



CHRONIC / ACUTE CONDITIONS

The Secret Killer: Cells on Fire

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The cat's out of the bag. Let's share secrets about the "secret killer" of health, issue an inspiring message to reduce the aging process and allow the body to live in more optimal health.

We live and die at the cellular level. *Time* magazine's February 2004 cover proclaimed, "The Secret Killer - The surprising link between INFLAMMATION and HEART ATTACKS, CANCER, ALZHEIMER'S and other diseases."

Inflammation is the body's acute, natural response to damaged tissues. Normally reserved for external environment injuries (sprains, pathogens, toxins), the 21st Century challenge is that the immune system is inflaming cell membranes (chronic inflammation) as a result of acquired toxins from the environment and food supply. Coupled with this systemic hyper-inflammatory activity, intracellular free-radical processes also excite the inflammation response from the inside out. This double whammy challenges health like never before.

Cells On Fire



Cellular inflammation is the primary cause of what modern medicine is now labeling "mitochondrial diseases" - the new shibboleth for all chronic-degenerative, autoimmune diseases. Free-radical inflammation damage to the mitochondrial membranes and DNA is the bugbear behind all the health-destroying diseases, despite their different names and diatheses.

The mitochondria are the cellular organelles that make ATP (Adenosine Triphosphate), the chemical energy of life that funds every thought, heartbeat and cellular activity of the human experience. "Energy is everything!" Like tiny nuclear reactors, the mitochondria use free radicals to make energy; and the body's primary antioxidant nutrients (glutathione, catalase, super oxide dismutase) are the control rods that keep it safe.

If a cell generates too many free radicals (various causes include hyper thyroid, pesticides in food, genetically-modified food, mercury in dental fillings and vaccinations, immune system responses to intestinal reactions, environmental toxins, etc.), then the mitochondria become damaged, aberrant and the cell must either expunge them or destroy itself (apoptosis). Failure to remove free radical-damaged DNA from cellular society means that the cell's sympathetic nuclear DNA can become "rogue," aka cancer or chronic-degenerative disease.

Science has discovered that on going cellular inflammation equals Alzheimer's, rheumatoid arthritis, Crohn's, atherosclerosis, arteriosclerosis, multiple sclerosis, scleroderma, heart disease and cancer; but research often focuses on developing suppressive drugs rather than issuing a clarion call for the simple, causative cure - cleaning up the environment and restoring nutrition to nature's wholesome standards.

The specific inflammation-based disease that a person gets is dependent upon several variables including: genetic predispositions opportunity (exposure), and biochemically-individual epigenetic transcriptions of DNA (e.g. cellular metabolic processes, which according to Dr. Bruce Lipton are influenced by thoughts and feelings). But here's what's exciting — remediation ultimately returns

to two causative concepts: the environment and nutrition, and thus is within our control.

Chiropractors quickly relate to the biological/nutritional concept of cellular inflammation because they are in the front ranks of helping patients with "injury inflammations" in daily practice. An injured, inflamed knee exhibits redness, swelling and pain. At the cellular level, inflammation means that the cell's fluid, undulating, lipid bi-layer membrane becomes damaged by free radicals and cytokine signaling molecules that launch both the cell's immune activities, as well as the immune system's inflammatory processes.

Hormone Resistance

Subclinical, chronic cell membrane inflammation (from within or from the immune system's activity on the cell wall) means that the cells become hormone resistant, a root cause of insulin resistance (sugar is inflammatory, thus diabetes); thyroxin resistance (thus thyroid disorders); as well as estrogen, testosterone and progesterone resistances. Hormones must dock with cell membrane receptors but can't when the membrane is inflamed. This is why thyroid drugs and bio-identical hormones may help but can't cure. They don't address cell membrane inflammation.

[pb]Natural Response

Cellular inflammation is simply the body doing what it is supposed to do under the circumstances of environmental toxins, intestinal inflammatory reactions and lack of dietary redox-regulating foods (raw fruit and vegetables).

The mitochondria have lipid bi-layer membranes, too. Their innately intelligent membranes manage nutrients for the citric acid cycle (makes ATP), as well as beta oxidation that makes ATP from membrane molecules. The mitochondrial membranes are where free-radical inflammatory processes can impede the body's energy resulting in fibromyalgia and chronic fatigue syndrome. The thyroid will lower the body's metabolic rate (ATP production) to protect the cells from accelerated destruction. Thus, these diseases are not really about the thyroid or adrenal glands, they're about the secret killer — cell membrane free radical/inflammation.

The mitochondria, (26000 of these energy generators in each cell), communicate directly with the cell's nuclear DNA — the repository of the human genome. Epigenetic processes — how the cell transcribes individualized, self-regulatory information from the nuclear genome — facilitate the cell's response regarding energy production, function, inflammation, free radical damage, pathogen presence and all necessary actions to ensure the prime directive: Adapt and Survive. This is why chronic-degenerative diseases and autoimmune diseases are labeled mitochondrial diseases. The mitochondria are the "minershaft canaries" giving early warning about the relative peace or warfare going on beyond the borders of the cell nucleus' inner sanctum.

When free-radical damage and inflammation permeate the cellular environment the cell's genomic chromosomes present a more confrontational face and manifest a disease depending on the person's genetic/bioenergetic disposition. This is why the one cause — inflammation — can serve up hundreds of different diseases for medicine to label based on biochemical individuality.

To the body's innate wisdom, a diseased person can still perpetuate the species, thus the body allows the disease as being preferable to death. This is why diseases already exist within the human genome, within our cells — they are an innate choice.

This is also why natural health practitioners contradict the errant tendency to blame genes for our diseases. Of course, we all have genes for cancer and diabetes and heart disease. But we don't have to express those genes or diseases! If we follow nature's laws, a person can have generations

of familial disease, live a long, vibrant life and never express the disease. Just don't do the same thing that the ailing ancestors did (refined foods, nutrient deficiencies, chemical/pathogen exposures) and be proactive to maintain health despite the 21st Century challenges — nutrient-depleted foods, electromagnetic/ionic radiations, genetically modified foods, stress and acquired toxins.

What must we do? Simply protect our mitochondria from free radical, inflammatory damage. Protect our largest organ — the collective cell membranes (cell, mitochondrial and nuclear). Nature has a plan and it's within the life-shaped molecules of natural foods — fruit, vegetables, wild game, herbs and spices.

Action Plan

A simple, \$4 test can evaluate a person's cell membrane free-radical/inflammatory damage occurring now. It measures lipid peroxidation via urinary malondialdehyde. It's a great way to ensure the proper amount of antioxidant activity in the body — not too little, not too much.

Correcting excessive inflammatory activities involves a simple recipe:

1. Remove the cause. This is basically detoxification which we'll discuss in an upcoming issue.
2. Lower the inflammatory "set point" established by the intestine's enterocytes (see April's *DC Insights*.)
3. Adjust dietary antioxidant supplementation (plant-based food nutrients, judicious supplemental antioxidants such as acetyl glutathione, Co-Q10, etc.) to protect against excessive free radicals and inflammation.

In the 21st Century, aging equates disease — the "rusting" oxidative process of free radical damage and the resulting inflammation. Ultimately, it's nothing more than the body doing what it believes to be correct.

The secret killer has dire consequences. The answer lies within: whole foods and supplements, the intestinal microbiome, and within the hearts of natural health practitioners who teach patients "The Answer" to the perils and afflictions of today's health challenges.