

Enhancing Your Knowledge About Calcium

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Calcium is a much talked about nutrient, the emphasis being in its role in the health of bones and teeth. What is much less known and addressed is the role that calcium plays in immune function.

Several studies, such as those reported by the Department of Pediatrics at Harvard Medical School as well as the Critical Care Units at Detroit's Receiving Hospital and the Helsinki University Hospital, indicate that a consistent key factor in critically ill patients (including children) and their ability to survive an infection in a hospital setting was the level of the *ionized* calcium in their blood.

It all makes sense when one understands that ionized calcium is what stimulates the process by which microbes in the body are engulfed and destroyed (phagocytosis). Howard Petty, PhD from the University of Michigan Health System's Kellogg Eye Center has provided high speed images of how calcium acts in an attack on foreign matter in the body.

Through his images of phagocytosis, Dr. Petty is able to track the movement of calcium waves sending signals in the immune response. As the foreign matter or microbe is surrounded, two calcium waves begin to circulate. When the invader is completely surrounded, one wave splits in two. The second wave allows digestive enzymes to enter the foreign invader and destroy it.

The active form of ionized calcium is what your body is looking to retrieve when it has a fever. In raising the temperature of the body, calcium is released from the bones for use in the blood. A fever is very much a friend in infection fighting.

I often see fevers reduced dramatically when the body is offered appropriate calcium. It is a different response in the body than taking aspirin. Aspirin is suppressing the fever, whereas the taking of calcium is assisting the immune system in getting what it is looking for: ionized calcium.

Not any calcium, however, will do. The calcium must be in a form that will assimilate properly and be easily turned into the ionized calcium: calcium bicarbonate. Calcium lactate and calcium citrate are your better choices. These calcium sources take only 1-2 steps to be converted into calcium bicarbonate. Calcium carbonate on the other hand takes about 13 different chemical steps in the body to be converted into ionized calcium.

Read your labels carefully. Pass on those made with calcium carbonate. Also, do not be fooled by chewy calcium squares whose source of calcium is calcium carbonate riding along in a concoction of corn syrup, high fructose corn syrup, hydrogenated fats, artificial flavorings and dyes.

Do not be fooled by antacids as a calcium source. Your stomach needs an acidic environment to ionize the calcium, not antacids. Taking antacids inhibits the ionizing process of calcium. (You can refresh your memory on the importance of stomach acid in past articles on my website)

Here is another point of interest: naturally occurring spring water is rich in calcium bicarbonate. Of all the bottled waters, the one richest in the bicarbonate is the Evian brand. What is interesting is that in a blind taste test on the streets of New York, it came in last. People just are not used to tasting mineral rich water. They preferred the taste of bland, distilled water instead.

So, if in a pinch, on the road with a cold and needing some calcium, pick yourself up a bottle of Evian water and drink up.

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