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## Safe, Natural, Effective Cleansing

From the moment we wake up until we go to bed, our body is constantly exposed to toxic chemicals. When you have your morning cereal, you may be exposing yourself to pesticides, and the milk may be laced with hormones and toxins. At night, the moisturizer you use may be made with synthetic ingredients.

It's alarming that chemical toxins are everywhere, from soaps, to shaving creams, shampoos, and even the toothpaste we use. Women's lipsticks have been found to contain lead, while many of the plastic containers they come in contain phthalates (a harmful plastic softener). The human body is bombarded with toxins every minute of every day. It's an ongoing onslaught causing more health problems than we ever realized.

According to organizations devoted to protecting the environment, including the Sierra Club, the Izaak Walton League, and even the Environmental Protection Agency (EPA), we are exposed to literally tens of thousands of chemicals and contaminants every day. All across America, from big cities to small towns, from sprawling suburbs to wide-open prairies, harmful toxins are present in the air we breathe, the food we eat, and the water we drink.<sup>1,2,3</sup>

The evidence is overwhelming so today's question is no longer whether or not we are toxic, but rather, how do we get rid of these toxins? The hundreds of detoxification products on health food store shelves is a testament to the interest in this subject. Yet, the majority of these products are confusing, have little science behind them, and, in some cases, cause harm. In this issue of *Ask the Doctor*, we will discuss the safest, most effective, and healthiest method of detoxification: a program of whole body cleansing with powerful, yet gentle, all-natural products.

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### **Q. What exactly is "detoxification"?**

**A.** Detoxification refers to the removal of toxic substances from the body. Detoxification programs include a vast variety of treatments aimed at getting rid of bodily toxins and improving health.

### **Q. Don't we have a built-in natural detoxification system?**

**A.** Absolutely! The human body has four main excretory pathways that remove environmental toxins (exogenous toxins), as well as toxic products produced by the body (endogenous toxins). These include the feces, urine, sweat, and breath. Although some toxins get eliminated

directly by some of these pathways, many toxins need to be transformed into water-soluble compounds, while still others have to be changed into complex molecules. These transformations occur in the body's most important detoxification organ, the liver. Other organ systems involved in detoxification include the kidneys, gastrointestinal system, and the skin.

For the most part, they do a pretty good job. But today, our bodies battle greater amounts of environmental contaminants than ever before, overwhelming our built-in detoxification systems. The toxins remain in our bodies, where they can accumulate to dangerous levels.

**Q. How do toxins accumulate in our bodies?**

**A.** As noted previously, chemical toxins are divided into two groups: exogenous and endogenous. Exogenous toxins are present in the outside environment. These are found in the air we breathe, the water we drink, the food we consume, and the things we apply to our skin. Endogenous toxins are those produced within the body from various metabolic activities, including the activity of microorganisms found in the gastrointestinal tract. The body has detoxification mechanisms to deal with these toxic substances, but when *total amount of toxins consumed* is greater than the *ability of the body to detoxify*, we accumulate a *toxic burden*. Toxic burden describes how much toxicity is in the body at any given time.

Scientific detoxification involves reducing the total amount of toxins consumed and enhancing the body's ability to detoxify. (Toxic Burden = Total Amount of Toxins Consumed – Ability of the Body to Detoxify)

**Q. What is scientific whole body cleansing?**

**A.** For most people, detoxification means the use of colonics, fasting, lemon juice and honey, sweating, or laxatives. Although some of these practices may have some benefits, they fall short of what needs to be done to achieve an overall whole-body cleanse.

The goal of scientific detoxification is to reduce overall body burden. To minimize toxic exposure and increase the body's ability to detoxify, we need to make sure the gastrointestinal tract is in good health, antioxidant reserves are sufficient for the increased demands, and liver detoxification pathways (phase I and II) are working well.

Once these steps are followed, then and only then can we successfully detoxify. For years I have preached that scientific

detoxification doesn't only involve doing a cleanse two or three times a year; it also involves supporting your body on a daily basis from the onslaught of toxins. This means finding the right whole body cleansing program as well as a daily supplement specifically made to support your body's own detoxification mechanisms.

The two parts of Scientific Detoxification:

- A 14-day whole-body detoxification program should be done two to four times per year. This helps reduce the buildup of toxic chemicals that every human carries.
- We need to take a daily nutrient combination to ensure that liver and gut detoxification mechanisms are functioning optimally and can deal with the daily toxin onslaught.

**Q. What should I consider when choosing an effective whole body cleansing program?**

**A.** Picking a detoxification system that works can be confusing and frustrating. Dozens of herbal combinations promise all sorts of results, sometimes with very little science supporting their claims. The problems with these systems are many:

- They are not based on science.
- The amount and type of herbs used may not have the potency needed to be effective.
- Some of the ingredients may have side effects.
- The overall system does not cater to complete detoxification but instead creates more toxins in the body.

In the last quarter century, scientists have

**HEALTH FACT:**

Many detoxification programs are based on senna and cascara, stimulant laxatives that can create bowel dependence, deplete vitamins, minerals, and enzymes, and leave their users feeling drained and fatigued.

developed an understanding of how the body actually gets rid of chemical impurities. Through this knowledge, we are

now better equipped to make recommendations for choosing the right cleansing programs. This wasn't the case 20 years ago, when some fasting techniques were actually detrimental.

Still, even today people working in the detoxification field use enemas, colonics, and stimulant laxatives like senna and cascara to clean the gastrointestinal tract with the hope of ridding the body of toxicities. In some circles, this is the preferred system of cleansing, even though very little research supports such methodologies.<sup>4</sup>

To understand what proper detoxification is we need to look at how the body naturally expels toxic chemicals. For example, how does the body get rid of alcohol, over-the-counter and prescription drugs, contaminated food, and so forth? If we have an understanding of how all this works, then we can begin to effectively enhance detoxification mechanisms and thus minimize the detrimental effects of exposure.

**Q. What's the best way to have safe and effective detoxification?**

**A.** The best detoxification program is based on having a scientific understanding of the cleansing process. It needs to be safe and effective with all-natural efficacious herbs and nutrients. The program should be gradual and gentle and work with the body's own detoxification ability and normal patterns of elimination. The program I have always recommended involves two parts.

**Part 1: A two-week cleanse that should be done 2 -4 times per year.**

This cleanse accomplishes the following:

- Restores health to the liver, so it can once more eliminate toxins, poisons, and contaminants
- Encourages gentle elimination of the intestines
- Binds the freed toxins with fiber for excretion and elimination

When looking for a cleansing program, make sure it contains a blend of natural

fibers that are easily dispersed, a full spectrum liver support formula, and a natural laxative without herbal stimulants like senna and cascara.

### **Part 2: A daily detoxification supportive supplement**

This daily supplement should contain nutrients that can support daily detoxification. Remember detoxification works 24 hours per day 365 days per year;

cells injured by toxins, it can actually block the toxins from entering the liver in the first place. Milk thistle has been shown to prevent liver damage in persons suffering from alcoholism or hepatitis and can improve the way the liver works in people with cirrhosis of the liver, a chronic and sometimes fatal disease.<sup>5</sup>

But not all milk thistle products are equal. Only milk thistle standardized to contain

small intestine, these liver-loving herbs provide excellent liver restoration.<sup>7,8,9</sup>

### **Encourage Gentle Elimination**

One of the most effective, yet certainly one of the gentlest laxatives available is magnesium oxide, which works by drawing water into the intestines, causing their contents to soften and swell, which then scrubs, loosens, and cleanses the intestinal walls.<sup>4,10</sup> Slippery elm bark helps coat irritated mucous membranes, drawing out toxins and soothing the lining of the intestinal wall.<sup>11</sup> Marshmallow root helps white blood cells seek and destroy disease-causing germs, then coats and soothes the intestinal walls.<sup>12</sup> Peppermint leaf extract increases the flow of bile, relaxes intestinal muscles, and reduces cramps and gas that may occur during detoxification.<sup>13</sup>

### **Bind and Excrete Toxins**

After the toxins have been stirred up and scrubbed from the intestinal walls, the next step is to grab onto them with natural detoxification fibers. When fiber enters the intestines, it expands and soaks up the toxins and waste materials for elimination through the intestines.<sup>14</sup>

The best and safest fibers to use in detoxification are oat bran (the most soluble fiber of any grain), pectin from citrus fruit (it provides fiber and helps strengthen immune cells too), psyllium husk (has more re-absorption ability than any other bowel regulating fiber), and guar gum, (a dietary fiber and stabilizer from the seed of the guar plant helps clear the colon of toxins and other wastes).<sup>14,15,16</sup>

### **What to Eat and Drink While Following a Detoxification Program:**

Bottled or Filtered Water • Herbal Teas • Fresh Fruit • Vegetables (steamed or raw)  
• Steamed or Raw Greens like Chard, Spinach, Endive, Arugula Romaine, and Butter Lettuce  
• Whole Grains like Brown Rice, Millet and Quinoa • Vegetable Juice • Chicken • Turkey Nuts and Nut Butters (no peanuts) • Lamb • Fresh Cold Water Fish like Salmon, Whitefish, Haddock, and Halibut • Legumes like Navy, White, Red, Fava, Garbanzo and Kidney Beans  
• Cold Pressed Oils like Olive, Canola, Rice Bran, Grape Seed, or Flaxseed • Spices and Sauces like Tamari, Ginger, Garlic, Cayenne, Tarragon, and Thyme, Sea Salt

### **Dos and Don'ts While Following a Detoxification Program:**

#### **Do:**

- Drink the Water! It's important to drink at least 64 ounces of bottled or filtered water every day.
- Eliminate caffeine and alcohol.
- Avoid beef, pork, cold cuts, sausage, bacon, hot dogs, shell fish, soy products, peanuts, refined oils, margarine and shortening.
- Try deep breathing and meditation to increase the effectiveness of detoxification.
- Eat less dairy and wheat products.
- Expect some changes in your bowel movements.

#### **Don't**

- Eat refined flour, sugar, saturated fats, artificial sweeteners, white potatoes or highly processed foods.
- Go hungry! Plan on eating regular meals of suggested foods along with healthy snacks. Try healthy snacks, like almond butter on celery sticks or hummus with carrot sticks or juice.
- Exercise vigorously while cleansing. Your body needs time to rest and rebuild while you are detoxifying. Gentle stretching, short walks in the fresh air and yoga are all good choices.

it's ongoing, so you need to give it daily support.

Now let's spend a little time discussing each of these components and how they work.

### **Restore Liver Health**

Without question the most revered herb for the health of the liver is milk thistle. Not only can milk thistle help regenerate liver

80% silymarin and formulated in a patented process with phosphatidylcholine are capable of these amazing feats. For example in a comparative study, milk thistle bound to phosphatidylcholine was shown to be seven times as potent as regular milk thistle at the same dosage.<sup>6</sup> And when combined with artichoke extract to stimulate healthy bile production, as well as licorice and dandelion to help bile flow better into the

But even the best detox fibers can't cleanse the colon if they can't absorb and eliminate the toxins. Some fiber supplements just sit in a clump and really don't absorb much of anything. The most effective detoxification fibers are specially formulated to be thoroughly dispersed and completely released throughout the entire colon.

### **Lymph Movement**

The lymphatic system—the lymph vessels, lymph nodes, and lymph fluids—are often

the first to alert the body that toxins are present. Lymph absorbs cellular wastes and drains them into the lymph system, where they're carried to the lymph nodes for filtration. Once lymph has been drained and filtered, it re-enters the bloodstream where it is then carried to the liver for further processing.<sup>17</sup> It's pretty easy to see how proper lymph movement is vital for good health. One of the most effective ways of improving lymph movement is exercise. Exercise stresses muscles and the cardiovascular system activating lymphatic flow.

### **Key Daily Cleansing Nutrients**

Don't forget that a comprehensive nutrient foundation is key to keeping our body's detoxification system in tip top shape. Essential vitamins and minerals should be taken at efficacious levels. So make sure you get your A, C, and E, all the B vitamins, and minerals like magnesium, zinc, selenium, and copper.

Add in some natural antioxidants that will reduce free radical damage. Free radicals are responsible for a significant amount of toxins in the body. The most important cellular antioxidant for neutralizing free radicals is glutathione, a nutrient that plays a critical role in Phase I and Phase II detoxification.<sup>18,19</sup> Other good antioxidants are N-Acetyl-L-Cysteine (NAC), quercetin, and milk thistle.

Finally, look for nutrients that support the binding process in the body's detoxification system. Calcium D-glucarate supplementation increases the net toxins and steroid hormones removed.<sup>20</sup> Amino acids, such as glycine, taurine, and glutamine, also assist in binding toxins.<sup>21,22</sup>

### **Special Concerns During and After Detoxification**

While most people will obtain excellent results from the whole body cleansing program we just discussed, there are additional nutritional supplements that help with specific detoxification needs.

In addition, after detoxification is complete, your intestines may need some help in

getting back to business. This transitional phase is like "re-booting" a computer after certain functions have been restored. Probiotics (along with daily fiber) can help provide powerful intestinal restoration.

### **High Potency Metal Chelation**

Humifultate, an extract from Hungarian peat, is a mixture of humic acid, fulvic acid and phenolic acids. In clinical trials, Humifultate reduced lead and cadmium levels in people who had been exposed to these highly toxic metals. This high-potency supplement binds or "chelates" harmful metals in the intestinal tract, without depleting the body of healthy minerals, such as calcium or magnesium.<sup>23</sup>

### **Parasites**

Cleansing the gastrointestinal tract is the first step in eliminating intestinal parasites. If you follow your cleanse with high potency pancreatic enzyme supplements at high doses, not only will the enzymes help keep your intestines parasite-free, they can also help your body make digestive enzymes, immune secretions, and beneficial flora.<sup>24</sup> Make sure to choose a pancreatic enzyme product that is buffered with bicarbonate. Bicarbonates help to neutralize the acid environment of the stomach and allow the systemic enzymes to work in the small intestine.<sup>25</sup> Normal pH of the stomach is 2 (acidic) while pancreatic juice is about 8 (basic).<sup>25</sup> Bicarbonates assist in changing the acidic environment to an alkaline environment.

### **Candida Reduction**

Oregano, thyme, peppermint, and goldenseal root extract can inhibit the growth of candida, bacteria, viruses, and fungi after detoxification.<sup>26</sup> A supplement with an enteric coating will help ensure that the herbs survive the acid of the stomach and exert action in the intestines.

### **Probiotics**

Retained intestinal toxins can cause bacterial flora to decline significantly. Once detoxification is complete, probiotic supplements can replenish this intestinal

flora. However, many probiotic supplements actually contain dead and dying bacteria. That's because these beneficial bacteria are easily destroyed by light, air, poor packaging, and (if they live long enough) stomach acid. Be sure to buy a probiotic product that guarantees delivery of the bacteria into the intestine, right where they belong.<sup>27,28</sup>

### **Q. Are detoxification programs safe?**

**A.** For most people, the answer is definitely yes. However, pregnant or nursing women should not use any detoxification programs—even those that are specifically designed to be extremely gentle.

And it's best to not detox more than four times in one year, unless directed by your healthcare practitioner. If you develop cramping or diarrhea simply reduce the dose of the intestinal cleanser. And if these problems persist, are painful, or are disruptive you should discontinue its use.

It's also very important to drink at least 64 ounces of bottled or filtered water every day while on the detoxification program. Try drinking the water on the rocks or with a twist of lemon.

### **Conclusion**

How well we digest the food we put into our bodies is almost as crucial to our health as what kind of food we put into our bodies. A simple fact of a healthy life is that there is no true health without digestive health. And an essential key to superior digestive health is whole body cleansing and detoxification that gently and gradually works with your body's own detoxification ability and normal patterns of elimination.

## References

1. The Sierra Club. Accessed on May 28, 2003. Available at: <http://www.sierraclub.org>.
2. The Izaak Walton League. Accessed on May 28, 2003. Available at: <http://www.iwla.org>.
3. United States Environmental Protection Agency. Pharmaceuticals and Personal Care Products in the Environment. Accessed on May 28, 2003. Available at: <http://www.epa.gov/esd/chemistry/pharma/book-summary.htm#>.
4. Nick GL. The intestinal tract. In: *Clinical Purification: A Complete Treatment and Reference Manual*. Brookfield, Wis: Longevity Through Prevention Books; 2001: 43-44.
5. Porth CM. The liver and hepatobiliary system. In: *Pathophysiology: Concepts of Altered Health States*. 5th ed. Philadelphia, Pa: Lippincott; 1998:745-753.
6. Nick GL. Detoxification overview. In: *Clinical Purification: A Complete Treatment and Reference Manual*. Brookfield, Wis: Longevity Through Prevention Books; 2001:167-178.
7. Lehne RA. Laxatives. In: *Pharmacology for Nursing Care*. 3rd ed. Philadelphia, Pa: W.B. Saunders; 1998: 787-792.
8. Fleming T, ed. Slippery Elm bark. In: *PDR® for Herbal Medicines*. Montvale, NJ: Medical Economics Company; 2000: 697.
9. Marshmallow. Ibid. 505-506.
10. Peppermint. Ibid. 580-583.
11. Grodner M, Anderson SL, DeYoung S. Fiber. In: *Foundations and Clinical Applications of Nutrition: A Nursing Approach*. St. Louis, Mo: Mosby; 2000: 102-108.
12. Nangia-Makker P, Hogan V, Honjo Y, et al. Inhibition of human cancer cell growth and metastasis in nude mice by oral intake of modified citrus pectin. *J Natl Cancer Inst*. 2002;94:1854-62.
13. Marlett JA, Kajs TM, Fischer MH. An unfermented gel component of psyllium seed husk promotes laxation as a lubricant in humans. *Am J Clin Nutr*. 2000;72:784-9.
14. Brown DJ. Milk thistle. In: *Herbal Prescriptions for Health & Healing*. California: Prima Publishing; 2000:193-202.
15. Fleming T, ed. Artichoke. In: *PDR® for Herbal Medicines*. Montvale, NJ: Medical Economics Company; 2000: 44-46.
16. Licorice. Ibid. 469-474.
17. Dandelion. Ibid. 245-246.
18. Guyton AC, Hall JE. Circulation. In: *Textbook of Medical Physiology*. 10th Ed. Philadelphia, Pa: W.B. Saunders Company; 2000: 647.
19. Fleming T, ed. Burdock. In: *PDR® for Herbal Medicines*. Montvale, NJ: Medical Economics Company; 2000:128-130.
20. Nick GL. Burdock root. In: *Clinical Purification: A Complete Treatment and Reference Manual*. Brookfield, Wis: Longevity Through Prevention Books; 2001:155-162.
21. Porth CM. Lymphatic system. *Pathophysiology: Concepts of Altered Health States*. 5th ed. Philadelphia, Pa: Lippincott; 2002: 427-428.
22. Red clover. Ibid. 167-178.
23. Fleming T, ed. Red clover. In: *PDR® for Herbal Medicines*. Montvale, NJ: Medical Economics Company; 2000: 633-634.
24. Reduction of blood lead and/or cadmium levels by Humifultvate. Proprietary documentation. December 2002.
25. PDR Health. Supplemental enzymes. Accessed on May 16, 2003. Available at: [http://www.pdrhealth.com/drug\\_info/nmdrug\\_profiles/nutsupdrugs/sup\\_0328.shtml](http://www.pdrhealth.com/drug_info/nmdrug_profiles/nutsupdrugs/sup_0328.shtml).
26. Fleming T, ed. Goldenseal In: *PDR® for Herbal Medicines*. Montvale, NJ: Medical Economics Company; 2000: 355-358.
27. Wollowski I, Rechkemmer G, Pool-Zobel BL. Protective role of probiotics and prebiotics in colon cancer. *Am J Clin Nutr*. 2001;73:451S-455S.
28. Bengmark S. Gut microbial ecology in critical illness: is there a role for prebiotics, probiotics, and synbiotics? *Curr Opin Crit Care*. 2002;8:145-51.

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