eBook

Detox 101

What Detox Means, Why it Matters, and How to Get Started

Standard Process®

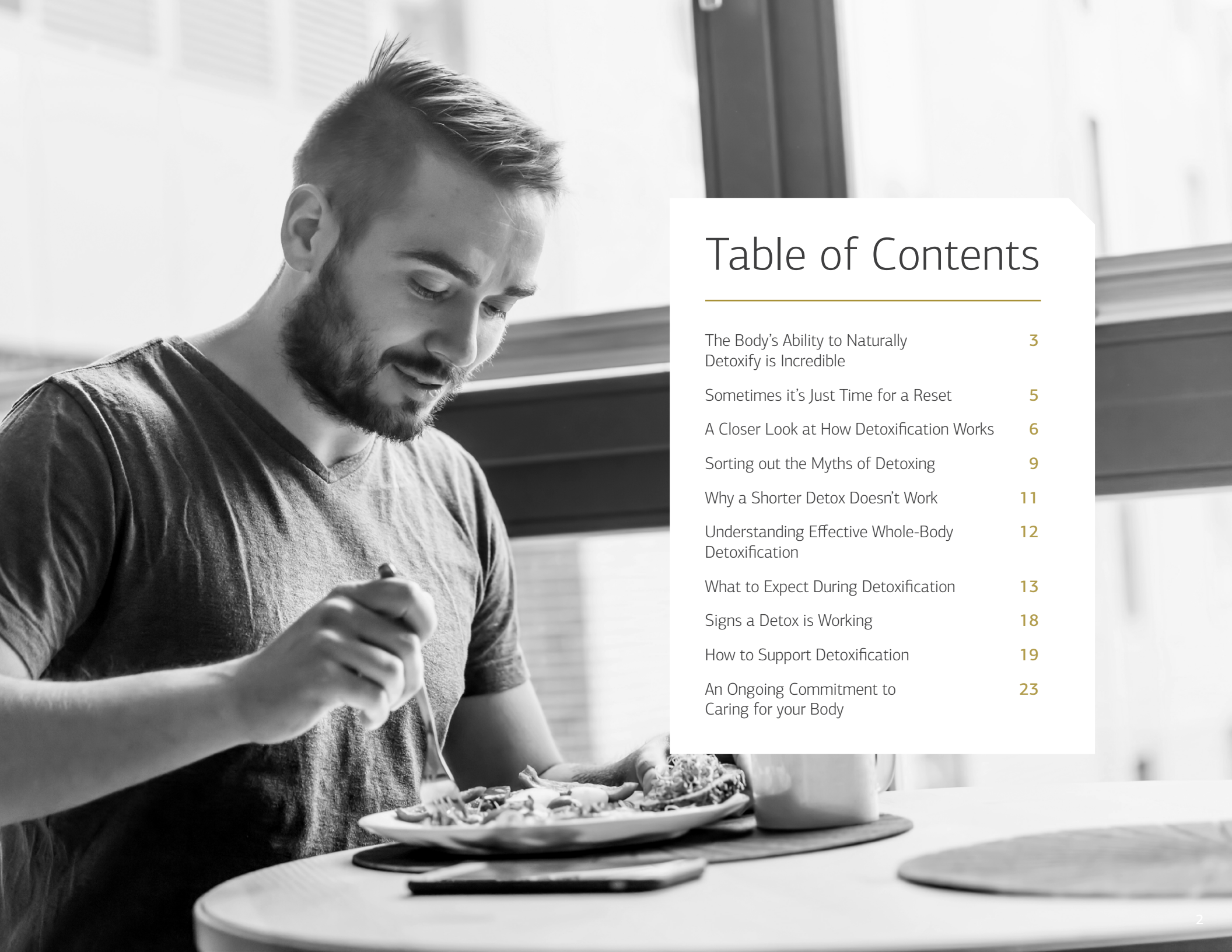


Table of Contents

The Body's Ability to Naturally Detoxify is Incredible	3
Sometimes it's Just Time for a Reset	5
A Closer Look at How Detoxification Works	6
Sorting out the Myths of Detoxing	9
Why a Shorter Detox Doesn't Work	11
Understanding Effective Whole-Body Detoxification	12
What to Expect During Detoxification	13
Signs a Detox is Working	18
How to Support Detoxification	19
An Ongoing Commitment to Caring for your Body	23

The Body's **Natural Ability to Detoxify** is Incredible

Every day, you're exposed to toxins that can contribute to a variety of health challenges. These toxins are found in the air, your food, your water and nearly everything you touch.[1,2] Since World War II, about 80,000 novel chemicals have been registered with the U.S. Environmental Protection Agency (EPA), but, many other chemicals have not been thoroughly examined and maybe be harmful to human health.[3]

Fortunately, your body has a natural ability to rid itself of many of these toxins through metabolic detoxification. However, toxin exposure can outpace your body's natural metabolic detoxification capacity, leading to a build-up of harmful toxins. Over time, improper clearance of toxins can contribute to poor health and dysfunction within the body.

Metabolic detoxification is a robust, whole-body detox at the cellular level. It's different from many other popular, fad detoxes you may have considered – and it's important to understand the difference.

Metabolic detox is a three-phased process where the body unlocks fat-soluble toxins and converts them to a water-soluble state that is easier for your body to remove. Detox products and programs that help with this metabolic detoxification process will help to unlock the body's natural detoxification capabilities and better enable the three phases to occur more efficiently.

This guide will help you better understand the nuances of metabolic detoxification, the advantages of this approach to detoxification, why many other detoxes don't work for true detoxification, and why proper nutrition, including key nutrients and phytonutrients, is essential for a successful metabolic detoxification.

Common Toxins

- Heavy Metals
- Pesticides
- Plastics
- Industrial chemicals
- Bacterial endotoxins

Sometimes it's Just **Time for a Reset**

When you take the time to listen to your body, there are times when you know you are feeling a little off. Because toxins building up in your body can lead to feeling not quite right, this may be the perfect time to reach out to your health care practitioner for guidance. It could be that detoxification is the solution to your body's unique needs – especially if you've been eating more processed foods than normal or may have been exposed to too many common environmental toxins.

Toxins Can Contribute To:

- Fatigue or difficulty sleeping
- Low libido
- Indigestion and other temporary GI upset
- Skin issues
- Food cravings and weight gain
- Joint discomfort
- Reduced mental clarity

A Closer Look at **How Detoxification Works**

When you come into contact with toxins that aren't immediately filtered out, your amazing body will often protect itself by storing those toxins in "safe" places such as fatty tissues, cells and organs in your body to try to mitigate the effects. This is a normal and healthy process.

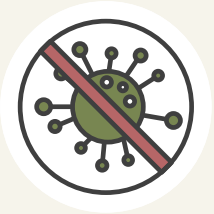
However, in the long-term, these toxins in your body can be dangerous if they are left untouched and never eliminated from where they are stored. As time goes on, the toxins can dissolve in fats and fatty tissues, disrupting normal bodily functions. They can also circulate throughout your body via the blood vessels and can ultimately be stored in your central nervous system (CNS), including the brain and spinal cord.

The three phases of **Metabolic Detoxification**

The presence of toxins stored in your body's cells requires a robust reset program: **metabolic detoxification support.** This process occurs primarily in the liver. Unlike circulating toxins, stored toxins first need to be unlocked and mobilized, then neutralized and eliminated. These three phases of the detoxification process require nutritional support to be successful.

Phase I: Unlock

The body transforms fat-soluble toxins to an "unlocked" state that is more water-soluble, and in many cases, more toxic than its original form.



Phase II: Neutralize

The highly toxic substances produced in Phase I convert to non-toxic molecules and become even more water-soluble.

Phase III: Eliminate

Water-soluble toxins leave cells, and the body eliminates them through urination, defecation, sweat, etc.

The Three Phases of **Metabolic Detoxification**

Specialized enzymes become especially important during phases I and II. During phase I, metabolic enzymes, called Cytochrome P450 or CYP450 enzymes, tag toxins with chemical structures that identify them as toxins. While this process is required to transport toxins throughout the body for excretion, it can also make them more toxic to the body. Because of this, it is crucial that phase II occur immediately or very soon after phase I in order to limit damage to cells. During phase II, conjugation enzymes convert the tagged, reactive toxins into water-soluble, non-toxic compounds that can easily be excreted. Conjugation enzymes require energy and many co-factors in order to function properly. Finally, in phase III, proteins transport processed toxins out of the cell and into circulation for excretion.

Sorting Out the **Myths of “Detoxing”**

In addition to the many products and programs out there claiming to detox your body – from body washes to restrictive diets – there is also a variety of nomenclature used to describe various nutritional approaches. So, how do you know the right “reset” program for you? Your health care practitioner is always a good resource. But to get you started, here are some definitions that may help you better understand the distinctions. **Think of the differences between these reset programs as a tiered approach to wellness maintenance.**

Sorting Out the **Myths of "Detoxing"**

Metabolic Detoxification Program or "detox":

Detoxification programs aim to support the liver and associated detoxification pathways and organs through diet, lifestyle practices, and targeted supplementation for a short time to aid the body's natural detoxification process. Metabolic detoxification is a critical physiological process conducted by the liver through phase I, phase II, and phase III detoxification pathways and processes. These pathways require specific nutrients to function optimally, including amino acids, micronutrients, and antioxidants. The term "cleanse" can also be applied to this approach, though it doesn't currently have a formal definition in the scientific medical community.

Elimination Program or Elimination Diet:

An elimination program is designed to reduce bodily burden by eliminating specific foods that may exacerbate and drive an immunological and inflammatory response. Often starting off as a fairly restrictive eating regimen, elimination programs offer dietary supplement support paired with a sequenced diet where foods are removed and then reintroduced. Gastrointestinal function is also supported as the GI tract is a central route for elimination.

Why a Shorter Detox **Doesn't Work**

Three-day detoxes are a popular online search for people who are looking to reset their bodies without a longer commitment. And you've most likely seen various skincare, dental or other self-care products described as "detoxifying." However, our bodies can't truly detox in just three days and these products don't support a true detoxification process. Elimination diets are also not designed to follow all phases of metabolic detox, so they won't address the fundamental issue with toxins.

Your body has a lot to accomplish during detox. It's working to transport toxins from your cells, not just clear out your colon: that's why a three-day liquid diet isn't enough. A true metabolic detoxification is a full cycle of the three stages – Unlock, Neutralize, Eliminate. And that takes time to effectively support your body – between 10 days and 4 weeks, depending on when and if you've completed a metabolic detoxification in the past.

Understanding Effective **Whole-Body Detoxification**

Detoxification requires energy and nutrients to complete all three phases efficiently and effectively – including macronutrients from a wide range of whole foods. A good detox program helps you understand the key nutrients and phytonutrients your body needs to support each of the three phases of detoxification. It's also important to note that hydration is critical for detoxing, as water intake supports urinary toxin elimination.

Fasting or poor nutritional support during a detox program can have a negative impact on your health if the volume of toxins exceeds your body's capacity to execute the three stages of detoxification.

Lack of proper nutritional support from vital whole foods or whole food-based supplements can result in:

- Low energy
- Fatigue/sluggishness
- Mood and sleep disruption
- Lean tissue breakdown

What to Expect
During Detoxification

An effective detoxification approach designed to support the body's natural toxin removal process may cause you to experience mild symptoms that occur as a result of dietary changes. These side effects are most often normal and a sign that your body is doing its job to rid your body of harmful toxins – however, it is always a good idea to keep your health care practitioner informed of any symptoms so they can help evaluate your personal health.

Symptoms may include:

- Fatigue, headache and irritability
- Food cravings
- Change in bowel habits

What to Expect During Detoxification

Side effects of detoxification are common. To be most successful, temporarily eliminating caffeine, sugar and processed foods from your diet is essential and could produce uncomfortable, withdrawal-like symptoms.[4] This is normal. Fatigue, headache and irritability can occur, and could be a result of eliminating some of the foods above. Dehydration and constipation or a constant fluctuation in blood glucose levels can also contribute to these symptoms.

Here are a few easy suggestions to help facilitate a comprehensive and effective detox:

- **Stay hydrated** – it's important to drink water!
- Try tea instead of coffee to help with **caffeine cravings**
- Eat foods such as **vegetables, fruits and herbs** for nutritional support
- Support **healthy blood glucose levels** by including high quality protein, fiber and healthy fats in your diet
- Maintain **healthy sleep habits**
- Support bowel regularity with a **healthy diet**
- Consider a **supplemental enzyme to help digest** the additional fiber-containing foods you're consuming

What to Expect
During Detoxification

Food Cravings

Changing your eating habits is common with many detox approaches, which can cause you to experience food cravings, especially at the beginning. This may be the result of foods suddenly being removed from your diet causing withdrawal-like symptoms. Many foods, including sugar, are linked with a "feel good" response in the brain, making them potentially more addictive than others.[5] Changes in the gut microbiome can also play a role in food cravings.[6, 7]

A healthy microbiome looks different for everyone, but the main characteristics include:

- **Balance** of different types of microorganisms
- **Variety** of the right amount of microorganisms
- **Minimal** harmful strains of bacteria

What to Expect
During Detoxification

Change in Bowel Habits

Regular bowel movements are important during detoxification because they are vital for removing toxins from the body. However, dietary changes during a detox, that may include higher-than-normal levels of fiber through fruits and vegetables, may lead to a change in your normal bowel movement and/or urination routine.

Here are a few ways to help promote healthy bowel movements during your detox:

- **Drinking water,** herbal tea and other fluids
- Eating **bitter vegetables** and **some herbs**
- Adding **magnesium supplements** to your routine
- Eating **non-starchy vegetables**
- Including **healthy fats** in your diet
- **Regular exercise**

What to Expect
During Detoxification

Change in Bowel Habits

Drinking water and other healthy fluids can help soften hard stool and help promote elimination. Similarly, fiber and supplemental magnesium can draw water into the bowel, achieving the same effect. Regular exercise promotes healthy bowel regularity through a variety of mechanisms.

First, it keeps food moving through the large intestine and limits the amount of water that can be absorbed from stool. Exercise also speeds up many bodily processes, including the natural contractions of the muscles in the intestines that squeeze stool out.

Finally, bitter vegetables and herbs can stimulate digestive processes and bowel function as well as modulate the gut microbiome which plays a role in bowel movements.

Signs a **Detox is Working**

You don't have to be a scientist to understand the benefits of detoxification. The best way to tell if a detox is working is that you actually feel better. Detox gives your body a chance to reset, and so it should be no surprise that many people feel positive effects all over their body, inside and out, after a detox. Toxins also contribute to fatigue and difficulty sleeping, food cravings and weight gain, reduced mental clarity, low libido and joint discomfort. After a successful detox, you may notice you are sleeping better, craving less, thinking more clearly, enjoying your sex life more and feeling relief in once-stressed joints.

How to **Support Detoxification**

The choices you make during detoxification are vital to your success. And, as mentioned, optimal nutritional support is one of the most important elements for a healthy, effective detoxification process. It will also minimize chances or severity of side effects.

Key nutrients help facilitate efficiency in the three phases of detoxing (Unlock, Neutralize, Eliminate). This is particularly important during and after Phase I Unlock when toxin molecules have been converted into reactive intermediate substances, and free radicals are produced as a result. These activated toxins need to be neutralized as quickly as possible in Phase II Neutralize, and certain nutrients may help this process along.

The following section will help you better understand the impact food types, nutrients, phytonutrients and supplements can have on your body and how they can help you prepare for a successful detox.

How to **Support Detoxification**

Food Choices

Whole foods in the form of fruits and vegetables are always essential to supporting a healthy life but of particular importance during detoxification. For example, cruciferous vegetables support Phase I Unlock by activating CYP450 enzymes.

Cruciferous vegetables include:

- Spanish black radish
- Broccoli
- Cauliflower
- Fresh daikon radish sprouts
- Cabbage
- Brussels sprouts

Many fruits and vegetables contain protective micronutrients that act as antioxidants to provide support for the oxidative stress that occurs as a result of Phase I Unlock of metabolic detoxification.

Important antioxidant vitamins, minerals and other compounds include:

- Vitamins A, C, and E
- Selenium, copper, zinc and manganese
- Milk thistle
- Bioflavonoids and polyphenols

How to **Support Detoxification**

Food Choices

Many nutrients and phytonutrients found in fruits and vegetables are also important to support methylation during Phase II Neutralize:

- Folate
- Choline
- Methionine
- Vitamins B_{12}, B_6, B_2 and B_3
- Magnesium
- Zinc
- Betaine

Adequate creatine is necessary for energy production in the form of ATP during Phase II Neutralize. Red meat provides creatine, but vegans and vegetarians not consuming red meat depend on the body to synthesize creatine from scratch. To support this process, their diet should contain the amino acids arginine and glycine since they are required for creatine synthesis, and glycine is also independently needed for Phase II Neutralize.

Lastly, research shows that a handful of other foods are associated with benefiting the detoxification process:

- Berries[8]
- Soy[9]
- Garlic[10]
- Turmeric[11]

How to **Support Detoxification**

Nutritional and Herbal Supplements

A variety of nutritional supplements may be an integral part of detoxification support programs. For example, amino acids and their metabolites as well as essential vitamins and minerals support creatine production, **which is important for creating energy in the form of ATP during Phase II Neutralize:**

- Glycine, arginine and cysteine
- Vitamin B_{12}

Several medicinal herbs are also important for detox support. Supportive herbs include:

- Dandelion root and leaf
- Burdock
- Yellow dock
- Nettle leaf

SP Detox Balance™, 10-Day Program Kit

SP Detox Balance supports whole body detoxification and helps your liver in the processing and removal of toxins from your body.*

An Ongoing Commitment to **Caring for your Body**

Supporting your healthy body is an ongoing process. Taking proactive steps, like maintaining a healthy lifestyle with whole food nutrition, regular exercise, healthy sleep habits and stress management, can be helpful in minimizing the harmful toxins in your body. Understanding where toxins come from and avoiding them whenever possible can also make a big difference.

Every person's body is different, so your practitioner is the best resource to help guide you toward the nutrients that will meet the unique needs of your body.

To learn more, find a health care practitioner or explore supplements that can support your detox journey, visit **standardprocess.com/where-to-buy.**

Individuals interested in following a detoxification program should discuss the specific program with their health care practitioner so they can decide together how to best approach detoxification based on that individual's unique needs. It is important to prepare for a detox program to ensure the highest quality nutritional support to assist a healthy, effective detoxification.

Check out the metabolic detoxification program offered by Standard Process:
Learn more at standardprocess.com/programs/detox-cleanse-supplements

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*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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