

NATURAL DETOXIFICATION – THE BODY’S INNATE PROCESS OF SELF-CLEANSING

The Cell’s Perspective Of An Ancient Process



ATP (Adenosine TriPhosphate), Breast Health, Bucket Theory,
Cell Membrane, Detoxification, Extracellular Matrix, Glutathione,
Inflammation, Liver, Mitochondria

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The Game Has Changed! Health In The 21st Century Requires A New Model For Detoxification!

First and foremost, the word “*detoxification*” is a natural health term in the public domain and common usage that refers to the body’s innate process of removing toxins and debris from inside its cells, through drainage systems, and out of the body terrain. This way, the body can perform its life processes unencumbered by detrimental elements, molecules, and compounds.



Detoxification is the body’s natural, innate processes to “recycle,” or “take out the trash.” This is necessary for survival as well as optimal cellular health.

Thus detoxification refers to the body’s innate, cellular process of alchemically converting toxins to useable substances—a process that, for those who wish to know, can involve methyl molecules, electron donors and acceptors, and use of ATP (Adenosine TriPhosphate) – the body’s chemical energy of life. The body is “The Great Recycler!” It endeavors to do the most work with the least amount of energy.

Note: Not Medical Detox. In medicine, the term “*detoxification*” is also borrowed from common usage and used to describe methods of chemically helping people who are addicted to drugs (narcotics, alcohol, prescription medicines) to reduce the toxic effects and neurotransmitter dependency upon such drugs. Often these procedures are called “rehab” or “rehabilitation.” Also, “*detoxification*” is a term used in medicine to help save lives of people who ingest life-threatening poisons (chemicals, lead paint, chlorine vapors, medications). **These acute and chronic medical procedures are NOT what we are talking about.**

There are two types of toxins: 1) metabolic wastes, 2) exogenous elements (molecules and compounds).

- **Metabolic wastes** are produced by the cells by using food nutrients to make ATP energy and other processes (protein transcriptions). Metabolic wastes occur in both the body’s processes of anabolic building as well as catabolic breaking down of substances. So metabolic detoxification is a nutritional issue, and it’s part of the science of metabolomics.
- **Exogenous elements** are metals, molecules and compounds that do not, and cannot, serve the cells or the body’s life processes, or are detrimental (toxic) to the body. This includes chemicals (chlorine, fluoride), plastics, pesticides, food additives, partially-hydrogenated (*trans*) fats, air pollutants, water pollution, etc., as well as metabolic wastes from pathogens (bacteria, parasites, fungi, virus and mycoplasmas.) It’s everything else other than the cells’ metabolic wastes.

Dumpsters in your body. Waste products are mobilized and transported through the body to exit portals. Along the way, the body has a choice to drop toxins off at a storage depot if its innate wisdom determines that it cannot properly dispose of the load which is called a “*toxic burden.*” A handy place for the body to “lay its burden down” is in the fat cells as well as the collagen (extracellular matrix).

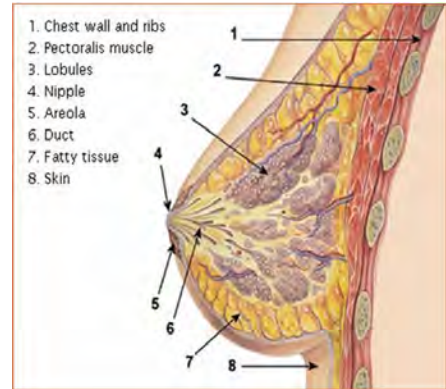


For example, if the body’s chief detoxification organ—the liver—does not have enough nutrients (methyl molecules, sulfur-bearing amino acids, antioxidants, and enzymes) available to handle the toxic burden while performing its myriad of other duties, then toxins may be stored in the adipose cells (fat cells) for future detoxification when the nutritional resources are available. In essence, the body just sets the work aside on the “back burner.” The storage of toxins in fat cells is one reason why the fat cells enlarge or

become water-infiltrated (water retention around fat cells) as the body uses the lymph fluid to protect itself from the inflammation associated with the stored toxins.

Note: Since the breasts are largely composed of many adipose cells, researchers surmise that if the breasts become storage depots for exogenous toxins, that the resulting free-radical damage might be associated with the reason that breast cancer is a primary concern for women (and also a concern for men.)

This, coupled with the fact that the breast cells have numerous hormone receptors on their membranes, if these cell membranes become inflamed due to toxins, then they do not receive the hormonal messengers (e.g. estrogens) and the homeless hormones become “toxic” and can become linked to abnormal cellular proliferations.



The body has established “drainage” pathways or “exit portals” that are used to “take out the trash.” Toxins processed by the liver can exit the body through the gall bladder and the kidneys. The gall bladder generally gets the high molecular weight, fat-soluble toxins; and the kidneys get the water-soluble toxins.

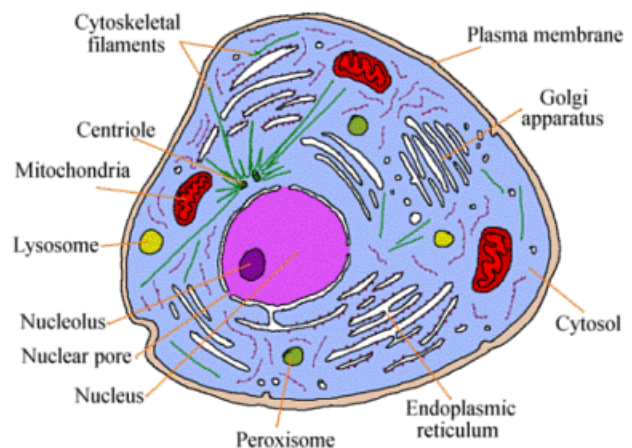


The body can use every “exit portal” to get rid of toxins and some are used more than others depending upon how the body decides to conduct business. Some tissues and processes that have “Exit” signs posted are: the gall bladder (moves toxins into the intestines), kidneys (urination), lungs (gaseous toxins exhaled), skin (sweat), lachrymal glands (tears), sinuses (mucous drainage), menstrual period, colon (bowel movements), ears (wax), and hair (toxins exit into the hair shaft as it grows).

As cited, the liver is the chief detoxification organ for the body at large, but inside most every cell are organelles called *lysosomes*, *peroxisomes*, *golgi bodies*, and *endoplasmic reticulum* that use a powerful antioxidant and detoxifying molecule called *glutathione (GSH)* as well as *methyl groups (CH₃)* to transmutate toxins and help eliminate them from the cells. **So really, the cells collectively are the largest detoxification organ in the body.**

Inside the cells we find thousands of power plants called *mitochondria* that manufacture the chemical energy of life called ATP. The other organelles have critically important functions such as genetic transcription, making enzymes and proteins to conduct life-business, and they have a clear preoccupation with detoxification. Nature shows us by the structure of the cell’s organelles that detoxification is critically important to healthy cells, and healthy cells are the foundation of a healthy body.

Organelles of the Cell



Inflammation: The real price of toxins. Like our cities, our bodies have elaborate waste disposal systems. But like cities caught up in a garbage strike with mountains of reeking refuse piling up on the sidewalks, our bodies can become overburdened with toxins and the dire need to detoxify and lower chronic inflammation. All the body needs are the tools and directives.



In February, 2004, *Time Magazine's* cover article was, "The Secret Killer: The Surprising Link Between INFLAMMATION and Heart Attacks, Cancer, Alzheimer's, and other diseases." Here, the public was alerted to the inflammation process as a common link to all autoimmune and chronic-degenerative diseases.

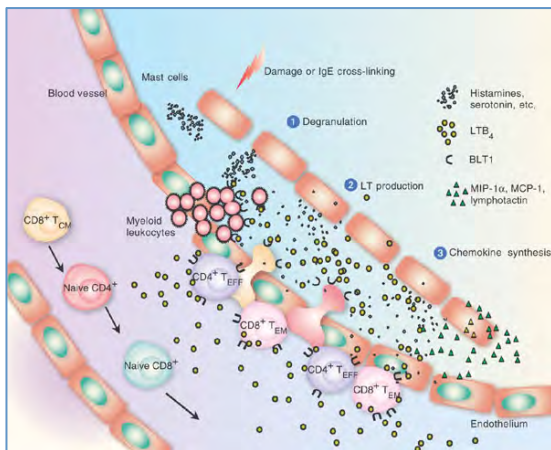
But what causes the inflammation? The answer is "toxins," for the most part. Toxins engender free-radical damage to cell membranes. The resulting cell fragments alarm the immune system and incite an inflammatory response.

There may be other reasons that stem from damaged genetics (perhaps due to electromagnetic frequencies, cell phones, wifi, smart-meters, etc. as well as ionic radiations from radioactive particles in the air, food, and water), but the "elephant in the middle of the room" is the correlation between the skyrocketing rise of inflammatory diseases and the gigantic rise of environmental toxins in the air, water, food (pesticides, GMO alterations of plant genetics), as well as from products in our garages, on our lawns, in our mouths (amalgam dental fillings), on our skin (cosmetics), and in the carpets and walls of our homes. Obviously the immune system is responding to *something* affecting the cells with an inflammatory response. Toxins are the chief, most widely acclaimed, cause. It's easily proven that pesticides, mercury, lead, chemicals, plastics, and trans-fats, damage cells and cause inflammation.



It doesn't take any leap of logic to arrive at the bucket concept—the simplistic idea that when the bucket gets filled, it overflows. Different people have different sized toxin buckets, so some people handle the environment better than others before a genetic switch is thrown and disease results. The body can only store so much, and when toxins overflow they damage cell membranes, mitochondrial energy processes, and genetics. Here, in the body's perceived need for inflammation and even cellular destruction (*apoptosis*), is the root of the inflammation dilemma. The inflammation that is causing all the big diseases can stem from molecules that the body does not want or use, but it struggles to get rid of them—particularly if a person's diet is contributing even more inflammation from refined sugar and carbohydrate foods as well as toxins, and/or lacking in the phytonutrients (vegetables, fruit) that fight cancer, quench free radicals, and build healthy tissue.

Cell Membrane Damage. Toxins damage cell membranes by binding with the membranes or by causing free radical damage that excites the inflammation response. Damaged membranes no longer have



hormone receptors that can perform effectively. This is the issue with the hormone-resistant diseases e.g. diabetes (insulin resistance) and hypothyroidism (thyroxin resistance and failure to convert T4 to T3), also the inability of the brain's hormonal command center—the hypothalamus—that must properly communicate with the pituitary, thyroid, adrenal, and gonad glands. Hormone imbalances are not so much a hormone problem as they are cell membrane issues.

When the cell membranes (outer cell wall, mitochondrial membranes) are inflamed and don't work right, the nutrients (glucose, oxygen) that fuel mitochondrial production of ATP can be blocked or diminished. Scientists have cited that "a lack of ATP is a root cause of all diseases" because when cellular energy is low, the cells cannot repair their DNA (genetic code).

DNA repair also requires enzymes as well as methyl molecules (CH₃)—made from Vitamin B-12, Folic Acid, and SAM-e (S-Adenosyl methionine) – that silence disease-expressive chromosomes. Inflamed membranes and free radical damage to DNA are cited as root causes of why a person’s genetics express a dread disease. The body needs access to its life code (called *transcription*) to maintain optimal cellular health. Ultimately our bodies need optimal cellular health in order to have optimal body health; and ultimately cells use nutrition, not suppressive drugs, for their life functions.

Further, the lack of the body’s chief antioxidant, *glutathione*, and other antioxidants—*catalase*, *superoxide dismutase*—can allow the mitochondria to engage in a perpetual cycle of free radical destruction labeled by Dr. Martin Pall as the “NO/ONOO cycle” in reference to the molecules involved. This vicious cycle inhibits proper ATP production (low energy), and also damages chromosomes—damage directly linked to unleashing diseases from within the body.



Okay, we’ve bit off a small chunk of molecular, nutritional biochemistry. Let’s get back to detoxification and how it’s a fundamental, inherent, innate, God-given body process. Actually, detox is really a nutritional process because the body uses the molecules from whole food, especially vegetables and herbs, to provide both the fuel (ATP) and the tools (nutrient molecules) to maintain itself in optimal health with a minimal amount of toxins fouling up the metabolic processes.

Detoxification is chiefly a nutritional issue. If you have the nutrients, the body will use them to detoxify itself. This is also why unrestricted access to nutritional supplements such as anti-oxidants is a basic human right. They help counter the onslaught of cellular damage of living in the 21st Century. This is why nutritional “detox” programs are critically important to the national health quotient. It’s a simple equation: supplements help the body live in good health = less spent on drugs and disease treatments.

The Best Way To Detoxify. Since the body already has its own innate detoxification processes, from a natural health perspective, it’s absolutely best to work with the body’s own systems. This is really the essence of natural health—working *with* the body rather than inflicting chemical demands on the body.

Here is a plan to BUILD the body nutritionally so it can detoxify itself. A sequential approach to building whole-body nutritional health is the essence of a proper detoxification program.

1. **Support the liver** with phytonutrients (organic fruit & vegetables, and herbs). Build liver function nutritionally and the liver will detoxify itself and the body according to the body’s innate processes. There are herbal formulas that excel in supporting the liver to function at its best.
2. **Assist the body to remove toxins** from the storage depots (fat cells and extracellular matrix) by increasing its overall nutritional health (organic fruit & vegetables, and herbs) using *superfoods* such as chlorella and chelating herbs. There are wonderful supplements to this effect.
3. **Support the cells** nutritionally for optimal health—membrane health, anti-inflammatory nutrients, antioxidants, methylation donors, ATP processes. Ensure that adequate Vitamins D₃, K₂, A, and the complete, natural Vitamin E (4 tocotrienols, 4 tocopherols) are provided as all four of those fat soluble vitamins promote cellular health as recognized by the huge number of cell membrane receptors and chromosomal repair processes that require those vitamins. This phase is cutting edge and there are marvelous supplements to help cellular health and healing.

Such a brilliant, three-phase plan for whole body nutrition exists. It’s a plan that simply works with the body to do what the body wants to do anyway. When we supplement to boost the body’s nutrition, the body rewards us with its self-directed removal of offending, disease-causing toxins, and maintains itself with less inflammation and better energy.

Today, more than ever, we all need good detoxification programs that nourish the body, so the body is unshackled to do what it does best—adapt, survive, and maintain its cells in optimal health.

The programs of the 20th Century are all well and good, but they are not helping people in the 21st Century like they used to. In the past, toxins were such that they were stored in the fat cells and could more easily be removed when the body was ready and able to do so. For example, the horribly toxic mercury that is used in vaccinations would be injected into children and it was expected that their bodies would handle it. But today, the children's micro-biomes (intestinal bacteria that help regulate health) are deranged by the use of antibiotics and their blood/brain barriers are weakened. The mercury can get into the brain and cause autistic-spectrum disease.

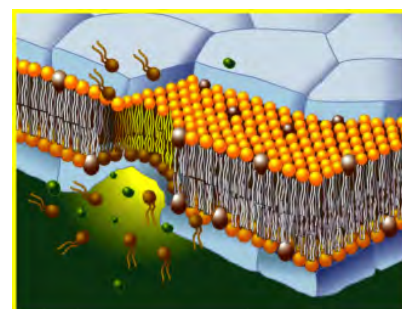


Today, there is direct damage occurring inside the cells. Rampant cellular inflammation inhibits the body's ability to detoxify itself because inflamed cell membranes are not fluid and thus resist in induction of nutrients and hormones as well as the egress of toxins. Lack of antioxidant nutrients in the diet (lack of fresh, organic, raw fruit and vegetables) mean that the mitochondrial production of ATP causes both inflammation and damaged DNA due to free radical processes.

This is why a 21st Century detoxification program is necessary. The game has changed from the extracellular matrix to the intracellular life processes. Fortunately, there are herbal/nutritional programs that address the three phases of detoxification: 1) build the liver, cleanse the bowel, 2) cleanse the extracellular matrix, and 3) cleanse and restore the cellular functions—fluid membranes, adequate antioxidants, methylation support, and boost ATP production.

Once the intracellular function is healthy and working, the body can more easily focus on removing toxins and heavy metals from the brain and/or deeper tissues. This can be accomplished by increasing glutathione (the body's premier antioxidant nutrient). The latest research demonstrates that supplemental *acetyl glutathione* (a 21st Century nutrient) can pass through the intestines, retain integrity in the bloodstream and actually enter the cells. Just a case in point that today's detoxification processes depend upon cutting edge solutions.

Everyone alive needs to detoxify. Even people who are vegetarians or eat exclusively organic foods! In testing hundreds of natural health devotees' urinary *malondialdehyde*—a marker for cell membrane inflammation—most score in the “rapid aging, cell membrane inflammation” range. Today there are literally 10,000 ways the body is being damaged—nuclear radiation in the air, water and food; air,



food, and water quality, prescription medications, vaccinations, mercury-silver amalgam dental fillings, household products and plastics, genetically-modified *non*-foods, etc.—so even natural health people must detoxify and they, too, require the advantages of a 21st Century solution.

Detoxification is absolutely essential for the body to be healthy. Today, there are new obstacles to the body's established methods, so detox must be **done right** to be effective in the 21st Century. When poor health, symptoms, and disease predominates our global culture; the practice of assisted detoxification is more important than ever before. And more than ever before, the body needs help—nutritional support that enhances the body's innate processes—to detoxify the new challenges to its established life processes.

The health professional who shared this information with you has the tools to help! Detoxification sets the stage for the body to be able to heal itself. Best wishes in your natural health endeavors!