

## MSM

### MSM

AKA: Methylsulfonylmethane

**One of the most important raw materials for building healthy new cells is a form of organic sulfur known as methyl sulfonyl methane (MSM).** This element is so essential to life that it is found in every cell of every plant and every animal. Sulfur makes up 0.25% of human body weight. However neither plants nor animals can use elemental sulfur directly. Sulfur is not easily available to living organisms in its inorganic form. MSM is a naturally occurring sulfur compound found in fresh fruits and vegetables, milk, fish, and grains. But as foods are processed, MSM is destroyed. MSM is an odorless, tasteless, white, water soluble, crystalline solid in its purified form.

MSM can be found naturally in foods, but it is marketed as a dietary supplement and sold as a chemical compound derived from DMSO (dimethyl sulfoxide). DMSO is found as both an industrial-grade and a medical-grade substance. DMSO, which was touted as a miracle treatment for arthritis in the 1960s, became controversial because of potential problems and unpleasant side effects. As DMSO faded from use as an arthritis treatment, MSM gained momentum.



Stanley Jacob, M.D. who developed MSM maintains that the supplement does not cure arthritis, but he believes it has many benefits. MSM has been marketed for pain and inflammation associated with osteoarthritis, rheumatoid arthritis, gout, and fibromyalgia.

The claims of what MSM can do are that it helps constipation, allergies, and even aids to stop snoring. MSM has not been shown to preserve cartilage or halt joint destruction and deformity. Any beneficial effects of MSM last only as long as MSM is taken.

Clinical evidence for the usefulness of MSM consists of published studies on both animals and humans. These studies of MSM have suggested benefits, particularly for treatment of:

- Osteoarthritis.
- Seasonal Allergic Rhinitis: Barrager et al. evaluated the efficacy of MSM for hayfever. Twenty-five subjects consumed 2,600 mg of MSM per day for 30 days. The study was not blinded. A significant improvement in symptoms was observed compared to those taking a placebo
- Interstitial cystitis: In 1978, the FDA approved dimethyl sulfoxide (DMSO) for instillation into the bladder as a treatment for interstitial cystitis. Since DMSO is metabolized to MSM by the body, it is possible that MSM is the active ingredient in DMSO treatments.
- Snoring: Blum & Blum conducted a randomized, double blind, placebo controlled clinical trial of an MSM-containing throat spray for snoring.

Animal studies have supported the evidence of the benefits of MSM. Human studies published in peer-reviewed medical or scientific journals are few however. In the animal studies involving mice, MSM relieved symptoms

similar to rheumatoid arthritis and lupus nephritis.



Scientists say that mineral deficiency subjects our animals to more diseases, along with aging and sickness. John Metcalf, DVM, a well-known equine practitioner, started his evaluation of MSM to treat a variety of illnesses in horses, including chronic muscle soreness, epiphysis's, acute laminitis, pleuritis, recurring digestive tract disorder and arthritis. MSM for horses is now widely acclaimed by veterinarians and horsemen for its contribution to equine health care and horse ailments in the equestrian world.

MSM supports healthy connective tissues like tendons, ligaments, and muscle. Thus, it is important in conditions such as arthritis, muscle pains, bursitis, etc. MSM has a unique action on body tissues. It decreases the pressure

inside the cell. In removing fluids and toxins, sulfur affects the cell membrane. MSM is an organic form of sulfur, whereas sulfites in foodstuffs are inorganic.

Sulfur has an indirect importance, because sulfur compounds play a role in many body organs and systems. Sulfur is in the hair, skin, and nails. Many amino acids, the building blocks of protein, have sulfur as a component. Many B-complex vitamins interact with or contain sulfur. Sulfur is needed for insulin production.

Some researchers note results from MSM when used for post-exercise muscle pain. MSM normalizes pressure inside cells and removes toxins. Oregon Health Sciences University has conducted arthritis studies with mice. The mice who received MSM had "no degeneration of articular cartilage". The other non-MSM mice had cartilaginous degeneration. The university has used MSM on over 12,000 patents. Researchers make no claim about MSM as a supplement, but osteoarthritis, rheumatoid arthritis, muscle soreness and muscle pain respond to oral MSM.

Avoiding nightshade plants has helped arthritis patients (tomatoes / potatoes / green pepper/eggplant). Biotin and vitamin C help the body assimilate MSM. Conditions That Have Reportedly Responded to MSM Supplements:

- Acne
- Allergies
- Arthritis
- Asthma
- Candida Yeast Infections
- Carpal Tunnel Syndrome
- Chronic Fatigue
- Constipation
- Diabetes
- Digestive Disorders
- Fragile Hair & Nails
- Migraine Headaches
- Muscle Pain & Cramps
- Parasites
- Skin Damage & Aging
- Toxic Build-up
- Ulcers

MSM makes cell walls permeable, allowing water and nutrients to freely flow into cells and allowing wastes and toxins to properly flow out. The body uses MSM along with Vitamin C to create new, healthy cells, and MSM provides the flexible bond between the cells. Sulfur has been called nature's "beauty mineral" because it is needed to keep the hair glossy and smooth and keeps the complexion clear and youthful. It is needed for synthesis of collagen and is prevalent in keratin, a tough protein substance necessary for health and maintenance of the skin, nails and hair.

MSM is responsible for the flexible disulfide bonds between cells, including those that make up the skin. It

blocks undesirable chemical and physical cross-linking or bonding of collagen, which is associated with tough, aging skin. Consequently MSM enhances tissue pliability and encourages repair of damaged skin. If there is insufficient sulfur in the body when new cells are being manufactured, the new cells will be rigid. This rigidity can contribute to cracking, wrinkling and unsightly scar tissue. When sufficient sulfur is present for new cells, the skin is softer, smoother and more flexible. MSM provides that sulfur.

Flexible, permeable cells are also important in that they allow toxins, allergens and foreign substances to be flushed out of the body more easily. When skin cells are soft and permeable, many toxins can be eliminated through the sweat glands, which takes some of the load off the liver and kidneys. While MSM is not a cure for allergies, supplementation may reduce symptoms by allowing allergens to be removed from the body more quickly. Vitamin C is also synergistic in this application in that it can lower histamine levels.



Be sure to try NSP's [MSM \(90 tabs\)](#), [MSM/Glucosamine Cream \(2 oz. tube\)](#), [EverFlex® Pain Cream \(2 oz. jar\)](#) or [EverFlex® w/Hyaluronic Acid \(60 tabs\)](#). You can see other products containing MSM by [clicking here](#).

## References

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Sincerely,

Chris Ritchason  
Dr. Jack & Verlyn Ritchason, Founders  
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This information was provided by

***Chuck & Judy Erkitz***

***Natures Better Way***

PO Box 261 - 880 W Dryden Rd., Metamora, MI 48455

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1-810-678-3131 [erkfitz@erkfitz.com](mailto:erkfitz@erkfitz.com)