

Magnesium: A King Among Captains

by Charles Walters

When we speak of minerals, we seem cursed to isolate the element in a closed, airtight compartment as though single-factor analysis promises the answers we seek. Such simplistic thinking was annihilated by Richard Olree in *Minerals for the Genetic Code* and continues to endure scrutiny in our series of articles that, so far, has examined yttrium, selenium, silica and iodine. The sequence is fortuitous because magnesium has a great deal to say about how all of the above, along with calcium and a raft of other nutrients that await examination, play out their roles in plant, animal and human life.

In the mid-1930s, Ira Allison, M.D., made a discovery that continues to be ignored by veterinarians and human health professionals who insist on deluding themselves. Allison found he could cure Bang's disease (brucellosis) in cattle, and the human variant called undulant fever, by feeding it out of both. Leading off the nutritional requirement was magnesium, albeit coupled with manganese, cobalt, copper, zinc and iodine.

This revelation should send public health officials scampering to the Olree Standard Genetic Periodic Chart as presented in the aforementioned book, especially positions #38 (magnesium) and #48, as well as all the rest detailed in this supplementary report on the magnesium connection.

A CONNECTION

Pain both sharpens and dulls memory. "If I could remember the pain," a mother of ten is said to have remarked, "I probably wouldn't have done this again." But there is a pain that haunts and humiliates. It is the cramp a dialysis patient suffers near the end of treatment. I still hear the screams of the worst cases, each punctuating the torment of the damned. By the time an artificial kidney finishes sorting and mis-sorting nutri-

ents marked for removal, the magnesium flush seems complete. Charley horse takes over, and unlike the mother of ten's pain in childbirth, this one remains clearly in the memory. Why?

I now go back to the day that actor Eddie Albert and I visited the late William A. Albrecht, Ph.D., at his retirement niche at the University of Missouri. Albrecht gently excused himself from a recording session with the university archivist and gave Eddie Albert both barrels, a lecture on the Pottenger cat studies, the miracle of the Ozarks, and Albrecht's own Epsom salts theory.

Frequently after a hernia repair job, bowels will not move past the hernia. The standard procedure for relief became a dose of Epsom salts. "If they check," Albrecht said, "they will find that the urine is throwing the protein out of the blood. The protein is lost because the Epsom salts keep the membranes of the kidney from doing their normal work. When you take Epsom salts, they replace the calcium in the walls of the intestines, which in turn throw out everything they can because that membrane is no longer normal." The old professor was adamant. The retreat is then to the bones for calcium to rebuild the intestinal walls. Magnesium in the bloodstream has to exit via the kidneys, in the worst case scenario exhausting that organ.

"Here's my theory," Albrecht said — and I now recover his words from my notes — "If I don't have my soil loaded with calcium, the nutrients are lost in exactly the same way they are flushed from an intestine. If I don't have the soil calcium high enough, the plants throw their fertility back to the clay instead of drawing it from the clay to the plant." The wise old man concluded, "It doesn't make much difference whether it's a person or a plant."

THE POWER OF MAGNESIUM

Magnesium shares its power with the source of all physical power, the sun. When photons of light reach planet Earth, bringing along the subatomic particles defined in the work of Walter Russell, a well-known but very mysterious process takes place. It is called photosynthesis, and its chief host catalyst is magnesium. Definition of this process won a Nobel Prize for Melvin Calvin in 1961, but the range of functions for the subatomic particles involved is as mysterious as the paradox called space and the swing of the stars.

Minerals for the Genetic Code gave magnesium a few pages, made vital connections, and possibly started a few youngsters on a scientific career, its details proposed so much and gave answers to a world without answers.

Niacin (vitamin B₃) enables magnesium's role, but so do relationships at once complex and simple in the extreme.

Code #38 on the Olree Chart confirms every speculation Albrecht ever entertained, including his insistent plant-animal connection. If plants do not exhibit a kidney, code #38, with its +2 valence, is nevertheless operative, as E.R. Kuch of Brookside Farms in Ohio discovered when nutrient-deficient calves ate the plaster off their stalls in order to get at the magnesium carbonate it contained, farm soils having been depleted long ago.

The center of the chlorophyll molecule upon which life depends is magnesium — a 15 percent requirement for balanced soil, a catalyst par excellence, a prime mover, stabilizer and nemesis in its absence or marked imbalance. In the human being, its role is interdicted by caffeine products such as coffee, phosphate drinks and soil deficiency — and often by medical failure to comprehend magnesium's role in osteoporosis, arthritis, kidney stones, anomalies that explain the magical growth of dialysis centers, kidney failures, and a few other good horrible examples best deferred to later paragraphs.

HEALTH

People may well encounter a magnesium problem after consuming alcohol, coffee, phosphate drinks and the calcium/osteoporosis trap. This signals a boron deficiency, according to Olree. Boron

prevents loss of magnesium via excessive urination. How? A mere 3 milligrams of boron a day, the same boron found to be so useful in case of atomic fallout.

Symptoms: Feet can cramp. Feet can smell so bad that they clear a room in less time than it takes to drink a small glass of water. It can take six months of selenium intake to challenge that intense odor. When feet swell, kidneys aren't clearing the water out. If bones physically hurt in the morning, magnesium is so low that utilization of calcium is inhibited. There is also magnesium seizure activity — the awakening with a terrible start and heavy heart palpitation. This is another symptom of magnesium deficiency. The problem is a super active mind, one that won't shut down and permit deep REM sleep. That bathroom call at 3 a.m. suggests an inability to clear the water during the day — in a word, magnesium deficit and/or a calcium/magnesium imbalance.

A MAGNESIUM CHECK

When blood work reveals a magnesium shortage, a crisis is imminent.

In discussing the situation with Richard Olree, he enlarged on the signs and symptoms mentioned above. He mentioned chronic muscle fatigue and muscle spasms (recalling the tormented in the dialysis clinic). The kidneys through the Loop of Henle control the magnesium available to the human body. A healthy kidney requires magnesium, a +2 mineral, which attracts a -2 mineral, selenium.

Stiff legs and ankles in the morning tell of magnesium deficiency, and there's old charley hoss ("horse," if you insist). Chronic neck spasms are signs. So are tension headaches. That's why many neurologists rely on magnesium to deliver relaxation via increased blood flow.

CALCIUM-MAGNESIUM

As William Albrecht told us in his charming way, magnesium is antagonistic to calcium. Calcium and magnesium have the same oxidation state, yet they oppose each other. Calcium causes contraction, while magnesium causes relaxation.

This calcium-magnesium standoff, perhaps uneasy partnership, is best illustrated by those dreaded clinical words,

"You have osteopenia (or osteoporosis)." This statement is usually followed by, "You have to take 1,200 milligrams of calcium every day," often in the form of calcium carbonate, mere blackboard chalk. "It would take 1,000 times the available stomach acid to absorb the stuff," Olree wryly comments.

The resulting overload causes the body to waste its magnesium. The usual clinical pattern is a patient on 2,000 milligrams of magnesium, and their health takes a nosedive. They don't know why they wake up at 3 a.m. They don't understand cramping, menstrual clotting, why they're tired, why their eyelids twitch.

Magnesium controls *Staphylococcus aureus*, and its absence gives the hospital nemesis permission for life.

Water pills run all the magnesium out of the body slowly, as though on an installment plan. Chronic wasting of magnesium equals greater hypertension, more water retention, more water pills!

Network newsreaders and their advertisers have not distinguished themselves in reporting on recent selenium research, nor have the investigators who wrote the research report in the first place.

Both should know and report on the real reason why the wrong kind of selenium embodies real harm. If cows or human beings live long enough taking sodium selenate, they will most likely develop Type 2 diabetes.

The availability and use of sodium selenate, molybdenum-based selenium compound, selenium chloride is ubiquitous. Only selenomethionine should be used for animal or human supplementation.

We can excuse Extension and the universities for making useless recommendations because they expect most supplementation to be toxic, useless, and worthy of proscription. Yet possibly 85 to 90 percent of the selenium sold to agriculture and a vast preponderance of the material used in human supplementation permits hardly 14 percent utilization, this as opposed to selenomethionine and its 80 percent utilization.

Just as sodium is attracted to chlorine, magnesium is attracted to selenium, and vice versa. If an individual allows dehydration, the magnesium-calcium equation falters.

The opposite of magnesium's +2 oxidation state is, of course, -2. The last has an impact on the oxygen, sulfur, selenium and trillium levels of the human body. Oxygen is a major component of DNA. Sulfur is the fourth most abundant element in the human body. It is pushed and pulled by magnesium.

Chronic magnesium depletion is hardly detectable by blood work. This fact asks physicians to rely on signs and symptoms, since less than 1 percent of magnesium is found in the blood. The other 99 percent is the property of cells and organs, with resultant wasting of magnesium. Complex the situation with soft drinks, coffee or other phosphoric acids, or tank up on alcohol, and you also lose the life-giving effect of selenomethionine.

ALUMINUM-MAGNESIUM

Color has an enigmatic role in the affairs of men. Some restaurants tout Angus beef as though the color black conferred taste on an overcooked hamburger or steak. It's a bogus claim. Not so with green vegetables — the deeper green, the better. With plants, the action of photosynthesis both identifies and ratifies magnesium in the food supply. Such a magnesium source won't be found in feedlot beef.

Nor is the human consumer going to get great benefits from pharmaceuticals with red dye in them. We see television ads about the purple pill, the red pill, etc. The color is made to appear very important — *ask your physician!* The fantasy sometimes even visits the health food pharmacy.

We know at least two troubling facts. One, the country now has a subclass of children defined as ADD and ADHD. These attention disorder syndromes are almost always accompanied by chronically low magnesium, which leads to chronically low selenium. Selenium helps keep the brain organized.

When the liver has way too many things to do, it cannot cope with, say, red dye. As a consequence, children become excessively unmanageable and angry, in short, out of control. Yet when supplemented with B-complex, magnesium and selenium, children become the kids their parents thought they were.

The matrix that holds dyes together is almost always aluminum. All dyes that carry the word *lake* are aluminum based. This aluminum goes into the liver and disturbs the organ's chemistry. When the aluminum load gets too heavy, the individual is headed for Alzheimer's disease.

These digressions notwithstanding, trace mineral and genetics researcher Richard Olree cautions, "Please look at your multiple vitamins, and throw them out if they have sodium selenate, a frequent mix with magnesium. If human beings are to be spared Type 2 diabetes, and cattle are to escape acetonemia, the sodium selenate myth needs to be rejected."

As these lines are set down, most farmers are supplementing cattle rations with sodium selenate. That they are not using selenomethionine is an indictment of the land grant college system and questionable supplement suppliers, often disposal grounds for foreign industrial wastes.

Ingested aluminum is difficult to remove and impossible to live with in good health. But most people know the color of cilantro. Research by people with credentials and standing has revealed that a daily fix of the cilantro herb on salad is the best remover of aluminum known. It best copes with the aluminum you often get in table salt, tap water, packaged groceries, antiperspirants and pharmaceutical pills.

CONCLUSION

To make the above observations is to suggest a few answers. Supplements work if they are in the correct form. Magnesium oxide is either worthless or not indicated, depending on the state of mind one can be allowed to invoke when confronting medical mendacity. Magne-

sium gluconate, magnesium citrate and magnesium aspartate are easily identified by label, and all merit the consideration of those confronted by the most unrecognized deficit in human nutrition. The last three named are useful, usable and safe.

This inventory invites a codicil. Some people are cursed with kidney stones. Magnesium citrate is the most anti-kidney stone form of this mineral available. Stones, of course, represent a chronic wasting of magnesium. This permits calcium to solidify in the form of calcium oxalate. It's a lot like making rock candy. The kidneys become supersaturated with calcium, and the calcium precipitates and recrystallizes. Normally, magnesium keeps the calcium mobile and in solution. Without enough magnesium, calcium clumps together in crystals called calcium oxalates, the kidney stone. A caution: some people get upset bowels from magnesium citrate.

Milk of Magnesia is designed to unlock bowels. The healthy human being with its magnesium warehoused cellularly usually spills enough magnesium to the bowels to cause looser stools. Routine constipation denotes a shortage of magnesium. Failure of daily bowel movements drastically increases the chances of getting colon cancer. The number one gene implicated in colon cancer, Olree's inch-thick file of medical research reveals, asks for magnesium and selenium for prevention. In short, the tumor-suppressing gene in this case is dependent on magnesium and selenium to be operative.

AND!

It is most rewarding to identify and correlate these facts. They become more

meaningful when the chart contained in *Minerals for the Genetic Code* is spread out for the theater of the mind. These nutrients connect and state their reason for being. They invite careful and thorough study.

Soon enough, the 64 entries in the code become as familiar as the states of the Union or the succession of one's own genealogy. When this happens, a veritable Niagara flow of personal knowledge relieves people of having to put their health into the hands of some clinical chain store.

We'll continue this series as long as readers want it and add each article to the grand pendulum that inspired them in the first place.

ACRES USA[®]
THE VOICE OF ECO-AGRICULTURE

Acres U.S.A. is the national journal of sustainable agriculture, standing virtually alone with a real track record — over 35 years of continuous publication. Each issue is packed full of information eco-consultants regularly charge top dollar for. You'll be kept up-to-date on all of the news that affects agriculture — regulations, discoveries, research updates, organic certification issues, and more.

To subscribe, call

1-800-355-5313

(toll-free in the U.S. & Canada)

512-892-4400 / fax 512-892-4448

P.O. Box 91299 / Austin, TX 78709

info@acresusa.com

Or subscribe online at:

www.acresusa.com