



Horse Stress, Horse Sense, Horse Shi(f)t

By Morley Robbins

“Magnesium deficiency is the basis of almost all of the heart disease epidemic that consumes so many of our health-care dollars.”

— Mildred S. Seelig, M.D.

There’s a wonderful exhibit on Horses at the American Museum of Natural History in New York City (www.amnh.org/exhibitions/horse). As we all know, they are powerful and majestic creatures, but the gist of this captivating show is how the horse has “domesticated” and “civilized” man and woman over the centuries. An intriguing and paradoxical thought, wouldn’t you agree? My maternal great-grandfather, John M. deLashmutt, Sr., was an equestrian of some repute, having earned his stripes (literally) as a Sergeant in the 6th Texas Cavalry during four straight years of battle throughout the Civil War. This exhibit touched a nerve that was most unexpected and most enduring.

I remember sharing this experience with my oldest son, Matt, several years ago while he was ensconced in Manhattan, not far from Ground Zero, during his first years as an investment banker. I’ve never forgotten how captivating this exhibit was, nor how important its message. Truth be known, I never thought I’d be writing about it, nor using it as the voice of reason in a wellness essay, but the insanity of today’s medical and nutritional fields dictate a dance with these equine masters of beauty and balance: for my enhanced sanity, as well as your improved health.

I know just what you’re thinking ...

“Okay, what’s he up to in this essay?!? ...”

You may have missed the latest bombshell that was issued from the hallowed halls of conventional medicine a few weeks back, but the American Academy of Pediatrics (AAP) issued an important report on March 26, 2012, entitled: “Policy Statement: Sudden Pediatric Cardiac Arrest“ (<http://tinyurl.com/bvjhtxf>). To say I was stunned, confused and angered by this report would be an understatement. The absurdity of this report has only been further punctuated by the tragic death of a twelve year old native of Salem, Oregon, Isaac Arzate, who died this week from his *second* heart attack. Yes, that is not a typo. In the span of three short months, this young boy suffered two myocardial infarcts before he had finished sixth grade. (Please note, when I was twelve, my grandmother had suffered her third and fatal heart attack—at the tender age of 76.

However great Nanny’s loss was to our family, that’s how it’s supposed to be ...)

As many of my readers know from my earliest writings on “*Let’s Make a Heart Attack!*” (May-August, 2011, *The Monthly Aspectarian*), I am no stranger to cardiac disease. Having grown up in a rather sickly family that suffered mightily from congestive heart failure, strokes, an enlarged heart, countless heart attacks (Nanny’s were just some of the many), diabetes and pervasive hypertension, I set out in my early twenties to understand this disease, as well as, if not better than, any cardiologist in the country. My entire world and my

true understanding of this so-called “cardiac disease” was shattered when I put the pieces of the jigsaw puzzle together with “magnesium deficiency” at its center in the most recent past. Suddenly, everything about this tragic killer became crystal clear—at least for me. Regrettably, it would appear that the vast majority of the allopathic fraternity appears frozen in unfounded, unprecedented and dysfunctional dogma. Please, let me explain.

It’s important to understand that the above noted Policy Statement was reviewed and “endorsed” by not just the AAP, but also by the American College of Cardiology, the American Heart Association, as well as the Heart Rhythm Society (Huh?, *what in the world do they actually do?!?*) *Pediatrics* 2012; 29:e1094-e1102. In effect, this statement has the unabashed blessing from all the key components of allopathic medicine. How very reassuring. Actually, no—how very, very frightening for our kids, for their parents, and for all of us being subjected to their banal and biased declarations.

Please keep this in mind: we’re talking about Sudden Cardiac Attack (SCA)—the leading cause of death in America that has plagued our nation for over one hundred years, now. Yup, we’ve been waging this “Coeur war” for over a century, losing mightily, I might add, despite the vacuous rhetoric from NIH, FDA, CDC, AMA, AHeartA, ADieteticA, etc. But now we’re talking about this coronary condition occurring in our children! *That is NOT natural*. And it should certainly NOT be considered “normal.” We’re talking

about children suffering from the very same clinical crises that challenged our *grandparents* when we were growing up! To fully appreciate this essay, it's important that you wrap your head around this total demographic and dysfunctional disconnect.

When you get into the guts of this "white-wash" report from AAP, you'll learn about all the many disorders that predispose kids and young adults to Sudden Cardiac Attack. Noted below are the causes:

Table 1: Cardiac Disorders Predisposing to Pediatric and Young Adult SCA

Structural/functional

1. Hypertrophic cardiomyopathy
2. Coronary artery anomalies (*Endothelial dysfunction is now linked to mineral deficiencies.*)
3. Aortic rupture/Marfan syndrome
4. Dilated cardiomyopathy or restrictive cardiomyopathy
5. Myocarditis (*Inflammation, the origin of ALL chronic disease, is*

triggered by Mg deficiency)

6. Left ventricular outflow tract obstruction
7. Mitral valve prolapse (*A known and well documented Mg deficiency, by the way.*)
8. Coronary artery atherosclerotic disease (*Hardening of the arteries is "Endothelial dysfunction."*)
9. Arrhythmogenic right ventricular cardiomyopathy
10. Postoperative congenital heart disease (*This makes NO sense: congenital = from birth?!?*)

Electrical (*This would mean the electrolytes are NOT working right.*)

11. LQTS (*These are electrical parameters on the EKG ... Hmmm, no mention of "Electrolytes."*)
12. Wolff-Parkinson-White syndrome
13. Brugada syndrome
14. Catecholaminergic polymorphic ventricular tachycardia (*Tachycardia is caused by mineral deficiency.*)
15. Short QT syndrome
16. Complete heart block (*Endothelial dysfunction is now linked to mineral*

imbalances.)

Other

17. Drugs and stimulants; some prescription medications (*Beware Ritalin, Adderall, etc.*)
18. Primary pulmonary hypertension (*Again, hypertension is widely recognized as a mineral imbalance.*)
19. Commotio cordis (*Sounds like the title to a third-rate dragon flick, right?*)

Huh?!? What are they talking about?!? Could they make this any more confusing?!? Please know, I eschew obfuscation!!!

Forgive my brutal candor (as opposed to my beautiful canter), but this is just a feedbag of Horse-Apples! Pure and simple. And to thrust these lame, but windy "explanations" on us (shrouded in scientific and clinical-sounding mumbo-jumbo), and then expect us to believe it, takes a "stallion's leap" of faith on the AAP's part. Furthermore, what they really want us to believe, as you read this report in

its entirety, is that there appears to be a genetic mutation that's occurring in our society that's causing this sudden rise in cardiac events within the pediatric community. (Again, we're talking about kids here, folks.) Really? Apparently, none of the physicians involved in this so-called "study" have read much on genetics—it takes hundreds of generations for such sweeping changes to occur in a species, even one as dysfunctional as *Homo Americanus*. Do they honestly expect us to believe this aspect of their report? *Is that really their best shot to deflect their total incompetence as healers and so-called health practitioners?*

Okay, okay, I'll calm down, but only if you promise to read the rest of this article carefully and also promise to do exactly what I recommend to do. Deal? Well, alrighty then, let's get trottin'.

Horse Stress

Bar none, one of the most definitive studies on Sudden Cardiac Death was published forty years ago in *The Lancet* medical journal (Chipperfield and Chipperfield, "Heart Muscle Magnesium, Potassium and Zinc Concentrations After Sudden Death from Heart Disease," *The Lancet*, 11 August, 1973: 293-296)¹ by two truth-seeking biochemists from University of Hull in England. (By the way, the *New England Journal of Medicine* looks up to *The Lancet* as the pinnacle of medical truth.) In any event, these enterprising scientists studied the hearts of individuals who had died *suddenly* of heart-related events and compared them to individuals who died suddenly from non-heart-related accidents. Key to this ground-breaking study was that they measured the status and prevalence of three key minerals that run the heart. (You do know that your heart runs on minerals, and not statins, right? Not an insignificant fact check in these disorienting days of 1984.)

In any event, they measured magnesium (Mg⁺⁺), Zinc (Zn⁺⁺) and Potassium (K⁺). Here are the key results from the summary of this highly respected and widely referenced article in learned circles:

- "Heart muscle from subjects who died suddenly from coronary

thrombosis [blood clots] or myocardial degeneration [hardening of arteries/plaque] *contained significantly smaller concentrations of Magnesium* than heart muscle from subjects who died of other causes."

- "Whatever the cause of the decrease in magnesium, it is bound to be deleterious to the functioning of the heart."

- They concluded with the following stunning observation based on the equally profound work of two Cardiologists practicing in Glasgow, Scotland: "This together with the our observations on the highly significant decrease (Note: Scientists don't often say 'highly significant' unless it's *really* surprising) in Magnesium concentrations in the heart muscle of individuals from hard and soft water areas that might demonstrate a fall in magnesium concentration in those from soft-water areas." (Further note: Almost *all* municipal water is now treated to make it "soft"—hmmmm.)²

Water Treatment: Man vs. Nature

Fascinating, wouldn't you say? Did the AAP not know of this seminal study, or just choose to ignore it?

Well, let me go totally "geek" on you. I'd like my readers to know exactly what's going on inside their bodies, unlike most doctors in America, especially when they're concerned about experiencing a sudden cardiac event. You see, our hearts are highly sensitive to stress, in the same way that our equine masters respond to a challenging workout—they, too, get tired and irritable. Let's further expand our cardiac cadence.

1. The heartbeat rhythm is determined by the state of our Autonomic Nervous System (ANS)—that silent master of our body that clips along at a modest 400 billion bits/second. (Wow!)

2. Our ANS runs off of and *is controlled by* our electrolyte status (Ca, Mg, Na, and K) especially when they are in their "ionic" form, *i.e.*, have electrons unbound and freely available for metabolic transactions, like keeping the heart beating 100,000 times each and every day.

3. Electrolyte levels *inside* the heart muscle cell are measured as follows:^{3,4}

	<u>NORMAL</u>	<u>STRESS</u>	<u>% CHANGE W/ STRESS</u>
a. Calcium:	1	4.5	450% Increase
b. Magnesium:	10,000	8,000	20% Decrease
c. Sodium:	1	n/a	
d. Potassium:	40	n/a	
e. Ca/Mg ratio:	0.0001	0.0005625	560+% Increase!

4. Our friend, magnesium, in fact, is an essential co-factor in maintaining the electrical balance across cell membranes, especially those found in our non-stop working heart cells.⁵

5. It turns out that our electrolyte values, and thus their ratios to each other, are highly responsive to stress (*i.e.*, some real or *perceived* "threat" to our organism—it matters not).

6. Actin fibers (a key part of our cardiac contractile apparatus) inside the heart muscle are, in fact, *activated* by calcium, and then subsequently *relaxed* by magnesium.⁶

7. An electrical charge *produced by magnesium* then pushes calcium to the opposite side of the Actin cell.⁷

8. Thus calcium helps to produce the contraction, but, in fact, *magnesium regulates it*.⁸ Please read that again, slowly.

9. An important nuance: Actomyosin-ATP, a critical enzyme enabling proper heart function and cardiac contractile force, is also *activated by magnesium ions*. (Not an insignificant fact.)⁹

10. Magnesium is also important in both the production and the elimination of acetylcholine, which is key to effective heart contraction, but very irritating to the muscle if not removed properly by magnesium.¹⁰

11. The lingering increase of acetylcholine, due to magnesium deficiency (hypomagnesaemia) leads to cholinergic symptoms (*i.e.*, anxiety, agitation, seizures, etc.) and neuromuscular hyper-irritability—not good for our heart, nor our health!¹¹

12. Magnesium deficiency increases and intensifies the contractile response of the heart to a series of additional chemicals that affect normal heart function: norepinephrine, acetylcholine, serotonin, angiotensin, and potassium.¹²

13. Under conditions of “Cardiac Stress” there is a *5.6-fold increase* in the Ca/Mg ratio(!) due to:

- a. Heavy Lifting
- b. Extreme Physical Exertion
- c. Mental and Emotional Stress
- d. Intake of Nutrient-deficient Foods

e. Intake of known Excitotoxins (*i.e.*, MSG, Aspartame, etc.)

f. Intake of Toxic Medications (*i.e.*, Ritalin ... see www.ritalindeath.com)

g. Intake of Excess Coffee and/or Alcohol

14. The loss of magnesium inside the cell, and the corresponding influx of calcium to the interior of the cell, seriously disrupt the energy potential of affected heart muscle tissue and cells.¹³

15. Additional critical facts to know about Sudden Cardiac Death:

a. It is very well established that Mg-infusion therapy (Mg IV) is the most effective intervention to protect the myocardial integrity during a cardiac arrest.¹⁴

b. Magnesium deficiency heightens the sensitivity of the sinus node (the heart’s natural pacemaker) to ANS regulation.¹⁵

c. It is also a known fact that simple balancing of key Cardiac Electrolytes (Mg⁺⁺, K⁺, and Na⁺) in table salt can achieve extraordinary and historic reductions of coronary heart disease deaths, as noted in Finland during the period 1969–1992 when that Scandinavian country lost its

standing as the “Heart Attack Capital of the World” due to its stunning ratio of Calcium: Magnesium in the diet, exceeding the U.S.A. in the amount of calcium and the lack of magnesium in their foods,¹⁶ like excess, unregulated calcium.¹⁷

d. Factors that stimulate the Sympathetic Nervous System (SNS) and catecholamine (*i.e.*, acetylcholine due to excess calcium from magnesium deficiency) are known triggers for acute myocardial infarction.¹⁸

e. And most importantly, a heart muscle that is lacking in magnesium—like *all* the muscles in our body—must generate energy without oxygen (anaerobically), which causes the production of lactic acid. This lack of Mg causes a rise in lactic acid which must then be buffered by magnesium, which intensifies the magnesium deficiency ...¹⁹

f. Finally, please note the summary observations of a recent article on heart function and the Autonomic Nervous System:²⁰ (Underlined summary footnotes are posted at the end of the article.)

“Magnesium (Mg) is an essential element of circulatory regulation and is the most common intracellular cation after potassium.^{1,2,3} It has been reported that Mg plays a role in numerous enzymatic processes in the cardiovascular system, such as in kinases, cyclases, and adenosine triphosphatase or guanine triphosphatase,² and is a naturally occurring antagonist to calcium.⁴ Thus, Mg affects the pivotal cardiac functions, including cardiac contraction,⁵ beating rhythm,^{5,6} vasomotor control,^{4,7,8,9,10} and proliferation of smooth muscle cells in vessels.^{9,11} Mg deficiency contributes to the pathogenesis of several cardiovascular diseases, *i.e.*, hypertension,¹² vasospastic angina,¹³ ventricular arrhythmia,¹⁴ and mitral valve prolapse.”¹⁵

g. Given the above summary of how electrolytes dictate cardiac function, it is certainly easy to see how the American Academy of Pediatrics, the American Heart Association, the American College of Cardiology and the Heart Rhythm Society failed to mention—even once—the Rodney

Dangerfield of cardiac regulatory minerals: **MAGNESIUM!**

Okay, now just relax. I’m done with the technical dressage of this essay. (*Trust me, we’ve both worked up quite a sweat...*) Please forgive the rather tedious listing of these key and foundational electrolyte events leading up to a Sudden Cardiac Event. Note, that in the span of a single page, the words “Electrolyte” or “Magnesium” have appeared *24 times* to explain the known scientific and clinical understanding of Sudden Cardiac Death in the definitive medical literature on this critical and heart-stopping issue.

But as anyone who has been checking the citations at the end can tell you, the vast majority of these studies are virtually ancient—all the way back to the 1960s and 1970s—long before 1984 when Big Pharma took control of medical research, and subsequently, *all* reasonable, natural and rational medical thought ceased to exist. So let’s get with the program and get to some more contemporary research that hopefully will set the record straight for you bucking broncos.



Here are the key results from a very contemporary study of Sudden Cardiac Events involving marathoners who collapsed at the 2006 and 2007 Boston Marathons:²¹

“Rapid whole blood point-of-care analyte results [measuring free, unbound electrolytes] in 135 collapsed runners at the 2006 race demonstrated frequent abnormalities of sodium, lactate, ionized calcium and ionized magnesium levels.

“Elevated levels of whole blood lactate were observed in *95% of collapsed runners* [a clear sign of cardiac stress] ... we also found prevalent abnormalities in various

electrolytes, which in conjunction with lactic acidosis and a decrease in ionized calcium and magnesium levels may contribute to the enhanced risk for ventricular fibrillation during acute exertional events [otherwise known as a ‘sudden heart attack’].”

Okay, I know you’re about to buck this (w) rider ... What this is saying is that almost *all* of the runners had elevated lactate in their blood and a notable percentage was low in “ionized” calcium and magnesium. What they failed to point out, of course, is that lactate gets produced when the body can’t metabolize glucose with oxygen, as noted above. No doubt you’re wondering, “Well, when does that happen?” When your body runs out of magnesium at the cellular level and can’t metabolize glucose aerobically (with oxygen). Anaerobic energy production is yet another form of stress for the heart!

What is particularly noteworthy is that there are scores of articles that I could cite and here are three more^{22, 23, 24} and I could easily add fifty more that would draw a definitive relationship between the loss of electrolyte minerals, especially magnesium and Sudden Cardiac Events. It is well established in the literature going back fifty years. And yet the American Academy of Pediatrics wants us to believe that it is a mysterious, multi-dimensional, and increasingly genetic anomaly. *No ribbons for that logic!*

Okay, so what to do?

Horse Sense ...

I would sincerely like you to go to the following important website addressing enhanced performance: <http://www.performanceequineusa.com/magnesiumtherapy.aspx>. Yeah, now how cool is that? I’ve even had the distinct pleasure of chatting with the owner, Carla Odetta of Performance Equine, only to learn that her world and mine are identical! Only her clients count with their feet.

In keeping with the beginning of this essay, please note that horses have gone out of their way over the millennia to teach humans how to behave, to interact, and to become civilized. Awesome! Well maybe these equine

masters can drill some “horse sense” into each and every one of us regarding the vital importance of magnesium for calming our frayed nerves, for enabling increased focus and for improved performance—especially in the never-ending race track of life.

Truth be known, I didn’t go looking for this website, but it did find me, and I’m thrilled to make the connection with this Mg-inspired company. I was dumbstruck when I spent some time reading her website, and then had the pleasure of chatting with her about our shared magnesium-mission. Here’s a listing of key symptoms that horse owners are being taught to look for in their prized animals (insured at upwards of \$5–10 million) to ensure proper magnesium status in their steeds:

- *Very tight, sore back not related to activity, fitness level or saddle fit (Sound familiar?)*

- *Horse never really relaxes (Sound familiar?)*

- Cranky about being brushed or palpated, especially over the back on either side of the spine

- Cranky about being blanketed

- History of tying up

- Muscle tremors or all-over trembling not related to outside temperature

- Requires long periods of lunging before being able to focus on work

- Does not tolerate work well and works up, not down

- Bucks shortly after workout begins, seems fine at first then bucks or balks

- *Would be described as “thin skinned” or hypersensitive to touch (Sound familiar?)*

- Chiropractic adjustments, massage and body work do not have lasting effects

- Has difficulty getting round or picking his back up under saddle, moves hollow

- *Difficulty focusing on work, poor work ethic (Sound familiar?)*

- Can’t be still, repetitive movement, weaving, pacing, head bobbing

Now, how fascinating is that? And what do these owners do who are totally committed to achieving higher and higher levels of performance from their

million-dollar fillies? They feed them magnesium! And lots of it. (And I’ll let you in on a little secret ... she sells magnesium to the owners, as well. It’s the very same brand we sell at our Wellness Center.) So if you won’t listen to me, please pay attention to the “Magnesium messengers with the mane!” They really know what’s good for them, but more importantly, what’s good for us.

Horse Shi(f)t

So what’s this “Horse Shi(f)t” all about?!? Believing that the recently released AAP Policy Statement on Sudden Cardiac Deaths has any basis of science behind it. Furthermore, believing that your cardiologist, and now your pediatrician, has even the slightest clue about what runs the human body, or certainly what runs the human heart. And why do I say that? Because the words: “minerals,” “electrolytes,” and “magnesium” *don’t even appear once* in this recent Policy Statement. In fact, here is their list of ten recommendations to address this crisis among our children:

1. Recognize the warning signs and symptoms of Sudden Cardiac Arrest (SCA), including those that may “misdirect” initial evaluation to non-cardiac specialties and, thus, delay correct diagnosis.

2. Understand the role of comprehensive and accurate family history and pedigree for preventing SCA stemming from inherited cardiac genetic disorders.

3. Use standardized PPE forms and processes to minimize unnecessary variation.

4. Ensure that identified patients and/or families with known or suspected cardiac disorders are referred to a pediatric cardiac center for further comprehensive evaluation and management. Appropriate secondary testing may include ECG, echocardiography, exercise testing, or genetic testing, as indicated.

5. Advocate for autopsy evaluation by a medical examiner familiar with rarely encountered heritable cardiac diseases causing SCA when pediatric SCA occurs. Procurement of and retention of DNA-bearing tissue for

subsequent molecular autopsy should be encouraged for autopsy-negative cases.

6. Support education programs for effective bystander CPR and appropriate AED use.

7. Support development of effective school emergency response programs.

8. Consider participation in school emergency response programs as a medical director.

9. Support efforts to mandate a central registry for pediatric SCA as a reportable event.

10. Support recommendation for evidence-based evaluation of national screening processes and programs.

The entire body of electrolyte mineral knowledge that is the very foundation of cardiology, EKG testing (which measures electrical response from electrolytes!), and most historic cardiac drugs are unabashedly ignored and thrown under the galloping horse in this recently released doctor diatribe.

Absolutely amazing. Not one word about magnesium, not one word about electrolytes, and not one word about

minerals. Nor is there any mention of the fact that nutrient-dense food (*i.e.*, meals containing minerals) is virtually absent within all school cafeterias across the country; nor is the fact that as recently as 2005, it was deemed by the USDA that 68% of Americans *do not consume the RDA* (Recommended Daily Allowance) of magnesium²⁵—it is even higher for children and adolescents; nor is there any mention of the fact that the World Health Organization has recently (2009) targeted the vacuous nature of drinking water—due to missing minerals calcium and especially magnesium—as the primary cause of Sudden Cardiac Events around the globe.^{26,27} The silence on these three critical and contributory factors towards the epidemic of Magnesium deficiency is profoundly deafening, and most disturbing.

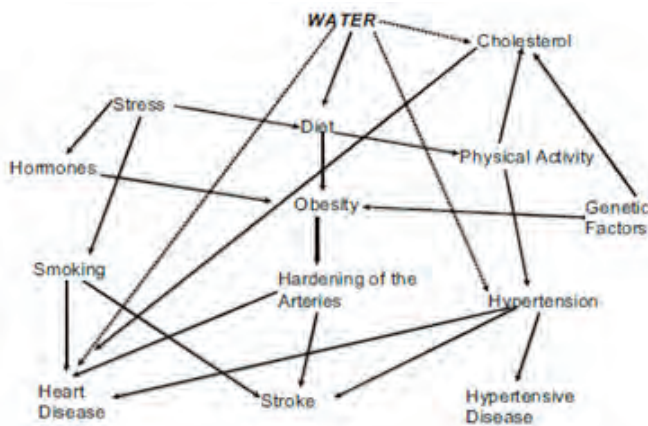


Figure 10.1. Web of causation applied to cardiovascular disease (adapted from Rockett 1994).

Source: World Health Organization *Calcium and Magnesium in Drinking-Water: Public Health Significance*, World Health Organization, 2009.

But imagine this. As soon as you step outside the borders of the American Medical Association and all its subservient medical minions, and well beyond the reach of the U.S. Food & Drug Administration, the fog seems to clear.

What a bunch of “horse shi(f)t!”

I would strongly encourage you to trot outside this worn out paddock of allopathic medicine, especially if you are at all worried about your horse-sized ticker, or that of your child. There is a wide-open pasture of time-tested (over the millennia), of very natural modalities that will bring your steed, and the electricity that runs it, back into proper balance. The time is nigh for you to close the barn door on this outmoded, profit-driven, and completely unscientific thinking on the part of pharmaceutical firms and their shills wearing white lab coats and stethoscopes. Forgive my blunt suggestion, but it’s time to send this old hag to the glue factory—where it belongs.

Giddy up! There’s a new Sheriff in town ...

Morley Robbins can be reached at wellness@chiropractic1st.com or follow his videos on YouTube or [Underground Wellness.com](http://UndergroundWellness.com), or just pick up the phone and challenge him with your “health” issues (847-922-8061). Just for the record,

Articles by Morley Robbins, aka Magnesium Man



Listen to Morley talk about Magnesium Deficiency: the Stealth Bomber in Chronic Disease on *Underground Wellness*.

<http://www.blogtalkradio.com.undergroundwellness/2012/03/23/magnesium-deficiency-the-stealth-bomber-in-chronic-disease>