Organic Silica

[rev_slider_vc alias="OrganicSilica"]

Silica is the most abundant mineral on our planet. The Earth's crust is 27.8 percent silica by weight (46.6 percent oxygen). It is all around us in granite, rocks, clay and sand. We peer through it every time we look out a window or drive a car. The Swiss have watches made out of it. Professors peer at their students through discs of silica, surrounded by metal frames.

Every mineral has certain properties that allow our bodies to function properly. Without minerals we cannot survive. They are not only the building blocks of our planet but are also the building blocks of our bodies.

Silica is an essential mineral whose importance has been ignored by most doctors and nutritionists. It was originally thought that silica is at worst an environmental contaminant of the human body and at best an element which quickly passes through the body and is excreted. These ideas were based almost entirely upon observations of mineral silica, which in the form of dust and particles was responsible for a number of serious illnesses such as silicosis.

Understanding silica

Silica, in mineral form, had been used therapeutically, but it was absorbed inefficiently into the human body. Herbalists have known for centuries that beneficial silica is present in

horsetail fern and some vegetables.

Experience and research with absorbable organic silica since the 1930s has shown irrefutably that organic silica could be described as an essential nutrient for both humans and other animals.

In studies during the 1970s, it was found that silica supplementation aided bone and cartilage growth.

In 1993, it was reported that treatment with silica could stimulate bone formation. By the 1990s, silica formulations were being used by some pharmaceutical companies on wound and burn dressings because it was recognized that silica healed wounds more quickly and could stabilize burns.

The glue holding us together

We are born with an abundance of silica and relatively low amounts of calcium. As we age, the amount of calcium increases and the amount of silica decreases within the body. Silica enhances the function of iron, calcium, magnesium, potassium and boron, and is essential for bone development and growth. It is necessary for bones to re-calcify and aids in strengthening bone tissue. A silica deficiency causes a calcium deficiency which, in turn, results in a loss of tissue elasticity.

Silica is also one of the most important constituents of the body’s connective tissue, including cartilage, vascular lining, tendons, and ligaments. It is found in the thymus gland, adrenal glands, liver, spleen, pancreas and in considerable quantity in hair. It functions as a cross-linking agent, providing strength, flexibility and resilience to collagen and elastin connective tissues. Silica is known to play a part in the integrity of the bones, arterial walls, skin, teeth, gums, hair and nails and has been used to alleviate eczema and psoriasis. Recently, research has focused on determining the role of silica in rheumatic disorders and

arterial disease.

Silica has been used to prevent osteoporosis, strengthen the musculoskeletal system, prevent injuries and accelerate the healing of fractures. This is due to silica's role in forming and repairing connective tissue. It also contributes to the buildup of minerals in our musculoskeletal system during development. Silica is present in osteoblasts (bone forming cells) responsible for the mineralization of the osteoid (bone-forming) matrix. Silica is also an essential component of collagen, the "glue" that holds our bodies together. While vitamin C, or ascorbates, serve as a catalyst in the formation of collagen, silica forms the structural part of collagen.

Circulatory benefits

The presence of silica is vital for the proper functioning of the cardiovascular system, decreasing the risk of coronary problems. It has been shown to be abundant (up to 14 times more) in the arteries of people who are free of heart disease. It is essential in maintaining the structural integrity, elasticity and permeability of the arteries, thereby regulating blood pressure.

Silica and aluminum

There is a relationship between silica and the rate of aluminum concentration in the brains of Alzheimer's patients. Much research points to the fact that a deficiency of silica in one's diet causes an increase of aluminum retained in one's body—and its ultimate accumulation in areas of the brain. Silica plays an important role in helping the body to eliminate these accumulations of aluminum, which are a causative factor in certain forms of senility, including Alzheimer's disease.

Structural integrity

Research shows that skeletal diseases such as osteomalacia

(soft bones) and osteoporosis (porous bones and/or spontaneous fractures, as well as shrinkage) are caused by a calcium deficiency, but do not respond to calcium therapy alone.

Research conducted by noted biophysicists Louis Kervran (Paris, France) and by Dr. Richard Barmakian (United States) shows that fractured bones did not heal at all when high amounts of calcium were present. They heal fair to poorly when moderate amounts of calcium were present. However, they heal extremely well when relatively low amounts of calcium were present with an abundance of silica. When it comes to bone demineralization, a silica deficiency has been shown to be a precursor to calcium deficiency.

Antidote to accelerated aging

Maintaining a healthy level of silica may retard the aging process. The average adult body requires about 20 grams of silica daily to promote good health. However, the body metabolizes and secretes about 10-40 mg. of silica per day through urination, hair loss and nail trimming. Thus, the body's natural level of silica declines with age causing signs of aging such as bone loss, dry and wrinkled skin, weakened teeth and gums, and hair loss to occur.

Conclusion

Given the importance of an organic form of silica in our diet, it is clear that silica remains the missing element in many dietary and therapeutic programs of today.

The above article was adapted from Robert and Kerrie Broe's excellent website at **http://tuberose.com**