

# Demystifying “Detox”

## The Importance of Environmental Medicine



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Popular buzzwords like “detox” and “cleanse” are used often in the health world, but what do they really mean? This article will explain what detoxification is, and outline some essential steps to support your body’s natural ability to eliminate harmful substances.

Let’s start with defining what toxins are. Toxins can either be internal or external. Through its normal metabolism, the body forms byproducts, which are a source of

internal toxins that can be harmful if not neutralized or eliminated.<sup>[1]</sup> External toxins come from our environment and include things like alcohol, pollution, pesticides, tobacco, heavy metals, medications, and more.<sup>[1]</sup> Toxins are frequently categorized into groups based on their health impacts. For example, carcinogens are chemicals known to cause cancer, and neurotoxins affect the brain and nervous system. Other classes include hormone disruptors and developmental toxins, which can impact reproduction and fertility. “Obesogen” is a more recent term used to refer to toxins that increase the risk of obesity, diabetes, and heart disease.<sup>[2]</sup> Names of particular chemicals that you may have heard of include PCBs, parabens, toxic heavy metals, phthalates, BPA, and chlorinated pesticides.<sup>[1]</sup> These chemicals can be found in household cleaning products, personal-care products, dry cleaning, plastics, our food and water, air fresheners and perfumes, furniture, detergents, and more.<sup>[3]</sup>

Now that you know what toxins are, it’s important to understand their impact on our bodies. When we accumulate toxins over time at a rate faster than we’re eliminating them, our bodies become overburdened, and our detoxification system cannot keep up. Toxins tend to be stored in particular organs or tissues, especially the brain, bones, kidneys, and—of course—our fat cells.<sup>[4]</sup> Once in the body, toxins can cause inflammation and DNA damage, as well as interfere with hormone production and



function.<sup>[5]</sup> Not only do toxins influence our health, but their effects are passed down to future generations.<sup>[6]</sup>

### How Do You Know if You're Toxic?

Our health is quite complex, and the cause of illness is often multifactorial. That being said, with today's level of exposure, it is always important to assess whether toxic burden could be causing—or at least contributing to—your health issues. Some

of the health concerns related to toxicity include:<sup>[7]</sup><sup>[8]</sup>

- Allergies
- Autoimmune disease
- Cancer
- Asthma
- Frequent colds and flus, chronic infections (*Candida*)
- Inflammation
- Infertility
- Precocious (early) puberty
- Thyroid disorders
- PMS
- Anxiety, depression
- Obesity and diabetes
- Kidney failure
- Chronic fatigue and fibromyalgia
- Nutrient deficiencies

### Now for the good news

Although it seems daunting to think about all the toxins in our environment and the major health risks they pose, it's important to remember there's actually something we can do about it! By knowing where to find these toxins, we can actually reduce our exposure. There are also ways to protect the body from the damage caused by these harmful substances, plus strategies for improving elimination (and that's where “detox” comes in).

“Detox” is short for the word “detoxification,” which is the process of transforming and neutralizing toxins and then excreting them from the body.<sup>[1]</sup> Our bodies are designed to handle different toxins, but with the increase of chemicals in our environment, they accumulate over time. When we speak or hear of doing a “detox,” it's essentially referring to dietary and lifestyle changes that reduce the intake of harmful chemicals while improving elimination.<sup>[1]</sup>

### So How Do Our Bodies Detoxify and Actually Get Rid of These Damaging Chemicals?

The main organs and systems involved in detoxification include the liver, kidneys,

bowels, skin (through sweat), and lymphatic system.<sup>[1][9]</sup> When thinking about doing a detox, it's important to identify which of these organs or systems are "stressed" and need a little extra support. For example, if you experience constipation, then you're not removing waste through your bowels, so you may need to work on the digestive system as part of your detox plan. The liver is also one of the most important detoxification organs, and is responsible for breaking down and metabolizing everything from toxins to hormones.<sup>[7][9]</sup> Inside liver cells, there are sophisticated enzyme pathways and chemical reactions that perform this function. These pathways make up the two phases of detoxification—known commonly as phase 1 and phase 2.<sup>[7]</sup> When doing a detox, it is important to support both phases of liver detoxification to ensure the liver is functioning optimally.<sup>[7][9]</sup>

Some of the benefits of regular detoxification are:

- Balancing hormones
- Healing the digestive system
- Increasing metabolism
- Balancing blood sugar and insulin production
- Decreasing stress and promoting mental health
- Healing the skin
- Decreasing inflammation and thus chronic pain
- Alleviating allergies
- Improving immunity

You can see why it's a good idea to make detoxification a part of your health routine. Supporting our bodies' ability to detoxify helps remove obstacles to cure, resets healthier habits, and improves overall health. Detoxes are popular in the new year, spring, and fall, but you can really do them anytime you want. Depending on one's toxicity levels and their exposure, it's a good idea to follow a personalized detox protocol at least once or twice a year. As is true for all naturopathic protocols, an individualized approach is recommended, and what you actually do as part of your detox plan will depend on your health goals.

With that said, there are five components I like to think of when doing a detox.

**Reducing Exposure:** By knowing where your exposure is coming from, you can take steps to remove toxins in the home, at work, etc. Gradually replacing things like household cleaning products and cosmetics, and instead transferring over to clean, toxin-free alternatives, can help with this. Check out the Healthy Home Challenge for more guidance and resources.<sup>[3]</sup>

**Diet Modifications:** eating fruits and vegetables rich in antioxidants helps prevent against damage caused by toxins. They also contain fiber, which helps bind toxins and pull them out of the body.<sup>[10]</sup>



**Whole-Food Diet:** in general, you should recognize the ingredients in your food. There should not be a long list of unfamiliar chemicals like preservatives, additives, dyes, artificial sweeteners, etc. Reducing packaged and processed foods and instead eating foods in their whole form helps decrease the intake of chemical compounds that are hard on our system.<sup>[5]</sup>

**Organic:** buying organic produce, as well as hormone-free meats and dairy is a great way to decrease your exposure to harmful substances commonly found in and on our food.<sup>[5]</sup> You can use the Environmental Working Group's list of dirt dozen and clean 15 to help guide your choices. If buying organic isn't feasible, make sure to wash and even peel your produce to minimize your exposure to pesticides.

**Water:** drinking adequate amounts of water (at least 2 L/day) helps promote regular bowel movements and thus elimination through the digestive system.<sup>[5]</sup> Since excretion of toxins is also mediated by voiding, water is essential for elimination through the kidneys. Make sure your water is not a source of toxins by drinking properly filtered or spring water is important to decreased exposure.

**Mindful Eating:** paying attention to your food by using all your senses and avoiding distractions during meals has many advantages. Not only will this aid in digestion, but it will also help you become more in-tune with the signals of hunger and satiety.

**Supplements:** the body uses specific vitamins and minerals as co-factors in the chemical reactions that transform and neutralize toxins.<sup>[5]</sup> Therefore, supplementing with certain nutrients can aid in these processes. Certain herbs can also improve the body's ability to detoxify by increasing urination, promoting circulation, reducing inflammation and re-instating healthy digestion.<sup>[5]</sup> Both herbal and nutritional supplementation are useful adjuncts, but should be tailored to the individual patient based on their symptoms picture, health history and concurrent medication use.

**Nutrients:** Vitamin C, N-acetyl-cysteine, Alpha-lipoic-Acid, B vitamins, Choline, Glutamine, Glycine, Taurine, and more! (11)

**Herbs:** Milk thistle, Dandelion, Chicory, Turmeric, Green tea, Artichoke, Burdock, and more! (10, 12)



**Lifestyle:** implementing lifestyle strategies and building habits to support the body's ability to detoxify.

**Exercise:** movement is very important to support the cleansing process. It helps to relax the body, clears waste through sweat and promote circulation of blood, oxygen and nutrients. Exercise also stimulates the lymphatic system, which is one of the major routes of elimination.<sup>[5]</sup>

**Hydrotherapy Practices:** help improve circulation and lymphatic flow. Examples include saunas, castor oil packs, dry skin brushing and contrast showers. Saunas in particular promote sweating, which will help get rid of toxins through the skin.

**Mental/Emotional:** Addressing the mind body connection is an important aspect of cleansing to help clear stresses and restore mental wellbeing. Using mindfulness and relaxation strategies to reflect on your thoughts, feelings and relationships will motivate positive change.

Before doing a detox or cleanse, make sure to consult with a medical professional to ensure that it is safe for you. Since your liver metabolizes drugs, any supplement that impacts liver function will interact with your medications. Therefore, consult your doctor or a license naturopathic doctor before taking any supplements as part of your detox plan.

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