

MSM

Methylsulfonylmethane

Methylsulfonylmethane, or **MSM**, is a water-soluble, solid compound, also known as dimethyl sulfone. It is a direct metabolite of dimethylsulfoxide (DMSO), and is sometimes called DMSO2. MSM is a source of biological sulfur, which is a major component in many of the body's proteins, tissues, hormones and enzymes. Sulfur is plentiful in all living organisms, amounting to about 2% of the dry weight of most animals. Through the formation of disulfide bonds, sulfur is the foundation for proper conformation of extracellular body proteins, holding connective tissue together as well as maintaining the structure of antibodies and hormones. Large amounts of sulfur are found in hair and nails, and sulfur plays a role in the detoxification of the liver.* Intracellular sulfhydryl (thiol) groups are also vital for the catalytic function of many enzymes.*

MUSCULOSKELETAL



#52850
150 vegetarian capsules

Key Features

- Provides a rich source of bioavailable sulfur, which supports the formation of important nutritional elements including glutathione, cysteine, and methionine*
- May support the formation of healthy connective tissue*
- May enhance the mucosal membranes*



800.545.9960
info@nutricology.com
www.nutricology.com



MSM and its related compounds provide most of the body's sulfur. Organic sulfides, sulfonium salts and MSM can provide sulfur to the amino acids cysteine and methionine. Cysteine sulfur is used in the synthesis of other sulfur-containing molecules, such as taurine, coenzyme A and glutathione. Research has demonstrated that MSM is a good source of sulfur: sulfur from orally ingested MSM was incorporated into cysteine and methionine, and it has been tracked through absorption and across the blood-brain barrier.*

Research indicates that MSM may have an inhibitory effect on abnormal cross-linking of collagen, which can further support the formation of healthy connective tissue and retention of cartilage.* It also may enhance mucosal membranes.*

MSM is found in low concentrations in meats, fruits, vegetables, milk and some grains. MSM has also been found in certain herbs, including horsetail (*Equisetum arvense*). Although MSM occurs in most unprocessed foods, it is readily lost due to its volatile nature. Only a diet composed of mainly raw foods is likely to provide sufficient MSM to significantly contribute to the nutritional sulfur requirement.

Due to its inert nature, MSM is non-allergenic, non-pyretic, and seems to have minimal undesirable effects.* Long term usage or high doses of MSM encourage urinary excretion of molybdenum. For that reason, we have added molybdenum to our MSM formula.

Supplement Facts

Serving Size	3 Capsules	
Servings Per Container	50	
Amount Per Serving	% Daily Value*	
Molybdenum (as Sodium Molybdate)	30 µg	55%
Methylsulfonylmethane	1.5 g	†

† Daily Value not established. * Percent Daily Value are based on a 2,000 calorie diet

Other ingredients: Hydroxypropyl methylcellulose, microcrystalline cellulose, L-leucine.

Suggested Use: As a dietary supplement, 1 to 3 capsules one to five times daily, or as directed by a healthcare practitioner.

OptiMSM® is a registered trademark of Bergstrom Nutrition, Inc.

References:

- Childs SJ. Urol Clin North Am. 1994; 21:85-98.
 Hess WC, Sullivan MS. Journal of Bone Joint Surgery. 1935;16:185-88.
 Jacob SW, et al. New York: G.P. Putnam's Sons; 1999:57-58.
 Kandorf H, Chirra AR, De Gruccio A, Girman DJ. Diabetes. 1989; 38:194-197.
 Kocsis JJ, Harkaway S, Snyder R. Ann NY Acad Sci. 1975; 243:104-109.
 Layman DL. In Vitro Cell Dev Biol. 1987; 23:422-428.
 Morton JI, Siegel BV. Proc Soc Exp Biol Med. 1986; 183; 227-230.
 O'Dwyer PJ, McCabe DP, Sickle-Santanello BJ, et al. Cancer. 1988; 62:944-948.
 Pearson TW, Dawson HJ, Lackey HB. J Agric Food Chem. 1989; 29:1089-1091.
 Richmond VL. Life Sci. 1986; 39:263-268.
 Rizzo R. Journal of Experimental Zoology. Sep1995;237(1):82-86.
 Rose SE, Chalk JB, Galloway GJ, Doddrell DM. Magn Reson Imaging. 2000; 18:95-98.