Ossentia™

Clinical Applications

- Support Total Bone Health
- Support Bone Strength and Flexibility
- Increase Quantity of Type 1 Collagen in Bone
- Increase Calcium "Binding Sites"

Ossentia™ provides total bone health in comprehensive, convenient and cost effective packets containing clinically-relevant quantities of microcrystalline hydroxyapatite concentrate ("MCHC"), cholecalciferol (D3) and choline-stabilized orthosilicic acid ("ch-OSA"). While the MCHC contributes to bone's strength and stiffness; ch-OSA is vital for the synthesis of Type 1 collagen which determines bone's flexibility and resistance to fracture. In addition, collagen provides "binding sites" for bone calcium.

Ossentia™ meets or exceeds cGMP quality Standards

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Discussion

Calcium is vital to bone health and strength. However, calcium, as well as all bone minerals, must bind to core posts inside the bone. These flexible posts are made from collagen. With age-related loss of collagen, there become fewer and fewer of these bone-calcium binding sites, resulting in a reduction in bone mineral density. What's more, the loss of bone collagen diminishes bone flexibility, resulting in a greater risk of fracture.

Ossentia™ contains patented, clinically-tested, choline-stabilized orthosilicic acid (ch-OSA). Ch-OSA links together single chains of amino acids to form collagen strands. The collagen strands create the core-post "binding sites" for calcium and other bone minerals. Oral supplementation of ch-OSA has been studied in chicks, rats, calves and humans.[1,2,3,4]

In a twelve-month, randomized, double-blind, placebo-controlled trial, (n=136 women; T score <1.5), a study group received 6 mg of ch-OSA along with 1000 mg calcium and 800 iu Vitamin D3, while another group received a placebo in addition to the same amounts of calcium and vitamin D3. Upon completion, the study group showed a 19% increase in serum procollagen type 1 N-terminal propeptide (PINP), the most sensitive bone formation marker, an overall positive trend for other bone formation markers (BAP, osteocalcin), and a 2.00% increase in BMD compared to the women taking only placebo, calcium and vitamin D3. Additionally, the ch-OSA group showed no adverse effects.[5]

An earlier study demonstrated that orthosilicic acid directly stimulates collagen type 1 synthesis in human osteoblast-like cells (bone-forming cells) and enhances osteoblastic differentiation.[6] Another OSA study demonstrated that the increase in collagen-responsible bone flexibility resulted in a greater resistance to physical stress.[7]

"Bone Support", contains Ossentia™ micro-crystalline hydroxyapatite concentrate (MCHC), a premium, proprietary, standardized extraction from New Zealand, the country that raises one of the world's safest, most natural sources of bone. Bone Support provides a crystalline calcium and phosphorous matrix in the ideal physiological ratio of 2:1. Bone Support delivers bioactive growth factors and type I collagen, amino acids, glycosaminoglycans and a broad range of essential trace elements. During four decades of scientific research on Bone Support, numerous studies document the reversal of bone loss at therapeutic levels of supplementation.[8,9,10,11]

Vitamin D in Ossentia™ is provided as cholecalciferol, the form in which the vitamin is derived from cholesterol in the body and synthesized by sunlight on the skin. Vitamin D is needed to maintain normal blood levels of calcium and phosphate needed for normal bone metabolism. The active form of vitamin D regulates gene transcriptors that code for calcium-transporting and bone matrix proteins.

Supplement Facts

Serving Size: 1 Packet
Servings Per Container: 60

	(2) Bone Support with vitamin D3 Capsules Amount	%DV*	(1) ch-OSA® Capsule Amount	%DV*
Calcium (as MCHC†)	550 mg	56%		
Vitamin D3 (Cholecalciferol)	2000 IU	500%		
MCHC†	2200 mg	**		
Silicon (as Choline-Stabilized Orthosilicic Acid)			3 mg	**

† Microcrystalline Hydroxyapatite Concentrate
* Daily Value.
** Daily Value not established.

Other Ingredients for Bone Support with vitamin D3: HPMC (vegetable capsule) and magnesium stearate.
Other Ingredients for ch-OSA®: Microcrystalline cellulose, HPMC (vegetable capsule), and purified water.

Choline-stabilized orthosilicic acid (ch-OSA®) is a registered trademark of and manufactured by Bio Minerals n.v., Belgium.

Dosing:

Consume content of packet once or twice a day as directed by your healthcare practitioner.

References:

1. Calomme M. et al. Effect of ch-OSA on bone density in chicks. Poster presentation at 29th European Symposium on Calcified Tissues May 25-29, 2002.

2. Calomme M, et al. Effect of choline stabilized orthosilicic acid on bone density in ovariectomized rats. J Bone Miner Res, 2004 Oct;(19) (S1), S449 [PMID: 16604283]

3. Calomme M, et al. Partial prevention of long-term femoral bone loss in aged ovariectomized rats supplemented with choline-stabilized orthosilicic acid. Calcif Tissue Int. 2006;78(4):227-32 [PMID: 16604283]

4. Calomme M, et al. Supplementation of calves with stabilized orthosilicic acid. Biol Trace Elem Res. 1997 Feb;56(2):153-65 [PMID: 9164661]

5. Spector TD, Calomme MR, et al. Choline-stabilized orthosilicic acid supplementation as an adjunct to Calcium/Vitamin D3 stimulates markers of bone formation in osteopenic females: a randomized, placebo-controlled trial. BMC Musculoskeletal Disorders 2008, June11;9:85 [PMID: 18547426]

6. Reffitt DM, et al. Orthosilicic acid stimulates collagen type 1 synthesis and osteoblastic differentiation in human osteoblast-like cells in vitro. Bone 2003 Feb;32(2):127-35 [PMID: 12633784]

7. Jugdaohsingh R, et al. Dietary silicon intake is positively associated with bone mineral density in men and premenopausal women of the Framingham Offspring cohort. J Bone Miner Res. 2004 Feb;19(2):297-307 [PMID: 14969400]

8. Pelayo I, Haya J, et al. Raloxifene plus ossein-hydroxyapatite compound versus raloxifene plus calcium carbonate to control bone loss in postmenopausal women: a randomized trial. Menopause 2008 Nov-Dec;15(6):1132-8. [PMID: 18791486]

9. Castelo-Branco C, Pons F, Vicente JJ, et. al. Preventing postmenopausal bone loss with ossein-hydroxyapatite compounds. Results of a two-year, prospective trial. J Reprod Med. 1999 Jul;44(7):601-5. [PMID: 10442322]

10. Albertazzi P, Steel SA, et al. Comparison of the effects of two different types of calcium supplementation on markers of bone metabolism in a postmenopausal osteopenic population with low calcium intake: a double-blind placebocontrolled trial. Climacteric. 2004 Mar;7(1):33-40 [PMID: 15259281]

11. Castelo-Branco C, Martinez de Osaba MJ, et al. Ossein-hydroxyapatite compounds for preventing postmenopausal bone loss. Coadjuvant use with hormone replacement therapy. J Reprod Med. 1999 Mar;44(3):241-6. [PMID: 10202741]

Cautions:

Keep out of reach of children. Take under medical supervision. Consult your healthcare practitioner if you have, or suspect you have any medical condition, are taking prescription drugs, or are pregnant or lactating.

Additional references available upon request.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.