greens, cilantro, and spinach. Greens can be taken in a salad, provided in various detox smoothies, or in hydro-nutrient smoothies. Liver function is strengthened through foods such as artichokes and beets. Other elements that aid detox pathways are provided in red and purple fruits and dark blue fruits such as blackberries and blueberries.

Hydrotherapy. Water therapies can be highly effective in pumping the blood and supporting microcirculation. A detox regimen is an opportune time to invoke the power of hot and cold to move and redistribute the blood supply. This could be as simple as the use of hot and cold showers or it might include saunas or detoxifying baths with Epsom salts or organic apple cider vinegar. Hot and cold stimulation can also be used to encourage the process of sweating. These are effective means of enhancing the elimination of toxins through the skin.

Managing leaky gut syndrome. It is imperative to repair the permeable gut before mobilizing stored toxins and moving them into the GI tract. Otherwise the patient is at a higher risk for auto-toxicity. Naturopathic providers are experienced in managing intestinal permeability/leaky gut, which is one of the principle causes of systemic toxicity. Consider the appropriate use of colon cleansing in this phase of elimination with various types of nutrients that support and repair the intestinal tract, particularly if there is any sign of inflammation. Supplements well recognized in the repair of intestinal mucosa include pre- and probiotics, plant fibers, nutrients such as L-glutamine, arabinogalactan (extracted from Western larch bark), and soothing extracts such as aloe vera and deglycyrrhizinated licorice root (DGL). These are effective ways to lower inflammation in the gut and manage leaky gut, so the patient is no longer dealing with endotoxicity or byproducts of their own immunologic food reactions.

Maintenance of healthy lifestyle modifications. The final stage of detox moves patients into a maintenance plan that will allow them to continue aspects of the program for life. A customized transition plan includes repeated testing to track the initial areas of concern, updating body composition results, and identifying unresolved health concerns.

Functional Medicine Detox Sequencing: PURE

Both the art and science of metabolic detoxification programs have evolved significantly in the last two decades. Clinicians are now able to offer their patients supervised detox that can be individualized to their specific medical needs. This is a paradigm shift in clinical practice that will involve educating consumers. Safe, effective medical detox requires far more than simply ordering a "Cleanse in a Box" kit or fasting with grapefruit juice.

In order to improve the clinical approach to metabolic detox, the faculty of the IFM provides a module on advanced practice detox. The module includes the acronym PURE to support clinical implementation of advanced detoxification programs.

Pattern recognition. For most patients, symptoms of toxicity are general and diffuse, developing slowly over time, which makes the patterns more challenging to identify for both provider and patient. We need to recognize when the patient is toxic by observing body composition, taking a good history, providing the TEQ and MSQ questionnaires, and evaluating lab results. Clinical management begins with this process of pattern recognition, by identifying the tissues that are most susceptible or experiencing the greatest impact. Patterns of toxicity that have been identified by Dr. Kenny Bock, described in his book *Healing the New Childhood Epidemics,* include mitochondrial toxicity, metabolic toxicity, neurodevelopmental toxicity, and immunotoxicity, to name a few. Since the total toxic burden cannot be fully quantified in all patients due to limitations in laboratory testing and/or financial constraints, pattern recognition is often an essential aspect of clinical strategy.

Undernourished. Patients tend to under-consume adequate protein and healthy fats in their diets, affecting their ability to detoxify. Inadequate levels of key nutrients can result from either insufficient dietary intake or enzymatic concerns secondary to epigenetic influences. Effective coaching on a detox diet starts by encouraging patients to consume a wide colorful array of phytonutrient-dense foods, coupled with an elimination diet while emphasizing detox-focused foods such as onions and garlic, broccoli and cauliflower, berries, greens, and green tea.

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Pattern Recognition
Under Supported
Reduce Toxins
Ensure a Safe Detox

THE INSTITUTE FOR FUNCTIONAL MEDICINE

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