

Product Code AN284	Magnesium for all species	Pages: 25
Suitability: * See page 15 specifically on Heart Health - prevention & treatment		
Last Updated: 11-11-18		

* See Page 20 [On Dosage Magnesium Supplement for your pet.](#)

Magnesium

A DEFICIENCY IN THIS CRITICAL nutrient makes you twice as likely to die as other people, according to a study published in The Journal of Intensive Care Medicine. It also accounts for a long list of symptoms and diseases — which are easily helped and often cured by adding this nutrient. In fact, in my practice, this nutrient is one of my secret weapons against illness. Yet up to half of Americans are deficient in this nutrient and don't know it.

I'm talking about magnesium.

It is an antidote to stress, the most powerful relaxation mineral available, and it can help improve your sleep.

I find it very funny that more doctors aren't clued in to the benefits of magnesium, because we use it all the time in conventional medicine. But we never stop to think about why or how important it is to our general health or why it helps our bodies function better. I remember using magnesium when I worked in the emergency room. It was a critical "medication" on the crash cart. If someone was dying of a life-threatening arrhythmia (or irregular heart beat), we used intravenous magnesium. If someone was constipated or needed to prepare for colonoscopy, we gave them milk of magnesia or a green bottle of liquid magnesium citrate, which emptied their bowels. If pregnant women came in with pre-term labor, or high blood pressure of pregnancy (preeclampsia) or seizures, we gave them continuous high doses of intravenous magnesium. But you don't have to be in the hospital to benefit from getting more magnesium. You can start taking regular magnesium supplementation today and see results.

The Relaxation Mineral

Think of magnesium as the relaxation mineral. Anything that is tight, irritable, cramps, and stiff — whether it is a body part or an even a mood — is a sign of magnesium deficiency.

This critical mineral is actually responsible for over 300 enzyme reactions and is found in all of your tissues — but mainly in your bones, muscles, and brain. You must have it for your cells to make energy, for many different chemical pumps to work, to stabilize membranes, and to help muscles relax.

That is why the list of conditions that are found related to magnesium deficiency is so long. In fact, there are over 3,500 medical references on magnesium deficiency! Even so, this mineral is mostly ignored because it is not a drug, even though it is MORE powerful than drugs in many cases. That's why we use it in the hospital for life-threatening and emergency situations like seizures and heart failure. Magnesium deficiency has even has been linked to inflammation in the body and higher CRP levels. In our society, magnesium deficiency is a huge problem. By conservative standards of measurement (blood, or serum, magnesium levels), 65 percent of people admitted to the intensive care unit — and about 15 percent of the general population — have magnesium deficiency. But this seriously underestimates the problem, because a serum magnesium level is the LEAST sensitive way to detect a drop in your total body magnesium level. So rates of magnesium deficiency could be even higher!

The reason we are so deficient is simple: Many of us eat a diet that contains practically no magnesium — a highly-processed, refined diet that is based mostly on white flour, meat, and dairy (all of which have no magnesium).

When was the last time you had a good dose of sea vegetables (seaweed), nuts, greens, and beans?

If you are like most Americans, your nut consumption mostly comes from peanut butter, and mostly in chocolate peanut butter cups. Much of modern life conspires to help us lose what little magnesium we do get in our diet. Magnesium levels are decreased by excess alcohol, salt, coffee, phosphoric acid in colas, profuse sweating, prolonged or intense stress, chronic diarrhea, excessive menstruation, diuretics (water pills), antibiotics and other drugs, and some intestinal parasites.

In fact, in one study in Kosovo, people under chronic war stress lost large amounts of magnesium in their urine. This is all further complicated by the fact that magnesium is often poorly absorbed and easily lost from our bodies. A recent scientific review of magnesium concluded, “It is highly regrettable that the deficiency of such an inexpensive, low-toxicity nutrient results in diseases that cause incalculable suffering and expense throughout the world.” (ii) I couldn’t have said it better myself. It is difficult to measure and hard to study, but magnesium deficiency accounts for untold suffering — and is simple to correct.

So if you suffer from any of the symptoms I mentioned or have any of the diseases I noted, don’t worry — it is an easy fix!!

Here’s how.

Take Magnesium Supplements. The RDA (the minimum amount needed) for magnesium is about 300 mg a day. Most of us get far less than 200 mg. Some may need much more depending on their condition. Most people benefit from 400 to 1,000 mg a day. The most absorbable forms are magnesium citrate, glycinate, taurate, or aspartate, although magnesium bound to Krebs cycle chelates (malate, succinate, fumarate) are also good. (E.g if you weigh 70kg you could take up 700mg throughout the day, not all at the one time)

MAGNESIUM “CO-FACTORS”

Supplementing magnesium alone is not as effective in raising magnesium levels in your body, as when you take it along with its co-factor. Your body requires co-factors which will enable it to effectively utilize magnesium in all the processes and functions that require it.

The THREE MOST IMPORTANT co-factors needed whilst taking Magnesium are:

B6 (P5P) activated (e.g Thorne Reaseach Vitamin B6 P5P)

BORON trace mineral (e.g. ReMyte Mineral drops)

Organic BICARBONATE powder (not baking powder)

*** MagSRT (Jigsaw mangelium)** has the Magnesium and cofactors all in one tablets. Can crush and add to meals for your pets.

MagSRT® by Jigsaw Health was evaluated in the Scottsdale Magnesium Study (SMS), a placebo-controlled, human clinical trial of 91 participants. The study measured Serum Magnesium, Red Blood Cell (RBC) Magnesium, and Magnesium Deficiency symptoms. The results are published in the peer-reviewed Journal of American College of Nutrition (JACN). C

ONTENT: Vitamin B (p5p), Folate, Vitamin B12, Magnesium Malate 500mg

Other co-factors that can be added are:

SELENIUM (mineral)
TAURINE (amino acid)
ZINC Picolinate (mineral)

How do they help?

Vitamin B6 (P5P)

B6 helps magnesium get inside the cell. Recommended source is local bee pollen, starting with a small amount and working up to 1 teaspoon. Or use the powder of capsule of Vitamin B6.

Note: Chemo drugs severely deplete the body of B6 vitamin, which causes neuropathy (tingling numb hands and feet).

Boron is natural trace mineral

Boron helps keep magnesium inside the cell. Boron helps keep Mg INSIDE the cell (ReMyte or Anderson's Concentrated Minerals contain much needed trace minerals such as boron)

Bicarbonate

Bicarbonate helps get the magnesium inside the mitochondria. Recommended source is magnesium bicarbonate as you will consume both bicarbonate and magnesium at the same time. Sodium bicarbonate (baking soda/bicarb soda) can also be added to your bath. (not Baking Powder)

Selenium, Taurine and Zinc

These three all help your body with its ability to intake and retain magnesium.

For Example:

- B6 (P5P)** Activated form of vitamin b6 - around 33.3mg (Thorne Research brand) (powder from cap) or cap for human. Twice a day. (or taken as part of a B-complex)
- Boron trace mineral** (ReMyte Minerals Solution) Boron is distributed throughout the body with the highest concentration in the parathyroid glands, followed by bones and dental enamel. It is essential for healthy bone and joint function, regulating the absorption and metabolism of calcium, magnesium and phosphorus through its influence on the parathyroid glands. With this boron is for the parathyroids what iodine is for the thyroid. Boron deficiency causes the parathyroids to become overactive, releasing too much parathyroid hormone which raises the blood level of calcium by releasing calcium from bones and teeth. This then leads to osteoarthritis and other forms of arthritis, osteoporosis and tooth decay. With advancing age high blood levels of calcium lead to calcification of soft tissues causing muscle contractions and stiffness; calcification of endocrine glands, especially the pineal gland and the ovaries; arteriosclerosis, kidney stones, and calcification of the kidneys ultimately leading to kidney failure. Boron deficiency combined with magnesium deficiency is especially damaging to the bones and teeth. Boron affects the metabolism of steroid hormones, and especially of sex hormones. It increases low testosterone levels in men and oestrogen levels in menopausal women. It also has a role in converting vitamin D to its active form, thus increasing calcium uptake and deposition into bone and teeth rather than causing soft tissue to calcify. Also other beneficial effects have been reported such as improvement of heart problems, vision, psoriasis, balance, memory and cognition. Boron was studied in other parts of the world with pronounced success for fluoride detoxification. Borax, which contains boron, has a history of anecdotal success for detoxifying sodium fluoride. Yes, this is the borax you can find in the laundry aisles of some supermarkets. It needs to be taken in with pure water in small quantities. FLUORIDE - toxins in our water supply.

REFERENCES:

Much information adapted from: <http://www.scribd.com/doc/133116926/The-Borax-Conspiracy-How-the-Arthritis-Cure-Has-Been-Stopped> (1)
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<http://www.sciencelab.com/msds.php?msdsId=9927593> (18) <http://www.hillbrothers.com/msds/pdf/n/borax-decahydrate.pdf> (19)
<http://www.atsdr.cdc.gov/toxprofiles/tp26-c2.pdf> (20) <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2005-0062-0004>
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<http://www.inchem.org/documents/sids/sids/15630894.pdf> (24) <http://www.sciencelab.com/msds.php?msdsId=9927258>

3. BICARBONATE / Soda Bicarb powder (not Baking Powder)

Human- taking a hot bath with Epsom salts (magnesium sulfate) is a good way to absorb and get much needed magnesium. - If sulphur sensitivity – use Magnesium Chloride flakes instead of Epsom Salts. BiCarb Powder diluting in water and rinse for pet is excellent for skin issues as well, as it re balances the pH levels in the skin – too acidic to more alkaline. Fungal does not like a alkaline skin or system.

Constipation – is often a deficiency of minerals.

Constipation is often misinterpreted as a lack of fiber, but that is not the case – it reflects failed transition to healthy bowel flora and mineral deficiencies. People have been using magnesium to treat constipation, but not all magnesium's work that way, so here are a couple types of magnesium supplements that will help with constipation issues.

Guide line to start using this mineral supplement

Magnesium Citrate powder is magnesium with citric acid, which has laxative properties.

Cat, toy dog, small animal, infant animal: ... try adding a "pinch" of magnesium citrate (mineral) powder.

Dog: try adding ½ a teaspoon of magnesium citrate powder supplement.

AUSTRALIA <http://au.evitamins.com/magnesium-citrate-powder-now-5182?>

USA <http://www.evitamins.com/magnesium-citrate-powder-now-5182>

And **Magnesium Oxide** powder is a non-chelated type of magnesium, bound to an organic acid or a fatty acid. Contains 60 percent magnesium, and has stool softening properties.

The ones HAMPL sell are well absorbed and do not cause loose stools e.g. But its worth trying the above ones. If you already have the ones we supply that is fine to continue with this also to help bring up the low magnesium levels your pet / animals is displaying



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Different types of Magnesium available:

<p>Magnesium Glycinate powder or liquid is a chelated form of magnesium that tends to provide the highest levels of absorption and bioavailability and is typically considered ideal for those who are trying to correct a deficiency.</p> <p>* This form of magnesium will NOT cause DIARRHEA "IF" needing to take a lot of Magnesium for therapeutic benefits.</p>	<p>Magnesium Oxide powder is a non-chelated type of magnesium, bound to an organic acid or a fatty acid. Contains 60 percent magnesium, and has <u>stool softening properties</u>.</p> <p>* Avoid - poorly absorbed (and the cheapest and most common forms found in supplements).</p>
<p>Magnesium Chloride / Magnesium lactate powder contain only 12 percent magnesium, but has better absorption than others, such as magnesium oxide, which contains five times more magnesium.</p>	<p>Magnesium Sulfate / Magnesium hydroxide (milk of magnesia) are typically used as a laxative. Be aware that it's easy to overdose on these, so ONLY take as directed</p> <p>* Avoid - poorly absorbed (and the cheapest and most common forms found in supplements)</p>
<p>Magnesium Carbonate powder, which has antacid properties, contains 45 percent magnesium.</p> <p>* Avoid - poorly absorbed (and the cheapest and most common forms found in supplements)</p>	<p>Magnesium Taurate contains a combination of magnesium and taurine, an amino acid. Together, they tend to provide a <u>calming effect on your body and mind</u>.</p> <p>** FOR ALL HEART CONDITIONS**</p>
<p>Magnesium Citrate powder is magnesium with citric acid, which has <u>laxative properties</u>.</p> <p>* Use for constipation issues if required.</p> <p>Magnesium Aspartate – not recommended.</p>	<p>Magnesium Threonate is a newer, emerging type of magnesium supplement that appears promising, primarily due to its superior ability to penetrate the mitochondrial membrane, and may be the best magnesium supplement on the market.</p>



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Signs of Magnesium Deficiency -

The classic physical signs of low magnesium are:

Neurological:

Behavioral disturbances
Irritability and anxiety
Lethargy
Impaired memory and cognitive function
Anorexia or loss of appetite
Nausea and vomiting
Seizures
Insomnia
hyperactive

Muscular:

Weakness

Muscle spasms (tetany)

Tics

Muscle cramps

Hyperactive reflexes

Impaired muscle coordination (ataxia)

Tremors

Involuntary eye movements and vertigo

**Difficulty swallowing
reflux**

Equines

Polysaccharide Storage Myopathy (PSSM1)

providing Magnesium will help prevent or treat clinical symptoms - that can include **skin twitching, stiffness, firm painful muscles, sweating, weakness, and reluctance to move with light exercise. Occasionally gait abnormalities, mild colic, and muscle wasting may also occur.**

In many cases, a horse that has tested positive has had no history of 'tying-up' or other symptoms associated with PSSM1. **A horse has a unique metabolism they do not need much of the mineral or herbs etc.**

Metabolic:

Increased intracellular calcium
Hyperglycemia
Calcium deficiency
Potassium deficiency
Hypercalcemia

Cardiovascular:

Irregular or rapid heartbeat
arrhythmias including..arterial
fibrillation (AF)
Coronary spasms

e.g. Atrial fibrillation (also called AFib or AF) is a quivering or irregular heartbeat (arrhythmia) that can lead to blood clots, stroke, heart failure and other heart-related complications - which can be corrected by taking the mineral magnesium daily.



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You or your pet might be magnesium deficient if you have any of the following symptoms:

Insomnia
Irritability
Sensitivity to loud noises
Anxiety
Autism
ADD
Palpitations
Angina
Constipation
Anal spasms
Headaches
Migraines
Fibromyalgia
Chronic fatigue
Asthma
Kidney stones
Diabetes
Obesity
Osteoporosis
High blood pressure
Menstrual cramps
Irritable bladder
Irritable bowel syndrome
Reflux
Trouble swallowing

There are many different types of magnesium as discussed on previous pages, however there are also different forms magnesium comes in:

However, I will mention some of the oral supplements. Magnesium is available in chelated (bound to) combinations such as alpha-ketogluconate, aspartate, glycinate, lysinate, orotate, taurate and others.

Chelated magnesium is far better absorbed than magnesium oxide but is more expensive. Complementary medicine practitioners rely on chelated magnesium, such as magnesium glycinate, taurate and orotate (magnesium plus amino acids) to treat serious cases of magnesium deficiency. These kind of magnesium's have less laxative effect on the intestines than magnesium citrate, so they are recommended if you tend to have loose stools.

Magnesium Taurate is a combination of the Amino acid Taurine and magnesium that has special properties for the heart. Taken together in this combination, magnesium and taurine have a synergistic effect, stabilizing cell membranes, making this form of magnesium highly absorbed. Magnesium Taurate does not have great laxative effect and is the recommended form of magnesium for people with heart problems. It appears that the amino acid Taurine is important for hearth health and may prevent arrhythmias and protect the heart against the damage caused by heart attacks. Magnesium taurate requires oral supplementation for six to twelve months to restore intracellular levels.

Magnesium citrate is probably the mostly widely used magnesium supplement because it is inexpensive, easily absorbed and only has a **mild laxative effect**. The best form is magnesium citrate powder mixed in water that can be taken everyday.

Magnesium malate combines magnesium with malic acid, a weak organic acid found in vegetables and fruit, especially apples. The weak bond with magnesium makes it readily soluble in the body. Malic acid is a key component of several energy making chemical reactions in the body. Researchers have used magnesium malate successfully to treat the chronic



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fatigue, pain and insomnia of fibromyalgia.

Dimagnesium malate increases the amount of magnesium available to the body; it has the same properties as magnesium malate.

Magnesium oxide appears to have high amount of elemental magnesium. One 500 mg capsule of magnesium oxide contains 300 mg of elemental magnesium. But little of that amount is available to the body because it is not absorbed and therefore not biologically available. One recent study reported 4 percent absorption rate of magnesium oxide. This means 12 mg of 500 mg capsule are absorbed and 288 may stay in the intestines, acting like a laxative. Imagine how much favorable the result would be if a more absorbable form of magnesium were used.

“Type” of Magnesium to avoid

Avoid magnesium glutamate; it breaks down into the neurotransmitter glutamic acid, which without being bound to other amino acids is neurotoxic. Glutamic acid is a component of aspartame, which should also be avoided. Avoid magnesium aspartate; it breaks down into the neurotransmitter aspartic acid, which without being bound to other amino acids is neurotoxic. Aspartic acid is a component of aspartame, which also should be avoided.

How to take magnesium

Take your first dose of magnesium when you wake up in the morning and the last dose at bedtime. Magnesium is most deficient in the early morning and late afternoon. Most people find magnesium as good as a sleeping pill to help them get a good night's rest.

Magnesium can be taken with or without meals, but it is preferable to take it between meals for better absorption. Magnesium requires stomach acid to be absorbed. After a full meal, your stomach acid is busy digesting food and may not be available to help absorb magnesium. Also magnesium is an alkaline mineral and acts like an anti-acid: taken with meals, it may neutralize stomach acid and impair digestion. If you develop loose stools while taking magnesium, it does not necessarily mean you are absorbing enough and losing the rest; it may mean you are taking too much at one time.

CORTISOL (adrenal function - stress hormone)

If you have low cortisol output – second or third stage Adrenal fatigue, it is best to only do min amounts of magnesium, as magnesium can lower cortisol's if you take a lot of it. If you have a done a Saliva Hormonal Stress test, you could take a magnesium supplement at the points were you are highest of cortisol output. But stay at low dosing of capsule once a day and over a period of months to 6 months increase to another capsule at bed time.

NEVER TAKE YOUR DAILY MAGNESIUM ALL AT ONCE.

Spread it out through the day; four times a day is best if you have been experiencing diarrhea. If that does not do the trick, you probably need to cut back the amount you are taking or switch to another type or brand of magnesium.

8 ways that Magnesium Rescues your Hormonal System

1) **Magnesium regulates cortisol.**

Magnesium calms your nervous system and prevents excessive cortisol. Your stress hormonal system (called HPA, or hypothalamic-pituitary-adrenal axis) is your central hormonal system. When it is better regulated, then your other hormonal axes - thyroid and sex hormones - will function better.

2) **Magnesium lowers blood sugar.**

Magnesium is so effective at sensitizing the insulin receptor that I refer to it as our 'natural metformin'. Better insulin control means fewer sugar cravings. Healthy insulin sensitivity is important for weight loss and PCOS, and it also prevents osteoporosis.

3) **Magnesium supports thyroid.**

Magnesium is essential for the production of thyroid hormone. It is also anti-inflammatory, which helps to quiet the autoimmune inflammation that underlies most cases of thyroid disease. (Other ways to address thyroid autoimmunity include gluten-elimination and a selenium supplement.)

4) **Magnesium aids sleep.**

Magnesium is the great sleep-promoter, and sleep is crucial for hormone production. Sleep is when we should have a surge in anabolic hormones like DHEA and growth hormone. If you know that you have a Catabolic system compared to an Anabolic one - it is best not to take magnesium at night. As Magnesium is a catabolic inducer.

5) **Magnesium fuels cellular energy.**

Magnesium is so intricately involved with glycolysis and the Krebs cycle (ATP energy production), that we can safely say: "There is no cellular energy without magnesium." Glandular tissue like thyroid, ovaries and testes is metabolically very active, so requires even more cellular energy and more magnesium than other tissue.

6) **Magnesium makes hormones.**

Magnesium is involved in the manufacture of steroid hormones such as progesterone, estrogen and testosterone. Magnesium has been shown to reduce hot flashes by 50%.

7) **Magnesium activates vitamin D.**

Without enough magnesium, vitamin D cannot do its job. Conversely, too much vitamin D supplementation can cause magnesium deficiency.

8) **Magnesium is anti-aging.**

The mineral has been shown to prevent telomere shortening, reduce oxidative stress, and enhance the production of glutathione.

Magnesium is powerful medicine.

Magnesium is a big player in emergency rooms, where it treats heart arrhythmias, heart attack, migraine and the toxemia of pregnancy. But why should magnesium be restricted to acute care emergency medicine? It is time - past time - for magnesium to take up its role in treating chronic conditions.

Can you test for magnesium deficiency?

Yes. As the majority of magnesium is *inside* your cells, having a Serum Magnesium test is useless as only detects 1% in your blood, not your cells. However, if you have a RBC Magnesium blood test this will show how much magnesium is in your cells. Unfortunately, not many (if any) doctors test the RBC (red blood cell) Mag – blood test, so you most likely will need to request (or insist) this test rather than Serum Magnesium test.

Optimum range is 6 – 7



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Which Magnesium Supplement is Best?

The best supplement is Magnesium Glycinate (or bisglycinate) a magnesium joined to the amino acid glycine. This is the least laxative of all the magnesiums, and the most absorbable. Glycine has its own beneficial calming effect on your GABA receptors.

Most people start off at one capsule (100mg) once to twice a day. Then over 3 weeks go up to three capsules once a day am and evening. Then go up to 2 capsules twice a day. Then over a period again, if needing, go up to 3 capsules twice a day. Some people also combine other sources of magnesium as well.

Having a Epsom Salt baths (mag sulphate) three times a week, and topically using magnesium cream or magnesium oil on sore muscles or anywhere to absorb the magnesium daily. Taking 600mg to 1,000mg a day is good

Magnesium Thirst Magnesium Hunger

We thirst for magnesium rich water.

Magnesium deficiency is often misdiagnosed because it does not show up in blood tests – only 1% of the body's magnesium is stored in the blood. Most doctors and laboratories don't even include magnesium status in routine blood tests. Thus, most doctors don't know when their patients are deficient in magnesium, even though studies show that the majority of Americans are deficient in magnesium.

Consider Dr. Norman Shealy's statements, "Every known illness is associated with a magnesium deficiency" and that, "magnesium is the most critical mineral required for electrical stability of every cell in the body. A magnesium deficiency may be responsible for more diseases than any other nutrient." The truth he states exposes a gaping hole in modern medicine that explains a good deal about iatrogenic death and disease. Because magnesium deficiency is largely overlooked, millions of Americans suffer needlessly or are having their symptoms treated with expensive drugs when they could be cured with magnesium supplementation.

One has to recognize the signs of magnesium thirst or hunger on their own since allopathic medicine is lost in this regard. It is really something much more subtle than hunger or thirst but it is comparable. In a world though where doctors and patients alike do not even pay attention to thirst and important issues of hydration it is not hopeful that we will find many recognizing and paying attention to magnesium thirst and hunger which is a dramatic way of expressing the concept of magnesium deficiency.

Few people are aware of the enormous role magnesium plays in our bodies. Magnesium is by far the most important mineral in the body, After oxygen, water, and basic food, magnesium may be the most important element needed by our bodies, vitally important yet hardly known. It is more important than calcium, potassium or sodium and regulates all three of them.

Millions suffer daily from magnesium deficiency without even knowing it

In fact there happens to be a relationship between what we perceive as thirst and deficiencies in electrolytes. I remember a person asking, "Why am I dehydrated and thirsty when I drink so much water?" Thirst can mean not only lack of water but it can also mean that one is not getting enough nutrients and electrolytes. Magnesium, Potassium, Bicarbonate, Chloride and Sodium are some principle examples and that is one of the reasons magnesium chloride is so useful.

Magnesium Torment (Deficiency)

You know all those years when doctors used to tell their patients its all in your heads were years the medical profession was showing its ignorance. It is a torment to be magnesium deficient on one level or another. Even if it's for the enthusiastic sport person whose athletic performance is down magnesium deficiency will disturb sleep and background stress levels and a host of other things that reflect on the quality of life. Doctors have not been using the appropriate test for magnesium – their serum blood tests just distort their perceptions.

Magnesium has been off their radar screens through the decades that magnesium deficiencies have snowballed

Symptoms of Magnesium Deficiency

The first symptoms of deficiency can be subtle – as most magnesium is stored in the tissues, leg cramps, foot pain, or muscle 'twitches' can be the first sign. Other early signs of deficiency include loss of appetite, nausea, vomiting, fatigue, and weakness. As magnesium deficiency worsens, numbness, tingling, seizures, personality changes, abnormal heart rhythms, and coronary spasms can occur.

A full outline of magnesium deficiency was beautifully presented in a recent article by Dr. Sidney Baker. "Magnesium deficiency can affect virtually every organ system of the body. With regard to skeletal muscle, one may experience twitches, cramps, muscle tension, muscle soreness, including back aches, neck pain, tension headaches and jaw joint (or TMJ) dysfunction. Also, one may experience chest tightness or a peculiar sensation that he can't take a deep breath. Sometimes a person may sigh a lot."

"Symptoms involving impaired contraction of smooth muscles include constipation; urinary spasms; menstrual cramps; difficulty swallowing or a lump in the throat-especially provoked by eating sugar; photophobia, especially difficulty adjusting to oncoming bright headlights in the absence of eye disease; and loud noise sensitivity from stapedius muscle tension in the ear."

"Other symptoms and signs of magnesium deficiency and discuss laboratory testing for this common condition. Continuing with the symptoms of magnesium deficiency, the central nervous system is markedly affected. Symptoms include insomnia, anxiety, hyperactivity and restlessness with constant movement, panic attacks, agoraphobia, and premenstrual irritability. Magnesium deficiency symptoms involving the peripheral nervous system include numbness, tingling, and other abnormal sensations, such as zips, zaps and vibratory sensations."

"Symptoms or signs of the cardiovascular system include palpitations, heart arrhythmias, and angina due to spasms of the coronary arteries, high blood pressure and mitral valve prolapse. Be aware that not all of the symptoms need to be present to presume magnesium deficiency; but, many of them often occur together. **For example,** people with mitral valve prolapse frequently have palpitations, anxiety, panic attacks and premenstrual symptoms.

People and Animals with "magnesium deficiency" often seem to be "uptight."

Other general symptoms include a salt craving, both carbohydrate craving and carbohydrate intolerance, especially of chocolate, and breast tenderness.

START NOW

Magnesium is needed by every cell in the body including those of the brain and is one of the most important minerals when considering supplementation because of its vital role in hundreds of enzyme systems and functions related to reactions in cell metabolism, as well as being essential for the synthesis of proteins, for the utilization of fats and carbohydrates. Magnesium is needed not only for the production of specific detoxification enzymes but is also important for energy production related to cell detoxification. A magnesium deficiency can affect virtually every system of the body

There is an eternal need for magnesium as well as water and when magnesium is present in water life and health are enhanced.

One of the principle reason doctors write millions of prescriptions for tranquilizers each year is the nervousness, irritability, and jitters largely brought on by inadequate diets lacking magnesium.

Persons (or Animal) that is only slightly deficient in magnesium become irritable, highly-strung, and sensitive to noise, hyper-excitabile, apprehensive and belligerent.

If the deficiency is more severe or prolonged, they may develop twitching, tremors, irregular pulse, insomnia, muscle weakness, jerkiness and leg and foot cramps.

If magnesium is severely deficient, the brain is particularly affected. Clouded thinking, confusion, disorientation, marked depression and even the terrifying hallucinations of delirium tremens are largely brought on by a lack of this nutrient and remedied when magnesium is given. Because large amounts of calcium are lost in the urine when magnesium is undersupplied, the lack of this nutrient indirectly becomes responsible for much rampant tooth decay, poor bone development, osteoporosis and slow healing of broken bones and fractures.

With vitamin B6 (P5P) (the activated B6 form), magnesium helps to reduce and dissolve calcium phosphate kidney stones.

Magnesium deficiency may be a common factor associated with insulin resistance.

Symptoms of MS that are also symptoms of magnesium deficiency include muscle spasms, weakness, twitching, muscle atrophy, an inability to control the bladder, nystagmus (rapid eye movements), hearing loss, and osteoporosis. People with MS have higher rates of epilepsy than controls. Epilepsy has also been linked to magnesium deficiencies.^[1]

Another good list of early warning symptoms is

Suggestive early warning signs of magnesium insufficiency:

Physical and mental fatigue
Persistent under-eye twitch
Tension in the upper back, shoulders and neck
Headaches
Pre-menstrual fluid retention and/or breast tenderness

Possible manifestations of magnesium deficiency include:

Low energy
Fatigue
Weakness
Confusion
Nervousness
Anxiousness
Irritability
Seizures (and tantrums)
Poor digestion
PMS and hormonal imbalances
Inability to sleep
Muscle tension, spasm and cramps
Calcification of organs
Weakening of the bones
Abnormal heart rhythm

Severe magnesium deficiency can result in low levels of calcium in the blood (hypocalcemia). Magnesium deficiency is also associated with low levels of potassium in the blood (hypokalemia).

Magnesium levels drop at night, leading to poor REM (Rapid Eye Movement) sleep cycles and unrefreshed sleep. Headaches, blurred vision, mouth ulcers, fatigue and anxiety are also early signs of depletion.

We hear all the time about how heart disease is the number one health crisis in the country, about how high blood pressure is the “silent killer”, and about how ever increasing numbers of our citizens are having their lives and the lives of their families destroyed by diabetes, Alzheimer’s disease, and a host of other chronic diseases

Signs of severe magnesium deficiency include:

Extreme thirst
Extreme hunger
Frequent urination
Sores or bruises that heal slowly
Dry, itchy skin
Unexplained weight loss
Blurry vision that changes from day to day
Unusual tiredness or drowsiness
Tingling or numbness in the hands or feet
Frequent or recurring skin, gum, bladder or vaginal yeast infections

But wait a minute, aren’t those the same symptoms for diabetes?

Many people have diabetes for about 5 years before they show strong symptoms. By that time, some people already have eye, kidney, gum or nerve damage caused by the deteriorating condition of their cells due to insulin resistance and magnesium deficiency. Dump some mercury and arsenic on the mixture of etiologies and pronto we have the disease condition we call diabetes.



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Magnesium deficiency is synonymous with diabetes and is at the root of many if not all cardiovascular problems.

Magnesium deficiency is a predictor of diabetes and heart disease both; diabetics both need more magnesium and lose more magnesium than most people. In two new studies, in both men and women, those who consumed the most magnesium in their diet were least likely to develop **type 2 diabetes**, according to a report in the January 2006 issue of the journal Diabetes Care. Until now, very few large studies have directly examined the long-term effects of dietary magnesium on diabetes.

Dr. Simin Liu of the Harvard Medical School and School of Public Health in Boston says, “Our studies provided some direct evidence that greater intake of dietary magnesium may have a long-term protective effect on lowering risk,” said Liu, who was involved in both studies. **The thirst of diabetes is part of the body’s response to excessive urination.** The excessive urination is the body’s attempt to get rid of the extra glucose in the blood. This excessive urination causes the increased thirst. But we have to look at what is causing this level of disharmony. We have to probe deeper into layers of cause. The body needs to dump glucose because of increasing insulin resistance and that resistance is being fueled directly by magnesium deficiency, which makes toxic insults more damaging to the tissues at the same time.

When diabetics get too high blood sugars, the body creates “ketones” as a by-product of breaking down fats. These **ketones cause blood acidity which causes “acidosis” of the blood**, leading to Diabetic Ketoacidosis (DKA), This is a very dangerous condition that can lead to coma and death. It is also called “diabetic acidosis”, “ketosis”, “ketoacidosis” or “diabetic coma”. DKA is a common way for new Type 1 diabetics to be diagnosed. If they fail to seek medical advice on symptoms like urination, which is driving thirst they can die of DKA.

Oral magnesium supplements “reduce erythrocyte”, dehydration.

In general optimal balances of electrolytes are necessary to maintain the best possible hydration. Diabetic thirst is initiated specifically by magnesium deficiency with relative calcium excess in the cells.

Even water, our most basic nutrient starts having a hard time getting into the cells with more going out through the kidneys. Please note: Magnesium - needs cofactors to get into the cells, which are: **Vitamin B6 (P5P), Zinc (mineral), Potassium (mineral), Boron (trace minerals)**. Example: taking Vitamin B1 and Taurine amino acid, gets Magnesium into cells, Selenium (mineral) keeps it in the cells.

Whereas – taking Vitamin D, Calcium supplements, caffeine, stress and certain drugs will eat Magnesium deplete big time.

Pet, humans with: LOW BLOOD PRESSURE - Magnesium - can lower blood pressure.
ADRENAL FATIGUE - Zinc and Magnesium- can lower Cortisol output.

Hypercalcemia (too much calcium in system)

Magnesium is the answer - by adding this mineral in daily meals will help prevent or treat hypercalcemia (PRODUCT CODE AN284) Magnesium drops (we use the **ReMag Magnesium Solution liquid**. We can provide smaller bottle 30ml (product 284) OR order a larger bottle 240ml - from Dr. Carolyn Dean Website.

Or

MagSRT (jigsaw magnesium tablets) which has some of the important CoFactor added to this magnesium - crush tablets and add to meals.

Magnesium is absolutely essential for the proper functioning of the heart.

The powder of a simple mineral. People and (pets given foods) who eat rich in the mineral **magnesium** appear to reduce their odds of having a **stroke**, a new study shows. The link between **magnesium** in the diet and **stroke** risk was strongest for ischemic **stroke**, which is when a clot blocks a blood vessel in the brain.

Magnesium and **potassium** are all effective in lowering blood pressure.

Magnesium is useful in **preventing** death from **heart attack** and protects against further **heart attacks**. It also reduces the frequency and severity of ventricular arrhythmias and **helps prevent** complications after

Magnesium – the Ultimate Heart Medicine

Posted by Dr Sircus on December 8, 2009 | Filed under Cardiology, Magnesium, Medicine

This offers a substantial breakthrough in cardiac medicine that could positively impact the lives of thousands of people and their families. When someone is in cardiac arrest or are having a stroke, having panic attacks with heart palpitations what is the first thing, the very first thing we would reach for? Our biological engine is seizing up (heart attack) what do we inject?

For the next million years there is going to be only one answer and that answer is magnesium. If you're ever rushed to the hospital with a heart attack, intravenous magnesium could save your life.

In a 1995 study, researchers found that the in-hospital death rate of those receiving IV magnesium was one-fourth that of those who received standard treatment alone. In 2003, a follow-up study of these same patients revealed an enduring effect of magnesium treatment. Nearly twice as many patients in the standard treatment group had died compared to those who received magnesium, and there were considerably more cases of heart failure and impaired heart function in the placebo group. In addition to increasing survival after heart attack, IV magnesium smoothes out arrhythmias and improves outcomes in patients undergoing angioplasty with stent placement.

Magnesium is absolutely essential for the proper functioning of the heart.

Magnesium's role in preventing heart disease and strokes is generally well accepted, yet cardiologists have not gotten up to speed with its use.

Magnesium was first shown to be of value in the treatment of cardiac arrhythmias in 1935. Since then there have been numerous double-blind studies showing that magnesium is beneficial for many types of "**arrhythmias**" including "**atrial fibrillation**" (**AF**), ventricular premature contractions, ventricular tachycardia, and severe ventricular arrhythmias. Magnesium supplementation is also helpful in angina due to either a spasm of the coronary artery or atherosclerosis.

*Heart palpitations, "flutters" or racing heart, otherwise called "arrhythmias", usually clear up quite dramatically on **500 milligrams of Magnesium Taurate or glycinate**, (request hospital staff - you do not want magnesium citrate or aspartate as hospitals will use the cheaper form of magnesium, which is not the best form of magnesium) once or twice daily or faster if given intravenously. – Dr. H. Ray Evers*

A magnesium deficiency is closely associated with cardiovascular disease.[1] Lower magnesium concentrations have been found in heart attack patients[2] and administration of magnesium[3] has proven beneficial in treating ventricular arrhythmias.[4],[5],[6],[7] Fatal heart attacks are more common in areas where the water supply is deficient in magnesium and the average intake through the diet is often significantly less than the 200-400 milligrams required daily.[8]



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Magnesium is proving to be very important in the maintenance of heart health and in the treatment of heart disease. Magnesium, and potassium are all effective in lowering blood pressure.[9],[10],[11],[12] Magnesium is useful in preventing death from heart attack and protects against further heart attacks.[13],[14] It also reduces the frequency and severity of ventricular arrhythmias and helps prevent complications after bypass surgery.

Magnesium deficiency appears to have caused eight million sudden coronary deaths in America during the period 1940-1994. [15]— Paul Mason

Researchers from North western University School of Medicine in Chicago have determined that not having enough magnesium in your diet increases your chances of developing coronary artery disease. In a study of 2,977 men and women, researchers used ultrafast computed tomography (CT scans) of the chest to assess the participants' coronary artery calcium levels. Measurements were taken at the start of the study—when the participants were 18- to 30-years old—and again 15 years later. The study concluded that dietary magnesium intake was inversely related to coronary artery calcium levels. Coronary artery calcium is considered an indicator of the blocked-artery disease known as atherosclerosis.

Almost all adults are concerned about the condition of their heart and cardiovascular system. Some live in constant fear wondering whether any ache, cramp or pain in their upper body is a sign of a heart attack. There isn't an adult living in North America that hasn't lost a loved one or a family member to heart disease. The fact is heart attacks kill millions every year.

Chernow et al in a study of postoperative ICU patients found that the death rate was reduced from 41% to 13% for patients without hypomagnesemia (low magnesium levels). Other post heart surgery studies showed that patients with hypomagnesemia experienced more rhythm disorders. Time on the ventilator was longer,[16] and morbidity was higher than for patients with normal magnesium levels. Another study showed that a greater than 10% reduction of serum and intracellular magnesium concentrations was associated with a higher rate of postoperative ventricular arrhythmias. The administration of magnesium decreases the frequency of postoperative rhythm disorders[17] after cardiac surgery. Magnesium has proven its value as an adjuvant in postoperative analgesia. Patients receiving Mg required less morphine, had less discomfort and slept better during the first 48 hours than those receiving morphine alone.

It is established that clinically significant changes in a number of electrolytes occur in patients with congestive heart failure (CHF). Magnesium ions are an essential requirement for many enzyme systems, and clearly magnesium deficiency is a major risk factor for survival of CHF patients. In animal experiments, magnesium has been shown to be involved in several steps of the atherosclerotic process, and magnesium ions play an extremely important role in CHF and various cardiac arrhythmias.

Magnesium is also required for muscle relaxation. Lower magnesium levels can result in symptoms ranging from tachycardia and fibrillation to constriction of the arteries, angina, and instant death.

Due to lack of magnesium the heart muscle can develop a spasm or cramp and stops beating.

Most people, including doctors, don't know it, but without sufficient magnesium we will die. It is important to understand that our life span will be seriously reduced if we run without sufficient magnesium in our cells and one of the principle ways our lives are cut short is through cardiac arrest (heart attack).

Yet when someone dies of a heart attack doctors never say "He died from Magnesium Deficiency."

Allopathic medicine ignores the true causes of death and disease and in the field of cardiology this is telling. Magnesium is an important protective factor for death from acute myocardial infarction.[18]



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Heart Conditions - like congestive heart failure, cardiomyopathy, arrhythmias (irregular), tachycardia (rapid), hypertrophic, aortic thromboembolism.

Typically, cats that are predisposed to saddle thrombus have an underlying cardiac (heart) disease that increases turbulence to the flow of blood through the heart. This increased turbulence makes these patients more prone to the formation of clots.

Cats with hyperthyroidism are prone to a cardiac condition called "**hypertrophic cardiomyopathy**". Therefore, **saddle thrombus tends to be associated with cats that have hyperthyroidism**. Cats that have formed a saddle thrombus typically **appear very weak back end to partially or fully paralyzed, unable to move the "rear legs"**

They are often vocalizing due to severe pain. When touched, the back legs are often cold and stiff, and sometimes there is panting and trouble breathing. Yes, you can prevent "aortic thromboembolism" from forming in cats with heart failure, with homeopathic medicines as prescribed in this set.

Bradycardia is a medical term derived from Greek and means "slow heart."

In humans, bradycardia is a diagnosis given when resting heart rate falls below 60 beats per minute and causes symptoms. For infants, bradycardia is defined as a heart rate less than 100 beats per minute with symptoms. Bradycardia has many causes, but a primary one is congestive heart failure or CHF. In some cases with pets, there is also a mitral valve insufficiency, and so if acute congestion, we suggest also formula **AN305 -1 Acute Mitral Valve 30ml drops** (to use initially to help balance fluid again, then continue with the Congestive Heart Formula drops for prevention and support) Suggest using these formula's as well as adding the content of the **Vitamin Coenzyme Q10**, or CoQ10 for short, is a vitamin-like substance that helps strengthen your heart and is able to mitigate the symptoms of CHF and bradycardia.

Heart murmurs

in older dogs may indicate that these dogs have a leaky mitral valve (the heart valve in between the left atrium and left ventricle). The mitral valve's job is to allow blood to flow from the left atrium to the left ventricle but not allow blood to flow backward from the left ventricle to the left atrium. This valve degenerates as dog's age and when it does, the older valve allows blood to leak backward. We refer to this disease as chronic valve disease, endocardiosis or degenerative mitral valve disease.

If "ACUTE" Mitral Valve insufficiency, also see the formulas for this condition.

Heart Murmur - Mitral Valve Disease (endocardiosis) - Mitral Valve Regurgitation, Insufficiency or Incompetence (or Feline).

Product Code: AN305 "**Mild**" or **Chronic Mitral Valve insufficiency** that leads to small leaks across the mitral valve usually does not create a problem for a dog. The disease is slowly progressive in most cases and the leak will continue to worsen over months to years. If the disease becomes severe, the dog is at risk for developing congestive heart failure.

Congestive heart failure means that the leak across the heart valve overwhelms the heart and fluid goes from the heart backwards into the lungs (instead of from the heart forward to the body).



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Signs of congestive heart failure include cough (especially a cough at rest), a fast breathing rate, difficulty breathing, fainting, weakness, lethargy, exercise intolerance and abdominal distension.

Congestive Heart Failure.

Many of the symptoms that can be associated with having a heart disease or condition are:

reflex dry hacking coughing and breathlessness

with little exercise tolerance

congested lungs

Resting for long periods in sternal recumbency

Weakness, falling over is often seen in older pets with weak heart action.

Mitral Valve Weakness

*may even cause the trachea to collapse, as the heart enlarges and fills voids in the chest cavity. Moreover, when a critical pressure is reached, pulmonary edema (flooding of the lungs) can occur. **This weakness can cause "Mitral regurgitation"** which is leakage of blood backward through the mitral valve each time the left ventricle contracts. Watch an animation of mitral valve regurgitation. A leaking mitral valve allows blood to flow in two directions during the contraction. E.g **Homeopathic remedy Apis Melliifca is indicated for valve regurgitation, which the DurAid 22-3 and the LungOdema 91-2 has Apis Mell in the complex.** If not enough See AN305 Mitral Valve Drops (Set of 2)*

Symptoms felt are:

Rapid and irregular pulse producing palpitation, for congestive heart conditions.

Valvular disease with or without endocarditis.

Possible Irregular pulse .. conditions of the valvular in the older dog.

Violent and rapid action, palpitations.

Low blood pressure.

Edema of limbs.

Cardiac edema.

Excessive exhaustion.

Myocarditis, Irregularities of action cause state of anemia with edema.

Arrhythmic heart conditions.

Irregularities or rhythm, dropsy.

Dyspnoea on least exertion, dilated heart, weak heart sounds or valvular murmur.

Shortness of breath symptoms or fainting fits, weak heart.

Mitral regurgitation producing cyanosis with a small feeble pulse.

Older dogs show signs:

of cyanosis, a dry cough, and respiratory distress. Insufficient systole action, fibrillation dyspnoea, decompensated heart valve, enlarged liver or heart disease associated with kidney failure. Did you know panting after exercise may be because they have a weak heart action as a consequence of simply old age Angina muscles restriction of chest muscles, anxiety? Minerals - **This is why the mineral "MAGNESIUM" supplementation given daily will quickly resolve many of these symptoms.**

*Please note: **HAMPL Congestive Heart 22-1 50ml and HAMPL DurAid 22-2 (diuretic) which are both homeopathic formula** - will not interfere with any other chemical heart drugs or medications.*

Our Formula combines the peripheral circulation building benefits of ginkgo with the heart strengthening and stabilizing properties of hawthorn into one for maximum circulatory support.



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FOR ALL HEART CONDITIONS

The type of Magnesium you or your pet needs is **MAGNESIUM TAURATE**



Cardiovascular Research Ltd., Magnesium Taurate, 180 Capsules
By Cardiovascular Research Ltd.

We get ours from iherb.com

Add the powder from capsules of the "**Magnesium Taurate**" capsules supplement - is a **combination of the Amino acid Taurine and magnesium** that has special properties for the heart. Taken together in this combination, magnesium and taurine have a synergistic effect, stabilizing cell membranes, making this form of magnesium highly absorbed. Magnesium Taurate does not have a laxative effect and is the recommended form of magnesium for people with heart problems. It appears that **the amino acid Taurine** is important for heart health and may prevent arrhythmias and protect the heart against the damage caused by heart attacks.

GENERAL HEART HEALTH

TOY DOG to FELINES: open one capsule and add half a cap of the powder from in every meal given.

SMALL TO MED CANINES: open one capsules and add the all of the powder in meals.

LARGE CANINE: open two capsules and add the all of the powder in meals.

ACUTE OR ADVANCE HEART CONDITIONS

TOY DOG to FELINES: open one capsule and add half a cap of the powder mixed in a little food – repeat this four times a day.

SMALL TO MED CANINES: open one capsules and add the all of the powder mixed in a little food – repeat this four times a day.

LARGE CANINE: open two capsules and add the all of the powder in meals mixed in a little food – repeat this four times a day.

Or

MagSRT (jigsaw magnesium tablets) which has some of the important CoFactor added to this mangesium - crush tablets and add to meals.

And add a Taurine Supplement Capsule in meals with the Magnesium supplement.

What about "Arrhythmias" (irregular heartbeats)

a heart murmur, an enlarged heart, or even heart failure.

Types of "Arrhythmias" Understanding some common terms in the language of cardiac arrhythmias helps sort through the types of rhythm problems. An arrhythmia is any abnormality in heart rhythm. **Arrhythmias are categorized in three main ways:**

- * **Rate:** If the heart rate is rapid, or greater than 100 beats a minute, it is considered a tachycardia. Alternatively, a slow heart rate, below 60 beats a minute, is known as a bradycardia.
- * **Location:** The location of the problematic electrical circuit helps define the arrhythmia. For instance, a rhythm is called supraventricular if it originates above the ventricles (lower chambers). So, the problem is most likely in the upper chambers (atria). It follows that a ventricular arrhythmia is the result of a problem in the lower chambers (ventricles).
- * **Irregular:** The nature of the heartbeat, whether it is steady or chaotic, is another key to categorizing an arrhythmia. A rapid beat that is irregular and chaotic may be a type of fibrillation or quivering beat.

Tachycardia (rapid heartbeat) Types and Causes of "Rapid Heartbeat" Tachycardia usually is caused by a problem with the electrical system that flows from the upper to the lower chambers of the heart and triggers the heartbeat.

Supraventricular tachycardia (SVT) This type of tachycardia originates in the upper chambers (the name supraventricular means above the ventricles). In most cases, SVT is not dangerous; however, if episodes happen frequently, the heart muscle can be weakened over time. **Ventricular tachycardia (VT).**

This more dangerous type of tachycardia starts in the lower chambers, or ventricles. VT can be life-threatening. Without treatment, ventricular tachycardia can lead to ventricular fibrillation, a severely irregular, rapid and ineffective beating of the ventricles that is the most **common cause of cardiac arrest.**

Morley Robbins (nutritional expert USA)

...Research tells us that "**EXCESS Iron**" is now recognized as the source of "arrhythmogenesis" (silly way of saying: creates arrhythmias) **The last line of this article:** "The specific K+ (Potassium) Channel affected by Iron, may, therefore, be a target for treatment of the arrhythmias caused by iron-overload cardiomyopathy." And there's one other amazing fact, that says it all in this article. It's a recognized fact that Rats have the natural ability to produce Vitamin C (not the man-made Ascorbic Acid, mind you). And what this article reveals is that Rats have the natural ability to EXCRETE IRON! "Because the Rat can excrete excess Iron, cardiac iron deposition could not be produced in vivo in this species.

" **There are two very important conclusions to be drawn:**

- 1) All Cardiac studies based on Rats are TOTALLY invalid, as the reduced iron status of these rodents puts a wrench into thousands & thousands of studies; and
- 2) **Take Vitamin C!** If a Rat can use their natural ability to "excrete excess Iron," why can't we?! No, I can find NO research to back that up. Please read this article carefully and know that excess, unmanaged Iron is the BAD guy, and **Vitamin C** is the good guy.

Reference: <http://m.circ.ahajournals.org/content/100/6/675.full.pdf>

Please consider taking these below minerals

Restoring Potassium:

1. Potassium Bicarbonate powder or Potassium Gluconate capsules (only adding powder)

Toy dog, Cat: a pinch in meal twice a day.

or 1 drop of Organic apple cider in a tablespoon of water and add to meals daily

Small dog: 1/2 powder from capsule twice a day or 5 drops of Organic apple cider in 2 tablespoons of water and add to meals daily,

Med - Large: 1 powder from capsule twice a day or 1 tablespoon of Organic apple cider and add to meals daily.

POTASSIUM (also see Page 24)

Also If you or your pet is taking a drug that is a "Diuretic " also be aware this may cause a deficiency in magnesium and potassium. Potassium is often lost through-- frequent urination -- which causes potassium loss--which causes frequent urination --more potassium loss. Also relevant to heart function having a low potassium or magnesium is - Tachycardia which is a condition that causes your resting heart rate to elevate to higher than normal, which for an adult at rest is 60 to 100 times per minute.

Symptoms include dizziness, light-headedness, elevated pulse rate, palpitations and chest pain.

MayoClinic.com notes. Heart disease, high blood pressure and imbalanced levels of electrolytes like potassium are possible causes of tachycardia. Abnormal levels of potassium coupled with heart disease potentially cause tachycardia, according to a study published in a 2001 issue of the "Journal of Cardiovascular Electrophysiology."

* **Diuretics** One can take the Lasix drug in conjunction with the homeopathic diuretic (DuraAid) or use one or the other. Some animals need both, some animals respond better just the homeopathic formula on its own. If your pet has issues still, please contact our office so a custom formula is made specifically for complex health situations. **Also, can be used as a natural diuretic for your pet in cases of heart insufficiency causing fluids on the lungs.**

OR

Braggs Organic Apple Cider Vinegar in daily meals to help replace potassium loss.

e.g Toy dog: 4 drops.

Small and med dogs. * ¼ - ½ teaspoon in water and/or add to meals.

*1-2 teaspoons for large dog pets. Use this for a month.

Repeat if still on the Lasix drug or both formulas.

Pets can be diagnosed with having a **Heart Murmur**, which can be quite common or less common is having **Cardiomyopathy (enlarged heart) or Hyperthyroid and/or-or is (Hypertrophic or dilated). Congestive Heart Failure.**

2. VITAMIN C - Whole Food Vitamin C - Capsules

Toy dog, Cat: a pinch in meal twice a day.

Small dog: 1/2 powder from capsule twice a day.

Med - Large: 1 powder from capsule twice a day.



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3. MAGNESIUM Taurate Powder (mineral)

* Suggest Magnesium Taurate capsules (use powder form cap and add to meals).

Magnesium deficiencies can lead to muscle weakness and tremors (spasm) and a host of cardiovascular problems ranging from high blood pressure to arrhythmias. It was suggested that many pets and humans that suffered sudden "cardiac death" from heart rhythm disturbances resulting from a deficiency of magnesium and / or potassium. A shortage can cause or worsen congestive heart failure, atherosclerosis, chest pain (coronary vasospasm), high blood pressure, cardiac arrhythmias, heart muscle disease (cardiomyopathy), heart attack and even sudden cardiac death. Your cells need a steady supply of magnesium to maintain proper smooth muscle function in your blood vessels. In addition, magnesium supplements can help your body shuttle potassium and sodium, two other essential electrolytes, into and out of cells, maintaining proper balance (homeostasis). (There is a great deal of evidence that magnesium, when administered according to specific protocols in appropriate dosages, can reduce the risk of death in patients who have suffered a heart attack. For example, when a person comes in with a heart attack, doctors give two grams (2,000 mg) intravenously over an hour)

Magnesium Taurate is a combination of the Amino acid Taurine and magnesium that has special properties for the heart. Taken together in this combination, magnesium and taurine have a synergistic effect, stabilizing cell membranes, making this form of magnesium highly absorbed.

Magnesium Taurate does not have a great laxative effect and is the recommended form of magnesium for people with heart problems. It appears that the amino acid Taurine is important for heart health and may prevent arrhythmia and protect the heart against the damage caused by heart attacks. Magnesium taurate requires oral supplementation for six to twelve months to restore intracellular levels.

**** Please Note:** Do not take Magnesium and Calcium - calcium competes and will deplete magnesium, therefore staying magnesium deficient.

A Herbal formula will not interfere with any other chemical heart drugs or medications. Our Formula combines the peripheral - circulation - building benefits of ginkgo with the heart - strengthening and stabilizing properties of hawthorn into one for maximum circulatory support.

Research indicates that the herb **ginkgo's** circulatory - system benefits may result from this special ability. Randomized, double-blind clinical studies using standardized hawthorn berry extract show that hawthorn appears to increase the efficiency of nerve impulses in, and protect against oxygen deprivation of, the heart muscle. Also, controlled study and found that hawthorn extract can improve heart function in patients suffering from chronic heart disease. These Hawthorn patients also reported fewer overall symptoms, less fatigue and less shortness of breath.

Can be taken long term in Homeopathic form (small animals) or in a Herbal extract liquid tonic (for larger pets) which is added to daily meals.

JUST SOME OF THE COMMON side effects of the DRUGS PRESCRIBED FOR OUR PETS - unfortunately.

HEART DRUG Common Side Effects of the VETMEDIN drug.

The most commonly reported side effects of VETMEDIN were **poor appetite, lethargy, diarrhea, dyspnea, azotemia, weakness, and ataxia**. The prevalence of side effects was similar in the active control group (enalapril, an angiotensin-converting enzyme [ACE] inhibitor).

DIURETIC Common Side Effects of the UREX drug.

Symptoms of overdose may include **weakness, dizziness, lethargy, nausea, vomiting, diarrhoea, anorexia, sweating, mental confusion, blurred vision, tingling in the arms or legs, restlessness, headache, tinnitus** (ringing in the ears), **cramping, constipation**, and symptoms associated with electrolyte and fluid depletion. The active ingredient in Urex is called frusemide which belongs to a group of medicines called diuretics.

Diuretics are used to help the kidneys remove excess fluid from the body. Urex is used to treat a number of medical conditions, including oedema (swelling of the body due to excess fluid).

Potassium (mineral)

Our bodies need about 4500mg of it a day from all source

Low potassium – symptoms

Potassium is important for a person's muscles to work effectively, including the heart. Potassium also has a role in regulating blood pressure. Low potassium levels (hypokalaemia) can cause weakness as cellular processes are affected.

Potassium is a mineral (electrolyte) in the body. Almost 98% of potassium is found inside the cells. Small changes in the level of potassium that is present outside the cells can have severe effects on the heart, nerves and muscles.

The kidney is the main organ that controls the balance of potassium by removing excess potassium into the urine.

The normal potassium level is 3.5-5.0 mmol/L (millimoles per litre)

Low potassium is defined as a potassium level below 3.5 mmol/L.

Low potassium causes ... Dehydration, diarrhoea, excessive sweating (hyperhidrosis) and laxative abuse are common causes of low potassium levels.

Other causes include medicines that affect the amount of potassium in the body, such as diuretics, also known as water pills.

Low potassium symptoms

Symptoms of low potassium are usually mild.

At times the effects of low potassium can be vague. There may be more than one symptom involving the gastrointestinal



HAMPL™ Pet Formulas

Holistic Animal Remedies

(GI) tract, kidneys, muscles, heart and nerves.

Weakness, tiredness, or cramping in arm or leg muscles, sometimes severe enough to cause inability to move arms or legs due to weakness (much like a paralysis)

Tingling or numbness

Nausea or vomiting

Abdominal cramping, bloating

Constipation

Palpitations (feeling your heart beat irregularly)

Passing large amounts of urine or feeling very thirsty most of the time

Fainting due to low blood pressure

Abnormal psychological behaviour:

depression, psychosis, delirium, confusion or hallucinations.

Note: anyone (and pets) on heart medication and diuretics, will be also become deficient in this mineral. Due to the actions of the diuretic drug. (loses potassium from body). These patients must replace enough Potassium back into their body to prevent side effects from lose of this vital mineral.

