

Glucosamine Synergy®

Combines *Boswellia serrata* with Vitamins, Minerals, and Glucosamine to Help Maintain Healthy Joint Function

Bones and supportive connective tissue, including cartilage, are in a constant state of renewal and restoration. Poor diet, not enough exercise, and excessive stress contribute to strain on cartilage and associated tissues. Glucosamine Synergy encourages healthy joint functioning by supporting the body's natural cartilage, ligament, and bone regeneration function, encouraging natural tissue restoration and renewal, supporting healthy osmotic transfer of fluids, and providing vitamins and minerals to maintain optimal mobility.†

How Glucosamine Synergy Keeps You Healthy

Supports the musculoskeletal system

Glucosamine is an amino-monosaccharide, made naturally in the body, which helps form cartilage. Cartilage is the thick layer of strong and pliable connective tissue that covers the ends of bones to provide a uniform gliding surface for efficient joint motion. Glucosamine sulfate is the supplemental form of glucosamine that can help the body in the normal repair and rebuilding of cartilage. *Boswellia serrata* extract can help maintain healthy joint tissue by inhibiting the activity of certain enzymes and the release of pro-inflammatory compounds called leukotrienes.†

Provides many essential nutrients to support bone and tissue health

Calcium helps keep bone tissue strong, is essential for blood coagulation, vasoconstriction and vasodilation, nerve impulse transmission, muscle contraction, hormone secretion, maintenance and function of cell membranes and membrane permeability, and proper functioning of many enzyme reactions. Both calcium and magnesium are essential in the maintenance of bone structure and function. Magnesium is also essential for over 300 enzymatic reactions in the body, including synthesis of carbohydrates and fats for energy and the uptake of calcium and potassium. Nutritional yeast contributes B-complex vitamins to support macronutrient metabolism. Vitamin C supports collagen formation and the growth and repair of tissues. Vitamin A supports skin cell integrity. Vitamins E and C provide antioxidant protection.†

Please copy for your patients.



Introduced in 2000

Content:
90 capsules

Suggested Use: One capsule three times per day, or as directed.

Supplement Facts:
Serving Size: 1 capsule
Servings per Container: 90

	Amount per Serving	%DV
Calories	2	
Manganese	1 mg	50%
Glucosamine Sulfate (from Crab Shells)	500 mg	
<i>Boswellia serrata</i> (Stem/trunk) Extract (65-70% Organic Acids)	60 mg	

Proprietary Blend: 31 mg

Calcium lactate, nutritional yeast, carbamide, bovine bone meal, veal bone PMG™ extract, bovine liver, defatted wheat (germ), bovine heart PMG™ extract, magnesium citrate, oat flour, inositol, carrot (root) powder, dried pea (vine) juice, *Tillandsia usneoides*, ribonucleic acid, beet (root) powder, bovine spleen, ovine spleen, bovine adrenal Cytosol™ extract, bovine kidney, mushroom powder, bovine liver fat extract, flaxseed oil extract, mixed tocopherols (soy), para-aminobenzoate, ascorbic acid, rice (bran), soybean lecithin, vitamin A palmitate, cellulose, cyanocobalamin, and cholecalciferol.

Other Ingredients: Gelatin, calcium stearate, manganese glycerophosphate, water, colors, arabic gum, starch, and sucrose (beets).

Sold through health care professionals.



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†These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Glucosamine Synergy[®]

What Makes Glucosamine Synergy Unique

Product Attributes

Multiple nutrients from a variety of plant and animal sources

- › Supports connective tissue and the natural healing process in joints
- › Bovine and ovine tissues provide cellular support and rehabilitation to the corresponding tissues in humans
- › Vitamins, minerals, and nutrients from plants and animal tissues work synergistically for maximum effect[†]

Contains Protomorphogen[™] extracts

- › Standard Process uses a unique manufacturing method of deriving tissue cell determinants from animal glands and organs
- › Important antigenic properties of nucleoprotein-mineral determinants are the foundation of the product[†]

Certified Organic Farming

A healthy ecosystem is created by using organic farming techniques, such as rotating crops, fertilizing the soil with nutrient-rich cover crops and byproducts from our processing, practicing strict weed-control standards, and continually monitoring the health of our plants

- › Assures the soil is laden with minerals and nutrients
- › Ensures plants are nutritionally complete and free from synthetic pesticides

Manufacturing and Quality-Control Processes

Upon harvesting, nutrient-rich plants are immediately washed and promptly processed

- › Preserves nutritional integrity

Low-temperature, high-vacuum drying technique

- › Preserves the enzymatic vitality and nutritional potential of ingredients

Not disassociated into isolated components

- › The nutrients in Glucosamine Synergy are processed to remain intact, complete nutritional compounds

Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products

- › Ensures consistent quality and safety

Vitamin and mineral analyses validate product content and specifications

- › Assures high-quality essential nutrients are delivered

Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature—in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists—known and unknown—bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the supplement facts for Glucosamine Synergy[®].

Bruyere O, Reginster JY. Glucosamine and chondroitin sulfate as therapeutic agents for knee and hip osteoarthritis. *Drugs Aging*. 2007;24(7):573-80.

Bsoul SA, Terzhalmy GT. Vitamin C in health and disease. *J Contemp Dent Pract*. 2004 May 15;5(2):1-13.

Carr AC, Frei B. Toward a new recommended dietary allowance for vitamin C based on antioxidant and health effects in humans. *Am J Clin Nutr*. 1999;69(6):1086-1107.

Food and Nutrition Board, Institute of Medicine. (1997). Calcium. In *Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride* (pp. 71-145). Washington D.C.: National Academy Press.

Food and Nutrition Board, Institute of Medicine. (1997). Magnesium. In *Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D, and Fluoride* (pp. 190-249). Washington D.C.: National Academy Press.

Food and Nutrition Board, Institute of Medicine. *Vitamin C, Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids*. Washington D.C.: National Academy Press; 2000:95-185.

Food and Nutrition Board, Institute of Medicine. *Vitamin E, Dietary reference intakes for vitamin C, vitamin E, selenium, and carotenoids*. Washington D.C.: National Academies Press; 2000:186-283.

Herrero-Beaumont G, Ivorra JA, Del Carmen Trabado M, Blanco FJ, Benito P, Martin-Mola E, Paulino J, Marengo JL, Porto A, Lafon A, Araujo D, Figueroa M, Branco J. Glucosamine sulfate in the treatment of knee osteoarthritis symptoms: a randomized, double-blind, placebo-controlled study using acetaminophen as a side comparator. *Arthritis Rheum*. 2007 Feb;56(2):555-67.

Hungerford DS, Jones LC. Glucosamine and chondroitin sulfate are effective in the management of osteoarthritis. *J Arthroplasty*. 2003 Apr;18(3 Suppl 1):5-9.

McCullough, F. et al. The effect of vitamin A on epithelial integrity. *Proceedings of the Nutrition Society*. 1999; volume 58: pages 289-293.

Rao NL, Dunford PJ, Xue X, Jiang X, Lundeen KA, Coles F, Riley JP, Williams KN, Grice CA, Edwards JP, Karlsson L, Fourie AM. Anti-inflammatory activity of a potent, selective leukotriene A4 hydroxylase inhibitor in comparison with the 5-lipoxygenase inhibitor zileuton. *J Pharmacol Exp Ther*. 2007 Jun;321(3):1154-60.

Ross AC. Vitamin A and retinoids. In: Shils M, ed. *Nutrition in Health and Disease*. 9th ed. Baltimore: Williams & Wilkins; 1999:305-327.

Rude R, K, Shils M.E. (2006). Magnesium. In M. Shils, Olson, J.A., Shike, M., Ross, A.C. (Ed.), *Modern Nutrition in Health and Disease* (10th ed., pp. 223-247). Baltimore: Lippincott Williams & Wilkins.

Safayhi H, Rall B, Sailer ER, Ammon HP. Inhibition by boswellic acids of human leukocyte elastase. *J Pharmacol Exp Ther*. 1997 Apr;281(1):460-3.

Shils M, E. (1997). Magnesium. In B. L. O'Dell, Sunde, R.A. (Ed.), *Handbook of nutritionally essential minerals* (pp. 117-152). New York: Marcel Dekker, Inc.

Singh S, Khajuria A, Taneja SC, Johri RK, Singh J, Qazi GN. Boswellic acids: A leukotriene inhibitor also effective through topical application in inflammatory disorders. *Phytomedicine*. 2008 Jun;15(6-7):400-7.

Singh S, Khajuria A, Taneja SC, Khajuria RK, Singh J, Qazi GN. Boswellic acids and glucosamine show synergistic effect in preclinical anti-inflammatory study in rats. *Bioorg Med Chem Lett*. 2007 Jul 1;17(13):3706-11.

Weaver, C. M., Heaney, R.P. (1999). Calcium. In M. Shils, Olson, J.A., Shike, M., Ross, A.C. (Ed.), *Modern Nutrition in Health and Disease* (9th ed., pp. 141-155). Baltimore: Williams & Wilkins.

Weber P, Bendich A, Schalch W. Vitamin C and human health—a review of recent data relevant to human requirements. *Int J Vitam Nutr Res*. 1996;66(1):19-30.

