

# **SODIUM CHLORITE**

## **The Miracle Mineral Solution (MMS)**

**By Walter Last**

Sodium chlorite is presently being promoted as a miracle mineral supplement or MMS with superior antimicrobial activity. You can appreciate its power from a statement by the discoverer of this remedy that all 75,000 individuals with malaria that have been treated were cured within a day, with 98% being cured within 4 hours (1). This obviously has great ramifications not only for self-healing but also for the drug industry and medicine. In the following I want to comment on these issues.

### **Conventional Use of Sodium Chlorite**

Acidified sodium chlorite is being used in many countries, including Australia and the USA, as an antimicrobial treatment in the food industry, for water purification, and for sterilizing hospital and clinic rooms and equipment. In hospitals it has been used as a disinfectant for a hundred years and in the US meat industry for about 50 years. Health-conscious countries and municipalities are increasingly replacing the health-damaging chlorine for the harmless chlorine dioxide in treating public water supplies (2).

In solution sodium chlorite ( $\text{NaClO}_2$ ) is very alkaline and stable but when acidified it forms the gas chlorine dioxide ( $\text{ClO}_2$ ) which smells the same as chlorine and probably is the strongest all-round antimicrobial and parasite remedy. While it destroys all anaerobic microbes and parasites, it does not damage the beneficial lactobacteria of our intestinal flora. The only residue left in water, food, or in the body after treatment with MMS is a small amount of table salt or sodium chloride ( $\text{NaCl}$ ).

In 2003 the *Australia New Zealand Food Standards Code* was changed to permit the use of sodium chlorite acidified with citric acid or other food acids for antimicrobial surface treatment of meat, poultry, fish, fruit and vegetables (3). The time between mixing and application is less than 5 minutes, and chlorine dioxide levels do not exceed 3 ppm. The safety assessment report concluded that if properly used no residues would be detected in the raw foods following treatment and prior to sale, and therefore there would be no toxicological concerns.

In solid form sodium chlorite is unstable and commonly mixed with about 20% sodium chloride. Commercially it is produced and shipped in Australia as a 31% solution in water. For end users in the food and agricultural industries it is available as a 5% solution called Vibrex. In the US and the UK it is also available as tablets that release chlorine dioxide (e.g. releasing 4 ppm per 1 liter or per 30 liter of water). In Germany and Italy chlorine dioxide is the main treatment chemical for public water supplies.

Curiously, stabilized sodium chlorite that does not generate chlorine dioxide has been patented for intravenous use in the treatment of autoimmune diseases, hepatitis and lymph cancers. It supposedly prevents or reduces antigen activity and autoimmune responses (4).

### **The Discovery of MMS, the Miracle Mineral Supplement**

Jim Humble, a chemist and metallurgist accidentally discovered the MMS by using a whole bottle of Stabilized Electrolytes of Oxygen (S.E.O.) to immediately cure a

companion of malaria during a jungle expedition. S.E.O. contains about 3 % sodium chlorite.

Humble gradually realized that S.E.O. is too weak and that it does not work by releasing oxygen but rather that it must be acidified to release chlorine dioxide as the active ingredient. This is also how it has been used as a hospital disinfectant. The problem was to find a safe dose and procedure that allowed this most effective antimicrobial to be used for people. Humble ended up using a nominally 28% solution which, because of a nearly 20% sodium chloride content, actually contains only 22.4% sodium chlorite. Because of its miraculous effect in supporting the immune system against invading microbes and parasites Humble called his sodium chlorite the Miracle Mineral Supplement. However, I prefer to call it Miracle Mineral Solution, as supplements require the approval of health authorities, while a solution for treating water does not need to be registered.

Using this at a maximum dose of up to 3 x 15 drops he writes: "MMS is producing some of the quickest results that I have seen with people's health, including cancer, diabetes, arthritis, shingles, warts going hard and dropping off, and many more." Also AIDS patients in debilitated conditions went back to work without any further signs of disease (1).

Basically all diseases associated with microbes and immune reactions respond very well, and that includes not only infections and autoimmune diseases but most of our diseases. Chlorine dioxide was used to kill Anthrax during the 2001 Anthrax attack. Even most diseases that are not known to be associated with microbes and the immune system reportedly have improved (1).

As an example of the unexpected results of using MMS, Humble relates the following incident: a teenage girl, overweight with depression and failure to develop breasts, was given MMS. The next day her breasts started to grow. After another dose 4 days later she had the first period after 6-months, her breasts were fully developed, her depression lifted, and she started losing weight (1). My interpretation of this is that all her problems were caused by Candida.

Because of its strong oxidizing ability, chlorine dioxide seems to inactivate many poisons, may help with toothache, and makes stored heavy metals soluble so that they can more easily be expelled. Another advantage of chlorine dioxide as compared to chlorine is that it does not react with organic matter, such as food, body cells or even our "good" intestinal bacteria, but is specific in destroying pathogenic microbes. However, it does react with vitamin C and possibly other reactive antioxidants.

If this treatment option would become widely known and used by the general population that would be devastating for the medical-pharmaceutical complex. The FDA has a long history of jailing and otherwise neutralizing inventors of effective natural remedies and therapies that harm the drug industry, and Humble, as an American, tries to protect himself by remaining in hiding in Africa or Central America.

### **Usage Instructions**

It should be stressed that MMS is not used to treat people but rather to purify water. We can then drink the purified water and receive a boost to our immune system as a consequence. The common recommendation is to start with 1 or 2 drops of MMS and gradually increase up to 15 drops three times a day. Mix the MMS with an acid activator. Most recommended is a 10% solution of citric acid in water which you may

make yourself by dissolving 1 spoonful of citric acid crystals in 9 parts of water. Citric acid tends to be available from supermarkets as an ingredient for baking. Acid activation releases chlorine dioxide.

Lemon juice, lime juice or vinegar have been used as activator before it was found that 10% citric acid is much more effective. Cider vinegar may aggravate fungal problems but white vinegar is suitable. The usual recommendation is to add 5 times more acid than MMS. Drops from a standard glass eye dropper should be multiplied by 1.5 to equal the number of drops from the standard MMS bottle. However, different types of eye droppers, pipettes and bottle tops have different drop sizes, and you may standardize your dropper by counting how many drops from the MMS bottle and how many from your eye dropper are needed to fill a teaspoon or another suitable measure. One millilitre or ml of MMS contains 17 standard drops. A level teaspoon of MMS, lemon juice or 10% citric acid solution has about 80 drops. So a quarter teaspoon has about 20 drops.

Therefore, for easier use the drops of the acid do not need to be counted, provided you make sure that you take more rather than less acid. When taking 15 drops of MMS you can mix it with a full teaspoon of acid, when taking 6 or 7 drops of MMS mix with half a teaspoon of acid, and generally take more or less acid according to the amount of MMS. Furthermore, 10% citric acid is about 5 times stronger than the other acids. Therefore to achieve the same results you may use more of the other acids compared to citric acid. The stronger the acid, the more chlorine dioxide is released within a short period. Therefore the chlorine dioxide smell is much stronger after acidifying with 10% citric acid, and equally the destructive effect on microbes and parasites is much higher. Therefore, difficult conditions, such as Lyme disease (caused by a virus transmitted by ticks) responded to 15 drops of MMS acidified with 10% citric acid but not if the other acids had been used.

Generally you do not need to be too concerned with the mentioned numbers and sizes of drops. The general idea is to keep slowly increasing the amount of MMS until you have overcome your immune-related problem.

Three minutes after adding the acid dilute with half a glass of water and additional herb tea, or juice without added vitamin C, e.g. apple or grape juice but not orange juice. Also cinnamon, on its own or with some honey stirred into the water, helps to disguise any unpleasant taste of the solution. The initial strong smell is now reduced as the chlorine dioxide remains dissolved in water rather than escaping into the air. Do not take any antioxidant supplements close to MMS. If it tastes too acid for you, then neutralize the liquid with sodium bicarbonate shortly before drinking.

Drink the diluted MMS all at once or possibly spaced out in sips over an hour or two to minimize nausea. It acts best on an empty stomach but that also easily causes nausea. If that happens temporarily reduce the dose or have some food in the stomach. Alternatively you may take a dose, say 6 drops, and another 6 drops an hour later. Such a double dose seems to be more effective than a single dose two or three times during the day. The highest double dose would be with two times 15 drops, but few will be able to take this without vomiting.

It may be best to take MMS just before going to bed. MMS works very fast, and people often become sleepy after taking a dose of MMS. Also, it is easier to cope with nausea if you can fall asleep. If you take MMS twice a day, take one of the doses in the evening

before going to bed. However, some individuals experience the opposite effect and have difficulty falling asleep after taking MMS.

An alternative method for intensifying the antimicrobial program or for overcoming an infection is by taking 3 to 4 drops of acidified and diluted MMS every hour and a half for several days. Temporarily reduce the dose if any nausea should occur. You may do this by swallowing the MMS or with oral absorption or a combination of both.

Humble believes it is safe to give children MMS as needed for infections. The maximum dose for children, underweight or overweight individuals, is stated as 3 drops per 11.4 kg or 25 pounds of body weight. I would instead use 2-3 drops per 12 kg as a maximum dose.

For most conditions Humble regards the intensive MMS treatment as completed after taking 15 drops two or three times daily for one week. If you cannot reach this level then just remain somewhat longer at the highest dose that you can use. Following this Humble recommends a maintenance intake for older individuals of 6 drops daily and for younger individuals of 6 drops twice weekly.

My own preference is for a relatively high intake for several weeks twice a year or when indicated by a developing infection, and not using it for the rest of the time. However, this also depends on body conditions. For instance if someone has root canal fillings, bio-films on surgical implants or other microbe factories that cannot be immediately sanitised, then I would recommend several drops of MMS daily until the condition is rectified. Also if a sufficiently high dose cannot be reached to cleanse the body of harmful microbes and spores of microbes, then it may be preferable to remain for longer periods on a sufficiently low dose that does not cause discomfort.

### **Different Conditions**

With serious acute infections or poisonings, such as with malaria Humble recommends giving immediately 15 drops followed an hour later by another 15 drops. While most conditions tend to improve with a medium-dose taken over a long period, some parasitic and viral conditions seem to require at least one high double dose to get results. It seems that with life-threatening acute conditions a high double dose can be more easily handled than with chronic conditions.

For chronic or long-standing conditions always increase the number of drops very slowly over a period of weeks. it is best to increase by 1 drop each day until you feel some nausea. The next day drop back by 2 drops and stay at this level for several days until increasing again by 1 drop a day. In this way you gradually work your way higher, reducing and then increasing again to keep nausea under control. You may reduce problems by dividing the daily dose into a morning and a bedtime portion, but after some time always try to edge higher until you start feeling the nausea. If you continue to encounter nausea whenever you raise the dose then just remain for a long time on a level that does not cause problems. Eventually nausea with vomiting or diarrhea may catch up with you anyway but it is better if that is at a high rather than a low level of MMS.

With an acute infection you may start with 3 or 4 drops and increase quite rapidly, even if this means nausea, vomiting and diarrhoea. With severe parasite problems, such as malaria attack, or if one had taken a poison, or has food poisoning, or with snake bites, a high double dose of MMS will often help.

For abscessed teeth, infected gums, and pyorrhea use 6 drops of acidified and diluted MMS and rinse for several minutes, for a sore throat gargle frequently. Finally you can add more water, tea or juice and drink it; experiment to find the dose that works for you.

With sinus infections you may mix a drop with acid and several times sniff up the chlorine dioxide, first through one nostril and then through the other. However, this can be rather irritating to the mucous membranes. Therefore do this only very carefully.

For inflammatory and infective skin conditions you may bathe or wash the affected area with suitably diluted acidified MMS. I have been told of a case where psoriasis went away after a few weeks of topical treatment. I would also use it internally as well as externally for all autoimmune diseases, including scleroderma, leukoderma/vitiligo and alopecia or autoimmune-related baldness.

For burns Humble advises to squirt the MMS full strength straight out of the bottle all over the burn. Do not use the acid in this case. Very lightly with the tips of the fingers spread it completely over the burn. Let it remain there for only 30 seconds to a minute. The acidic chemical in the burn is neutralized by the alkaline solution of the MMS. The pain stops immediately, within seconds. Wash the MMS off with water. You absolutely must wash it off or the burn will become worse. If you do this correctly, the burn will heal in about ¼ the usual time for a similar untreated burn. For sunburns he advises leaving the MMS on for 15 to 30 seconds and then rinse off with water.

To reduce nausea, but also with bowel cancer or inflammatory bowel conditions you may try using it activated in half a liter of water as a retention enema. Use another enema beforehand to clean the bowels, or use a laxative to clean out. With cancer of the uterus/cervix/ovaries you may also try inserting the activated solution in a non-irritating concentration.

With colds the MMS kills the virus but does not stop the beneficial mucus release. This can be stopped with the Sugar Cure: Keep a teaspoon of fine sugar in the mouth until it is dissolved, then spit out and take another teaspoonful. Continue with this for one or two hours and repeat on subsequent days as required. The sugar draws mucus combined with lymph fluid from the lymph glands and so gradually clears the headspaces.

With Influenza I recommend taking several high doses of MMS for only one or two days and then taking instead high amounts of sodium ascorbate, e.g. half a teaspoon in liquid (e.g. fresh citrus juice) every 2 hours until recovered.

### **Side Effects and Problems**

Individuals may find it difficult to continue with the MMS program because of frequent nausea. This is especially a problem with advanced cancer and other long-term conditions. Therefore I generally recommend a program of intestinal sanitation and antimicrobial therapy with milder agents before starting MMS therapy. This will remove most of the toxic load with less discomfort than by starting immediately with MMS. As part of this preliminary program I recommend a 3-week course of Lugol's solution or a less concentrated form of aqueous iodine, and finally a course of water that has been purified with MMS. For instructions see the Ultimate Cleanse at [www.health-science-spirit.com/ultimatecleanse.html](http://www.health-science-spirit.com/ultimatecleanse.html).

Some individuals with advanced degenerative diseases become very weak on MMS seemingly unrelated to die-back reactions. I believe that this is due to antioxidant deficiency, and especially to lack of glutathione. In this case take 1 gram of N-Acetyl

Cysteine daily to stimulate glutathione production. This also helps to expel toxic minerals.

Commonly nausea, vomiting and diarrhoea will occur sooner or later and are beneficial for cleaning out. Sometimes also other reactions, such as inflammations may temporarily occur. To stop nausea you may take 1000 mg or more of vitamin C, but this also stops the antimicrobial activity. Other methods that may help against nausea are vitamin B6, ginger, pressing 2-3 cm below the wrist in the middle of the underarm, and also reflexology: pressing the foot reflex for the stomach - just below the joint of the big toes, press against a pointed stone/rock, step or corner of some furniture.

Furthermore, I found that much of the nausea can be relieved by cleaning out the bowels before taking the drops or immediately when nausea starts. This may be done with an enema or colonic, or by taking a suitable laxative before the nausea starts. In addition with bowel cancer or inflammatory bowel conditions you may try using activated MMS in half a liter of water as a retention enema. Use another enema beforehand to clean the bowels, or use a laxative to clean out. With cancer of the uterus/cervix/ovaries you may also try inserting the activated solution in a non-irritating concentration.

In the case of cardiovascular diseases and arteriosclerosis it has been suggested that with MMS therapy cholesterol deposits may be removed too fast and lead to a weakening of the affected blood vessels. To avoid or minimize problems Dr Matthias Rath recommends taking high amounts of vitamin C, up to 10 g daily in divided doses, for several weeks before starting MMS therapy. This is to strengthen the blood vessels and make them more elastic. Some other nutrients to improve elasticity are lemon juice, green juices, copper salicylate, magnesium chloride, MSM, and N-Acetylglucosamine. In the case of cancer I also recommend using additional therapies as recommended by natural therapists, for example see the 8-part program in [www.health-science-spirit.com/diseases.html](http://www.health-science-spirit.com/diseases.html).

### **Oxidants versus Antioxidants**

Besides nausea also inflammations may arise as a side effect of MMS therapy. To understand this effect we need to have a look at the function of inflammation and the role of oxidants and antioxidants in this process. Inflammations increase blood and nutrient supply to an area and are essential for the immune system to work and for healing of damaged organs and tissue to occur. If the immune system is not strong enough to eliminate invading microbes and diseased body cells, originally healing immune inflammations become destructive chronic inflammations, and this is a symptom of our present epidemic of chronic diseases.

Oxidants support the immune system by killing microbes outright and by giving the immune system more firepower. This results in increased inflammation when using strong oxidants such as chlorine dioxide. Therefore as during any real health improvement various healing reactions, including temporary inflammations, may develop during MMS treatment. This is beneficial for healing in the long-term even if uncomfortable in the short-term. For a more detailed explanation of this process called a healing crisis or healing reaction see [www.health-science-spirit.com/healingcrisis.html](http://www.health-science-spirit.com/healingcrisis.html).

The reverse of this process, the suppression of inflammation, can be seen in the conventional medical approach of using anti-inflammatory steroids in the treatment of autoimmune diseases. It is my experience that such diseases may be overcome within weeks or months using natural approaches, but when steroidal drugs are used at the same time, it is much more difficult to make headway. In this case any increased

immune activity that results in increased inflammation is blocked by steroidal drugs. However, it is not advisable to greatly reduce any anti-inflammatory drugs until the intestines and infected teeth have been sanitized, and until after antimicrobial therapy.

Antioxidants have the opposite role to oxidants. They protect our body cells and functions from being oxidized. Oxidation needs to take place only in well established and protected pathways to generate energy or to eliminate invaders and harmful agents. If we step up the intake of oxidants, we also need to increase the intake of antioxidants otherwise we may get unnecessary inflammations due to irritation of tissues and other degenerative changes. An example of this is deteriorating eyesight that may occur when using high doses of MMS for more than a few days.

Antioxidant deficiency is common with chronic diseases and advancing age. High intake or prolonged use of MMS will make this situation worse. Therefore it is important to increase antioxidant intake when using MMS. However, oxidants and antioxidants should be separated during the day or they may neutralize each other. For instance you may be using MMS before breakfast and at bedtime and antioxidants from mid-morning to the evening meal.

This does not only apply to antioxidants in supplement form, such as vitamin C and E, B-complex, coenzyme Q10 or grapeseed extract, but also to food high in antioxidants, such as purple berries and juices, fresh fruit, polyunsaturated oils, turmeric, black or green tea, cocoa and others. Because chlorine dioxide reacts especially well with vitamin C, it is advisable to take 1 gram or more when on a high dose of MMS for more than a few days to protect oxidation-sensitive structures, such as heart, brain and eyes.

**Overdose** of sodium chlorite: Anyone who has consumed more than ½ teaspoon of the miracle mineral solution should immediately begin drinking water, as much as possible. It is best to add ½ teaspoon each of bicarbonate of soda and sodium ascorbate to each glass of water or whichever is available. After drinking plenty of water you may also try to induce vomiting.

Presently MMS is still available over the Internet. There are 2 types with slightly different composition. The product used by Global Light (<http://www.globallight.net>) and its distributors is made from technical sodium chlorite flakes containing 20% sodium chloride, while the MMS from StrideintoHealth ([www.strideintohealth.com](http://www.strideintohealth.com)) is a pure sodium chlorite solution as used in the food industry. Nominally MMS is a 28% solution of the flakes but because of its high sodium chloride content the effective concentration of sodium chlorite is 22.4% which is the same in both products. A Canadian distributor is [www.mmsdr.com](http://www.mmsdr.com).

Keep MMS protected from direct sunlight. Also see the more recent article [MIRACLE MINERAL SUPPLEMENT - An Integrated MMS Therapy](#), and check for new protocols at [www.jimhumble.biz](http://www.jimhumble.biz).

<http://www.health-science-spirit.com/MMS.html>

#### REFERENCES

- (1) <http://miraclemineral.org>
- (2) [www.epa.gov/safewater/mdbp/pdf/alter/chapt\\_4.pdf](http://www.epa.gov/safewater/mdbp/pdf/alter/chapt_4.pdf)
- (3) FINAL ASSESSMENT REPORT APPLICATION A476 (12/03: 8 October 2003)  
[www.foodstandards.gov.au/srcfiles/A476\\_Chlorite\\_Final\\_Assessment\\_Report.pdf](http://www.foodstandards.gov.au/srcfiles/A476_Chlorite_Final_Assessment_Report.pdf)
- (4) USE OF A CHEMICALLY-STABILIZED CHLORITE SOLUTION FOR INHIBITING AN ANTIGEN-SPECIFIC IMMUNE RESPONSE (WO/1999/017787)  
<http://www.wipo.int/pctdb/en/wo.jsp?wo=1999017787&IA=WO1999017787&DISPLAY=DESC>