Coming Clean in a Toxic World: An Integrative Approach to Detoxification

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The word "detox" has taken on a much broader and more dynamic meaning over the past two decades. Instead of simply referring to the withdrawing from drug and alcohol use – we now know it to mean assisting the body with the removal of everyday toxins. This change may be because we find ourselves living in a heavily industrialized time. Pollutants regularly permeate our food, air, water, personal care products, even the clothes we wear – all impacting how the body functions.

More than five decades ago, toxins weren't as visible on our medical radar. Increasing recognition came after the launch of Rachel Carson's book titled, *Silent Spring* (1962), in which she pointed out the detrimental effects of modern pesticides – compared with what was used in the past, they are significantly more potent, slowly decompose, and concentrate in fatty tissue. She stated: "For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death."[i] Indeed, the entire span of one's life is vulnerable to these effects, especially the unborn, young children, women of all ages, especially pregnant women, and older adults. If an individual has a depressed immune system, such as a cancer patient undergoing chemotherapy, they may be even greater risk.

It has been estimated that there are over 80,000 chemicals presently used in the United States.[ii] Some of them have not yet been extensively tested for their effects on human health. Research shows that we even come into the world with a toxic load. Up to 232 toxic chemicals have been found in the umbilical cord blood of 10 babies.[iii] These findings constitute evidence that infants are exposed to a host of dangerous substances while still in utero. As we age, our toxic load continues to compound – scientists estimate that everyone alive today carries within her or his body at least 700 contaminants. Medical literature continues to support the growing association between exposure to popularized toxins such as heavy metals (e.g., mercury, arsenic, lead), exogenous hormones (e.g., recombinant bovine growth hormone and synthetic estrogens), and industrial plasticizers (e.g., bisphenol A) and the rising incidence of neurobehavioral, reproductive, and musculoskeletal diseases – everything from attention deficit disorder to autism to infertility to fibromyalgia.

Some toxins are thought to play a role in metabolic disturbances such as insulin resistance, obesity, and type 2 diabetes, which is why these disrupting substances are even referred to as "obesogens." When it comes to a well-rounded detoxification program, it's also important to consider not just the physical removal of toxins, but also the emotional aspects that may need to be released as well. Toxicity can build in many areas of life – from the social networks we keep[iv], to the stress we experience, to the quantity and quality of our sleep. Research continues to support the idea that "…humans are simultaneously biological and cultural beings, which means that physical and ideational networks are enfolded in and unfold from one another."[v]

Of course, as our knowledge about toxins grows, it becomes essential to assess one's exposure. However,

the point is not to become overwhelmed by fear of toxic exposure, but to take health into your own hands by working with a functional medicine professional on safe ways to keep the body vital and capable of optimally processing and excreting environmental toxins. The five organs responsible for orchestrating good clearance of toxins include the gut, kidney, skin, liver, and lungs. Here are four essential steps to get your organs on the "clean" path:

Be Good to the Gut

It's best to begin any type of cleansing program by first ensuring that the intestines are in good shape so that you can excrete toxins without difficulty. Constipation leads to toxin buildup; the longer it takes for the body to remove toxins through the bowel, the greater the possibility that they will be reabsorbed into the systemic circulation. Normal bowel movements are at least once a day in the form of soft, well-formed stools. Fiber is critical to effective detoxification. It not only "traps" toxins within its matrix, but assists with generating movement in the intestines so that toxins are promptly eliminated. Fiber sources include: legumes, non-starchy vegetables, beans, fruit, seeds, nuts, and flaxseed meal. Otherwise, dietary fiber supplements like, psyllium, cellulose, oat fiber, and rice bran work well. The general recommendation for fiber is about 30 to 35 grams daily.

When it comes to the emotional aspects of the gut, consider any outdated emotions that are stored in the body and need to be "excreted." When we don't properly "eliminate" unhealthy emotions, we can experience increased levels of stress. Stress not only causes inflammation, but can elicit poor digestive function. Those who experience chronic stress have a difficult time maintaining a positive outlook on life and are at greater risk for disease and premature death.[vi]

Deep breathing is an example of one way to not only rid the lungs of stagnant air and contaminants, but also aid in moving the gut. When we breathe in deeply, the diaphragm moves down gently, massaging our intestines, and when we exhale, we create space in the gut area, allowing waste to move through us.

Let the Fluids Flow

If toxins aren't being excreted in stool, they can end up in urine and sweat. For this reason, drinking adequate water is an imperative for healthy detoxification. Fiber works best with fluid, and being properly hydrated allows toxins to move in and out of cells freely. Monitor fluid intake by assessing the color of urine. If it is dark to medium yellow, more water may be needed. It is important to note that certain vitamins may also darken the urine. A general guideline for fluid intake is just a little over 2 liters for a 70 kg person. Ensure that water is purified and consumed throughout the day (not just at meals) in a non-plastic container, preferably glass or stainless steel. Sweating is another form of detoxification. If possible, spend time in a sauna (preferably an infrared one), to maximize toxin excretion through the large surface area of the skin. It is important to check with your healthcare provider if you have high blood pressure, cardiovascular disease or if you are pregnant, before using a sauna.

Aside from "cleaning" aspect of water washing out physical toxins, the water element represents emotions and creativity. During detoxification, consider any emotions that may need to be released – tears or sadness bottled up inside. Tears are thought to help the body release inflammatory cytokines. In one clinical study by Dr. Ishii and colleagues at the Nippon Medical School in Tokyo, they showed that being easily brought to tears is associated with a better

response for the immune and neuroendocrine systems.[vii] Engaging in creative activities can assist in emotional expression: listening to music, singing, painting, and dancing, for example.

Liven the Liver

The liver is the classic "hub" of metabolic detoxification and acts as the head of the army of attack against toxins. It is important that detoxification enzymes are working efficiently because the intermediate compounds can often be more chemically toxic to the body compared to the form they were in when they started out. People can be "imbalanced detoxifiers" – or have some enzymes be overactive and others underactive. One of the basic requirements for these enzymes is protein, which is why a juice or water fast may impede effective liver detoxification. High-quality, hypoallergenic protein such as rice protein with added amino acids is one example of a protein source that can provide the raw materials to get toxins packaged for their exit out of the body. Other substances that can help streamline the processing of toxins through the liver include: green tea, curry, and cruciferous vegetables. Epigallocatechingallate, otherwise known as EGCG, found in green tea, can assist with boosting detoxification enzymes, as well as providing antioxidant protection against toxin metabolites. Another powerful substance for liver detox is curcumin, the active compound of the yellow root, turmeric, used in Indian curries. Curcumin is an anti-inflammatory substance that balances detoxification enzyme systems. Cruciferous vegetables like broccoli, kale, and Brussels sprouts are excellent in supporting liver detoxification. It is recommended to get at least one serving daily.

When it comes to emotions, traditional medicine would say the liver is about action, which is why anger is often associated with this organ. Anger is simply a "call to act." It is a catalyst that prompts us to change something or make a statement about our boundaries. During the detoxification process, note the presence of anger. Is it easily expressed or stuffed down inside? Finding healthy ways to vent anger can be more beneficial than just reacting in a volatile way.

In summary, detoxification is an essential process for most individuals nowadays due to the increased toxic burdens we carry. There are ways to make the most of daily detoxification through foods and drinks that assist in the functioning of the gut and liver. Whether one consumes foods for daily detoxification or undergoes a targeted, more intensive program with a healthcare professional, consider the benefits of approaching detoxification in a more holistic way. Include the emotions in conjunction with the physical body for a deeper elimination.

i Silent Spring; Carson, R., ISBN-13: 004-6442253055; ISBN-10: 061825305X; Boston: Houghton Mifflin, 1962, 412 pages, $18 Hardback; $12.75 Paperback; $8.78 Kindle.

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