



Toxicity Is Our Legacy

It is no secret that we live in a world full of toxins. Never before in human history have we been exposed to such high levels of toxins. The air we breathe, the chemicals in our foods, the release of chemicals in our homes and workplaces all add to our toxic load. More than 83,000 chemicals are in our environment—some presently released and some released in the past that are still in our environment. It is estimated that 2,000 new chemicals are created each year—most without EPA oversight. The EPA states that approximately 27% of chemicals are released into the air, 4% into water, and 69% to land. Official estimates are that the average American is exposed to at least 128 unique chemicals each day. Chemicals such as BPA and the following are among our top toxic exposures:

- Triclosan, an antibacterial and antifungal agent found in antibacterial soaps, toothpastes, and cosmetics, as well as clothing, furniture, toys, and phthalates found in most soft vinyl (PVC) products. In 2016, the FDA issued a rule stating that over-the-counter antiseptic soaps, body washes, and hand gels containing triclosan can no longer be marketed to consumers. But, they are still allowed in other products.
(<https://www.fda.gov/ForConsumers/ConsumerUpdates/ucm205999.htm>, <http://www.mayoclinic.org/healthy-lifestyle/adult-health/expert-answers/triclosan/faq-20057861>)
- Phthalates are found in most soft vinyl (polyvinyl chloride), such as vinyl flooring, building materials, food packaging, air fresheners, drinks, toys, and clothing.
(https://www.doh.wa.gov/Portals/1/documents/Pubs/210-090E_BPAandPhthalates.pdf)

Most surprisingly phthalates have been found in macaroni and cheese mixes. DEHP is the most widely banned phthalate around the world.
(<http://www.ourhealthyfuture.org/blog/unhappy-macaroni-and-cheese-day-toxic-chemicals-discovered-10-varieties-macaroni-and-cheese>)

- Glyphosate, an herbicide and antimicrobial agent, is the most ubiquitous chemical in all of our subsidized crops, such as wheat, corn, soy, and even cotton. Recently the World Health Organization declared glyphosate a “probably human carcinogen.”^{1,2} It has also made recent headlines for its widespread use on genetically modified seeds and research that links it to antibiotic resistance, hormone disruption, damage to the gut, celiac disease, and diabetes.
- “Glyphosate is not included in the U.S. government’s testing of food for pesticide residues or the monitoring of chemicals in human blood and tissues. A recent USGS study sampled waterways in 38 states and found glyphosate in the majority of rivers, streams, ditches and wastewater treatment plant outfalls tested. Glyphosate also was found in about 70 percent of rainfall samples.”³

It isn’t usually just one small or large exposure to these toxins, but the daily small exposures that increase your toxic load and lead to health consequences.^{4,5,6} Being aware of the sources of your daily accumulation allows you to make less toxic choices when it comes to the foods you eat, the personal care items you choose, and the environments in which you live and breathe.
(<https://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/ExposuretoToxic.pdf>)
Exposure to toxic environmental agents. ACOG Committee Opinion No. 575.

More About Toxins

There are many other types of toxins. Along with those we are exposed to in our environments, whether indoor or outdoor, there are those that are by-products of our metabolism. These by-products include metabolic waste products from the production of energy in our body, excess hormones, metabolic poisons from incomplete digestion, infection (yeast, bacteria, viruses, and parasites), and free radicals (damaged cells). In the process of detoxification, there is an additional toxic load of metabolic waste that has to be cleared every day.

Failing to eliminate these toxins from the body and from the extracellular matrix can lead to systemic toxicity which ultimately results in damage to internal organs or tissues. It can also lead to a compromised immune system that is unable to effectively fight more serious assaults on our health.

The Body's Natural Detoxification Needs Help!

Because of so much exposure, it is important for our bodies to break down these toxins and clear them out. Our detoxification organs, such as the kidneys, liver, lungs, lymph, and skin, have a great deal of work to do every day.

Our body naturally detoxifies on a daily basis, but to accomplish this the body needs a variety of nutrients to support the detoxification process. If these nutrients are not available, the body will have a difficult time detoxifying. Also, if we are under stress and are eating inflammatory foods, such as sugar, refined carbohydrates, bad fats, and living off stimulants, such as coffee and sodas, or have a chronic health condition, then the detoxification process is slowed down and the toxins are not effectively eliminated. When this happens, the toxins will recirculate and are held in the tissues for detoxification later on. But, as more toxins enter the body, those stored toxins do not get eliminated. As time goes on, the toxins accumulate, and eventually the cells receive fewer nutrients, and the energy factory of the cells, the mitochondria, become impaired. Symptoms of toxicity appear along with identifiable health issues.

Symptoms of toxicity:

- Gas, bloating
- Headaches or migraines
- Nausea or vomiting
- Weight gain

- Brain fog
- Bitter, metallic taste
- Joint and muscle aches
- Inflammation
- Acne or skin rashes
- Fatigue
- Excessive mucous
- Digestive problems
- Ringing in the ears
- Constipation
- Circles under the eyes
- Skin rashes
- Strong body odor or bad breath
- Poor concentration

Health issues related to toxicity:

- Arthritis
- Leaky gut
- Fibromyalgia
- Obesity
- Chronic fatigue
- Multiple chemical sensitivity

How the Body Detoxifies

A good 80% of detoxification is done by the liver, which has the job, along with the immune system, of identifying these foreign substances. Through several phases the body transforms the toxins into something harmless and prepares them for elimination. During Phase I, the biotransformation phase, the liver accomplishes this by turning these harmful toxins into water-soluble intermediate chemicals. Then, during Phase II, through different metabolic pathways according to the type of toxin, amino acids, sulfur, and other natural substances bind (conjugate) to the toxins so they can be eliminated. If the nutrients needed to conjugate the toxins are in low supply, the toxins recirculate as new toxins that are sometimes more toxic than the original substance.

The digestive tract is also involved in the process of detoxification. Over the course of a lifetime, the gastrointestinal tract processes more than 25 tons of food, which represents the largest load of antigens and toxins confronting the human body. The toxins are processed through the digestive process and by the beneficial gut bacteria.

It is not only toxins that are broken down, but also hormones, natural waste products, medications, and

fat-soluble vitamins. Some of the nutrients needed for better detoxification are:

Sulfur (cruciferous vegetables, onions, garlic, eggs); vitamin B6 (avocado); zinc (shellfish); and protein (fish, poultry).

As the toxins are being eliminated, a host of free radicals are produced that must be cleared. Antioxidants disarm these harmful oxidants. Thus, it is important to eat a variety of colored fruits and vegetables that contain compounds involved in antioxidant processes on a daily basis, especially when the body is detoxifying.

Effective elimination is another factor in detoxification. It is through our urine and bowel movements that harmful substances are eliminated. Eating a good amount of fiber and hydrating with purified water every day will assist in this elimination process. Fiber is found in such foods as vegetables and fruits. Consuming at least 25 grams of fiber every day will greatly improve your detoxification capacity. Filtering out chlorine and the typical chemicals found in the water supply before you drink the water will lower your toxic load.

What Can We Do to Improve Our Capacity to Detoxify?

Here are some other ways that improve your chances of keeping your liver healthy and of assisting the clearance of toxins:

- Limit exposure to harmful chemicals.
- Drink purified water and in glass bottles, not plastic bottles that contain thalates and Bisphenol A (BPA).
- Don't heat food in the microwave, especially in plastic containers. The plastic leaches into the food. Microwaving also significantly depletes the nutrient content of foods.
- Clean your home environment with natural cleaning agents.
- Buy materials and home accessories that are less toxic: hardwood flooring that is laid without glue, organic cotton bedding, lead free glassware.
- Use an air purifier to clear your home environment of chemicals and dust.

- Purchase a water purifier and put a filter over your faucets and shower heads.
- Eat only wholesome, organic, fresh foods in a variety of colors.
- Clean out your heater and air conditioner every season.
- Eat a balanced diet of all food groups: protein, good fats, vegetables, fruits, raw nuts, and seeds.
- Do not cook or fry foods in non-stick pans coated with chemicals. High heat wears away the coating, which is then cooked into the foods.
- Eat liver- and kidney-enhancing foods: beets, artichokes, dandelion greens, leafy green vegetables, cruciferous vegetables, fermented foods such as sauerkraut.
- Do a month-long detoxification program at least twice a year to improve and maintain your health. This will ensure your body is more successful in clearing your daily toxic load.

Mental and Emotional Detoxification

For many of us the build-up of negative or hurtful emotions can be toxic to our psyches and to our bodies. These can become chronic, and the emotional memories can literally be bound in our cells. Have you ever remembered a past traumatic event and at the same time experienced emotions associated with that event? Have you had an emotional reaction to a situation that seemed out of character to that situation? These are examples of emotional patterns that have become imbedded in our body and brain.

When undertaking a detoxification program, it is a good idea to cleanse the mind of hurtful thoughts and emotions. In fact, conscious self-examination can help us to uncover and express hidden frustrations, anger, fear, and other held-in emotions and replace them with forgiveness (for ourselves and others), love, peace, and happiness. Your psyche and body will feel cleansed, and you will heave a sigh of relief as these old, stuck patterns of functioning are released.

Holding on to unresolved hurtful emotions can seriously compromise the long-term effectiveness of any detox program. Every effort should be made to resolve such issues and bring them to a healthy closure.