



The Health Nugget

Iron Overload

There is no doubt that iron is an important element in the human body. Last month we learned how to increase iron absorption to ensure adequate blood levels. Iron, we concluded, is a good guy. But iron has a dark side. You see, since adequate iron has been associated with strength and stamina, we tend to think more is better. This is not the case. Iron is a necessary, but potentially toxic substance.

In the human body, iron exists as an ion that has the flexibility to donate or accept an electron. This ability makes it essential to life, but also heightens its potential of being damaging. As a protective measure, the body binds iron to proteins such as heme in hemoglobin, transferrin in the blood, or ferritin, found in its highest concentration in the liver. In this bound state it is relatively harmless. Over 90 percent of the iron absorbed from your diet is normally bound to these protective proteins. Once bound, if not in active service, it is simply stored. If released from its carrier, however, iron becomes a loose cannon in the body.

Free iron triggers intense inflammation, free radical generation and oxidizes the lipids in our cell membranes. Iron accumulation has been associated with heart disease and cancer. In addition, Russell Blaylock, M.D. states, “When iron levels are too high, they can precipitate rapid aging of tissues and bring on neurodegenerative disorders such as Alzheimer’s disease, Parkinson’s disease, and ALS.”¹ In the dietary study NHANES (National Health and Nutritional Examination Survey), it was found that “people who had transferrin iron saturation greater than 55 percent had an increased mortality rate compared to those with lower iron levels.”²

Iron is a key ingredient in rapid cell division.

From cancer to microbial infections, a pathogen conquers through rapid cell division. So significant is iron to this process that it is perceived as a rate-limiting nutrient. “This means that the more iron that is available, the more the cancer cells will divide and flourish, and the better chance they have of killing the host. Recent research has shown that people with high levels of iron have an increased risk for cancer.”³ When the storm of a microbial infection is brewing, iron is not what you need. The body knows this and responds by increasing a hormone that directly destroys microbes and down-regulates iron for as long as the infection persists. This is an example of one of the body’s compensatory responses to iron overload. In spite of its efforts to rein iron in, evidence of iron overload can occur as we age and in disease states.

Take breast cancer for example. It has been observed that, “high iron levels within the breast tissue worsen the prognosis.”⁴ Ferroportin is a protein that eliminates iron from cells. Low levels of this protein have been associated with the most aggressive and recurring breast cancers. According to Suzy V. Torti, Ph.D., an associate professor of biochemistry, “In the case of cancer, the ability to remove iron from cells is reduced by the depleted ferroportin levels, and as a result, iron accumulates in cancer cells. Cancer cells require iron, which allows the tumor to grow faster and perhaps become more aggressive. Because ferroportin can remove iron from the cell, when we put the protein back into the cell, the ferroportin removed the cancer’s growth stimulus. Our findings suggest that ferroportin is a substantial influence on the behavior of the cancer.”⁵

In relation to heart disease, researchers found that when animals were fed a diet very low in

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iron, the size of the atherosclerotic lesions in their blood vessels dramatically reduced. In one study, “using an iron chelator (process of binding free iron) for nine weeks reduced the iron levels within the plaque and reduced overall atherosclerosis, strongly suggesting iron was playing a major role in atherosclerosis.”⁶

In his research, Dr. George Bartzokis of Semel Institute for Neuroscience and Human Behavior at UCLA compared memory and information-processing speed in a group of healthy older adults with brain iron levels. Poorest performance was seen in men who had the highest accumulations of iron in their brain’s grey matter. More specifically, his research has focused on the link between iron and neurodegenerative disorders, including Alzheimer’s and Parkinson’s disease. MRI brain scan studies revealed that “increased iron levels were present at the earliest onset of disease, indicating that they were not a consequence but rather a potential cause of brain degeneration . . . people with the highest brain iron accumulations had the earliest age at onset of the degenerative diseases.”⁷

I find it interesting that when you look at nature, iron appears difficult to extrapolate from whole foods. This has made red meat look superior. But maybe whole foods were designed this way for a reason. Before knowing whether you need more or less iron I would encourage you to have a health professional assess your body’s status by measuring serum ferritin and transferrin saturation.

Some have the opinion that the amount of damage done is in proportion to the excessive amount in storage. Others maintain that rather than the amount ingested, the defining factor is the substances and events that cause proteins to release the iron into its unbound state. These substances include

alcohol and aluminum (potentially from vaccines). If reducing body levels of iron is needed, talk to your health provider about iron chelators that have been used such as IP6 Gold powder, an extract of rice and wheat bran fiber, as well as curcumin and quercetin.

The bad guy/good guy behavior of iron may initially appear as an anomaly until you remember how even our own personalities verify the fact that qualities with potential for good have also revealed themselves as damaging or hurtful. It is true that our natural tendencies, unless corrected by the Holy Spirit of God, have in them the seeds of moral death. But take courage, for where sin abounds, grace does much more abound. Grace is the divine chelator that binds itself to the loose cannon of self with a grasp that will not let go.

¹ Russell Blaylock, MD, “Iron and Your Body: Too Much Can Be Deadly,” *The Blaylock Wellness Report* (April 2011), Vol. 8, No. 4.

² Ibid.

³ Alex Vasquez, “Iron in Men” (Jan. 1997), *MenWeb*, <http://www.menweb.org/alexiron.htm>.

⁴ Russell Blaylock, MD, “Excess Iron and Cancer: Part 2,” *The Blaylock Wellness Report* (May 2011), Vol. 8, No. 5.

⁵ “Iron-Regulating Protein Is Strong Predictor of Breast Cancer Prognosis, Study Shows,” *Science Daily* (Aug. 4, 2010), <http://www.sciencedaily.com/releases/2010/08/100804151351.htm>.

⁶ Russell Blaylock, MD, “Iron and Your Body: Too Much Can Be Deadly,” *The Blaylock Wellness Report* (April 2011), Vol. 8, No. 4.

⁷ Kathleen Anderson, “Excess Iron and Brain Degeneration: The Little-Known Link,” *Life Extension Magazine* (March 2012), http://www.lef.org/magazine/mag2012/mar2012_Excess-Iron-Brain-Degeneration_01.htm.

