### **Article Document Series Part 2**

#### A note to our readers:

This is an informative and important document covering the top 50 minerals for health. The original document is provided courtesy of California Earth Minerals, the maker of Terramin. The challenge is that the original document is 18 pages long! So, we decided to feature it each month, broken down into two page segments.

# Minerals Health and Knowledge

What you need to know & what you thought you knew ©California Earth Minerals Corporation 2008

## The Quest for Nutrition Knowledge

One great truth however is emerging. While most minerals are beneficial in specific dose ranges (that no doubt vary between individuals), all versions of any given mineral are not alike. Any given natural, colloidal mineral molecule is much safer for the body, than that same mineral after it has been chemically extracted, altered or changed by industrial processes. Therefore, much confusion exists when we make universal declarations about heavy metal toxicity. A clear example of demonizing some elements is the case of aluminum. Many smart people just "know" that "aluminum is bad for you".

Yet scientists who study nutrition and physiology know that this is not true. A minute amount of natural trace aluminum—one of the most abundant compounds on earth, is beneficial and compatible with metabolic processes. Aluminum stabilizes enzymes, brain function, nervous function, sleep patterns, and is capable of balancing the intercellular environment. It is a natural antiseptic. Many people are surprised to learn that it is one of the most abundant elements on earth. But even as practically all soils, plants, animals and people have natural, health-supporting aluminum in them, many scientists and medical practitioners, and regulators hold the belief that any amount of aluminum is bad, and focus only on toxicity. The same frame of thinking dominates discussions of lead, mercury, and other metals, all of which play metabolic roles and can be toxic. What's missing from the debate is the balance...most minerals are both necessary and toxic depending on type, dose, and frequency of exposure.

Like economists and politicians, scientists disagree over many other things. The debate rages over which minerals are safe, beneficial, or toxic, and in what amounts. This is why it is more important than ever that you do not just blindly trust supposedly professional opinions about such vital things as nutrition and health. Here's an example of why. Very recently the American Academy of Pediatricians announced it was more than doubling its recommended intake (daily value) of vitamin D! The Canadian association of pediatricians increased the recommended amount for nursing mothers by 1000%! This must have been embarrassing for the FDA, which at the same time was telling people vitamin D could be toxic at the same doses. But the FDA's lack of humility raises some important public health questions. What makes them so certain the new dose is "right"? The answer is: the same certitude that caused them to proclaim that the previous recommendation was "correct". Only a week prior to the announcement, if you had been supplementing to double your vitamin D dosage, thousands of medical doctors and mainstream biochemists would have scoffed and ridiculed you for such reckless behavior as making up your own mind. They would have told you that you were wasting your money, or perhaps that you were risking your health by exposing your body to toxicity. My advice: don't just accept their opinions because you think they are smarter than you or possess some mystical expertise. You must inform yourself and make your own decisions. You must take charge of your health and nutrition needs. Doctors and government agencies simply cannot effectively manage your care without your active participation. They need to be held accountable.

Another phenomenon in the last 100 years is the increasing reliance on government funding and the influence of regulated mega-corporations over the open scientific process in health and nutrition. It is a fact that the government bureaucracy at all levels is decades behind the scientific community and hundreds of years behind ancient and traditional empirical knowledge of how natural products and healing earths can induce wellness. And because our political process is so unfortunately integrated with unsound business interests, the process of science...the quest for truth...is distorted by men and women who are dominated by other than your interests. Science is a process of trial and error, but no scientist wants any longer to admit their errors, especially when government programs have been set in motion based on public health decisions that sometimes turn out to be wrong. These mistakes are far more easily obfuscated by dismissing the new research than by confessing. Admitting fault would invite class action lawsuits and would risk loss of political and consumer trust in the "experts". Too often there is little or no accountability to you.

### Minerals and the Nutritional Gap (Part 2)

Below is a list of minerals in alphabetical sequence that are generally accepted as essential or helpful in certain circumstances for health and function of the human body. Not all of these minerals are recognized by the various regulatory bodies of the US government as necessary, and some that are recognized have no established dietary intake levels established. The amounts listed as essential are from various sources including the FDA, but may not represent DV or RDI. Don't let anyone tell you that if the government has not sanctioned it or prescribed it, or provides it...it must be bad. You could be playing with your health and life. All elements can be toxic in amounts exceeding safe thresholds.

This list is accompanied by an indicator of the amount each element that exists in colloidal ionic suspension within 100% pure ION-MIN brands. Also shown is whether or not the US government considers the element an "essential" macro or micronutrient.

If you are considering taking minerals for medical treatment, consult your licensed physician or naturopath.

## The Big 50 Minerals

COMPOUND	SYMBOL	ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN
CONFOOND	JIMBOL	AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
Barium	(Ba)	unknown	unknown	.0008 oz	461 ppm; 2.3 mg

A relatively unknown biocatalyst, this mineral is needed for regulation of blood pressure, among other systems. Typical of our mainstream nutrition science, there is no RDA or recognition of it as a nutrient even as research proves it is beneficial in trace amounts.

Bismuth	(Bi)	unknown	unknown	unknown	5 ppm; 25 mcg
COMPOUND	SYMBOL	AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
		ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN

This mineral is the original active ingredient of Pepto-Bismol . It is a good anti-infectant and supports immune function. In combination with antibiotics it is now used for treatment of some stomach ulcers. It has even been used to successfully treat syphilis.

COMPOUND	SYMBOL	ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN
		AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
Boron	(B)	unknown	1-3 mg	.002 oz	108 ppm; 0.5 mg

A hyper-trace element, boron plays a role in bone and muscle development, cerebral function, metabolizing macrominerals, and secretion of hormones. It literally hardens our bones. In clinical studies, supplementation appeared to reduce the excretion of both calcium and magnesium, while estrogen and testosterone levels doubled. Boron is a vital element in all humans, yet it was not established as a health mineral until the 1980's! It is likely that most people do not get enough Boron.

COMPOUND	SYMBOL	ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN
		AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
Bromium	(Br)	unknown	unknown	.008 oz	6 ppm; 30 mcg

Bromium is also a hyper-trace element found in the bodies of all higher animals and humans. It settles in the pituitary gland and works with membrane ionic exchanges and nervous function.

COMPOUND	SYMBOL	ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN
COMPOUND	STIVIBOL	AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
Cadmium	(Cd)	unknown	unknown	.002 oz	5 ppm; 25 mcg

A Hyper-trace element with unknown properties, cadmium seems to affect metabolic processes.

COMPOUND	SYMBOL	ESSENTIAL DAILY	TYPICAL DIET	AMOUNT IN	AMOUNT IN
		AMOUNT	DEFICIENCY	AVERAGE BODY	TERRAMIN
Calcium	(Ca)	(1200mg)	400 mg	2.5 lbs	4.7%; 235 mg; 20%*

Calcium is an absolutely essential macro-mineral that forms structural components of bone and tissue. It is the "master" element that also helps regulate cellular activity and pH and blood pressure, heart rate, and digestion. It supports healthy skin and tissue. Your body craves good sources of calcium, yet when it cannot assimilate this important substance, it begins to deposit the crystalline element on bones and in tissue in an unhealthy way.

<sup>\*</sup> One serving of ION-MIN supplies at least 20% of the average essential amount listed for adults. ION-MIN is a highly bio-available form of calcium, delivered along with complementary trace elements that make the calcium operable for its purpose.