



IMAGE AWARENESS WELLNESS INSTITUTE

Magnesium

1271 HIGH STREET, AUBURN, CA 95603 • PHONE (530) 823-7092 • ORDER LINE (800) 359-6091
HOURS: TUES. – FRI. 10 A.M. – 4 P.M. • E-MAIL: MAIL@IMAGEAWARENESS.COM WEB: WWW.IMAGEAWARENESS.COM

October 2006

Volume 2 : Issue 10



SHERLOCK BREATHES AGAIN!

Sir Arthur Conan Doyle studied medicine at the Edinburgh Royal Infirmary. It was here that he met Joseph Bell, a famous instructor who emphasized the importance of close observation in making a diagnosis. Bell was one of the fathers of the science of forensic science. Arthur Conan Doyle, the creator of Sherlock Holmes, was Bell's clerk.

Today almost no one pays close attention to what they eat. Killers and criplers are on the loose, but no one takes precaution against them. The physicians at one major health care facility are only allotted 15 minutes with the patient to make a diagnosis.

My book, *Your Body's Sign Lan-*

guage, was written to train people to become careful observers of their own health. The book plays the role that Dr. Bell played in Sir Arthur Conan Doyle's life. It teaches how to carefully observe and helps to prevent the neglect of important aspects of health.

This edition of the newsletter has a "Sherlock Holmes" puzzle which we shall solve. This new addition to the newsletter is designed to help you understand some of the finer points of nutrition in order that you might better protect your health and that of your family.

We are developing a Sherlock Holmes brochure to use as a promotional piece when we do seminars and lectures.



**YOUR SHERLOCK
HOLMES PUZZLE:**

**WHY DO I HAVE LEG
CRAMPS MADE WORSE
BY CALCIUM
SUPPLEMENTATION?**

"I have leg cramps all the time. I went to my doctor and he put me on calcium. That did not seem to help, as a matter of fact, it seems to have made the cramping worse." The person on the other end of the line was a program chairman for a club. This situation is common and the outcome almost predictable. Sometimes calcium will help muscle cramps, but sometimes it will make muscle cramps worse. Calcium may temporarily improve a muscle cramping situation only to have it recur.

NUTRIENT PARTNERS

The answer to this puzzle lies in a very simple nutritional principle. Nutrients do not work in isolation, they work together, and they work in families. Calcium and magnesium are a pair. One of the world's leading magnesium authorities, Mildred Seelig, warns that supplementation with high doses of calcium by itself may actually induce a magnesium deficiency or aggravate a deficiency that already exists.

Calcium is essential for muscle contraction. Magnesium is essential for muscle relaxation. Magnesium is a key component of the body's energy production machinery. It is actually more difficult to get muscles to relax than it is to get them to contract. Those who are drained of energy are more likely to experience muscle cramping.



WE NEED ENERGY TO RELAX!

The proof that it takes energy for muscles to relax is rigor mortis. Rigor mortis is an observable sign of death (Latin mors, mortis"). The muscles become stiff from minutes to hours after death. The dead body simply can not produce the energy to keep the muscles in a relaxed state.

CRAMPING MATTERS

Any kind of cramping is something to take careful note of and to take seriously. After all, it brings us one step closer to death (rigor mortis). In fact, if we have serious cramping of the heart muscle it can indeed result in death.

I explained the importance of magnesium to the program chairman mentioned above and he added magnesium to his supplement program. The result was rapid disappearance of his muscle cramping. When I spoke to his club on the topic of my book, he stood up and shared his experience with the group which gave my presentation added credibility.

MAGNESIUM INSIGHTS

MAGNESIUM OFTEN DEFICIENT

Magnesium is abundant in leafy green foods. Unfortunately, millions of Americans do not eat leafy greens. Contamination of spinach and salad greens with *E. coli* resulting in severe illness and even death (as happened recently) does not en-

courage people to eat more greens.

The likelihood of magnesium deficiency is increased by several factors. Refining of foods removes significant quantities of the magnesium they contain. For example, when brown rice is converted to white rice it loses 80% of its magnesium content.

Another factor which contributes to low magnesium is deficient soil levels of the nutrient. The most common soil amendments are nitrogen, potassium, phosphorus and calcium. Magnesium is rarely added back to the soil after growing crops. The result is that foods grown on these soils are often low in magnesium content.

Magnesium can also be difficult to absorb. High dose calcium supplementation can reduce absorption of magnesium. Mildred Seelig, a world expert on magnesium believes that the ideal form of calcium and magnesium supplementation is two parts calcium to one part magnesium (2:1). The absorption of calcium is actually superior with this natural balance than it is by simply loading the body with large quantities of calcium. *Seelig suggests that the magnesium requirement of a man is about 3 milligrams per pound of body weight* That would be 300 milligrams for a 100 pound man. Women require a little less magnesium because they usually have less muscle. Their requirement is about 2.5 milligrams per pound of weight. (Pierce, 29)

Another roadblock to magnesium absorption is high intake of phosphorus. Sodas loaded with phosphoric acid convert magnesium to magnesium phosphate which can not be absorbed. A high fat meal can reduced magnesium absorption by 50%. Many fats contain a good deal of phosphorus.

Magnesium can also be readily lost from the body. Factors that cause magnesium loss include diuretics like caffeine, alcohol, high sugar intake, stress, and loud noises.

Large numbers of people are magnesium deficient. This is not completely due to inadequate intake of magnesium. A major factor involved in inadequate intake is the highly acid diets Americans consume. Magnesium is a buffering mineral. Consumption of large quantities of meat, grains, and caffeine requires a generous supply of magnesium to buffer the acids produced in the metabolism of these foods.

One of the largest factors inhibiting magnesium absorption is magnesium deficiency itself. The body requires magnesium for the energy required to absorb magnesium. Once a magnesium deficiency develops it can be difficult to overcome and it can result in a whole train of other health problems.



SIGNS OF MAGNESIUM DEFICIENCY

In a lecture to the International and American Associations of Clinical Nutritionists Mildred Seelig shared a story of a woman who was so weak she had not dressed or groomed herself for several months. The woman was completely bedridden.

Dr. Seelig tested the woman's susceptibility to cramping and the woman's body went into violent spasms. Dr. Seelig then injected the woman with magnesium. The doc-

tor was summoned to the woman's room several hours later. The woman had risen from her sickbed, bathed, clothed, and groomed herself. The woman told Dr. Seelig that the convulsion therapy she had administered was rather unusual, but she had never received a more effective therapy from any of the many physicians she had consulted for her many problems over the years. (The woman attributed her improvement to the convulsions rather than the injection of magnesium.)

[Mildred Seelig died in January of 2005. I feel privileged that I had the opportunity to sit next to her and converse with her at a clinical nutrition meeting prior to her death. She was an incredible individual.]

One of the most common signs of magnesium deficiency is tremors, tics, cramps, or spasms of the muscles. Weakness and fatigue are common as it sensitivity to loud noises. Deficiency of this mineral can cause high blood pressure, irritability, and depression. Loss of energy for the proper operation of the digestive tract can lead to constipation. Magnesium deficiency can also cause a loss of appetite and a loss of the sense of smell. The brain will function poorly and it can become difficult to sleep. The magnesium deficient individual may manifest a good deal of emotional volatility and overreaction. Magnesium is so important to the functioning of the heart that deficiency can result in rapid or irregular heartbeat.

MAGNESIUM PROTECTS FROM CALCIUM TOXICITY

One of the startling facts about calcium is that it is absolutely essential for life if it is in the right place in the body, and quite harmful if it is in the wrong place. Calcium does not belong in soft tissues where it can destroy the mitochondria or energy factory of the cell. It is criti-

cally necessary for healthy bones.

Magnesium is the key regulator that directs calcium out of soft tissues and into the bones. It does this by stimulating the release of a hormone called calcitonin. Low magnesium intake favors calcification of soft tissues and weak bones (osteoporosis).



MAGNESIUM AND THE HEART

Magnesium has been referred to as nature's calcium channel blocker. Calcium channel blockers are a common class of medications used to lower blood pressure and regulate heart beat.

Not only does magnesium help to keep blood pressure down, but adequate intake reduces the risk of heart attack. There is an inverse relationship between intake of magnesium and the risk of heart disease.

The HMG-CoA reductase enzyme in the human body which synthesizes cholesterol is turned off by magnesium. Deficiency of the mineral causes the enzyme to be turned on all the time and too much cholesterol to be produced. Many of the major cholesterol lowering drugs (statin medications) seek to stop the functioning of this enzyme. Magnesium is one of nature's cholesterol regulators. (Seelig, 13)

The most common heart valve disease among humans (5-10% of the world population) is mitral valve prolapse. This disease is much more common in those who show evidence of magnesium deficiency. A tetany or tightness of the muscles characteris-

tic of magnesium deficiency is common in those who develop mitral valve prolapse. Magnesium is recommended by some to prevent the development of mitral valve prolapse and even to help reverse the damage resulting from the condition. A severe case of mitral valve prolapse can result in death. (Seelig, 245)

SUPPLEMENTING WITH MAGNESIUM

Simply supplementing with magnesium will not always resolve a deficiency problem. Quality is important. Specialized forms of magnesium are available to override uptake blocks.

Minerals carry positive charges while the lining of the intestine has a negative charge. Opposites attract. Therefore, minerals are attracted to the lining of the intestine, but they are not well absorbed.

Wrapping mineral molecules with amino acids resolves this block to mineral absorption by neutralizing the positive charges on the minerals. This process is called chelation. The word chelate is Greek for "claw" and refers to the fact that the mineral is seized and held by an amino acid.

The GNLD Chelated Cal-Mag provides superior magnesium assimilation. The magnesium is bound to an amino acid called glycine. Studies on chelated minerals have shown that processing minerals in this way improves absorption between two and six fold over nonchelated minerals.

Chelated Cal-Mag comes in two forms, a tablet and a capsule. The tablet contains GNLD explo-tab technology. The tablet is designed to break down readily within a matter of only a few minutes. The U.S. Pharmacopeia has a standard for calcium of 75% dissolution within 30 minutes. The dissolution of the Cal-Mag tablet was 103.3% dissolution in 30 minutes.

The dissolution of the Cal-Mag Capsule was 85% within 30 minutes. While the capsule has a slower dissolu-



IMAGE AWARENESS WELLNESS INSTITUTE

1271 HIGH STREET, AUBURN, CA 95603
PHONE (530) 823-7092 ORDER LINE (800) 359-6091
E-MAIL: MAIL@IMAGEAWARENESS.COM
VISIT OUR WEBSITE! WWW.IMAGEAWARENESS.COM

tion it meets government standards while the average dissolution of 52 major brands of calcium sold was only 39.3% in 30 minutes. (University of Maryland Data published in the New York Times, January 27, 1988.)

The capsule also has the benefit of vitamin D, a nutrient which is increasingly being recognized as being very important for long term health.

Make every effort to obtain adequate magnesium intake. Not only will it increase your energy level, but magnesium could save your life.

Don't become discouraged if symptoms of magnesium deficiency seem to linger. It can take up to six months to replenish magnesium stores in someone who is seriously depleted. The effort to optimize magnesium intake is worth it. The body uses magnesium in over 300 different enzyme systems which are critical for health and which make life possible.

REFERENCES:

Pierce, James, Heart Healthy Magnesium, Garden City Park, New York: Avery Publishing, 1994.

Seelig, Mildred, and Rosanoff, Andrea, The Magnesium Factor, New York: Penguin, 2003.

South, James, Magnesium: the Key to Health and Life, in *Vitamin Research News*, September 2006, 4.



Magnesium is abundant in leafy green foods. Each chlorophyll molecule contains an atom of magnesium.

SHERLOCK HOLMES GOES CAMPING

Sherlock Holmes and Dr. Watson went on a camping trip. After a good meal and a bottle of wine, they were exhausted and went to sleep.

Some hours later, Holmes awoke and nudged his faithful friend.

"Watson, look up at the sky and tell me what you see."

Watson replied, "I see millions and millions of stars."

"What does that tell you?" Holmes said Watson pondered for a minute.

"Astronomically, it tells me that there are millions of galaxies and potentially billions of planets. Astrologically, I observe that Saturn is in Leo. Timewise, I deduce that the time is approximately a quarter past three. Theologically, I can see that The lord is all powerful and that we are small and insignificant. Meteorologically, I suspect that we will have,

a beautiful day tomorrow. What does it tell you?"

Holmes was silent for a minute, then spoke. "Watson, you idiot, Some ----- has stolen our tent."

REMOVAL OR ADDITION TO THIS NEWSLETTER

If you wish to be removed from this health-letter simply send us an email requesting to be removed. If you wish to add an email address send us the address with a request to be added.

WEB RESOURCES

www.yourbodysignlanguage.com
www.imageawareness.com

DISCLAIMER

This publication contains the opinions and ideas of its author. It is intended to provide helpful and informative material on the subjects addressed in the publication. It is provided with the understanding that the author and publisher are not engaged in rendering medical, health, or any other kind of personal professional services in this newsletter. The reader should consult his or her medical, health or other competent professional before adopting any of the suggestions in this newsletter or drawing inferences from it.

The author and publisher specifically disclaim all responsibility for any liability, loss, or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of use and application of any of the contents of this newsletter.