

Understanding Genetic Detoxification

I am sure that many of you have heard of or even done a great number of detox programs, but one should know that there is a right way and a wrong way to clean out your body, and some weight loss and detoxification programs can actually do more harm than good if done incorrectly.

During the detox process, your liver is actually working hard to break down toxic substances and it needs certain essential nutrients to do this effectively. Fasting, or eating insufficiently or incorrectly, can interfere with the process and weaken your liver.

Toxins are stored in the fat cells (as an aside, your brain is made of predominantly fatty tissues), so losing weight actually releases these toxins back into your system where they can cause harm if not properly processed and excreted. If too many toxins are released from the fat cells too rapidly, or your liver lacks the genetic ability or nutritional support to metabolize them, then toxic reactions and health problems can be the result.

Furthermore, detoxification and weight loss are not one-size-fits-all programs because each person's natural detoxification abilities are unique. Most of the body's detoxification processes take place in the liver. The liver processes toxins in two steps known as Phase I and Phase II. While some toxins can be processed by just Phase I or just Phase II, most toxins require both steps in order to be safely removed from the body. Phase I alters the toxin so that it can be bound to another molecule that will send it either to the kidneys for excretion through urine, or to the fat for "safe" storage. Phase II is where the appropriate molecule is attached to the toxin. In order for this process to occur smoothly and efficiently, it is critical that both Phases be properly balanced and coordinated. This timing and rhythm is determined by your genes.

For example, we know that there is a gene that specifically governs the metabolism of estrogen, both natural estrogen and estrogen from dietary intake. This gene is not always encoded the same way in every individual. Some people may have an alteration, or a variation, of this gene that causes it to process estrogen too rapidly through Phase I.

While to some this may sound like a good thing, it's not. Phase I turns toxins into what scientists call "intermediate metabolites". They are highly reactive molecules, which are actually more toxic than they were in their original forms. Unless they are processed through Phase II in a timely manner, they can re-enter the body and cause all sort of problems.

Some of you may be old enough to recall the TV show "I Love Lucy". Some you may be older still and recall the episode where Lucy and her best friend Ethel worked in a chocolate factory. At one point, their job was to take chocolates that came off a conveyor belt and wrap them. Well, in the obvious comedy that ensues, the conveyor belt is rolling hundreds of chocolates out faster than either of them could hope to wrap and they end up just cramming chocolate into wherever they can, be it their mouths, hats, or the floor. In the case of an "up-regulated" Phase I gene, Phase I would be the conveyor belt sending armies of toxic chocolate to a very desperate and over worked Phase II who wouldn't fare much better than Lucy did. So now the question becomes, how do we slow down an over reactive Phase I and get the chocolate factory working properly?

In order to solve any problem you first need to collect information. Thanks to recent breakthrough technologies in the field of genetics, a simple blood test can now be used to analyze each person's

unique genetic variations that affect different aspects of their body's functions. It is now possible to know how your body's Phase I and Phase II processes are affected on the genetic level and from this information, solutions can be found.

A general example might be in the case of up-regulation in the gene controlling Phase I estrogen metabolism, in order to balance out the processes one might recommend a nutrient program that increases the capabilities of one's Phase II metabolism without affecting the Phase I and bringing the two into balance.

Besides just being able to understand how your liver treats simple environmental toxins, we know have the potential to test each person to determine what effects a person might experience from taking various classes of prescription medications BEFORE they take them. Considering that adverse reactions to medical drugs are among the top ten leading causes of death in the United States this is nothing to scoff at. Information of this magnitude can literally save lives. Well over 75% of the prescription drugs currently available can be prescreened for individuals who have been genetically tested to ensure that the risk of side effects and adverse events is nearly zero.

After living for thousands of years in organic chemical harmony with nature, mankind has within a century changed the entire chemistry of the planet through the progressive poisoning of nature the toxic chemical by products of industrial agriculture, fossil fuels, and coal-powered energy to name just a few. The chemical changes these industrial toxins cause are not confined by geographical boundaries. Scientists have recorded evidence of pollution on virtually every surface of the earth, from the largest cities to the most rural landscapes, and even the Arctic and Antarctic regions are

not remote enough to prevent their contamination.

A simple Google search of environmental toxins is enough to sweep away any naiveté one might have that we are living in a pure environment where the environmental impacts of our industrial technologies are tiny flecks of dust in the great deserts or drops of water in our oceans. The Gulf of Mexico oil spill disaster is still destroying wildlife a year after the "clean up" was ended.

A recent study conducted on the lakes and rivers of the United States discovered that detectable levels of prescription drugs were present in every body of water tested which numbered hundreds of lakes and rivers all across the US.

Our bodies absorb toxins constantly. When we breathe, eat, drink, smoke, use computers, put on make-up, drive to work, or simply walk down the street. Nearly every facet of living in an industrialized nation creates an exposure to harmful toxins that each of our bodies has a different level of ability coping with. When someone's body cannot fully break down and properly process these toxins, they remain in the tissues where they can cause progressively worsening long-term health effects.

Consider the example of Thomas Latimer, as reported in the Wall Street Journal. Hours after treating his lawn with a pesticide, he experienced dizziness, nausea, and a pounding headache that was getting steadily worse. Despite medical care, he continued to worsen. Today he suffers from visual and concentration difficulties, speech impairment, nightmares, brain seizures, and takes anti-epileptic medications. He can no longer ride a bike, and even walking is difficult. The collective medical opinion

on what occurred is that an anti-ulcer medication he was taking suppressed his liver and it was not able to process the pesticide he was exposed to and it was thus allowed to wreak havoc on his body unchecked. Mr. Latimer is not the only individual to suffer from this type of toxic exposure. Pesticide alone is estimated to cause over 220,000 deaths each year.

POSSIBLE LONG TERM SYMPTOMS OF CHRONIC TOXICITY:

- Headaches
- Mineral imbalances
- Kidney dysfunction
- Fertility problems
- Abnormal pregnancy outcomes
- Chronic immune system depression
- Multiple chemical sensitivities
- Extreme sensitivity to odors, fumes, medications, and/or foods
- Fibromyalgia
- Recurrent yeast infections
- Tinnitus (ringing in the ears)
- Contact dermatitis
- Learning disorders
- Panic Attacks
- Memory loss
- Adverse reactions to medications
- Parkinson's disease
- Fatigue
- Muscle weakness
- Mood swings
- Inflammatory arthritis
- Rheumatoid arthritis
- Epstein-Barr virus
- Chronic fatigue syndrome
- Alzheimer's disease
- Certain Cancers

Even if you are a health-oriented individual who eats organic foods, has minimal toxic exposure from their workplace, only drinks high quality artesian water, etc. There is still the potential for cumulative toxicity because of your inherent genetic individuality. You could have a genetic uniqueness that every time you fill up at the gas station, the exposure from the fuel vapors is not entirely processed and over the course of several years you begin developing signs of toxicity, i.e. skin problems, bronchial disorders, impaired cognitive ability, nervous system impairment, and so on. It may have been because your Phase II gene that is responsible for those toxins is under performing. Or some other set of genetic factors that amounts to the same result. In any case, the only way to know about such factors and to be able to prevent these conditions from occurring and ultimately being able to DO something about it requires testing. Because your genes are not likely to alter over the course of a lifetime, you only need to be tested once and then you are set for life.

A good analogy is such a test is like going over a piece of armor with a powerful magnifying glass that looks for any opening or weakness. Each weakness can then either be patched and repaired, or improved as best as can be done to prevent it from being pierced.

One of the best decisions that can be made to improve your health now and prevent illness and poor quality of life in the future is to be tested for genetic strengths and weaknesses that effect your body's detoxification abilities and to regularly detoxify your body when your body cannot do it by itself.

TOXICITY SELF-TEST:

- Fatigue/Weakness
- Hyperactivity
- Muscle/Joint pain
- Asthma
- Sinus problems
- Digestive problems
-
- Rapid heartbeat
- Sore/hoarse throat
- Canker sores
- Stiffness in joints/muscles
- Food cravings
- Water retention
- Mood swings
- Anxiety/Depression
- Itchy/Swollen eyes
- Poor concentration
- Headaches
- Itchy ear
- Dizziness
- Skin problems

Some “detox” programs involve fasting or an extremely limited diet of odd ingredients like maple syrup and lemons. This is not a recommended method of cleansing the body for a number of reasons. In order to function properly, your liver needs a sufficient supply of nutrients that it can only get from proper diet and perhaps supplementation. Abstaining from a healthy diet can cause you to lose muscle mass (instead of fat, which is preferable), cause hypoglycemia (low blood sugar), and not to mention the impairment of various body systems from insufficient nutrient supply. Recall the example of Mr. Latimer and his pesticide incident. Impairing the body can increase the risk of health problems. It’s just common sense.

The message is simple: get tested for your genetic detoxification abilities and regularly detoxify so that your body does not have to be burdened long with the toxins it may not be able to process on its own. Both of these steps are very important, which is why you should consult a qualified medical professional before beginning either part of the process.



4789 Vineland Ave.
Toluca Lake, CA 91602
(818) 761-1661
www.nutrikon.com