# Beating Free Radicals: The Basis for Injury, Illness, and Death

Thursday, May 22, 2008 by: Glen Gordon MD See all articles by this author

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(NaturalNews) Free radicals are deadly chemicals formed in your body when stress, illness, or injury causes ischemia or diminished blood supply to tissues. Insidious as excessive eating that squeezes capillaries or as gross as a severed artery, ischemia is scalar as to amount of involvement but the path to cell death for each cell is the same. From local injury to massive trauma, heart attack or stroke, wherever one sees pain, shock, coma or death, all are free radical mediated.

#### How are free radicals formed?

Mitochondria are cell structures that convert food to energy called "high energy phosphate" or ATP in the presence of oxygen, which releases carbon dioxide and water. If not receiving enough blood supply of oxygen, mitochondria "scorch" oxygen which now becomes a dangerous "free radical". This changed oxygen that once made life possible can now take life away, cause cancer, or break apart DNA to create malformations and a lot of other bad events in our body. Normal high-energy phosphate formation releases a few free radicals, which are responsible for DNA damage that causes aging.

#### Why do free radicals exist?

When humans initially occupied earth, the threat was infection regardless of initial injury. Free radicals evolved to liquefy tissues housing the infection ergo acidosis, which is ideal for solubilizing meat as in gastric acid. They had to localize the bacteria and their toxins thus decreased blood pressure, blanched tissues, and shock. Lastly, they had to block off access to the main body and thus prevent coagulopathy. The main functions then are acidosis, drop in blood pressure, and blood clotting -- a scorched earth policy if ever there was one! Their redeeming quality: they will sacrifice a thumb to save the hand and turn the infected area of the thumb into "laudable pus", which gets rid of the offender before it kills the offended.

Today the number two killer in the first two hours in Iraq is: 1. Acidosis 2. Shock 3.

Blood clots, jointly spoken of as "The Lethal Triad" -- pure free radical chemistry killing our sons and daughters using a million years old formula.

### How do we get rid of them?

Don't be fooled by propaganda, the only chemicals known to neutralize free radicals are antioxidants. While Vitamin C, D, E and others are important, most important are protein antioxidants our body makes to protect against free radicals. It's smart to maintain a good supplement schedule even though our natively formed protein antioxidants do much more. As far as supplements, no one walked his talk better than Linus Pauling, and in spite of a busy life that saw him win two Nobel prizes, he died in his sleep at 93 years of age.

Unfortunately, free radical neutralization by antioxidants is highly inefficient since it relies on random collision between the antioxidants and free radicals to stop the damage, and when a collision occurs the desired neutralization may fail because a specific alignment is required in addition to "the bump in the night". Following injury and illness, the body produces free radicals far more rapidly than antioxidants can neutralize them. The injury zone widens and the illness worsens while we attempt other means to change the balance, e.g. antibiotics, fluids, blankets -- anything! Too many drugs used in trauma care also impair healing and contribute to higher death rates. Anti-inflammatory drugs, cortisone, local anesthetics, and narcotics are among these agents.

## The Natural Balance - Antioxidants and Electromagnetism

Antioxidants and free radicals are part of a huge group of paramagnetic compounds that are known to respond to appropriate electromagnetic (EM) fields. Today, we can design EM fields that very efficiently "line up" free radicals and antioxidants like a key in a lock. This alignment concept was first described by Svante Arrhenius, a Swedish genius who studied physics and won the 1903 Nobel prize in chemistry. Each antioxidant can neutralize numerous free radicals converting them to harmless waste products of water and carbon dioxide for which our body intended them before the wheels came off. Scientists calculate that pulsed electromagnetic fields increase protein antioxidant efficacy a hundredfold when initiated immediately.

The next time you experience an injury or illness, don't take drugs or attempt excessive supplementation; reach for The Natural Balance Brigade and quench free radicals with a pulse of electromagnetic energy. As for supplements, they are best taken regularly over time to assure adequate tissue levels; excessive ingestion enriches your urine and does nothing for tissue levels.

The advantages to you vs. that of using drugs doesn't end with just lining these bad actors up; a year or so ago I discovered that proteins including antioxidants use electromagnetic energy to initiate a computer-like information system that enhances the tempo of their changes in shape to dramatically enhance neutralization of free radicals. You have minutes to a few scant hours to neutralize free radicals or they incite "the inflammatory

cascade" following which cells will die, and that can be followed by stunning (coma) and death at rates one can hardly believe.

### What of the universal force, Electromagnetism?

Electromagnetic waves swept across our planet as a result of solar flares and lightning since our solar system began; scientists speak of these waves as "forcers" that proteins respond to, a natural balance that saw proteins driven forward to form more complex assemblies and finally life. It was in this symphony of signals that life evolved and diurnal rhythm was set into motion, the life-sustaining symphony we see today. In composite, these electromagnetic waves are the Schumann Resonance, which was first described in the 1950s and continues to generate great interest in many fields including medicine.

We can think of protein antioxidants as two large and two small baseball gloves tied together side-to-side by spring-loaded molecules uniquely capable of responding to electromagnetic fields that spur on the big gloves to trap free radicals and toss them into the smaller gloves where they are reduced to water and carbon dioxide. *If* early enough and rapid enough, the injury hardly takes place. As an example, we can look at the immediate pain and swelling of a bee sting as the toxins, themselves super-radicals, incite free radicals and other inflammatory chemicals. When applied immediately, there's no pain, no swelling, and minimal redness.

# **Natural Energy Technology Today**

Never heard of it? Drug company lobbyists would respond, "just right". Caregivers who never heard of electromagnetism in their training naively dismiss it. Perfect storm conditions for the blind use of drugs and hundreds of thousands of prescription related deaths annually while ignoring the better, safer harbor of energy medicine. Vetted in thousands of studies, a National Institutes of Health (NIEHS) symposium, and use by thousands around the world, the rejection in the U.S. is inexplicable in polite discussion.

These technologies are not all of equal value, and none justify thousands of dollars price tags -- not lasers, not ultrasound, not pulsed electromagnetic field devices! Do your homework; understand electromagnetism and you will see that lasers are too near visible light to penetrate tissues deeply. We demonstrated in the lab and with patients that the RF (radio-frequency) signal emitted by the circuit activating the laser had far more bioactivity than the light beam itself. While this information system in proteins is acoustically driven, why presume we know their harmonic dictionary better than they by forcing ultrasound into tissues. Join the chorus, but don't write the song for them. Give them the natural energy they've used for eons and tissues will thank you with prompt restoration from illness and injury, which I've observed in 20,000 patients.

Lastly, insist on a money back guarantee. In asking anyone to use this technology, a manufacturer should happily stand behind his product. This era is not about killing people and "studying the data" but rather about demonstrating results or refunding the money.

# About the author

Considered a senior scientist in the field of pulsed electromagnetic field technology Dr Gordon speaks internationally on this topic. Beginning in 1980, he has accumulated the largest clinical experience in the United States in treating human illness and injury. An admirer of Rachel Carson, author of Silent Spring, Dr Gordon agrees with her that, "man made solutions imposed upon the natural balance of things diminish the experience of mankind". He sees drugs and surgery reflective of such man-made solutions and has been a pioneer in establishing the universal force of electromagnetism as "the natural balance of things" in tissue restoration after injury and illness.

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