



Magnesium For Life

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Magnesium Chloride

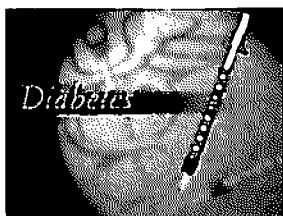
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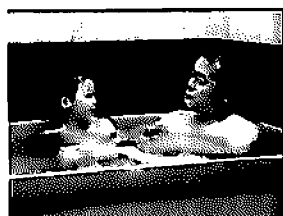
Transdermal Mineral Therapy

Getting Inv

Dosage



Diabetes is disabling, deadly and on the rise and in certain places has reached fifty percent of local populations.



Intravenous, Transdermal, and Oral Magnesium Mineral Therapy



Research suggests that shortfalls in magnesium

Since it is difficult to measure magnesium in the body accurately, being that most of in our bones and only about 1% is in our blood, do we wait until we show sign deficiency before supplementing? The answer is clearly no if we want to live a long in good health. Each day it is critical to receive the full requirements our bodies have magnesium and those who understand the realities of modern life, diets and agricult practices know how difficult it is to receive our needed magnesium through food alone

The pertinent questions about magnesium chloride dosing are: how effectively absorbed transdermally, in bath water foot soaks, direct topical application or comp to oral consumption? And can we take in too much magnesium when all sources considered. These are important questions when we start supplementing anything.

Before one begins transdermal magnesium chloride it is highly advised that you read chapter on warnings and contraindications if you are suffering from any chronic illr severe disease or deficiency, or are taking any pharmaceutical medications. Also if or suffering from any kind of disease it is always recommended to have your treatm supervised by a primary health care practitioner. That could be a nurse, chiroprac naturopathic doctor, acupuncturist, or allopathic medical doctor. Unfortunately few k anything about transdermal magnesium mineral therapy because it is so new.

Magnesium chloride is without doubt a versatile mineral medicine, though as with forms of magnesium supplementation, it is not easy to calculate the exact dos. Absorption rates vary considerably from one person to another and from one form of to another, even with magnesium chloride, which probably delivers more use magnesium to the cells than any other form. It is wise, especially if one is seriously to start out with low dosages and build slowly up to higher doses over a period week or two.

In general, to individualize the appropriate magnesium dosage for oral intake, the rul thumb is approximately 6-8 mg/kg (3-4 mg per pound) of body weight per day. translates into a total dietary magnesium intake of 600 to 900 mg per day for a 20 man. With children some researchers indicate that 10 mg/kg/day are appropriate bec of their low body weight and increased requirements for growth. Athletes also need n depending on their stress and training levels[i] and we can always adjust upwards w under great emotional stress or when seriously ill.[ii],[iii]

The normal accepted recommended daily dietary amount of Magnesium is 300-400 Many professionals feel this to be the bare minimum. Some would say that 1,000 m probably more in the range of what most people need due to stress (cortisol) cau magnesium to be dumped into the sweat in increasing quantities. Most people are num

intake can seriously impair athletic performance.

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the amount of stress experienced every day. But cortisol can be measured by saliva tests one really wants to know and if found to be high magnesium dosages can be adjusted accordingly.

Dr. Norm Shealy recommends using 6-8 oz in each bath you take when using suggested magnesium chloride product, which is a USP grade product, made by process of using hydrochloric acid. This is not considered a natural product, as magnesium oil evaporated from seawater is, and is considerably more expensive. As the natural form of magnesium oil, evaporated from seawater, the recommended amount per bath is only 2 oz. The cost and amount you use is dependent on the concentration of the magnesium oil obtained. The magnesium product from Dr. Shealy contains 100% magnesium chloride as opposed to 30-35% from natural seawater evaporated form. Fabricated forms of magnesium oil may contain 25 times the amount of heavy metal as the tested natural seawater form. It's the difference between using $MgCl_2$ evaporated from sea water and $MgCl_2 \cdot 5H_2O$ powder to make the oil. Please write for more information on these products.

As with anything when just starting, caution should be taken in the beginning until one gets a feel for the appropriate dosages for adult and especially with children. Each person has to adjust the dosage to their own needs, size and body weight. The actual amount used is also dependent on the method of use or the combinations of methods used. Magnesium chloride may be taken orally, applied directly to the skin (used in a massage or simply rubbed on), used in foot baths, full body baths, and sprayed into mucous membranes.

Our cells are best served when they are brimming with magnesium reserves and we need to absorb a sufficient amount each and every day. A magnesium saturated body is more potent and will sport a tougher immune system that will fight more easily against infections and influenza. This does not mean that we should all put ourselves into hypermagnesaemia without concern and ignore the needed balance with other minerals. What we really have to do is make sure we have adequate magnesium, for all the cell systems to work to their optimal level, and at all times.

The requirements for a very ill person are going to be higher than for a healthy person. In general, for a large adult, spraying one ounce of Magnesium Oil a day all over the body is recommended with that adjusted downward for children depending on their age and size. If used in a full body bath two ounces should be used. Some people enjoy a very concentrated magnesium chloride bath applying as many as eight ounces at a time. For sports injuries more concentrated baths would definitely be indicated. Footbaths use much less water so two ounces will yield a very concentrated footbath.

The Magnesium Oil can and should be diluted when applying directly to the skin (especially with children) if redness or "stinging" feelings result in discomfort, feelings or sensations. If one is suffering from long term illness of any kind, dosage whether orally or topically administered, should be started at lower levels and brought up gradually. Magnesium chloride and Vitamin C have similar toxicity profiles and overdose from both resulting at worst usually in diarrhea unless the kidneys are seriously compromised.

Soak the whole body or just the feet in bath water for 20-30 minutes, at a temperature of about 108 degrees. The most effective protocol for this therapy is to begin with a daily body or foot bath every day for the first 7 days, (starting at lighter concentrations and building up) then continue with a maintenance program of 2-3 times a week for 6-8 weeks or longer. Sensitive care must be taken especially with children as to dose levels, water temperature and magnesium concentrations. Muscle spasms might occur on some occasions if one forgets to get out of the tub so it is necessary to supervise children and limit the length of time they remain soaking in magnesium chloride. All strong reactions such as redness in local areas to diarrhea or even muscle spasms are indications to reduce concentration.

Fick's Law of Membrane Permeability says that the amount of any solute (magnesium) that will be absorbed is directly dependent upon the area of contact, the concentration of the solution and the time that the solute is in contact with the membrane.[iv] Thus one can feel one's way to appropriate dosage both in initial self-treatment phases and for long term maintenance dosage levels. A particularly strong sensation is realized when one uses magnesium chloride in the mucous membranes and it is especially useful as a mouthwash to strengthen teeth and revitalize the gums. Spraying three or four sprays full strength several times a day is appropriate.

There are no numbers available for how many milligrams are absorbed through the skin but it is generally acknowledged by all who have been involved with transdermal application of magnesium chloride that topical is actually the best avenue of entrance into the body. Dr. Norm Shealy has gone as far as applying for a patent for the specific use of transdermal magnesium therapy to raise DHEA hormone levels, something he claims oral and intravenous methods do not seem to do.

Magnesium Oil from the sea weighs 12 pounds per gallon. Distilled water weighs 8.33 pounds per gallon.[v] Thus we can calculate in a straight away manner how much elemental magnesium is in each gallon and ounce. **Each spray of Magnesium Oil contains approximately 18 milligrams of elemental magnesium.** An ounce would contain over 3,300 mg. Five sprays in a glass of water would be almost 100 milligrams and could probably count on the majority of that being absorbed. If two ounces are put in a bath we might have over six thousand milligrams floating around in the water but only a fraction of that will be absorbed. But absorbed it will be for almost everyone experiencing the effect and Dr. Shealy has done studies showing the rising magnesium levels. Spraying it on the body will yield a higher magnesium concentration on the skin so an ounce used that way will result in more magnesium absorbed than two ounces used in a bath.

It should be understood that we need more research into studies on absorbability and bioavailability thru the skin, and the necessity to use this chapter as a general guide only. Possibly the best approach is a combination approach alternating with baths, direct spraying on the body, and oral intake besides relying on one's foods. When one uses all three approaches together it is easier to bring one's magnesium levels up in a month or so to healthy levels and from there one has only to maintain appropriate daily intake.

Food Sources of Magnesium

Tofu, firm, 1/2 cup 118mg
Chili with beans, 1 cup 115mg
Wheat germ, toasted, 1/4 cup 90mg
Halibut, baked, 3 ounces 78mg
Swiss Chard, cooked, 1 cup 75mg
Peanut, roasted, 1/4 cup 67mg
Baked potato with skin, 1 medium 55mg
Spinach, fresh, 1 cup 44mg

— Source: USDA: Composition of Foods. USDA Handbook No. 8 Series. Washington, D.C., ARS, USDA, 1976-1986.

There is no specific information about oral magnesium chloride in liquid form but it is reasonably safe to assume it would be more absorbable than magnesium taurate. Liquid minerals are thought to be much more absorbable than tablets.

3-5 sprays of magnesium chloride in a glass of pure water is an excellent way to take magnesium internally. It assists digestion, counteracts excess acidity in the stomach, and delivers magnesium swiftly into the bloodstream for distribution to all the cells of the body.

Daniel Reid

Tao of Detoxification

The taste of the solution is not very good (it has a bitter-saltish flavor) so a little of juice (grapefruit, orange, lemon) can be added to the solution. Individuals with sensitive taste buds may start using it in tiny amounts mixed with strongly flavoured food and increase doses very gradually. Alternatively, drink it in one gulp dissolved in water while pinching your nose and quickly drink something pleasant afterwards.

Hydrated magnesium chloride (powder or crystal) contains about 120 mg of magnesium per gram or 600 mg per rounded teaspoon. It has a mildly laxative effect. As a maintenance intake to remain healthy you may take about 400 mg or a level teaspoon daily in divided doses with meals. With raised blood pressure and symptoms of magnesium deficiency you may temporarily increase this to 2 teaspoons daily in divided doses under the supervision of your healthcare practitioner. This may already cause 'loose stools' in some. However, commonly with these conditions a rounded teaspoon daily of 600 mg may be just right. With low blood pressure additional calcium may be required together with about 300 mg of magnesium for a ratio of two parts of calcium to one part of magnesium.

Dr. Raul Vergin offers the following guidelines for oral intake of a 2.5% Magnesium Chloride hexahydrate ($\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$) solution (i.e.: 25 grams or approximately one ounce of pure food grade powder in a liter of water). **The quantity of elemental magnesium contained in a 125 cc dose of the 2.5% solution is around 500 mg.**

Dosages are as follows:

Adults and children over 5 years old 125 cc
 4 year old children 100 cc
 3 year old children 80 cc
 1-2 year old children 60 cc
 Over 6 months old children 30 cc
 Under 6 months old children 15 cc

125 milliliter = 4.2267528 ounce [US, liquid]
 cc and ml are equivalent

Dr. Vergin indicates that "In acute diseases the dose is administered every 6 hours (every 3 hours the first two doses if the case is serious); then space every 8 hours and then every 12 hours as improvement goes on. After recovery it's better going on with a dose every 12 hours for some days. As a preventive measure, and as a magnesium supplement, one dose a day can be taken indefinitely. Magnesium Chloride, even if it's an inorganic salt, is very well absorbed and it's a very good supplemental magnesium source."

Daniel Reid says, "Using Magnesium Oil is the quickest and most convenient way to transmit magnesium chloride into the cells and tissues through the skin. 2-3 sprays under each armpit function as a highly effective deodorant, while at the same time transporting magnesium swiftly through the thin skin into the glands, lymph channels, bloodstream, for distribution throughout the body. Spray it onto the back of the hand, the top of the feet any time of day or night for continuous magnesium absorption. Regardless of where you apply the spray on the body, once it penetrates the surface of the skin, the body transports it to whichever tissues need magnesium most."

Dr. Norm Shealy recommends using 6-8 oz in each bath you take when you use a suggested magnesium chloride product, which is a food grade magnesium chloride. With the Magnesium Oil from Global Light the recommended amount per bath is only 2 oz. The cost and the amount you use is dependent on the concentration of the magnesium chloride used. The magnesium oil from Global Light Network is 30-35 percent Magnesium Chloride as opposed to 25 percent for Dr. Shealy's oil. It's the difference between unevaporated MgCl_2 from sea water and $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$ powder to make the oil.

The magnesium oil also comes in a gel (lower concentration for massage) form as we have a small bottle with a spray pump for easy application to the skin. All massage therapists should be using the gel, and even families, for it is always a good idea to combine massage with a magnesium treatment. The oil, which is not an oil actually, (it just has an oily consistency), is also usable in massage applications. If we really appreciated it important it is to make sure our magnesium levels are satisfactory we would be spraying our underarms with it everyday, spraying it on to different parts of our body and we never leave it out of our baths.

[i] Seelig, MS. Athletic stress, performance and magnesium in consequences of magnesium deficiency on the enhancement of stress reactions; preventive and therapeutic implications: a review. J Am Coll Nutr, vol.13, no. 5, pp. 429-446, 1994

[ii] Durlach, J. Magnesium in Clinical Practice, Libbey, London, 1988.

[iii] Fehlinger, R. Therapy with magnesium salts in neurological diseases. Magnesium vol 12, pp. 35-42, 1990

[iv] Diffusion is the mechanism by which components of a mixture are transported across the mixture by means of random molecular (Brownian) motion (cf. permeation: the ability of a diffusant to pass through a body - dependent on both the diffusion coefficient, D , the solubility coefficient, S , ie, permeability coefficient, $P = D.S$). Flynn et al. Berthelot as postulating, at the beginning of the nineteenth century, that the flow of matter by diffusion (ie, the flux), across a plane, was proportional to the concentration gradient of the diffusant across that plane. <http://www.initium.demon.co.uk/fick.htm>

[v] Magnesium chloride is an ionic compound because it has a metal, magnesium, and a nonmetal, chlorine. Magnesium will lose two electrons and form a +2 charge. Chlorine will gain one electron to form a chloride ion with a -1 charge. The formula for the compound is $MgCl_2$. To get the formula weight, find the atomic weights and add them together taking the subscripts into account. Magnesium is 24.3; chlorine is 35.5; so it would be 71.0. The total gives 95.3 as the formula weight.

More on this subject is available in the book Transdermal Magnesium Therapy. [More...](#)

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