



PIONEER PEARLS

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SPECIAL DETOXIFICATION ISSUE



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ASK THE NUTRITIONIST

**Detoxification:
Internal cleansing for vibrant health.**

Q: I've been hearing a lot about the benefits of detoxification. I eat well and rarely get sick. Do I really need to go on a detoxification program?

A: Clinical studies support the advantages of short-term detoxification for healthy individuals.¹ As a nutritionist, my findings agree. Especially in this age of pesticides and pollution, it is very important to periodically detoxify the body. Your diet may be excellent, but even with a perfect diet, it is impossible for anyone's body to completely eliminate the overload of toxic materials we are exposed to in modern life. For this reason, I highly recommend cleansing the body of accumulated toxins at least once a year.

What exactly are "toxins"? A good definition would be "any material that has a harmful or irritating effect on the body." Some toxins, known as endotoxins, are produced by our own bodies. This is the case with free radical oxidants, for example, or the metabolic waste products of bacteria and yeast which live in our digestive tracts. However, the fact is that most toxins today come from the environment.

The human body is a self-cleaning mechanism constantly going through detoxification cycles. A good example is the nighttime fasting period. Have you ever wondered where "morning breath" comes from? When we stop the intake of food, the body naturally releases stored waste materials into the body's elimination pathways, i.e. urine, skin, bowels, and lungs. After a detox, when many of the deeply stored waste materials have been eliminated, morning breath actually smells sweeter.

Evolution gave human beings the fundamental ability to cleanse toxins from the body via the liver and the various elimination pathways mentioned above. Unfortunately, our system is no longer adequate to the task. To understand why, imagine a pristine stream running through a forest glade. Animal waste products, dirt, and decaying plant materials are continually added to the flow. But the water's constant movement, and the activity of algae, insects and fish that inhabit the stream, are sufficient to process out these impurities. The water remains clean and clear. Now imagine that someone builds a factory at the edge of the stream and begins dumping sewage and pollutants into the water. Soon enough, the onslaught of pollutants will exceed the stream's processing ability. As this is true for a stream, so it is with the human body. Whenever Nature becomes challenged beyond her means, a state of toxicity develops. In the case of our bodies, this toxic condition is a direct and unavoidable result of modern living.

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ASK DR. JIM

**Herbs for the liver,
the giver of life.**



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Q: I'm told that we should clean out our liver periodically as part of good preventive health. But my regular doctor says not to worry because my routine blood test, which included a "liver function test," was normal.

A: The liver is one of the most extraordinary organs in our body. There's good reason why it's called the "live-r." This large and complex organ performs its many hundreds of vital functions necessary for life in four general ways: 1) It is a **detoxifier** - breaking down and processing toxic pollutants, drugs, alcohol, etc.; 2) It is a **blood filter** for bacteria, endotoxins, allergenic complexes and other particles; 3) It is a **synthesizer and secretor of bile**, essential for the excretion of end-products and toxins from the body and required for the emulsification and absorption of fat-soluble vitamins and other substances; and 4) It is a **metabolic powerhouse**, involved in the metabolism of fats, proteins, and carbohydrates and the storage, synthesis, conversion and regulation of many vital nutrients.

With so much activity going on in the liver even as we sleep, it is little wonder that this organ can become *sub-clinically* toxic simply by being subjected to our busy lifestyle. Liver enzyme tests may not pick up a moderately congested or toxic liver. In this case, unfortunately, what we can't see could hurt us. Although the liver might not rebel in the beginning, there is a limit to how much it can withstand in the long run.

For this reason, it is a very good idea to periodically reinvigorate your liver by engaging in a comprehensive dietary detoxification program such as is outlined in the *Ask the Nutritionist* column of this newsletter.

To support the dietary aspect of a liver flush, consider the use of herbs, many of which have proven to be extremely useful - even in severe liver ailments like hepatitis and cirrhosis. Herbs can heal the liver in several

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Our Toxic World

In scientific terms, environmental toxins are called xenobiotics: foreign chemicals that tend to lodge in the fat portions of tissue cells and organs and can cause illness and disease. The xenobiotics stored in fat cells are periodically released into the bloodstream, particularly at night, or when we fast, or when the body is stressed in any way (exercise, heat, illness, psychological stress, etc). However, because xenobiotics are, in most cases, fat-soluble they can not be eliminated from the body without first being transformed into water-soluble form. This transformation happens primarily in the liver through a series of complex enzymatic processes known as the Phase I and Phase II Detoxication Pathways. One important reason why supplementation is so vital nowadays is that it ensures the presence of several nutrients critical for the proper functioning of these pathways.

It is difficult to avoid exposure to xenobiotics in the modern world - we are besieged by these substances on a daily basis. Experts agree the average American consumes several pounds of toxic chemicals per year from sources as varied as air and water pollutants, pharmaceutical and recreational drugs, electromagnetic and mechanical radiation, and outgassing from carpets and textiles. Even natural-seeming fabrics such as cotton are regularly subjected to heavy chemical processing.

Most of the pesticides sprayed on commercially grown crops are known neurological toxins. The same is true for solvents, which additionally have been shown to cause immune and endocrine system imbalance. Many other pollutants are proven carcinogens. Of the estimated 70,000 poisonous chemicals now in daily use in America, less than 5% have been evaluated for their long-term effects on health. ²

Periodic detoxification of the body is one potent tool at our disposal for ridding the body of this multitude of harmful substances, and it may be performed as often as someone is willing to put the time into it – be it weekly, monthly, or yearly. I like to do a full detox in accordance with the seasonal changes, especially in the Spring and Fall. A lighter, weekly cleaning provides a frequent opportunity for my body to rest and renew.

Before we look at a few of the principles and methods of the detoxification process, I want to stress that as a concept detoxification is highly relative to each person. For example, an individual who is accustomed to eating a typical Western diet high in meat, dairy products, and fried and sugary foods will initiate some level of cleansing simply by adding more fresh fruits and vegetables to their diet. A lacto-ovo vegetarian who *already* eats lots of fresh fruits and vegetables plus whole grains, beans, eggs, and dairy products would do the same by eliminating the animal foods, often high in chemical residues.

Not Too Fast!

It is vital for each person to evaluate their current eating habits and be careful to go slowly, preparing the body by first detoxing from the “foods of commerce,” particularly caffeine, alcohol, refined sugar, and junk food.

Weaning yourself off of these non-foods beforehand will help lessen the withdrawal symptoms you may experience once detoxification has been initiated. Eating lots of healthy, light, and if possible, organic foods, and drinking an abundance of water – 6 to 8 glasses a day – helps prepare the body for a deeper cleanse.

The need to go slowly is one reason why I do not recommend extended water or even juice fasting for regular detoxification. It is safer and, in most cases, more effective to simply rid the diet of all difficult-to-digest foods and non-food substances and follow the basic cleansing diet with appropriate supplementation as outlined below. This is the best way for chemical toxins stored in fat cells to be flushed into the cleansing pathways of the body and eliminated without overburdening the system. But in cases where fasting is appropriate, I personally would always choose juices and vegetable broth in preference to just water.

In some cases water fasting may be beneficial, but it can often cause very serious problems. Fasting in general initiates an overwhelming release of toxic materials into the system. With water fasting, the rate of toxic release far exceeds the body's elimination capabilities and may create more harm than good in the long run. Thus, after thirty years of supervising detoxification programs, I generally choose not to recommend this approach. I strongly urge those who do choose to attempt any type of long fast to proceed only under the guidance of an experienced health care practitioner and only after having first consulted their physician.

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The Cleansing Diet

There are scores of detoxification programs on the market that offer pre-measured supplement packets, powdered drinks, and so on. Some of these are good. Many are way overpriced. In my experience, Mother Nature provides all we need to do our own detox. The fruits and vegetables provided by Mother Nature work in two ways at the same time: they build the body up *while* cleaning it out.

My basic cleansing diet centers on our original foods: fresh fruits and vegetables. Juicy fruits, rich in vitamins, put the least stress on the body by requiring very little digestion. Green and leafy vegetables, both cooked and raw, provide micronutrients, chlorophyll, and colon-scrubbing fibers to draw toxins out of the body. Starchy root vegetables supply minerals and complex carbohydrates. Whenever possible, try to select organically grown produce to avoid adding insult to injury.

Along with fruits and vegetables, protein is important to include because protein is essential for the proper functioning of the enzymatic detoxification processes. Some practitioners would disagree here, but my clinical opinion is that for this reason adequate amounts of clean proteins (beans, almonds, tofu) are necessary ingredients of a good detox diet. In observing thousands of people attempt to follow a variety of detoxification programs, I have found that those who include protein foods not only last longer on the program, but also benefit more.

Finally, high quality antioxidant-rich fats, such as flax seed and virgin olive oils, are a key component of my cleansing regime as they provide the lipid medium for eliminating toxic-laden bile acids. Drinking plenti-

ful amounts of fresh or filtered, non-distilled water is also vital to allow for adequate and continuous flushing of the body's systems.

Vitamins and Minerals for Cleansing

Proper supplementation is crucial for successful detoxification. The correct supplements will help reduce withdrawal symptoms, maintain energy, provide sufficient nutrients, and aid in the cleansing process itself.³ Recommended supplements include vitamin C taken up to bowel tolerance (see box), vitamin B5 (required for proper adrenal gland functioning), and a good multiple vitamin/mineral that contains *all* the B vitamins, vitamin A and/or beta carotene, and natural vitamin E.

A good multiple will also feature a high quality trace mineral complex. Be sure yours does, as many of the trace minerals (copper, zinc, selenium) are required for the synthesis of several micronutrients upon which the detoxification processes depend (i.e. glutathione, etc.). Consult a nutritionist, naturopath, or qualified health professional to help you develop the cleansing diet and supplementation plan best suited to your body's particular needs and condition.

Herbal Support

There are also many herbs which can aid in the elimination process, from liver-supporting milk thistle to gently laxative cascara sagrada. (See *Ask Dr. Jim* for more.) A knowledgeable herbalist or comprehensive book on herbal medicine will offer additional suggestions for herbal aids to detoxification. However, please beware of herbal cleansing programs that make big claims while allowing you to consume your regular diet. These programs have their place as a simple bowel cleanse, but they do not offer true detoxification which must involve a full dietary program as well as supplementation to be deeply effective.

Positive Results of Detoxification

A wonderful physiological benefit of detoxifying is a marked decrease in blood pressure and blood sugar levels. For this reason, if you take medications to regulate either of these functions, you **MUST** work in conjunction with your doctor to avoid the risk of overdosing once your blood pressure and blood sugar levels go down. A good detoxification diet, and subsequent lifestyle changes, will reduce your need for these drugs.

In addition to a lowering of blood pressure and blood sugar levels, the beneficial results of a dietary cleanse include increased energy and mental clarity, better digestion, a strengthened immune system, and improved overall health. But don't expect to feel wonderful at first!

Once toxins are released from fat cells, they circulate through the system awaiting elimination. It is common to experience fatigue, hunger, dizziness, headache, and general confusion or "spaciness" during this stage. Some individuals report more severe reactions such as mild depression, enhanced emotional sensitivity or outbursts, and allergic

reactions. The best way to lessen these sensations is to *go slowly* (I can't emphasize this enough). Always prepare the body first, and then adjust your diet as necessary. If feelings of weakness or extreme hunger arise, try increasing your intake of carbohydrate-rich vegetables and/or protein foods (carrying some almonds or sunflower seeds with you at all times can help you be prepared for such moments).

Completing the Cleanse

As a rule, the most physically challenging stage of a cleanse only lasts a few days. After that, a feeling of lightness and clarity usually begins to prevail. In fact, you may feel so good that you won't want to stop! But when you are ready to come off the cleanse, allow as many days as you spent *on* the detox diet for the *transition back* into regular eating. I call this transition period of the cleanse Phase Two. Going slowly now is as important as it was during Phase One. If you took a week to complete Phase One, then Phase Two should also last a week.

During the transitional period of Phase Two, I suggest adding small quantities of *only one or two new food groups each day*. For example, start by having a bowl of oatmeal at breakfast, or a serving of brown rice or other cooked whole grain at lunch or dinner. Eat only whole grains in their whole form during this period. Then, observe your body carefully as you reintroduce the foods of commerce (bread, pasta, dairy, etc.). Pay attention to how good you feel, and be careful not to overdo. Keeping this in mind will help you make healthier choices when you begin eating normally again and will prolong the benefits of the cleanse. It takes discipline and commitment to follow a detoxification

program. May your efforts be rewarded with the valuable gift of enhanced health and overall well-being.

For a copy of "Teri Kerr's Liver Flush, A Detoxification Program," please contact Pioneer Nutritional Formulas.

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The information in this newsletter is for educational purposes only. It is not intended to diagnose, cure, mitigate, treat, or prevent any disease or health condition. It has not been evaluated by the Food and Drug Administration. If you suspect that you may be ill, take time to learn about your condition and speak with others who have successfully treated themselves. Always consult your physician before embarking on any type of cleansing program.

VITAMIN C FINDING YOUR BOWEL TOLERANCE

If human beings were like most mammals, we would be able to synthesize vitamin C within our bodies at levels between *6 and 10 grams per day* (that's 6 to 10,000 mg!). But since we lack this ability, we must look to food and/or supplementation to supply our daily requirements of this essential nutrient.

To find out how much vitamin C *your* body can use, try experimenting with supplementation to find your personal bowel tolerance. Too much vitamin C will result in either loose stools or excessive intestinal gas.

Many individuals can tolerate far greater amounts of buffered vitamin C than of pure ascorbic acid. Consider a naturally buffered C to minimize stomach upset if this is an issue.

Your bowel tolerance will vary depending on your state of health. We need more vitamin C when we are fighting off sickness and less when we are healthy.

interrelated ways: PROTECTING, REGENERATING, INCREASING BILE PRODUCTION, METABOLIC NORMALIZING, ANTIOXIDANT, and ANTI-INFLAMMATORY. Herbs contain a constellation of active natural compounds, unlike synthetic drugs which usually have only one active ingredient. So most herbs that have beneficial effects in the liver also favor other organs or body systems. Of the dozens of herbs that might benefit you and your liver, let's look a little closer at four of the more familiar and well-researched ones.

MILK THISTLE (*silybum marianum*): Used for more than 2000 years, and with more than 450 current research papers, milk thistle is a preeminent liver protectant against a wide array of natural and man-made poisons. It is a powerful liver antioxidant, as are many of the best liver herbs. Without adequate free radical quenchers, liver cells can be damaged by free radicals released when toxins are broken down in the liver. Milk thistle and many liver herbs act to augment the critical role of glutathione, a major liver antioxidant. Milk thistle can stimulate the regeneration of liver cells called hepatocytes and can alter the outer membranes of these cells so that toxins are not able to enter the inside of the cell. Milk thistle is not water-soluble and is usually taken as capsules of a quality standardized extract, 200-500 mg per day, standardized to 70-80% silymarin.

PICRORHIZA (*picrorhiza kurroa*) is a traditional ayurvedic herb which grows on the slopes of the Himalayas in western India. It is comparable to milk thistle in its ability to protect the liver against poisonous mushrooms, toxic side effects of drugs, environmental toxins, radiation toxicity, scarring (cirrhosis), and hepatitis B. In addition to its antioxidant and anti-inflammatory protection, picrorhiza promotes the flow of bile, counteracting the stagnating and congesting influences certain toxins have on bile production and flow. Average adult dosage is 400 to 1500 mg/day of a standardized extract (4% kutkin).

SCHIZANDRA (*schizandra chinensis*) is an adaptogen (an herb or other substance that energizes and revitalizes organs and tissues without being stimulating like caffeine). Long used in China for lung and kidney deficiency and stress, schizandra has recently been found to provide protection against a variety of liver toxins including viral and chemically induced hepatitis. It is a strong liver antioxidant and can help promote liver cell regeneration (as do the other herbs discussed here). A typical adult dose is 1.5 to 6 grams daily of the powdered dried fruit or proportionally less of the standardized extract.

TURMERIC (*curcuma longa*), a traditional ayurvedic medicinal and culinary herb, has recently gained much recognition for its anti-tumor, anti-inflammatory, and potent water- and fat-soluble antioxidant properties throughout the body. It appears to be strongly hepatoprotective, and it promotes the flow of bile. Turmeric is poorly absorbed on its own, but absorption can be improved significantly by using *piperine*, a black pepper extract, along with it. (Herbalists and naturopathic physicians traditionally use "a pinch" of red pepper to augment the absorption of many herbs.) Adult dosage is about 1-3 grams a day of the powder; standardized extracts, proportionally less.

Other excellent liver protective herbs are *green tea extract*, *licorice root extract*, *phyllanthus amarus*, *bupleurum chinense* and the proprietary ayurvedic formula *Liv-52*. Consult your licensed healthcare practitioner when planning a liver detoxification program using herbs.

LOOKING AT LABELS

Understanding Labels and the New Labeling Laws

Supplement labels can be confusing. The *LOOKING AT LABELS* column in every issue of *PIONEER PEARLS* offers pointers to help you distinguish a better product from an inferior one.

It's sad but true: not all people are as honest as they might be. In the world of supplements, this is evidenced by several legal but deceptive practices that manufacturers may use to hide the quantity and quality of their ingredients. One such potentially deceptive practice involves the **PROPRIETARY BLEND**.

Initially created to protect a company's secret formulations from the danger of imitation by others, the Proprietary Blend can unfortunately also be employed to mislead. (The term "base," e.g. "in a special herbal base of ...," is another way to say "proprietary.")

Consider these two examples:

TWO POOR LABELS

TWO BETTER LABELS

1	Unique Secret™ Calcium Blend (carbonate, citrate-malate) . . . 500mg	Calcium (4:1 carbonate:citrate-malate) . . . 500mg (or) (80% carbonate, 20% citrate-malate) . . . 500mg
2	Unique Secret™ Proprietary Herbal Detox Blend: Milk Thistle, Schizandra, Turmeric, Dandelion 650mg	Milk Thistle (<i>silybum marianum</i>, seed) 80% silymarin 350mg Schizandra (<i>schizandra sinensis</i>, berry) 4:1 extract 100mg Turmeric (<i>curcuma longa</i>, root) 100mg Dandelion (<i>taraxacum officinalis</i>, leaf) . 100mg

Note that in example 1, the poorly labeled "Unique Secret™ Calcium Blend" does not tell you how much of its calcium comes from carbonate (a less absorbable form) and how much comes from the more absorbable citrate-malate. *It could contain up to 99% carbonate.* A better label clearly states the amount of each source by *ratio* or *percentage*.

In example 2, the poorly labeled "Proprietary Herbal Detox Blend" merely lists ingredients in descending order of weight, as mandated by law. As in example 1, this label fails to tell you the *amount of each ingredient* in the blend and thus, the *proportion* of the ingredients to each other. A better label specifies these points and more by giving *individual weights* for each herb, *potencies* for extracts (i.e. 80% silymarin, 4:1 extract), *part of plant* (root, seed, berry), and *form*: extract, standardized extract (indicated by a percentage), or powdered herb (assume this when no other form is specified).

When shopping for supplements, look for true full disclosure labels that provide all the pertinent information. If a manufacturer isn't telling you everything, they may very well have something to hide.

*Looking at Labels is based on the Pioneer poster
How to Read the Label of a Nutritional Supplement.
Contact Pioneer to request a free copy.*