia).

Vitamin K: The synthesis of osteocalcin, the bone protein that attracts calcium to bone tissue, requires vitamin K as a co-factor. Administration of vitamin K to individuals with osteoporosis reduced urinary excretion of calcium by 18-50%.¹⁰ Factors limiting vitamin K uptake include long term usage of antibiotics, vitamin K antagonists such as warfarin, and malabsorption of fat and fat-soluble vitamins due to gastrointestinal dysfunction.

B Complex Vitamins: B vitamins function as coenzymes in metabolic pathways that provide energy and building blocks from foods. Shortages impair healing and repair by connective tissues, including bone turnover.¹¹ B complex vitamins works collectively—all should be present in appropriated amounts for optimal functioning. For example, elevated blood homocysteine is linked to osteoporosis; homocysteine interferes with collagen cross linking. Folate and B6 promote the conversion of homocysteine to simple amino acids.¹² B6 also participates in collagen cross linking.

Vitamin C: Enzymes that form hydroxyproline and hydroxylysine (proline and lysine oxidases) require vitamin C. These hydroxyamino acids form cross-links with collagen and elastin in mature connective tissue and matrix. Twenty percent of elderly women were found to be deficient in vitamin C, even though they consumed RDI amounts (60 mg) daily.¹³

Purified Chondroitin Sulfates: Chondroitin sulfates represent glycosaminoglycans (GAG), polysaccharides found in connective tissue such as cartilage. Low levels of chondroitin sulfates occur in bone where they initiate bone formation. Preformed GAG can stimulate chondroitin sulfate synthesis.¹⁴ **Osteo-B Plus®** supplies highly purified chondroitin sulfates, up to 90% of which can be readily absorbed.

Saccharum officinarum Extract: *Saccharum officinarum* is an especially rich source of silicon. Silicon is required for structural integrity of connective tissue and bone strength. It is believed to function as a cross-linking agent to strengthen connective tissue.¹⁵

References:

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