

Glucosamine & Chondroitin + MSM Discussion and Clinical Support

Protocol for Life Balance™ Glucosamine & Chondroitin with MSM combines three of the most effective nutrients known for their action in supporting healthy joint and connective tissue. Glucosamine is an amino monosaccharide produced by chondrocytes (the cells found in cartilage that are responsible for the synthesis, maintenance, and regeneration of cartilage) and used to make glycosaminoglycans (GAGs) and proteoglycans. GAGs and proteoglycans are the structural molecules that make up the connective tissues of the skin, tendons, ligaments, and joints. Glucosamine supplementation helps to provide the building blocks of these structural molecules, thereby supporting the maintenance of healthy joint tissue.* Chondroitin sulfate is another important naturally occurring constituent of cartilage tissue. Chondroitin sulfate has been shown to work along with glucosamine to encourage cartilage production.* Methylsulfonylmethane (MSM) is an organic form of the mineral sulfur found naturally in plants. Sulfur, provided by MSM, is widely recognized as promoting healthy skin, joints, bone, hair and nails. This product can help to support joint / connective tissue health.*

Supports Joint Structure & Function

Glucosamine and chondroitin sulfate support healthy joint structure and function (1-6, 10, 11). In osteoarthritis, cartilage is destroyed faster than it is synthesized. The key limiting step on the synthetic side is production of glucosaminoglycans (GAGs), for which glucosamine is the basic building block. Glucosamine is often referred to as a “chondro-protective agent” because of its function as a substrate for the support of joint tissue synthesis. Glucosamine, however, does not act alone. Other nutrients must be available in adequate amounts if it is to be used efficiently in the synthesis of cartilage. Chondroitin Sulfate stimulates the synthesis of hyaluronic acid, the lubricant for joints as well as a major component of connective tissue in the skin.*

Organic Sulfur and Joint Health

MSM supports healthy joint structure and function (7 - 10). MSM is a biological form of sulfur that has recently attracted a great deal of attention. In particular, MSM has generated broad anecdotal support for its benefits in cases of allergies, arthritis and joint pain. In the cases of arthritis and similar joint and ligament injuries, MSM may work through several different mechanisms. Sulfur is required for the repair of joint tissues and the construction of connective tissues more generally. This is one rationale often given for the use of glucosamine sulfate as the preferred glucosamine form in the treatment of osteoarthritis. Sulfur, moreover, is especially important for the body's production of the chondroitin sulfates, which act to maintain the proper water levels, and therefore the cushioning properties of cartilage. Supplementing with MSM insures that the body has adequate amounts of sulfur for the purposes of repair.*

Supplement Facts	
Serving Size 3 Capsules	
Servings Per Container 30	
	Amount Per Serving
Calories	10
Total Carbohydrate	2 g
Sodium	110 mg
Potassium (from Potassium Chloride)	245 mg
Glucosamine Sulfate	1.1 g (1,100 mg)
(from 1500 mg Glucosamine Potassium Sulfate Complex)	
Chondroitin Sulfate	1.2 g (1,200 mg)
(from Bovine Cartilage)	
MSM (Methylsulphonylmethane)	300 mg

* Percent Daily Values are based on a 2,000 calorie diet.

Other ingredients: Gelatin (capsule) and Magnesium Stearate (vegetable source).



1. Chan PS, Caron JP, Orth MW. Effect of glucosamine and chondroitin sulfate on regulation of gene expression of proteolytic enzymes and their inhibitors in interleukin-1-challenged bovine articular cartilage explants. *Am J Vet Res.* 2005 Nov;66(11):1870-6.
2. Simanek V, Kren V, Ulrichova J, Gallo J. The efficacy of glucosamine and chondroitin sulfate in the treatment... are these saccharides drugs or nutraceuticals? *Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub.* 2005 Jun;149(1):51-6.
3. Chan PS, Caron JP, Rosa GJ, Orth MW. Glucosamine and chondroitin sulfate regulate gene expression and synthesis of nitric oxide and prostaglandin E(2) in articular cartilage explants. *Osteoarthritis Cartilage.* 2005 May;13(5):387-94.
4. Deal CL, Moskowitz RW. Nutraceuticals as therapeutic agents in osteoarthritis. The role of glucosamine, chondroitin sulfate, and collagen hydrolysate. *Rheum Dis Clin North Am.* 1999 May;25(2):379-95.
5. Kelly GS. The role of glucosamine sulfate and chondroitin sulfates in the treatment... *Altern Med Rev.* 1998 Feb;3(1):27-39.
6. Bijlsma JW. [Glucosamine and chondroitin sulfate as a possible treatment...]. *Ned Tijdschr Geneesk.* 2002 Sep 28;146(39):1819-23.
7. Ameye LG, Chee WS. Osteoarthritis and nutrition. From nutraceuticals to functional foods: a systematic review of the scientific evidence. *Arthritis Res Ther.* 2006;8(4):R127.
8. Kim LS, Axelrod LJ, Howard P, Buratovich N, Waters RF. Efficacy of methylsulfonylmethane (MSM) in...pain of the knee: a pilot clinical trial. *Osteoarthritis Cartilage.* 2006 Mar;14(3):286-94.
9. Ebisuzaki K. Aspirin and methylsulfonylmethane (MSM): a search for common mechanisms, with implications... *Anticancer Res.* 2003 Jan-Feb;23(1A):453-8.
10. Parcell S. Sulfur in human nutrition and applications in medicine. *Altern Med Rev.* 2002 Feb;7(1):22-44.
11. Bruyere O, Pavelka K, Rovati LC et al. Glucosamine sulfate reduces...progression in postmenopausal women...evidence from two 3-year studies. *Menopause.* 2004 Mar-Apr;11(2):138-43.

NEW! ProtoSorb-C™ Buffered, Bioavailable Vitamin C

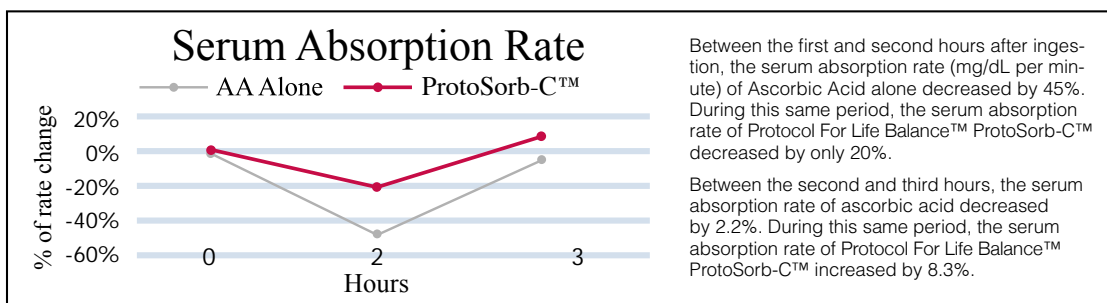
Vitamin C has one of the natural product industry's most rich and interesting histories. Since it was first isolated in 1932, ascorbic acid has been the subject of countless studies, and is now universally regarded as one of our planet's most important nutrient compounds. The ability of Vitamin C to protect healthy human cells and eliminate oxidation is extremely well-documented, as evidenced by the research of Linus Pauling, Irwin Stone, Ewan Cameron, and scores of other renowned scientists.

Protocol For Life Balance™ ProtoSorb-C™ contains the vitamin C metabolite threonic acid, which has been shown in various studies to enhance the body's cellular uptake of vitamin C. This buffered, non-acidic supplement is superior, as it contains the most readily available form of Vitamin C in addition to other cellular support compounds. Alpha Lipoic Acid has been added based on its unique fat and water solubility, potent antioxidant properties, and the ability to regenerate Vitamin C within the body. Studies have determined that Alpha Lipoic Acid may enhance the body's ability to better utilize Vitamin C in other ways, such as enhancing absorption through glucose pathways into cells, stimulating utilization in repair and protection activities.*

Finally, this innovative new Vitamin C formula from Protocol For Life Balance™ contains synergistic Bioflavonoids to ensure that this supplement is well-absorbed and highly effective. Safe and ideal for

vegetarians, Protocol For Life Balance™ ProtoSorb-C™ is the culmination of highly advanced research, as well as the unwavering dedication of individuals who have dedicated much effort to improving Vitamin C and bringing it to the public. At Protocol For Life Balance™, we are 100% confident that this formula represents a breakthrough in the science and potential of Vitamin C. This is a significant advance in Vitamin C bioavailability and therefore Protocol For Life Balance™ has applied for a patent for this formulation.

Serving Size 1 Tablet	
Vitamin C (from Threonic Acid Enhanced Buffered Calcium Ascorbate)	1.0 g (1,000 mg)
Calcium (from Buffered Calcium Ascorbate)	120 mg
Alpha Lipoic Acid	100 mg
Citrus Bioflavonoids (37% total bioflavonoids as Hesperidin)	75 mg
Acerola Powder	25 mg
Rose Hips Powder (Rosa canina) (Seed)	25 mg
Rutin	25 mg



Cardio Nutrition: Ubiquinol CoQH-CF™

Protocol For Life Balance™ Ubiquinol CoQH-CF™ contains the reduced form of CoQ10, which has been shown in scientific studies to be a highly bioavailable and active antioxidant form of CoQ10. To improve solubility and enhance intestinal absorption, D-Limonene has been added, thus providing superior overall biological value. This unique, reduced form of CoQ10 is easily converted to cellular energy within the body, further allowing its antioxidant and cardiovascular-supporting properties to flourish. A patented softgel delivery system provides substantial protection against oxygenation and oxidative stress, making it possible for higher levels of Ubiquinol to be utilized within the bloodstream.*

- Shown in Studies to Exhibit Superior Absorption
- Contains D-Limonene to Enhance Solubility
- Best Value Available

One Softgel Contains:
Ubiquinol (Kaneka QH™) (Reduced Form CoQ10)..... 50 mg

*These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease.

Stevia Packets, Powder and Liquid



Our proprietary Stevia Extract is produced utilizing a patented process which involves extraction from stevia leaves using only water and alcohol. The resulting extract is treated with a vegetarian-source enzyme (amylase) to reduce the licorice-like aftertaste of regular stevia extracts.

- **Natural Herbal Extract**
- **Calorie-Free**
- **Saccharin- Free & Aspartame-Free**
- **Does Not Affect Blood Sugar Levels***

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