



KARYN SHANKS MD

Heart, Hope, Healing

A Detoxification Primer

BY KARYN SHANKS MD | DECEMBER 9, 2018



HOW TO LET GO OF BIOLOGICAL TOXICITY

Bolster the Body's Innate Detoxification Systems

The reality is we live in a toxic world. And in spite of our best efforts, some toxins will get in. This is especially true for environmental toxins. But we're not helpless. Not only can we take responsibility for avoiding them, we can also bolster our bodies' innate capacity to remove toxins.

What is "Detoxification?"

Detoxification is a core physiologic process of our bodies, designed to manage the toxins we are exposed to from both our internal and external sources. It operates continuously and demands a constant supply of energy and essential nutrients to function optimally. Detoxification is not something we can sustain with a twice yearly seven-day "detox" program, or occasional cleanse, colonic, or sauna. It's a 24-7 proposition and to work well for us, it must be supported daily.

Detoxification is part of the innate intelligence of our bodies, yet can become overwhelmed by toxin exposure when there are inadequate nutrients or energy to manage it. When this happens, the toxins have an opportunity to interfere with our bodies' complex physiology, making us more vulnerable to damage, disease, and dysfunction. Detoxification problems are important players in our most common health problems.

How to Achieve Optimal Detoxification—the Basics

To stay safe and healthy, we must support the path toxins take from point of entry into the body all the way to exit. This is detoxification, a resource- and energy-expensive process that prepares toxins for elimination and supports the channels through which they must pass. Toxins must be made water-soluble by the liver for transport through blood, bile, urine, sweat, and exhaled moisture. The flow of toxins through their respective fluids, and the function of their exit pathways (gut, kidneys, sweat) must be supported and maintained.

Avoid Environmental Toxins

Take precautions to avoid the environmental pollutants, pesticides, plastics, toxic internal environments, and toxic and irritating food as discussed in the previous section on environmental toxicity.

Eat Nutrient Dense Food to Support Detoxification

The standard American diet (SAD) is nutrient poor and contains many food irritants. This combination leads to blocks in detoxification because there simply are not enough resources for this energy- and nutrient-expensive process to proceed. The SADs impact on detoxification and health is compounded by common medication use that cause damage to our primary detoxification organs—the liver, gut, and kidneys—or overwhelm their capacity to keep up with toxin clearing.

The intensive nutrition required to run the operation of detoxification is addressed by my [**FINE**](#) (Foundational Intensive Nutrition Energy) and [**GRIN**](#) (Gut-Immune Restoration Intensive Nutrition) food plans. While we are all genetically unique and our nutritional requirements or optimal detoxification will differ, these food plans will provide templates that will meet the needs of most. A well-trained Functional Medicine practitioner will be able to help those of you with additional needs.

Stay Well Hydrated

Water assists in the transport of toxins from all sites within the body to the point of elimination. Most people require a minimum of two to three quarts of water daily.

Encourage Good Bile Flow

This will be accomplished by including healthy fat with each meal and snack. Bile is released with the ingestion of fat, serving as an emulsifier, allowing fat to be absorbed through the gut lining. This regular release of bile allows for the toxins, transformed within the liver to be

released frequently and eventually eliminated from the body via the intestinal tract.

Keep Bowels Healthy and Moving

Complete daily bowel movements are essential for proper elimination of toxins that have been processed in the liver, dumped into the bile, and released into the intestines. Adequate water intake, movement, dietary fiber, and a healthy microbiome are essential. By following the primarily plant-based food plans, *FINE* and *GRIN*, and by taking a good quality, multi-species probiotic daily, most people will enjoy healthy bowel elimination. For those who are not able to easily move their bowels in large quantity on a daily basis, it is important to work with a Functional Medicine specialist to help you with this. Additional fiber, magnesium, or mild intestinal stimulants may be needed.

Consume Detoxification Support Nutrition Daily

It is important to consume food rich in nutrition to support all aspects of detoxification and energy production. You'll find this foundational support in the *FINE* and *GRIN* food plans in chapter seven. Consider using supplemental nutrition to support detoxification: see below.

Sweat, Move, Exercise, Breathe Deeply, Sleep Well

These are all key aspects of maintaining healthy flow of toxins out of our bodies. Sweat is one of the major routes we use for toxin elimination, in addition to the gut, kidneys, and lungs. Any movement or activity that elevates the core temperature of the body sufficiently to induce a profuse sweat is all you need. This may include intense exercise, a hot bath or shower, being outside on a hot day, or use of a sauna designed to raise core body temperature. Far-infrared saunas are your best bet and there are many small, affordable versions available to purchase for personal use. We'll explore movement and sleep in depth in upcoming chapters.

Supplemental Nutrition to Support Detoxification

Foods Rich in Detoxification Support Nutrients

- Liver from pasture-raised beef, bison, or poultry.
- Healthy protein sources—to provide protein in sufficient quantity to meet detoxification needs (see APPENDIX B).
- Cruciferous vegetable family (glycosinolates): kale, cabbage, broccoli, cauliflower, watercress.
- Onions, garlic, leeks (sources of sulfur).
- Pomegranate seeds and juice (elagic acid).
- Sea vegetables (iodine, antioxidants).

- Coffee (antioxidants, chlorogenic acid).
- Green Tea (catechins, antioxidants).
- Red wine (antioxidants, resveratrol).
- Foods rich in omega-3 fatty acids: fatty wild-caught fish, ground flax seed, chia seed, hemp seed, pasture-raised beef.
- Turmeric root, whole or extract—curcumin.

High Quality Multi-Vitamin and Mineral Supplements

- Contain biologically active form of B vitamins: methyl folate, methyl cobalamin (not cyanocobalamin), pyridoxal-5-phosphate (P5P).
- Contain natural E complex with tocopherols and tocotrienols.
- Contain optimal amounts of basic vitamins and minerals.

These are companies vetted by me who make high quality multivitamin/mineral supplements: Designs for Health, Metagenics, and Xymogen. Purchase directly from these companies or your trusted healthcare provider, rather than third party vendors. The sensitive micronutrients must be well cared for and sent fresh to maintain optimal potency.

Mitochondrial Energy Support Nutrients

Look for these nutrients:

- Coenzyme Q10
- Acetyl-L-carnitine
- Alpha-lipoic acid
- Glutathione
- N-acetyl-cysteine (NAC)
- Magnesium
- B-complex
- Essential fatty acids
- D-Ribose

These are companies vetted by me who manufacture excellent mitochondrial support supplements: Researched Nutritionals, Designs for Health, Metagenics, and Xymogen. Again, for the same reasons as stated before, purchase directly from the manufacturer or a trusted healthcare provider.

Essential Fatty Acids

EPA and DHA from fish are ideal omega-3 fatty acids to supplement with. Vegans can use

DHA from algae or precursor fatty acids in flax seed oil. However, many people can't convert fatty acid precursors into EPA and DHA, or DHA into EPA, and both are essential. Your Functional Medicine provider can help you sort this out.

It is also important to supplement with gamma-linoleic acid (GLA), an anti-inflammatory omega-6 fatty acid, especially when taking EPA, which can reduce its synthesis. A combination of EPA, DHA, and GLA is ideal both for mitochondrial membrane and anti-inflammatory support.

Plant-Derived Nutrient Support for Phase 1 and 2 Liver Detoxification Pathways, Bile Flow, and Toxin Elimination

Look for these Nutrients:

- Silymarin (from milk thistle)
- Artichoke leaf extract
- Watercress
- Ellagic acid from pomegranates
- Green tea catechins
- Sulfur from garlic, onions, and crucifers
- Glucosinolates from cruciferous vegetables
- Dandelion root
- Oregon grape root
- Gentian root
- Turmeric
- Cholorgenic acid from coffee

These are companies vetted by me who manufacture excellent detoxification support products: Metagenics, Designs for Health, and Xymogen.

Resources

Karyn Shanks, MD. [The Foundational Intensive Nutrition Energy Food Plan](#). 2018.

Karyn Shanks, MD. [The Gut-Immune Restoration Intensive Nutrition Food Plan](#). 2016.

[Metagenics](#)

[Designs for Health](#)

[Researched Nutritionals](#)

[Xymogen](#)

KARYN SHANKS MD

Karyn Shanks, MD, is a physician who lives and practices in Iowa City. Her work is inspired by the science of Functional Medicine, body-mind principles, and wisdom gleaned from the transformational journeys of thousands of clients over her twenty-five-year career. Her work honors each individual and the power of their stories, their inner wisdom, and innate healing potential. She believes that the bones of healing are in what we do for ourselves. She is the author of *Liftoff*, a manual of energy recovery and healing through essential self-care practices.

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