

Strontium: A Stable Element for Stable Bones

by Charles Walters

Up front, let us set aside that child of the atomic age, strontium 90. It has no role in the health system our study of mineral nutrients expects to construct. It is merely an isotope of the real thing, symbol Sr. On the Olree Biological Periodic Chart, strontium is number 54.

The real thing in terms of human health is number 38 on the Mendeleev chart, atomic weight 87.62. It resides in soil and rock compounds as well as mineral waters, not the least of which are ocean waters. Strontium is much harder than lead, pale yellow in color.

As a metallic element, it shares with gold the property of being ductile and malleable. Its industrial uses need not detain us. Here it is enough to say strontium hydroxide is an agent for harvesting sugar from molasses. Strontium nitrate is a compound of choice in fireworks. World War II aerial gunners relate to strontium peroxide because tracer bullets helped them find many targets, courtesy strontium. The flares and rockets used as warning and distress signals rely on a mixture of strontium and potassium chlorate for their flaming effect. Not least, strontium figures in the bone health most estrogen-based medicines find wanting.

This vital trace element practically apologizes for the shirttail relative, strontium 90, a radioactive isotope associated with atomic fallout. Rachel Carson, writing in *Silent Spring*, first called attention to the danger of farm chemicals that in their ionized state become radiomimetic, meaning they ape the nature of atomic fallout.

Strontium was discovered in 1790 by Adair Crawford of Scotland. As we open our envelope on strontium, strontium 90 and warnings that go with man's perversion of nature's gift, we hear anew the warnings of Rachel Carson.

STRONTIUM'S HEALTH ROLE

How also can we remain so indifferent to the benefits of a trace mineral rarely mentioned in commonly consulted medical literature?

Quiz show followers will want to know that strontium takes its name from the village of Strontian in Argyll, Scotland. This information along with industrial uses of this rare metal pale into insignificance compared to the "might be" should strontium find universal application in the treatment of osteoporosis.

First-rate peer-reviewed research has revealed that strontium is incorporated into new bone, but does not make its way into older bone. It is old bone, like the core of a tree, that is no longer subject to robust growth, or even growth at all. New bone resembles the character of the tree's cambium layer, as the following few paragraphs make transparently clear.

Strontium does not affect the quality of bone mineral, but it affects the quantity. That is to say, the micro-architecture of bone is improved in bone-absorbing strontium. Mineralization thus holds the key to new bone mass construction. Here we pause to consider the anatomy of bone construction, pre- and post-menopause in women.

For men or women bone is made up of two types of structure. There is a sponge-like internal core and there is also an outside layer called the cortical bone. The bone loss that concerns us most occurs in women as the estrogen level becomes compromised during post-menopausal life. This drop in estrogen levels triggers a tearing down of existing bone.

Simply stated, new bone is not made as fast as life's new process breaks it down as a consequence of a drop in estrogen. This inventory of medical findings clearly identifies strontium in its catalyst role.

Strontium, magnesium and silica lay down a matrix that is later replaced by calcium in bone development. The strontium referred to here is *stable stron-*

tium, not strontium 90. The radioactivity inserted into bone-seeking strontium 90 causes cancer. So erase strontium 90 and insert the word *stable* in front of the strontium associated with health maintenance.

Stable strontium is nontoxic even when administered in large doses over a long period of time. Stable strontium is also the most effective substance yet found for the prevention and treatment of osteoporosis and other bone-related conditions. The above statement, extracted from well-disciplined medical research, has me wondering why so little literature on the subject even mentions strontium and prescription medicines shun inclusion of this therapeutic mineral in their formulas. Is it that junk science has proscribed stable strontium from the pharmacopia pending transfer of strontium to the list of high-priced *Codex Alimentarius* pharmaceuticals, at which time the great discovery will be made that strontium is an *open sesame* to osteoporosis treatment and obscene profits?

A HIDDEN VALUE

Strontium is the 17th most abundant mineral in the human body, clocking in at 320 milligrams actual presence.

Since this report is written for lay readers, the text has not been burdened with the citations that would double its length — nevertheless, one study begs to be mentioned. Pierre J. Meunier, et al., performed a three-year, double-blind, randomized placebo controlled protocol with 680 milligrams of strontium (in strontium ranelate form) daily. It involved women suffering from osteoporosis. Those given strontium experienced a 41 percent reduction in the risk of vertebral (backbone) fractures compared to placebo controls. Also, the research revealed that vertebral density in the strontium group increased by 11 percent. The placebo group had a 1.3 percent decrease in backbone stability.

There is also a 1985 study by Stanley C. Skoryna of McGill University, Montreal, that pointed to the use of stable strontium for the treatment of humans. It involved the administration of 600-700 milligrams of strontium per day in the form of strontium carbonate. Bone biopsies were taken at the hip bone before and after six months of treatment. There was a 172 percent increase in the rate of bone formation with no change in bone resorption.

One of the first physicians to blow the whistle on obfuscation of stable strontium's healing factor was Jonathan Wright, writing in *Guide to Healing with Nutrition* (1971). It was written for medical students but ended up being a popular title for those on the hunt for hidden lessons in unopened books. Wright called attention to the reckless consequences of radioactive strontium 90 in the atmosphere delivered into bones with resultant cancer.

In 1962, the science journalist Rachel Carson wrote her best-selling book, *Silent Spring*. In it she wrote, "We are rightly concerned about the genetic effects of radiation. How then can we remain so indifferent to farm chemicals that produce the same effect in our environment?" When I submitted that quotation to Dr. Americo Mosca, the chemistry prizewinner at the Brussels World's Fair, he pointed out that almost all farm chemicals were radiomimetic, that is, they ape the character of radiation. He handed me computations equating the use of ionized farm chemicals to equal damage delivered by an astonishing number of atom bombs, type Hiroshima.

Pignut hickory shoots, American persimmon, black tupelo leaf, red and white cabbage, black cherry juice, dandelion and dandelion wine, asparagus, grapefruit, onion, carrot, cucumber, cinnamon, Brazil nuts, red beets — in their natural growth environment, all these are excellent sources of strontium.

Stable strontium calculates out at 4.3338, in relation to hydrogen at 100 megahertz. Strontium 90 sends readings off into the ether. When DNA calls for stable strontium and gets something else

the resultant protein will be an errant product. Radiation, of course, wreaks havoc with the DNA. It breaks genes so they can't properly transcribe their message.

It is not possible to comprehend the dynamics of bio-life without a measure of clinical expression. So read carefully, and distill the message our researchers confer on us.

Osteoblastic differentiation from human mesenchymal stem cell is an important step in bone formation. Strontium enhances the induction of human mesenchymal stem cells to differentiate into osteoblast (bone builder). There are two types of bone cells, osteoblast and osteoclast. The last breaks bone down. When the osteoblast no longer makes bone as fast as osteoclast breaks bone down, bone density decreases. The human gene called CBFA1 causes an osteoblast-osteoclast differentiation. CBFA1 viability is dependent on strontium, and bone integrity is dependent on bone construction and destruction remaining in equilibrium.

Medicine now uses biophosphates to treat osteoporosis. This treatment does absolutely nothing to create new bone cells. Its role is to kill osteoclasts, or bone breakdown cells, giving the false reading of bone density or killing-off cells instead of feeding nutrition to bone-forming cells. This regimen is good for about five years. Side effects include bone necrosis of the jaw, and extensive medical bills when teeth fall out. In a high percentage of patients, this pharmaceutical balancing act ruins the rods and cones in the retina.

The tragedy of hormone replacement has become legend, even though it has been downgraded to extinction by no less than the *Journal of the American Medical Association*. That therapy need not detain us, because the real story of bone growth assistance has long replaced conjectural healing. Included in our general assessment of failure are nasal sprays and other pharmaceutical moneymakers.

THE GENETIC CODE

When the physician Richard Olree ran a protein sequence involving the above-named gene, strontium ended up being the tenth most abundant mineral in the production of a bone cell. (As a background to this report, readers are urged to consult *Minerals for the Genetic Code* and *Fertility from the Ocean Deep*.) The eighth most abundant mineral was scandium, with ties to vitamin D. The third most important mineral was silica (see "Silica & the Microbe's Kiss," *Acres U.S.A.*, June 2007). This triumvirate shows how futile is single-factor analysis in unraveling the human health system. The CBFA1 gene is among a cascade of genes split out by Chromosome 6, either sex.

There is always a codicil of sorts, research to the effect that strontium affects the stability of the cells. It supports the endocrine reticulum, meaning the cellular toilet works better.

There is a company in Pennsylvania that puts strontium into a supplement, but it wants a physician to direct its use. For more details, Richard Olree, D.C. is sometimes available at 989-742-4242 or e-mail drrich@llc.com.

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