

## BODY DETOXIFICATION - by Michael Vertolli

One of the most important causes of the many health problems from which we suffer in the modern world is tissue toxicity. Billions of years ago the earth was inhabited exclusively by single-celled organisms that lived in water. The water was both their source of nutrients and the medium into which they dumped their waste products. If their local environment became nutrient poor or overly toxic, these organisms would attempt to migrate to a more hospitable area. If they couldn't, they would get sick and eventually die.

The cells that live in our body are not very different from their ancient ancestors. They also live in a liquid environment (our tissue fluids) that provides them with their nutrition and into which they eliminate their waste products. However, if they are not getting enough nutrition or their local environment becomes toxic, they can not move away. They occupy a fixed position within our body tissues. This is why large multi-celled organisms like human beings have had to evolve specialized organs and organ systems that can distribute nutrients to their cells and remove waste products. These same mechanisms are also responsible for removing any toxins that enter our body from the external environment. The goal is to ensure that the fluid environment in which our cells live is clean and nutrient rich.

In order to accomplish this, it is essential that we are able to remove waste products and toxins from our body before they build up to toxic levels. In the past our capacity to remove waste products and toxins from our body tissues was usually able to meet our needs. Today, however, we live in an increasingly more toxic environment where the amount of toxicity that we produce in our body and absorb from our environment typically exceeds our capacity to eliminate it. This results in a more or less constant increase in the level of toxicity in our body tissues throughout our lives. The consequences of this are reduced immune response and the full range of chronic conditions that are becoming more prevalent in our society such as allergies, heart disease, arthritis and cancer. Much of the toxicity in our tissues comes from our immediate environment: the food we eat, the water we drink and bathe in, the kinds of cosmetics and cleaning products we use, out-gassing from furniture and building materials, and other sources. The rest of it comes from the general environment. All of these sources are direct consequences of the choices that we make every day. By eating and using products that are more in harmony with our body and the world we live in, we can reduce the toxic stress load on both our tissues and our environment and improve our health and well-being. Unfortunately, the level of toxicity in our tissues is usually too high to expect to see an immediate change in our health simply by reducing our exposure. Usually our body needs some help.

Fasting is one of the best means available to help aid the detoxification process. During a fast we are able to give our overworked digestive system a rest. The liver is able to divert much of the energy that it usually uses to digest food into

breaking down toxins so that they may be more easily excreted in urine, sweat or bile. In addition, the reduced calorie intake during a fast requires that our body break down fatty tissues for fuel. In the process, toxins that have accumulated in these tissues are released and can be more easily eliminated. I only recommend juice fasting. Water fasting is too extreme and can be dangerous. It is also important that we only use fresh, organic fruit and vegetable juices while fasting. We don't want to be absorbing more toxicity into our body when we are trying to eliminate it. A three to six day fast once or twice per year is ideal for most people in our society. Three is the minimum number of days necessary to get a good cleanse. In the modern world, even those of us who eat well, exercise regularly and try to avoid using toxic products will still tend to accumulate some toxicity through the year. A regular fast or some other kind of cleanse will help to prevent this. The best times to fast are mid spring (April/May) and early fall (September/October). If you have never fasted before and especially if you have any serious health problems, start off slow with a one or two day fast, or better still, seek the guidance of a qualified herbalist or other complementary health care practitioner who has experience with fasting. Fasting is very beneficial, but it is not the only way to help cleanse our body of toxins. This can also be accomplished with the help of herbs. The key to any good detoxification program is a good herbal detox formulation.

In order to understand how to create an herbal detox formulation, it is important to look at how our body eliminates toxins from our tissues. There are two organ systems that are responsible for removing toxins and waste products from our tissues and delivering them to other organs that will ultimately eliminate them. These are the cardiovascular and lymphatic systems.

Blood circulation is supported by circulatory stimulants. These are warming herbs such as cayenne fruit (*Capsicum* spp.), ginger rhizome (*Zingiber officinale*), garlic bulb (*Allium sativum*) and cinnamon bark (*Cinnamomum verum*). They are used in very small quantities in a detox formulation, usual 1-2% for cayenne or 5-10% for ginger, garlic and cinnamon. The proportion depends on how 'hot' the herb is. If we include too much of this kind of herb, the formulation will be too heating and may stimulate detoxification too rapidly or cause digestive disturbances.

Lymphatic circulation is supported by herbs called lymphatics. These herbs also help to drain toxins and waste products from our tissues. Good lymphatics include cleavers herb (*Galium aparine*), horsetail herb (*Equisetum arvense*), burdock root (*Arctium* spp.), yellow sweet clover herb (*Melilotus officinalis*), purple coneflower root (*Echinacea* spp.), goldenrod herb (*Solidago* spp.), pot marigold flowers (*Calendula officinalis*), and many others. Cleavers, horsetail and purple coneflower should only be used fresh or as a fresh herb tincture, otherwise they lose most of their effectiveness.

The liver is the organ that is responsible for breaking down toxins into simpler substances that are less toxic and more easily eliminated from our body. The

liver also eliminates substances that don't easily dissolve in water by releasing them into the digestive tract dissolved in bile. If our bowel function is good, a significant percentage of these toxins will be eliminated in our feces along with the bile. Liver function is primarily supported by herbs that are bitter tasting. They include herbs such as dandelion root (*Taraxacum officinale*), milk thistle seeds (*Silybum marianum*), yellow gentian root (*Gentiana lutea*), yellow dock root (*Rumex crispus*), wormwood herb (*Artemisia absinthium*) and boneset herb (*Eupatorium perfoliatum*). It is very important that bitter herbs (and most herbs, in general) are taken in a form that allows us to taste their bitterness; otherwise they will not work as well. This is one of the reasons why the best way to take an herbal detox formulation is as a tincture or tea. It is also a good idea to hold the herbs in our mouth for 20-30 seconds before swallowing them to enhance this effect. With teas this is not as important because we are drinking more fluid and it is very difficult to avoid the bitter taste, but with tinctures this is very important because they are more concentrated and we are consuming a much smaller quantity.

The largest proportion of toxins and waste products in our body (especially after they have been processed by our liver) are water-soluble and are eliminated in our urine by the kidneys. Some are also eliminated through our skin in sweat, but this is primarily a back-up system. However, our skin can become a very important avenue of elimination (to the detriment of its health) if our body is very toxic or our kidneys are not functioning efficiently. When this occurs, there is a higher likelihood that we may develop a chronic inflammatory skin condition like acne, eczema or psoriasis.

Kidney function is supported by herbal diuretics. Some of the better ones include herbs that I've already mentioned (most lymphatic herbs are also good diuretics) such as horsetail herb, cleavers herb, goldenrod herb, and dandelion root, as well as Queen Ann's lace herb (*Daucus carota*) and celery seed (*Apium graveolens*). The last major eliminatory channel for toxicity is the colon. Good bowel function is essential for clean tissues. This means that we should be having one to two bowel movements per day without skipping any days and dietary waste products should be eliminated within 18-24 hours of being ingested. In general, the stronger stimulating laxatives such as senna leaves or pods (*Senna* spp.), buckthorn bark or berries (*Rhamnus* spp.) and cascara bark (*Frangula purshiana*) are not recommended to improve bowel function because they are too strong and tend to be dependency forming. Detox formulations that contain these herbs are best avoided. A better way to support bowel function is by using some of the bitter liver herbs mentioned above. These herbs increase the secretion of bile by the liver and gallbladder. Bile has a gentle laxative effect which is more natural and not dependency forming. For anyone who has a history of constipation, bulk laxatives such as psyllium husks (*Plantago* spp.) and whole flax seeds (*Linum usitatissimum*) are also recommended. Add one tablespoon of either or a half tablespoon of each to a full glass of warm water. This should be taken on an empty stomach first thing in the morning. Wait 45-60

minutes before consuming anything else except water. Bulk laxatives are even more effective if we add a bit of probiotic powder that includes several strains of beneficial bacteria such as *Lactobacillus acidophilus* and others. Bulk laxatives are contraindicated for those who suffer from any kind of bowel obstruction. If you experience any discomfort when using them, stop taking them immediately and consult with a qualified complementary health care practitioner. In putting together a good herbal detox formulation, it is important that it contains one or two members of all of the categories of herbs mentioned above (with the exception of bulk laxatives, which are taken on their own or with probiotics). The formulation should be taken three to four times per day on an empty stomach. The best times are 15-20 minutes before meals and before bed. Although this kind of formulation can be taken as a tea, it is more effective to use tinctures, preferably made from fresh herbs. The dosage will vary depending on the strength of the tincture. Detoxification will sometimes be accompanied by a temporary aggravation of symptoms. In order to avoid this, we generally begin at a lower dose and build up to the full dose over a period of several weeks. If an aggravation occurs, reduce the dosage until the symptoms subside and then begin building up the dose again. Should any unusual symptoms persist, consult with a practitioner.

A fast or detox is not recommended for pregnant or nursing women, or young children. In addition, seniors, anyone with an inflammatory bowel condition, bowel obstruction or serious illness such as diabetes, heart conditions or cancer should consult with a practitioner before attempting a detoxification program. For anyone who decides to include fasting as part of their detox regimen, the best results will be obtained if we also take an herbal detox formulation for a couple of weeks prior to, during and for another couple of weeks following a fast. Traditionally, spring has been recognized as the most important time of year to cleanse. It is part of our natural yearly cycle. I recommend some kind of spring detox as a very important part of a healthy lifestyle.

We mustn't forget, however, that no matter how well we eat, how much we exercise and how often we engage in a cleansing program, the level of health that we can achieve will be limited if we are living in a toxic world. The health of our body can not be separated from the health of our environment. It's empowering to realize that when we make choices that are healthy for ourselves, we are also making choices that are healthy for all of the beings with whom we share this beautiful planet.

Having digested all of this, now you can eliminate it from your mind and get out there and enjoy the spring (when it gets here), and for those of you who are so inclined, happy cleansing!

Michael Vertolli is an herbalist and lecturer.

He is the Director of Living Earth School of Herbalism which offers introductory classes and certificate and diploma programs in herbalism and related fields of study.

For more information contact:

Living Earth, 10971 Jane Street, Maple, Ontario L6A 1S1.

Phone 905-303-8723 ext. 1.

Website [www.livingearthschool.ca](http://www.livingearthschool.ca)

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