

ArthroSoothe™

Herbs and Chelated Mineral Complex

By David M. Brady, ND, DACBN, IFMCP, FACN; Kendra Whitmire, MS, CNS; and Antonia Toupet, PhD

This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing, and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

ArthroSoothe™ provides the joints with nutritional support for lubrication, free movement, and healthy function and helps mitigate the normal wear-and-tear of joints due to exercising or the natural aging process.* Joints, cartilage, ligaments, tendons, and synovial fluid (for joint lubrication) undergo a continuous but slow turnover and remodeling process. This is affected by many physiological factors, such as diet, certain supplements, activity, stress, gut health, immune status, infections, aging, hormones, toxic load, and/or various medications. The bioactive compounds in ArthroSoothe™ promote healthy cartilage and a normal inflammatory response to support joint function.*

Formula Highlights

- Glucosamine sulfate, methylsulfonylmethane (MSM), and hyaluronic acid to support joint function and healthy structure*
- Boswellia (as Boswellin® standardized to contain 70% boswellic acids), turmeric (standardized to contain 95% curcuminoids), and resveratrol (as Veri-te™) to promote a healthy inflammatory response*
- Green lipped mussel to promote a healthy inflammatory response and support joint health*
- Provides minerals in their most bioactive forms for superior absorption and bioavailability*
- Gluten-free, dairy-free, and soy-free; non-GMO

Glucosamine sulfate helps support joint function and cartilage health.* It is one of the substrates in the biosynthesis of proteoglycans in chondrocytes and is found in substantial amounts in the articular cartilage.^{1,2} Glucosamine may also promote a healthy inflammatory response, potentially by reducing the catabolic activity of proteases, which may help decrease inflammatory processes.^{2,3} It may inhibit nuclear factor kappa B (NF-κB) signaling and downstream pro-inflammatory responses.^{2,3} Glucosamine may also support hyaluronic production in the synovial membrane.³ Research demonstrates the potential for glucosamine to mitigate the degradation of type II collagen, which is the dominant form of collagen found in cartilage, and maintain the synthesis of collagen in athletes with excess joint usage.⁴

Studies demonstrate the potential for glucosamine to support joint health.* A systematic review and meta-analysis assessed data from 14 randomized controlled trials that administered 1,500 mg/day of glucosamine for a duration ranging from four to 144 weeks. The researchers concluded that glucosamine may play an important role in mitigating stiffness in those with osteoarthritis (OA).¹

Another systematic review and meta-analysis reviewed 13 studies using 1,500 mg of glucosamine per day for a duration of 46 days to three years. The results showed that patients with OA supplemented with glucosamine reported diminished pain in the knee.³ A separate meta-analysis and systematic review of 18 randomized, controlled trials concluded that supplementing with 1,500 mg glucosamine per day for a duration between six weeks and two years may have the potential to support knee function and mitigate pain.⁵

Hyaluronic acid is present in the connective tissue space and the synovial fluid of movable joints. It supports joints and cartilage health by promoting cartilage lubrication and normal synovial fluid viscosity.⁶ Supplementing with hyaluronic acid may support joint health and structure.*

One study (n = 60) compared two groups of patients with OA. Group A was given intra-articular injections of hyaluronic acid (1.6% three times per week). Group B was given oral supplementation of hyaluronic acid (300 mg/day, along with 100 mg/day of Boswellia extract for 20 days, followed by 150 mg/day of hyaluronic acid for an additional 20 days). All patients were evaluated

Benefits*

- Supports healthy joint structure and function^{1,6,9-11,13,19}
- Promotes healthy cartilage^{1,2,6}
- Promotes a healthy inflammatory response^{2,3,8,9,12-16,18,20,21}
- Helps mitigate the normal wear-and-tear of joints due to exercising or the natural aging process^{1-4,6,10,13,19}

Supplement Facts

Serving Size 4 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Niacin (as Niacinamide)	500 mg NE 3125%	Green Lipped Mussel	100 mg *
Zinc (as Zinc Bisglycinate Chelate)	10 mg 91%	Turmeric Extract (<i>Curcuma longa</i>)(rhizomes)	100 mg *
Selenium (as Selenomethionine)	100 mcg 182%	(standardized to contain 95% curcuminoids)	
Copper (as TRAACS® Copper Bisglycinate Chelate)	1 mg 111%	Hyaluronic Acid	20 mg *
Manganese (as TRAACS® Manganese Bisglycinate Chelate)	1 mg 43%	Trans Resveratrol (Veri-te™)	10 mg *
Glucosamine Sulfate (as 2KCl form)	1 g *		
Methylsulfonylmethane (MSM)	750 mg *		
Boswellia Extract (Boswellin®) (<i>Boswellia serrata</i>)(resin)	200 mg *		
(standardized to contain 70% boswellic acids)			

Other Ingredients: (cellulose (vegetarian capsule), vegetable stearate, microcrystalline cellulose, silicon dioxide).
Contains shellfish (crab and shrimp).

*Daily Value not established.

^{††}Ipsos 2023 survey among 160 U.S. functional medicine practitioners who are aware of Designs for Health and recommend supplements. Among these practitioners, in an average month, Designs for Health is their most recommended practitioner supplement brand, meaning a brand that is sold by health-care practitioners, in their office. (For sample definition, go to <https://www.designsforhealth.com>)

after three months, and both groups showed improvement in pain and function.⁷ The American Knee Society Score (AKSS), used to assess knee function, increased by 17% for group A, while for group B it increased by 11%. The visual analogue scale (VAS) score for the pain decreased by 40% for group A and by 24% for group B. The authors suggested that the two types of administrations, injections and oral supplementation, may be synergistically combined.⁷

Another study (n = 40) with individuals with OA of the knee compared a group taking a placebo to a group taking 80 mg/day of a supplement containing 70% hyaluronic acid and 30% other glycosaminoglycans.⁸ The group supplemented with hyaluronic acid showed an improvement in knee function and a reduction in pain and inflammatory cytokines, with the VAS score for the pain decreasing from 6.75 to 4.06 and the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score decreasing from 40.29 to 27.62 after three months of supplementation.⁸

Green lipped mussel (GLM), an extract of *Perna canaliculus*, may support a healthy inflammatory response and joint function.* GLM features omega-3 fatty acids including docosahexaenoic acid (DHA).⁹ One study (n = 21) found that taking 3,000 mg of GLM extract daily for eight weeks led to an improvement in pain, stiffness, and mobility in patients with OA of the knee.¹⁰ A systematic review of the effect of GLM on OA symptoms found that supplementation may promote lower pain and improved gastrointestinal symptoms co-occurring with OA.¹¹ The included studies used servings ranging from 210 mg to 300 mg daily.¹¹

Turmeric and Boswellia Extract (as Boswellin®) promote a healthy inflammatory response and support antioxidant status in the body.^{12,13} A meta-analysis reviewing studies on patients with OA found that those supplemented with turmeric extract (curcumin), ranging from 180 mg to 1,500 mg per day, reported lower pain and reduced WOMAC scores.¹² A meta-analysis of studies assessing the efficacy of Boswellia on patients with OA found that those supplemented with Boswellia (ranging from 100 to 250 mg/day) reported improvements in joint function and decreased pain and stiffness.¹³

Boswellic acid may support healthy inflammatory responses by modulating the activity of the enzymes 5-lipoxygenase (5-LO), human leukocyte elastase (HLE), and cathepsin G (catG).¹⁴⁻¹⁶ It has been shown to be a direct, non-competitive, and non-redox-type inhibitor of 5-LO, which is a key enzyme for the biosynthesis of the pro-inflammatory lipid mediators leukotrienes.¹⁴ An in vitro study found that acetyl-11-keto- β -boswellic acid (AKBA) may mitigate the activity of HLE, an enzyme involved in tissue degradation and inflammation.¹⁵ A randomized, placebo-controlled trial (n = 12) found that subjects supplemented with 800 mg/day *Boswellia serrata* gum extract displayed reduced catG activity compared to a placebo.¹⁶ Reduction in catG activity may play a supportive role in certain inflammatory conditions, such as rheumatoid arthritis (RA).¹⁶

In a three-arm study (n = 201), participants supplemented with 333 mg of curcuminoids three times per day were compared to participants supplemented with 350 mg of curcuminoids plus 150 mg of boswellic acid three times daily for 12 weeks, with both treatment groups also being compared to a placebo group. The researchers found that those supplemented with curcumin or curcumin combined with boswellic acid reported pain reduction, with the combination being more effective, which was likely due to a synergistic effect of the two herbs.¹⁷

Methylsulfonylmethane (MSM) is an organosulfur compound providing sulfur, which is a component of the extracellular matrix of connective tissue. MSM promotes a healthy inflammatory response, potentially by inhibiting NF- κ B and reducing the expression of inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2).¹⁸ One study (n = 120) compared a group of participants supplemented with 5 g of MSM combined with 7.2 mg of Boswellia extract twice daily with another group supplemented with 1,500 mg of glucosamine sulfate daily for 60 days. The researchers found that both groups showed an improvement in joint function and lower pain scores.¹⁹

Trans-resveratrol (as Veri-te™) may further promote healthy inflammatory responses and support antioxidant status.^{20,21} In vitro studies suggest that trans-resveratrol may support normal inflammatory responses and a healthy antioxidant status when it comes to bone and joint health.¹⁹ In pre-clinical models of OA and RA, trans-resveratrol has been shown to play a supportive role in joint health, mainly by promoting healthy inflammatory and immune responses.²⁰ A randomized, placebo-controlled study (n = 117) found that women supplemented with 75 mg of resveratrol twice daily (a serving much higher than in this product) for 12 months displayed positive effects on bone density and a reduction in bone resorption, compared with placebo.²¹

Additional Nutrients

ArthroSoothe™ contains the additional nutrients niacin, zinc, selenium, copper, and manganese to support joint health and antioxidant status and promote a healthy inflammatory response.* This product is formulated using chelated minerals for enhanced absorption and bioavailability.

Recommended Use: Take 4 capsules per day with meals or as directed by your health-care practitioner.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---arthrosoothe-tech-sheet-references>

Dosing recommendations are given for typical use based on an average 150-pound healthy adult. Health-care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

Boswellin® is a registered trademark of Sabinsa Corporation.

TRAACS® is a registered trademark of Albion Laboratories, Inc.

Veri-te™ is a trademark of Evolva or its affiliates in the United States and other countries.

*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.

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.