

# MSM (Methylsulfonylmethane)

Item #55133 50 Capsules 500 mg  
Item #55132 90 Capsules 500 mg  
Item #55125 90 Capsules 1000 mg



## UNIQUE PRODUCT BENEFITS

- Rich source of sulfur needed for hair, skin, nails and joints\*
- Odorless, essentially tasteless

## PRODUCT IS ALSO KNOWN AS

Dimethyl sulfone, methyl sulfone, DMSO<sub>2</sub>, crystalline DMSO, Factor N.

## PRODUCT DISCUSSION

PhysioLogics MSM® provides a rich source of organic sulfur. Methylsulfonylmethane (MSM) is an odorless, essentially tasteless sulfur compound that is important in the diet of humans. MSM decreases in mammals with increasing age and may provide antioxidant protection and cartilage maintenance.\*

## INDICATIONS

- Millions of Americans suffer from joint-related concerns that impair their daily activities.
- MSM provides essential sulfur for connective tissue and may also provide antioxidant protection.\*

## NUTRITIONAL BENEFITS

- Antioxidant properties.\*
- Promotes joint and cartilage comfort.\*
- Increases mobility and range of motion.\*

## WHY IT WORKS

Sulfur plays an important role in nutrition. It is the eighth most abundant element, and is an integral component of more than 150 compounds in the body (Oae & Okuyama 1992). Sulfur is stored in every cell of the body and is fundamental to the structure and integrity of tissues, such as hair, skin, nails, and joints (Jacobs 1999).\*

MSM is a dietary source of sulfur and is an odorless crystalline powder similar to the texture of sugar. MSM contains 34% sulfur by weight and is derived by the heating of dimethyl sulfoxide (DMSO). Unlike DMSO, MSM however does not possess solvent properties and is completely odorless. MSM is found widely in nature with major sources coming from milk, eggs, seafood, meats and plants. MSM is one of the least toxic substances in biology (LD50 17,000mg/kg), similar to that of water (Parcell 2002).

MSM in vivo can act as an antioxidant in both lipid and aqueous compartments. It has been shown to suppress production of superoxide, hydrogen peroxide, and hypochlorous acid by activated neutrophils without reducing viability (Beilke et al. 1987).\*

Since sulfur is an integral component in connective tissue, MSM clinical trials have focused on cartilage and joint support. Cartilage is a fibrous, elastic connective tissue that functions as a cushioning layer for joints. Cartilage is comprised of an extracellular matrix made of complex proteins known as glycosaminoglycans (GAGs) and proteoglycans. Sulfur concentration of arthritic cartilage is one third of normal tissue (Rizzo et al. 1995).\*

## CLINICAL EVIDENCE

One preliminary double-blind study, conducted by UCLA School of Medicine professor Ronald Lawrence, M.D., Ph.D., followed 16 subjects. The subjects who took MSM daily for six weeks reported an 80 percent reduction in joint discomfort. Only two of those taking the placebo reported decreased joint discomfort- about 20 percent (Lawrence 1998). Sharif et al. (1996) showed that keratan and chondroitin sulfation patterns were significantly reduced in subjects.

## SUMMARY

Sulfur is one of the building blocks of collagen and GAGs, key structural components in cartilage. The compounds play an important role in the integrity and maintenance of joint cartilage. MSM is a natural dietary source of sulfur which synergistically enhances the body's connective tissue, including hair, skin and nails\*.

## SUGGESTED DOSAGE

500 mg: 1 capsule 4 to 6 times daily with meals  
1000 mg: 1 capsule 2 to 3 times daily, preferably with meals

## COMPLEMENTARY SUPPLEMENTATION

MusclEase .....	#55127
Cartilage Care .....	#55166
Joint Formula .....	#7066
CTR Support.....	#55069

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

\*\*Note: MSM is not intended to serve as a replacement for any medications, nor should you discontinue taking any prescribed medications while supplementing with MSM.



<b>Supplement Facts</b>		
Serving Size 1 Capsule		
<b>Amount Per Serving</b>		<b>%Daily Value</b>
Methylsulfonylmethane (170 mg Organic Sulfur)	500 mg	**
**Daily Value not established.		

Other Ingredients: Gelatin, Vegetable Magnesium Stearate, Silica.

Item #55125 90 Capsules 1000 mg

<b>Supplement Facts</b>		
Serving Size 1 Capsule		
<b>Amount Per Serving</b>		<b>%Daily Value</b>
Methylsulfonylmethane (340 mg Organic Sulfur)	1,000 mg (1 g)	**
**Daily Value not established.		

Other Ingredients: Gelatin, Vegetable Magnesium Stearate.

**References**

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Rizzo, R., et al. (1995) Calcium, sulfur, and zinc distribution in normal and arthritic articular equine cartilage: a synchrotron radiation-induced X-ray emission (SRIXE) study. J Exp Zool. 1:273(1):82-6.

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