Pure Organic Sulfur

Pure MSM

Learn about the dietary super supplement of the millennium & the dramatic research and history of this amazing nutritional breakthrough
MSM Information booklet

References for the material in this booklet:


3. “MSM The Natural Pain Relief Remedy” Deborah Mitchell

4. The Forgotten Nutrient MSM On Our Way Back To Health With Sulfur Beth M Ley, Ph D

5. The MSM Miracle Earl Mindell, R Ph, Ph D

6. The Power of MSM Dr. Earl Mindell
THE MIRACLE OF MINERALS

Minerals are inorganic elements. While our bodies can synthesize some vitamins, the fact that minerals are inorganic means that no living thing, plant or animal, is able to manufacture or create them. Minerals, however, are able to bond with other molecules in animals and plants, giving them different properties without actually changing the chemical structure of the minerals themselves.

CONVERTED BY PLANTS

Mother Nature has provided an easy path for minerals to nourish the human body. Plants need minerals to grow, they readily absorb them. They take up minerals, including sulfur, from the soil. When minerals have been converted and bound to carbon by plants, the human body can easily absorb them from the vegetables, fruits and other plants we eat.

The “organic” minerals found in plants and animals are in a form easy for the body to absorb and utilize. While humans can tolerate a deficiency of vitamins for a while even the slightest change in the level of certain minerals may endanger health and, survival. Vitamins cannot function without minerals present. When you consider that many minerals have been recognized as necessary for optimal human health, you can begin to appreciate the need to eat a variety of foods and supplements for your body to stay fully functional.

HOW DO WE GET MSM IN OUR DIETS?

Once it is incorporated within the plant structure, MSM enters the food chain as plants are consumed by humans and animals. We humans derive our dietary MSM sulfur from fresh vegetables, fresh fruits, meat and seafood. Unfortunately, heat and processing can destroy or greatly reduce the MSM content of our fruits and vegetables. Overuse and abuse of our agricultural soils also depletes large amount of MSM from our food sources.

As Robert Herschler reveals, “MSM is shy, evasive and escape prone. While present naturally when food is very fresh, it can be driven out of any food by even moderate processing. People, generally speaking, will be sulfur-deficient unless they eat their fish

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and meat raw and their vegetables unwashed and uncooked.” But research also shows that **MSM** levels decline with age, resulting in symptoms of fatigue, tissue and organ malfunction and increased susceptibility to disease. The good news is that researchers have discovered a way to prepare **MSM** supplements, which can be used nutritionally to enhance our diets, as well as therapeutically to help a wide variety of health problems.

**What is MSM?**

**MSM** is the abbreviation for the technical term methyl-sulfonyl-methane, which refers to a naturally occurring sulfur compound found in the tissues and fluids of all plants, animals and humans. **MSM** sulfur and its related compounds make up 85% of the sulfur found in all living organisms. Sulfur is a vital and essential substance contained in all living things. Actually, 96% of our bodies are composed of five basic elements: oxygen, hydrogen, nitrogen, carbon and sulfur. Sulfur itself is found in many different forms in nature, but **MSM** is a special type of dietary sulfur that is essential to our health and well being. Sulfur is present in the cells of all animals and plants. All plants and animals need it, but in order to use it, it must be in a bioavailable (organic) form.

**HOW DO OUR BODIES USE SULFUR?**

Sulfur is one of the most basic and important elements of organic life, and in humans, sulfur performs a variety of key functions. Let’s look at a few sulfur facts:

1. Sulfur is needed to form crucial blood proteins and amino acids including methionine, cystine, cysteine and taurine. In our bodies, sulfur provides chemical bonds that actually hold the molecular structure of these proteins together.

2. Sulfur also provides the chemical links that are needed to form collagen in the body (the protein found in connective tissue). So without these sulfur bonds, we (and other animals) would essentially be shapeless pools of protoplasm.

3. Because sulfur forms both the collagen and keratin in the body it is often called the 'beauty mineral'. It is essential for thick and lustrous
hair, blemish free skin and hard, healthy nails.

4. Sulfur acts as a synthesizer and activator of thiamine, vitamin C, biotin and pantothenic acid.

5. Sulfur is used by the liver to manufacture bile, a key element in digestion.

6. Sulfur is essential in maintaining the body’s crucial pH (acid/alkaline) balance. 7. Sulfur is stored in every cell of the body. The highest concentrations are found in joints, hair, skin, and nails.

8. Studies show that sulfur is an important component in insulin production and plays a significant role in carbohydrate metabolism, which is particularly important for diabetics and hypoglycaemics.

9. Sulfur is an important element in over 150 compounds in the body, in tissues, hormones, enzymes, antibodies, antioxidants and amino acids. Examination of blood samples from 100 volunteers determined the naturally occurring levels of DMSO in human plasma to be between 20 and 40 ng/mL (which is equivalent to 20 to 40 parts per billion). The concentrations of MSM found in human plasma were far greater, between 700 and 1,100 ng/mL (0.7 to 1.1 ppm).

As you can see by examining the following chart, sulfur is the eighth most abundant substance in the body by weight. If you eliminate water and gas, sulfur is the surprising joint third most abundant mineral!

**Substance Composition in Body by Weight**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>45,000 g</td>
</tr>
<tr>
<td>Carbon</td>
<td>16,000 g</td>
</tr>
<tr>
<td>Oxygen (Nonaqueous)</td>
<td>2,000 g</td>
</tr>
<tr>
<td>Hydrogen (Nonaqueous)</td>
<td>2,000 g</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>1,800 g</td>
</tr>
</tbody>
</table>
1. Calcium 1,100 g
2. Phosphorus 600 g
3. Sulfur 140 g
3. Potassium 140 g
5. Sodium 100 g
6. Chlorine 95 g
7. Magnesium 19g
8. Silicon 18 g
9. Iron 4.2 g
10. Zinc 2.3 g
11. Vitamin C 1.2 - 2.0g

HOW IS SULFUR USED FOR HEALING?

Sulfur has been used throughout history as a healing agent. For centuries, sulfur hot springs have been known to provide relief from aches, pains, arthritis, rheumatism and general poor health.

In the 20th century, a variety of sulfa drugs (sulphonamides), from sulfur, have been used extensively in modern medicine for fighting bacterial infections. Sulfur ointments or liniments are also used for their anti-bacterial and anti-inflammatory properties.

**MSM** is the newest form of therapeutic sulfur discovered in the early 1960s. One of the biggest advantages of **MSM** is that it provides a majority of the healing benefits of other forms of sulfur, but unlike sulfa drugs, or even DMSO, **MSM** can be given in large doses as a dietary sulfur supplement without deleterious side effects of any kind.

THE HISTORY OF MSM

Dr. Stanley Jacob of the Oregon Health Sciences University of Portland, Oregon, and his associate, Robert Herschler, a research chemist, were the pioneers of **MSM** research. Their work on **MSM** was actually an offshoot of their extensive investigations of DMSO, the chemical cousin of **MSM**.

Robert Herschler, a research chemist for the paper manufacturing company, Crown Zellerbach, was investigating possible commercial uses for DMSO, which is a by-product of paper
milling. DMSO is found in substantial quantities in the water which is used during the milling and processing of trees for paper production.

In his search for commercial or medical uses of DMSO, Herschler apparently contacted Dr. Jacob, a medical researcher, who began to study the biological effects of DMSO on animals. After testing and observing the biological effects of DMSO on animals over the course of several years, Jacob and Herschler began observing its effects on humans. They discovered and documented several of its remarkable therapeutic benefits. DMSO was found to be effective for a variety of conditions including joint and muscle pains and injuries, rheumatoid arthritis, skin ulcers, psoriasis, bursitis, emphysema and interstitial cystitis (chronic urinary tract infection). In 1963, Jacob and Herschler reported their findings on DMSO.

Today DMSO is an approved pharmaceutical agent in over 50 countries. DMSO can be applied intravenously or topically. Because it penetrates well through the skin’s outer layers, it is absorbed efficiently into the bloodstream through the topical route (liquid or salve). Even though it’s widely used throughout the world, DMSO has exhibited certain properties that have made it somewhat unpopular, particularly in the USA. One of the biggest factors limiting the everyday use of DMSO is its side effects, bad breath or “after breath” which is associated with the use of DMSO is extremely strong, and there may be a reddening and itching of the skin, making DMSO unappealing to many users.

Additionally, DMSO has produced allergic symptoms in some individuals. However, while continuing their DMSO studies, Jacob and Herschler discovered that the primary healing agent in DMSO appeared to be its cousin, the sulfur compound, MSM (methyl sulfonyl-methane). MSM can be produced by adding another stabilising oxygen molecule to DMSO which yields DMS02, which is MSM. Jacob, Herschler and other researchers continued to conduct extensive laboratory and clinical trials with MSM. These studies revealed numerous extraordinary
therapeutic benefits - without the odour, allergies or side effects experienced with DMSO.

**What to expect**

**MSM** might surprise you, you may notice a number of good things happening in your life in addition to pain and allergy relief: more energy, cosmetic benefits such as softer skin, thicker hair, stronger nails, decreased scar tissue, and relief of constipation. In the coming years, with wider and wider usage, more of the healing potential of **MSM** will be revealed. At this point, based on our clinical experience, we believe that such healing potential may be as great, if not greater, than any other nutritional supplement, and we feel we are only beginning to scratch the surface of its multiple uses. In this brochure we are covering the major effects known to us.

There are, no doubt, many more benefits that people will discover as they take **MSM** and use it regularly. When all the facts are in, and controlled clinical studies are conducted, **MSM** may become known as one of the great nutritional discoveries of the twentieth century. Still, it is not a panacea. It has its limitations and works at its own speed, which can be quick in some people and slower in others. This brochure will tell you what to expect from **MSM** - and how to take it.

**MSM Research and Health Benefits**

In laboratory and clinical testing, **MSM** has shown remarkable promise for side-effect-free healing.

In his work with **MSM** at the Oregon Health Sciences University in Portland, Oregon, Dr. Jacob, a pioneer **MSM** researcher, has reported a wide variety of **MSM** health benefits. These reports stem from several years of observation in both animal and human studies.

Jacob and Herschler report: “**MSM**, an odourless, somewhat bitter, white crystalline substance, demonstrates usefulness as a
dietary supplement to man and animals. Our research suggests that a minimum concentration in the body may be critical to both normal function and structure. We are intrigued by the fact that **MSM** is a factor in all normal diets of vertebrates and somewhat mystified by the seeming needs of the body of adults for a concentration level above that available from a diet presumed as normal.”

At the Oregon Health Sciences University, Jacob has administered **MSM** to over 15,000 patients for a variety of conditions. Dr Jacob observed excellent results in administering **MSM** in doses of 3-8 g per day to his patients, but he also reports that much higher doses (up to 15g per day) can produce definitive improvements without side effects.

**What ORGANIC Sulfur is NOT**

Don’t confuse **MSM** with sulfa-based drugs, sulfites, or sulfates. Sulfa-based drugs, (sulfonamide) are part of a group of high molecular weight compounds, which have been known to cause allergic reactions. Sulfa drugs include erthromycin, sulfisoxazole, sulfacytine, sulfalazine and sulfamethozazole. These are large complex molecules (drugs) used as antibiotics.

**MSM** or organic sulfur, is a naturally occurring substance in the body. Sulfites are preservatives, antioxidants and browning agents used in foods. Ingestion of these is associated with adverse reactions such as asthma attacks, nausea, and diarrhoea. There are several sulfiting agents now in use: sodium sulfite, sodium bisulfite, potassium bisulfite, sodium metasulfite, sodium metabisulfite and potassium metasulfite. Sulfates are sulfuric acid salts. Sulfuric Acid is a heavy corrosive oily acid used in producing fertilisers, chemicals and petroleum products.
SAFER THAN SALT!

**MSM** is rated as one of the least toxic substances in biology, similar to water. Common table salt is muchmore toxic than **MSM**. The lethal dose of **MSM** for mice is over 20 grams per kilogram of body weight. By comparison, common table salt is toxic at 2.5 grams per kilogram of body weight. When **MSM** was administered orally to human volunteers, no toxic effects were observed at levels up to 1 g/kg of body weight per day for 30 days (Jacob).

If one takes more **MSM** than needed, it simply passes through the body and is excreted in the urine, it won’t harm anyone. **MSM** has been widely tested as a food ingredient without any reports of allergic reactions. An unpublished Oregon Health Sciences University study of the long-term toxicity of **MSM** over a period of six months indicated no toxic effects. More than 12,000 patients have been treated at the Oregon Health Sciences University with **MSM** at levels above two grams daily with no serious toxicity. Dr. Jacob reports he personally takes 30g (6 heaped tsp) **MSM** per day, and has done so for 20 years. He reports he has not had a cold or flu, which had previously experienced once or twice every year, since he began this regimen.

DISCOVERIES OF MSM BENEFITS CONTINUE

The Mighty sulfur supplement, **MSM**, is a unique substance with healing properties that only now are beginning to be fully identified. What’s making **MSM** so hot in nutritional circles is that it brings a multitude of exciting health benefits and relief to those suffering from a variety of ailments but who never had a clue that sulfur possessed such a broad influence in normalising the functions of the body. Study after study has shown that a low concentration of **MSM** is associated with tissue and organ malfunction, a heightened susceptibility to disease, and adverse physical as well as psychological stress. Every day I hear of more applications for this amazing mineral. Some practitioners call **MSM** ‘The Forgotten Nutrient.’

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ACIDITY/HEARTBURN

Heartburn and excess stomach acidity are at an all time high these days, which is not surprising considering our modern diet of pizza, soft drinks and burgers. Chronic use of antacids or acid blockers is just plain bad for your body.

Most people don’t realise that the chronic use of antacids can permanently impair the natural pH, or acid/alkaline balance of the body. Acid-blockers like Zantac were originally developed for treating severely ill ulcer patients and can cause a host of side effects including liver damage, hepatitis, insomnia, vertigo, severe headaches, mental confusion, pancreatic inflammation, constipation, vomiting, or diarrhoea. Laboratory and clinical studies show that MSM can provide extremely effective, often immediate relief from excess acidity, with no side effects whatsoever.

Dr Jacob reports that patients with hyperacidity who use antacids or acid-blockers have taken MSM as an alternative treatment with excellent results they experience none of the side effects that can accompany anti-acid drugs. Additionally, MSM can be taken every day without disturbing any of the body’s normal functions, including acid/alkaline (pH) balances. Dr Jacob has generally administered up to 750 mg per day for treating hyperacidity, but reports having used as much as 2000 mg daily for a period of six months for patients requiring higher therapeutic doses.

ACNE

Studies have shown that the severity of acne that has been triggered by the raging hormones of puberty can be reduced with MSM. Common teenage acne is usually the result of clogged pores most likely due to overactive oil glands. By keeping the skin soft, flexible and permeable, some of the excess oil can escape, avoiding bacteria build-up in the pores. In addition, a body that does not have a healthy acid/alkaline balance is more susceptible to acne-causing bacteria, and as you have learned MSM helps your body maintain a healthy acid/alkaline balance.
ALLERGIES

In treating allergy patients with MSM, Dr. Jacob observed that both environmental and food allergies were dramatically reduced. He also found that the anti-allergy properties of MSM were equal to or better than traditional antihistamines, yet MSM causes no side effects! Herschler, Jacob’s associate, personally experienced the anti-allergenic properties of MSM: “Early in his work with MSM, Herschler found that when taking MSM he was not bothered by three types of allergies that were normally so severe at specific times of the year that he needed antihistamines to combat them.

That experience led him to do research with laboratory animals. He discovered that MSM (in layman’s terms) had a coating action on the entire gastro-intestinal tract, making it difficult for the allergens to bond and cause their damage”. Environmental Allergies: Patients with chronic or severe environmental allergies to substances such as house dust, animal hair, wool, pollen and other similar allergens have reported “substantial to complete relief” of their symptoms including inflammation, mucous discharge, itching and general discomfort.

ASTHMA AND HAY FEVER

Sufferers also report significant relief. For severe allergies requiring conventional medications, users report that taking MSM in addition to their anti-allergy drugs significantly reduced the amount of medication needed to control symptoms. MSM also provides protection against insecticide exposure because it neutralises anticholin-esterases (toxic chemicals in insecticides and nerve gas) and enhances urinary excretion of toxins produced by hydrocarbons. The reported results for environmental allergies were based on dosages varying from 50 to 1000 mg per day.

Food Allergies: Various food allergies (to milk, seafood, cereals, etc.) were reported to have been dramatically lessened with daily dosages of 100 to 1000 mg of MSM.
Drug Allergies: Allergies to drugs such as aspirin, arthritis drugs (Indocin and Motrin), and allergies to oral antibiotics have been completely relieved or greatly decreased in MSM users taking 100 to 1000 mg per day of oral MSM, according to Dr. Jacob. MSM is known to exert a strong anti-inflammatory activity on the body which can greatly assist in relieving the localised or more general inflammations that are common in allergic reactions. Dr. Jacob reports that a combination of Vitamin C (500-1000 mg/day) taken with a daily dose of MSM is particularly effective in boosting immune strength and combating inflammation.

ARTHRITIS

Osteoarthritis is a common joint disease affecting some 70% of women over 65 years of age and a significant number of men under 45. Osteoarthritis begins with a softening of the cartilage in the joints, which later develops into cartilage thinning and degeneration, bone cysts and separation of joint tissue and cartilage.

Conventional medicines for this very painful and debilitating condition includes analgesics and anti-inflammatory drugs, but the side effects from continuous use of such drugs can be severe. MSM has shown excellent potential as a non-toxic treatment for osteoarthritis. Dr. Jacob conducted a study at the Oregon Health Sciences University in which 12 OA (osteoarthritis) patients were treated with MSM, while another 12 were treated with 2,400mg of Motrin daily. The results showed that not only was MSM well tolerated in the non-Motrin group, but that MSM was on par with Motrin as a pain reliever for OA, yet had none of Motrin’s toxicity or side effects.
RHEUMATOID ARTHRITIS

40% of people over 65 suffer from some form of rheumatoid arthritis. According to Dr. Jacob, **MSM** acts as both an anti-inflammatory agent and as a good analgesic (pain reliever). Doctors and patients report that sore, stiff joints respond well to **MSM** supplementation, as do bursitis, inflamed joints, etc. Researchers at Oregon Health Sciences University conducted tests on mice that were prone to the development of joint lesions similar to those seen in rheumatoid arthritis. Mice that were fed a diet that included a 3% solution of **MSM** in their drinking water daily for three months suffered no lesions or cartilage damage, while those not fed **MSM** did show cartilage degeneration within the three month test period.

In talking to those who use **MSM** for arthritis or joint and muscle pain, it appears that larger doses of **MSM** appear to be more effective. Dr. Jacob reports that daily doses of 2000 mg to 5000 mg per day of **MSM** can be used for therapeutic purposes with no side effects. Vitamin C added to this **MSM** regiment is also reported to greatly reduce symptoms of pain, swelling and inflammation. There are no established guidelines for what dosage is best in treating muscle and joint pain, but a regimen of 2000 - 5000 mg per day for two to four weeks has been reported as effective. Once the pain has subsided, a supplemental dose of 250 - 750 mg per day can be resumed. If symptoms reappear, increase the dosage as needed to relieve the pain.

There have been many clinical reports on the benefits of **MSM** for arthritis from consistent users. Those reports demonstrate how **MSM** may reduce the swelling and inflammation of joints which, in turn reduced pain and stiffness.
**ASTHMA**

**MSM** may also strengthen the lungs against allergic responses. It may help regulate the fluid that covers the surface of the airways (airway surface fluid, ASF). This is a critical component of one of the first defence mechanisms of the lung against insult from microbes and other environmental agents. ASF collected from healthy airways contains much less Na and CI (approximately 45% less) and much more K (around 600% more) than extracellular fluid or plasma, which shows that steep ion gradients exist across normal airway epithelia.

These differences also show that ASF composition must be regulated and maintained by active electrolyte transport processes of airway epithelia, and that it is not merely the evaporated residue of isotonic secretions or extracellular fluid exudate. However, in patients with asthma or other sustained airway irritation, infection, or cystic fibrosis, ASF composition appears to become more isotonic with respect to plasma and much more hypotonic in patients with asthma. (Joris). As an anti-inflammatory agent, **MSM** may do much to help the asthmatic individual.

**CONSTIPATION**

In clinical studies, Dr. Jacob has observed that patients with chronic constipation have prompt and continuing relief with a daily supplement of 100 to 500 mg of **MSM** per day taken orally.

**DIABETES**

Diabetes, brought on in part by poor metabolism resulting in excess blood sugar & insufficient production of insulin or cell resistance to insulin. A deficiency in the sulfur-bearing B vitamin biotin can cause high blood sugar. This vitamin is a critical part of glucokinase, the enzyme involved in the utilisation of the sugar glucose. Sulfur is also a component of insulin, the protein hormone secreted by the pancreas that is essential to carbohydrate metabolism.
Lack of nutritional sulfur in the diet can result in low insulin production. Of special interest to diabetics is the fact that a diet containing plenty of organic sulfur might enhance the body’s ability to produce insulin to the point at which injection of insulin can be reduced. Experts theorise that with diabetes the cells in the body may become rigid and impermeable. Consequently, when insulin carries the blood sugar to your cells, it can’t be absorbed.

The pancreas must then work harder and faster to compensate for the deficiency, but then becomes overworked and stops functioning properly. The blood sugar that is not being used saturates the bloodstream, creating a high level of blood sugar. Studies indicate that taking **MSM** regularly (I recommend a minimum of 2,000 mg per day) may cause cells to become permeable and the pancreas to return to normal as blood sugar is absorbed through cell walls, balancing the sugar levels.

**EMPHYSEMA - LUNG PROBLEMS**

In his initial use of **MSM**, Herschler discovered that it sometimes could produce extraordinary relief from emphysema symptoms. One experience involved a friend of Herschler’s who has emphysema. “Her emphysema was so severe she could hardly walk from one side of a room to another ...soon she changed from a woman who couldn’t walk across the living room to the back door without running out of breath to a woman who not only could do that, but could walk a third of a mile to her mailbox and back again”. Further clinical studies have shown that lung problems (such as those caused by bronchitis, pneumonia, cysts or heavy smoking) may also respond positively to **MSM** supplementation when combined with proper exercise and eating habits.
**EYE CONDITIONS**

Dr. Metcalf, an **MSM** animal researcher, discovered the anti-inflammatory property of **MSM** for the eyes in experiments on lab rabbits. The irritated rabbit, eye was then treated topically with a mixture of water and 5-10% **MSM**. The irritation disappeared rapidly and Dr. Metcalf concluded that not only did **MSM** have anti-inflammatory properties, but that it could make the tissues themselves more flexible. Dr. Jacob reports that **MSM** eye drops produce excellent results for a variety of eye conditions including conjunctivitis, eye injuries, infections, etc. and also has shown promise for treating glaucoma.

**FIBROMYALGIA**

Fibromyalgia is a relatively recent term for a common rheumatic disease that was previously called soft tissue rheumatism, fibrositis, or non-articular rheumatism. According to the Arthritis Foundation, it is the second leading arthritis-related condition. The American College of rheumatology believes 3 to 6 million Americans are affected.

The Arthritis Society of Canada estimates the prevalence of Fibromyalgia is between 2.1 and 5.7 percent of the population, with women affected four times more than men. The incidence increases with age and is said to be the most common in women 50 or older. Australia has very similar statistical rates. Common degenerative arthritis involves the joints of the body.

Fibromyalgia attacks the soft tissue - the muscles, tendons, and ligaments. Symptoms include persistent burning, soreness, pain and stiffness all over, a flu-like feeling, headaches, irritable bowel, fatigue, insomnia, anxiety and depression. The severity of symptoms fluctuates, but most patients experience discomfort on a daily basis and some pain is always present.

Fibromyalgia is hard to diagnose because many of the symptoms mimic those of other diseases. The American College of Rheumatology has developed certain diagnostic criteria. The
main elements are widespread pain for a period of three months or longer, both above and below the waist, and on both sides of the body, as well as the presence of tenderness in at least eleven of eighteen specific, localised areas, particularly in the neck, spine, shoulders and hips.

The cause of Fibromyalgia is not known. Before symptoms develop some patients report having had a viral, bacterial or parasitic infection or a physical trauma such as an automobile accident, fall, or athletic injury. Among the possibilities are also poor diet, steroids, birth control pills, antibiotics, food allergies, nutritional deficiencies and chemical sensitivities.

Fibromyalgia may be associated with changes in muscle metabolism, such as decreased blood flow, which causes fatigue and decreased strength. Recent studies funded by the National Institute of Arthritis and Musculoskeletal and Skin Diseases also indicate an association with low levels of the anti-inflammatory hormone cortisol.

**MSM** cannot cure this major painful condition. However it is an excellent source of safe and substantial relief. Women diagnosed with Fibromyalgia who have taken **MSM** say it has relieved their condition better than anything else they had previously tried. This great benefit comes from the pain reducing, anti-inflammatory and increased blood supply properties of **MSM**, but there may be other mechanisms at work that have yet to be determined.
GASTRO-INTESTINAL PROBLEMS

MSM is reported to be effective for upset stomachs and for inflammation of the sensitive mucous membranes in the body, including those in the gastro-intestinal tract. Research has shown that stubborn, recurring diarrhoea or occasional bouts of bowel discomfort can be dramatically relieved when MSM is incorporated into the daily regime. Even severe diarrhoea has been eliminated within a matter of days with doses of 500 mg - 1500 mg daily of MSM. Gastric ulcers have also improved with MSM treatment in clinical trials.

In addition, Herschler’s research has demonstrated that other forms of gastrointestinal discomfort caused by stress or produced by the ingestion of aspirin, pharmaceuticals or by parasitic infections may be eradicated by MSM.

Such symptoms as diarrhoea, chronic constipation, nausea, hyperacidity, or inflammation of mucous membranes have responded dramatically to the oral administration of 500 to 1500 mg of MSM daily. Stomach acid is used by the body to break down food during digestion. The stomach lining releases a form of acid known as hydrochloric acid, which is necessary for the digestion of proteins. If the valve regulating the flow of food into the stomach does not close properly, stomach acid can back up into the oesophagus, causing a burning pain in the upper chest or throat area, known as heartburn. This disorder can also be caused by rich, spicy foods, alcohol or overeating.

MSM has been shown to be more effective than the standard treatments for stomach acid. Standard treatment for heartburn involves the use of antacids and other products that neutralise hydrochloric acid, but a reduction in hydrochloric acid content can in turn lead to indigestion and poor absorption of nutrients. In addition, overuse of antacids can destroy the body’s natural acid/alkaline balance. As you learned earlier, this can impair the body’s normal metabolism. MSM helps the body maintain its acid/alkaline balance, while neutralising the excess stomach acid.
In test subjects given MSM, antacids and other products were no longer necessary or could be significantly reduced.

INSECT BITES AND SUNBURN

MSM reacts with foreign protein, such as venom and toxins injected by insects, by locking them up, neutralising the poisons, which can then be harmlessly eliminated. Subjects in a test who took MSM daily had much milder reactions to insect bites, with a significant reduction in post-bite irritation and itching. MSM is also reported to take the itch out of poison ivy and poison oak.

Because MSM contributes significantly permeability and pliability properties to all tissues, including the skin, it prevents blistering and promotes faster healing from sunburn or wind damage. People who took from 500mg to 2,000mg of MSM suffered only mildly after about four hours of exposure to summer sun and wind, while their companions who took no MSM were severely sun and windburned. In cases involving the skin, creams and lotions containing MSM would be the preferred form of application.

LUPUS

Systemic lupus erythematosus (SLE; commonly known as lupus) is an inflammatory tissue disease, which causes periodic bouts of fever, fatigue, painful joints and raised red rash on the skin. Lupus can also affect the heart, spleen, lungs, kidneys and gastrointestinal tract.

Dr. J.M. Siegel (of the Oregon Health Sciences University in Portland, Oregon) reported to Dr. Jacob that he had conducted experiments with MSM in treating lupus in animals.

In one of his studies, mice bred for the propensity to acquire lupus were given a 3% solution of MSM daily in their drinking water, while another group were given only tap water to drink. After seven months, 30% of the group not given MSM died while there were no deaths in the MSM group. In another study, a
group of seven-month-old mice with advanced lupus were given **MSM** in their water every day, while a group of similar mice were given plain tap water. Nine months later, 52% of the **MSM** were still alive, while only 14% of the mice given tap water survived.

**MENTAL NORMALCY**

Mental normalcy in humans is demonstrated by alertness and an inner calmness that is not subject to sharp mood swings. What literature exists suggests that individuals on **MSM** generally report increased alertness a plateau of mood changes, and very infrequent depression.

A few subjects taking depression medication observed that **MSM** relieved their depression within hours rather than days, as had been their prior experience with the antidepressant medication. Students report that while on **MSM** their ability to concentrate is enhanced. The most useful application for **MSM** seen to date in the field of mental normalising is as an aid to the terminally ill to relieve anxiety and depression. Try up to 9,000 mg per day to start then taper down to 3,000 mg.

**MUSCLE PAIN**

Research studies on individuals with injuries or various musculoskeletal disorders showed significant improvement when **MSM** was added to their daily diets. Taken in conjunction with ascorbic acid (vitamin C), the results were seen to be faster and more dramatic than with **MSM** alone. Clinical research confirms that **MSM** is capable of reducing or eliminating leg and back cramps, muscle spasms and general soreness.

**MSM** is also widely used by professional athletics and by practitioners of sports medicine. Its ability to relieve the pain overworked or strained muscles has been observed to be excellent, often dramatic. Injured players treated with **MSM** have been reported to return to the playing field up to 75% more quickly than injured players not treated with **MSM**.
Additionally, the anti-inflammatory properties of **MSM** appear to enhance circulation. “That’s the name of the game in getting repair of an inflamed or damaged part,” Dr. Metcalf, and **MSM** research, reports. Dr. Metcalf also reports that his own lower back problems disappeared after he began taking **MSM**.

**CHRONIC PAIN SYNDROMES**

Pain relief may be the most important application for **MSM**. Reduction of inflammation and inhibition of pain impulses are the likely mechanisms of action. **MSM** has a wide variety of applications, particularly for various forms of arthralgia (i.e. rheumatoid arthritis and osteoarthritis), low back pain, soft- tissue damage, occupational and sports injuries, fibromyalgia, dental discomfort and hangover.

Some of these clinical entities are discussed elsewhere in this booklet. We have observed that **MSM** ameliorates muscle cramps, particularly in geriatric patients who experience such cramps at night after long periods of inactivity, and leg cramps in premier athletes during participation in their sport.

We have found that **MSM** supplementation can reduce or obviate the need for over-the-counter & prescription painkillers, including the widely dispensed NSAIDs. Reducing the use of these drugs can yield important health dividends by lessening the risk of intestinal permeability defects, inhibition of cartilage synthesis, and kidney and liver disease.

Alternative medicine - especially use of dietary supplements such as **MSM** - is an area of intense interest for patients in their quest to overcome chronic pain. Health professionals need to be knowledgeable about alternative modalities to relieve pain. In 1998, a Stanford University study found that approximately 40% of Americans used an alternative health treatment in the previous year. Pain was the most often cited condition for which health consumers sought alternative remedies.

Most of the information I (Dr Jacob) have compiled on the use of
MSM for pain relief is based on my work with thousands of patients at the DMSO - MSM clinic at OHIO State University.

To date, I have not completed controlled studies, so my clinical reports are anecdotal in nature. However, observation is the beginning of all scientific inquiry. Compelling reasons can be found to utilize MSM for pain relief, especially when the relative safety of the natural compound is compared and contrasted with the more commonly used drugs.

HOW MSM BENEFITS PAIN PATIENTS

What is the mechanism for pain reduction by MSM? MSM has not undergone the kind of rigorously controlled scientific trials needed to validate the clinical effects we have observed. However, some of my earlier work on DMSO sheds light on the mechanisms by which MSM possibly acts. Based on a review of the scientific literature and experience with both compounds, I believe that the following similarities between DMSO and MSM may account for MSM’s ability to ameliorate pain: Inhibition of pain impulse transmission.

In a 1993 report in Neuroscience Letters, researchers found that even very low amounts of DMSO are able to block or slow the transmission of pain impulses. Anti-inflammatory action: Inflammation is a source of chronic pain in many diseases, including rheumatoid arthritis, post-surgical trauma, and sports injuries. Several studies have demonstrated anti-inflammatory actions of DMSO.

Similar actions of MSM may be a key to its ability to relieve chronic pain, dilation of blood vessels and enhanced blood supply. DMSO improves blood flow to bodily tissues. This may also be a key to its long-term benefits. DMSO appears to facilitate oxygenation of tissues and nutrient supply to sites of injury, scarring, and inflammation. We have observed similar vasodilation in patients applying topical MSM.

Reduced muscle spasm. Pain is closely interwoven with muscle
spasm. DMSO applied topically to the skin of patients produces electromyographic evidence of muscle relaxation one hour after application.

The ability of MSM to reduce such spasms is another key to its pain-relieving properties. In a study of 37 patients with intractable pain problems, Drs. William M. Rosenbaum, Edward E. Rosenbaum, and I found that periods of pain relief following application of DMSO became progressively longer and the dosage of DMSO required to maintain pain relief gradually diminished.

In our surgical department at the University of Oregon Medical School (now OHSU), we studied the effects of DMSO in the treatment of intractable pain arising from several clinical entities, including phantom limb pain in post-amputation patients (n=11), tic douloureux (n=11), post-traumatic pain (n=10), and post-operative pain (n=5).

Intractable pain was defined in the study as persistent pain despite one year or more of conventional therapy. One significant feature of DMSO treatment was that patients were frequently able to discontinue drugs they had taken for years and to sleep soundly without being repeatedly awakened by pain.

PARASITES

Many parasite-based illnesses can mimic diseases more familiar to the doctor. As a result, any symptoms that puzzle doctors are frequently misdiagnosed and are actually the result of the activities of several types of parasite in the body. Additionally, making an accurate diagnosis gets tricky when a patient’s symptoms come and go possibly mirroring the irregular reproductive cycle of the parasite.

Untrained or unfamiliar with the field of parasitology, it is easy to inaccurately diagnose parasite-related syndromes, which include chronic fatigue, hypoglycaemia, hypothyroidism, hypoadrenalism,
chronic upper respiratory tract ailments, endometriosis, decreased libido and depression.

When you are hosting uninvited guests in your body, sometimes for as long as 30 years, you are in effect sharing all your nutrients. When there are parasites feasting in your intestines and depriving you of needed nutrients and energy, is it any wonder you might get sick?

Specific symptoms attributed to the presence of parasites (but often associated with other causes) including itching, lethargy, slow reflexes, unexplained gas or bloating, heart pain, blurred vision, muscular pain for no good reason, a burning sensation in the stomach, numb or cold hands, unexplained menstrual problems, sexual dysfunction, loss of appetite and overeating.

Parasites are not just some Third World phenomenon that only affects people in undeveloped countries traditionally associated with poor hygiene and malnutrition. It is estimated that 85 percent of Australians are hosting at least one parasite in their body. It is a silent epidemic of which most doctors in this country are generally unaware.

The fact is that worms, from the microscopic amoeba to tapeworms which can exceed 30 feet in length are a fundamental cause of disease in Australia today and are responsible for health problems that go beyond the gastrointestinal disturbances we expect. Roundworm infection, for example, has been misdiagnosed as peptic ulcer.

Diabetes and hypoglycaemia can be caused by tapeworms. Internal parasites have become prevalent to the point where Australians today are host to more than 130 different kinds of parasites. The principal reasons for the recent rapid increase in parasitic infestation are the rise in international travel, contamination of our water supplies, the huge influx of immigrants and refugees from highly parasite-infested areas, the growing popularity of exotic foods, the use of immuno-suppressive drugs,
higher pet population, increased sexual contact and increased use of day-care centres.

All of these developments serve to increase the likelihood of exposure and accelerate the transmission of a variety of parasitic diseases. Goldenseal, which contains a powerful compound called berberine, grapefruit seed extract, black walnut, mugwort, butternut root bark, thyme and appropriately, wormwood are all antiparasitic herbs. The most recent natural treatment is organic sulfur or MSM which has demonstrated amazing antiparasitic action against Giardia, Trichomonas, roundworms, nematodes, Enterobius and other intestinal worms.

Tests indicate that MSM may present a blocking interface between the parasite and host by competing for binding or receptor sites at the mucous membrane surface. It’s as though MSM puts down a coating on the lining of intestines like Teflon that parasites find impenetrable and can’t cling to. And if they can’t get attached, then they can’t chow down at your expense, can’t excrete toxins, and can’t reproduce.

Unable to hang on, the parasites are simply flushed out of your system, preventing the symptoms usually ascribed to parasitic infestation. If you are hosting uninvited guests, put out the unwelcome mat by taking 10,000 mg of MSM daily for three or four weeks. You could then drop back to a regular rate of 3,000 mg per day. One subject specifically diagnosed with Giardia was given only 500 mg of MSM by mouth three times a day for two weeks. By the eighth day he was symptom free and stool samples confirmed that no organisms were present.

Mainstream medicine will typically treat parasites with potent antifungal drugs such as metronidazole (Flagyl) and quinacrine. Both subject people to the risk of highly unpleasant side effects, several negative drug interactions and the possibility of a rebound yeast infection. Avoid them if at all possible. After any parasite treatment, it is a good idea to take a probiotic containing acidophilus for at least a couple of weeks to help correct the
imbalance and restore beneficial bacteria in your intestines.

As a preventative measure before travelling to a suspect country, get your intestines in fighting form by taking some probiotics up to three weeks before you visit. And don’t forget to pack the **MSM**. If your house were infested with cockroaches, you would know what action to take. Now you know what you can do to rid your body of unwelcome infestation.

**SCAR TISSUE**

**MSM** patent information states that the restorative properties of topical **MSM** lotions have been found to be effective in eliminating external scars (stretch marks, burns, or surgical incisions, etc) while internal scaring responds to oral **MSM**.

Researchers report that they believe **MSM** works by softening the scar tissue, thereby causing the damaged tissue to diminish in size or to disappear altogether. **MSM** cream or lotion can be applied several times each day, but be careful to choose one with as few artificial ingredients as possible (additives can cause rashes or side effects, diminishing the effectiveness of the **MSM**). “CalmCream” is very good.

**SCLERODERMA**

Scleroderma is a possibly fatal tightening of the skin, usually occurring in older persons. If severe, it causes the skin to shrink dramatically and tighten like a vice around the organs. In experiments with **MSM**, Herschler discovered that topical **MSM** Lotion significantly softened the skin, making it more elastic.

Dr. Jacob conducted research studies with scleroderma patients and confirmed that topical **MSM** applications did provide substantial relief. Dr. Jacob confirmed that **MSM** lotions, which generally contain about 15% **MSM**, can be used daily, even several times a day, without side effects.
**SINUSITIS**

Sinusitis is characterised by inflammation of the tiny sinus cavities around the nose and eyes. This common condition may be caused by frequent colds or chronic allergies and, if not properly treated, may develop into a bacterial or viral infection. The sinuses clean the air as it passes through the nose and drain mucus away from the area.

Since the sinuses form the body’s first line of defence in protecting the lungs against infection, chronic sinusitis may contribute to colds, bronchitis, and other pulmonary infections. In addition, the symptoms associated with the condition itself are definitely no breath of fresh air: stuffiness, headaches, facial pressure and pain, and possible toothaches and earaches.

Like asthma, sinusitis is exacerbated by allergies, particularly to airborne substances like dust mites, moulds, pollens, and chemicals. Conventional treatments like antibiotics and decongestants don’t offer lasting relief and generally don’t get to the root of the problem.

Instead of reaching for toxic over-the-counter preparations to treat sinusitis, reach instead for **MSM** for long-lasting relief of the inflammation and congestion. In addition to taking a daily dose orally, you can administer the supplement in the form of a nasal spray.

In their book *The Miracle of MSM*, Dr. Stanley Jacob and Dr. Ronald Lawrence suggest filling an empty nasal spray bottle with a solution containing approximately one level teaspoon of **MSM** crystals for every ounce of water. Make sure the water is warm so that the crystals dissolve thoroughly.

Then spray this solution three or four times into each nostril several times per day. Jacob and Lawrence report that some people experience a slight burning sensation but that most get
used to it after a few applications. You can reduce the amount of MSM until you get used to it, but you may need a stronger one to feel the benefit.

SKIN, HAIR AND NAIL CONDITIONS

MSM is known to have an inhibitory effect on cross-linking of collagen and protein which reduces the hardening of skin and connective tissue. This property makes MSM an extraordinary treatment for improving the quality of the skin, hair and nails. MSM lotions can be applied directly to the skin for treating problems such as acne, burns, topical fungus or dry, aged, wrinkled skin.

Apply liberally to the skin and rub gently into the affected area.

SNORING

In an Oregon Health Sciences University study, 35 sufferers of chronic snoring were given MSM drops (15% water solution, you can make it yourself) in each nostril 15 minutes before bed. 80% of the test studies reported significant reductions in snoring with no side effects whatsoever after 90 days of treatment.

Using MSM with other supplements researchers discovered that MSM apparently increases the body’s assimilation of other substances taken in conjunction with it. This may be due to MSM’s reported ability to make rigid cell walls (caused by aging or damage) more permeable, thus allowing for increased nutrient absorption.

If you are taking other supplements or medications, be aware that you may want to decrease the amounts of the other substances you usually take when taking frequent doses of MSM.
CONCLUSION

There are many other conditions in addition to those already mentioned which have responded favourable to MSM in clinical studies. Additional applications are listed below, to give you a clearer idea of how you can apply MSM both internally and externally to enhance and strengthen your overall health. When it comes to MSM, Dr. Stanley Jacob says it best when he states that, “MSM is a fascinating, life- enhancing agent.”

ARE YOU SULFUR DEFICIENT?

Sulfur deficiencies are associated with:

- Slow wound healing
- Brittle nails
- Gastrointestinal problems
- Regulation of inflammation
- Lung dysfunction
- Rashes Memory loss
- Scar tissue
- Brittle hair Arthritis
- Acne Immune dysfunction Depression

Supplementing MSM assures that you have an adequate organic source for the body to use for whatever it needs to.

Remember the body is in a constant state of self-repair, but if we do not have all the necessary “parts”, the end product is going to be less than perfect.

Scientists around the world are investigating the relationship between MSM and arthritis, Alzheimer’s disease, allergies and asthma, dermatological problems, periodontal conditions and even cancer.
Researchers have claimed that **MSM** in sufficient levels as a dietary supplement can help the following:

- Improve joint flexibility
- Reduce stiffness and swelling
- Improve circulation and cell vitality
- Reduce pain associated with systemic inflammatory disorders such as arthritis
- Reduce scar tissue which further aggravates the condition, increasing pain
- and decreasing mobility
- Break up calcium deposits

Arthritis may be induced by the intake of too much calcium and by taking the wrong forms of calcium. Calcium can migrate to the soft tissues and form deposits. The tissues become calcified and the cells cease to function normally. **MSM** is able to rupture the weak (water) bonds of calcium in the synovial fluid. This is likely to also be true for kidney stones.

**HOW TO USE MSM WHICH MSM SHOULD I USE?**

There are certain grades of **MSM** that are used for livestock consumption. However, you want to look for food grade pure **MSM** which is made in the United States specifically for human consumption.

**AS A DIETARY SUPPLEMENT** If simply supplementing your diet with **MSM**, 250-5000mg/day is the usual amount. Because of the non-toxic nature for **MSM**, researchers have found that higher dosages can be taken safely. The amount you need really depends on: the severity of your symptoms, the condition of your immune system, how effective your body is at utilising the **MSM**, body size and weight.

I've given several suggested dosage levels for specific illnesses in the preceding pages, but I'll give you a few more general
guidelines that may help you to better determine how much and what form of MSM to take:

1. **MSM** must be taken frequently in order to be therapeutically effective. When taking **MSM** to improve symptoms of illness, **MSM** should be taken everyday.

2. Researchers have used total daily dosages ranging from 250mg to 5000mg per day in treating illness. Noticeable results are usually seen in 1 to 21 days for less severe symptoms.

For more serious conditions, researchers report that higher doses (2000-5000 mg/day) can be taken. When using large doses, it’s best to divide your dosage into equal parts to be taken throughout the day (for instance, for a 2000 mg dose, take 1000 mg twice a day, or 500 mg four times a day, etc.). If you have a serious condition and want to try high dosages of **MSM**, work with your health practitioner to monitor changes, improvements, etc. in your individual condition.

**DRUG INTERACTIONS**

Because of its non-toxic nature, **MSM** is non-allergenic and does not interfere or interact with any other types of pharmaceutical medicines. Researchers report that **MSM** can be taken in conjunction with all other forms of medication.

**Water is very important** to help flush toxins out of the body. More water, the faster the results, and the fewer side effects will be experienced from the detoxification process. Some individuals find that **MSM** gives them extra energy so in order to avoid sleep difficulties, avoid taking any **MSM** after 5pm.

Possible side effects: One may experience headaches and fatigue for the first few days due to the detoxification process. If this occurs, drink more water. Do not be alarmed as this is a natural part of the healing process.
My name is Pauline, I am 67 years of age I suffer with arthritis. I was having difficulty walking to the corner store and back and had lost all interest in gardening which I love. I started taking MSM a few months ago and now I am back gardening, I go for walks with my neighbours and also have a great sense of well being.

Pauline Herridge (Christchurch)

Ten years ago my doctor told me the pain in my knees was arthritis. I had 2 choices take pills which could give me a heart attack, or finish up on crutches. I found a third choice, I read about a product called MSM. When I read the booklet I thought “Yeah right, one of those miracle cure everything products!” Then I thought, give it a go you have nothing to loose. I am glad I did! Three months ago I put the pills away and started on MSM, now I wish I had found MSM a long time ago. If you suffer from arthritis I recommend you try this product you will be glad you did.

Donald Kennedy (Christchurch)
I had been suffering from arthritis with the condition becoming worse it has restricted my lifestyle tremendously. Constant pain made me cranky and enjoying golf was a challenge. Recently we discovered the miracle of MSM, a natural occurring mineral and after a trial of only 14 days my pain has been massively reduced and I am able to play golf PAIN FREE. At first I was a bit sceptical but now I recommend MSM to everyone. 

**John Peterson (Christchurch)**

I am 85 and have had osteoarthritis for many years; I saw the MSM advert in the local paper so I got the information pack and am so glad I did. I was taking up to 8 paracetamol a day, I have not needed any pain killers for weeks now. MSM worked well for me, my wife also decided to try it because she snored and now it is much improved also we have both found it gives us more energy.

**Gerald Smith (Christchurch)**
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**MSM New Zealand Ltd.**
PO Box 19648
Christchurch 8241
Phone: 0800 893 349 or (03) 384 5659 for orders

www.msm-newzealand.co.nz
info@msm-newzealand.co.nz