

TREATMENTS FOR MERCURY TOXICITY

Treatments

The standard treatment for clinically diagnosed heavy metal toxicity such as mercury is called chelation. Chelation is the process of chemically bonding to metals and other toxins. There are several chelating substances, and chelation for mercury or other heavy metal exposure. Chelation can consist of more than one method. Current mainstream conventional methods of mercury detoxification involve extreme therapies, called chelation therapies with pharmaceutical agents. Less acute cleaning and detoxification alternative therapies can provide safe and effective nutritional solutions through a gentle herbal supplement regimen of detoxification.

The Importance of Mercury Detoxification in Three Stages

Since it is unlikely that heavy metals or mercury were accumulated over night; one should not rush into trying to remove them over night. A good basic approach is to start with gentle systemic and intestinal chelation of heavy metals without introducing other agents that can penetrate into the tissues and bind heavy metals to them. It's true that these other agents can pull heavy metals including mercury from the brain. But at the same time, they can also aid in the penetration of mercury to the same tissues. If chelation is performed over a long enough period of time by using a MCP/Alginate combination, it will slowly reduce the heavy metal burden on the tissue level. This first stage may take 1-6 months.

A second stage product involves nutrients high in sulfured amino acids or supplements of sulfured amino acids such as Garlic, Cystein, Methoinine, NAC and MSM can be used together with botanicals that help binding of heavy metals in the tissues (Cilantro extract as an example), and nutrients that can cross the blood brain barrier and help in the elimination of mercury. These nutrients include alpha lipoic Acid, L-Carnitine and others. Such a system can be put into life (or enhanced) by using botanicals that promote elimination and discharge while supporting the various detoxification systems of the body. They can also help in clearing the adverse effects of mercury toxicity.

An important auxiliary step is to maintain a healthy gut function and especially healthy bacterial flora. This can be done by supporting both the prebiotic phase as well as the probiotic phase and maintaining healthy digestive function. Digestion and elimination requires energy or heat. Detox is usually a cooling process. Therefore, it is important to make sure that the vitality of the body and especially the digestive and urinary systems are supported in the process by using a quality pre/probiotic support product

Engaging in such a multi faceted approach to heavy metals can bring great benefits.

Once the body has been cleaned from heavy metals, one should continue to take the gentle chelators such as MCP with Alginates on an ongoing basis together with the digestive flora support. The elimination support system can be added periodically as part of seasonal detox, usually during the Spring and Fall. We should be aware that it may take a few years until we are truly able to rid ourselves from the majority of heavy metals

in our body. The positive is that in the process other undesirable elements such as environmental toxins can be eliminated. Engaging in such a process in a holistic way through the path of knowledge and wisdom can also bring benefits on the emotional and spiritual level and enhance our lives, equipping us to pursue our life's work.

Conventional Treatments

Chelation with Pharmaceuticals

Chelation with pharmaceuticals is generally performed with harsh chelating agents in a hospital that may cause many side effects while also taking essential nutrients out of the body. This treatment is designed for an acute problem, where the risk of side effects may outweigh the benefits detoxifying the body of the mercury poison.

The well-known chelation agents are dimercaptosuccinic acid (DMSA), DMPS (Dimercaptopropane Sulfonate) and ethylene diaminetetraacetic acid (EDTA). They are usually administered intravenously, and then they are able to enter the blood stream and attach to a toxin with an ionic bond. Once bonded, the chelation agent will then carry the toxin out of the body. However, since it is bonded usually in only one way, sometimes the toxin is able to react to other cells on the way out of the body. Chelation agents may cause serious side effects, as well, because they are not only preferential to the toxins, but will bind to other metals in the system as well including calcium, and essential trace minerals.

Alternative Treatments

Alternative treatments for chelation and detoxification are showing a lot of promise, as they are both effective and without major side effects.

Detoxification/Chelation with Modified Citrus Pectin

Recently, PectaSol a type of modified citrus pectin (MCP) a dietary supplement mostly known for its use in inhibiting cancer metastasis, and reducing tumor growth and development has been found to be able to gently chelate and cleanse the body of mercury. The results of two recent clinical trials on the use of MCP for chelating mercury was so exciting that it was named one of the best new supplements of 2005 at the Natural Products Expo West in Anaheim, CA.

In the most recent clinical study, MCP was administered to a group of patients, and baseline levels of their total body mercury burden were taken and then compared against levels after treatment with MCP (15 grams of PectaSol daily) for four to ten months. The total body mercury burden for each individual was determined for baseline measurements using DMPS (2,3-Dimercapto-1-propanesulfonic acid) challenge of 250 mg i.v., followed by 6 hours of urine collection. The results showed a significant average decrease of over 60% ($p=0.03$) in the total body mercury burden after treatment with MCP (Eliasz, 2004).

In an earlier study, MCP (PectaSol) was given to patients and proven to increase urinary secretion of heavy metals such as lead, mercury, cadmium and arsenic. The results of the study found that MCP's gentle nature allowed for safe chelation with no side effects. It

was suggested to be a promising alternative to the harsher intravenous chelating therapies currently offered as primary therapy for heavy metal toxicity (Eliaz and Rode, 2003).

Modified Citrus Pectin is similar to the pectins in foods so how does it work to gently cleanse the body of toxicity? Pectins are natural gelling agents, binders, thickeners, and stabilizers in foods. They mostly consist of long molecules called galacturonic acid and galacturonic-acid methyl esters with average molecular weights from 50,000 to 150,000. High-methoxy (HM) pectin has at least 50% DE (degree of esterification) or greater, while a low-methoxy (LM) pectins DE is 50% or less. For dietary supplement purposes, a special low-methoxy pectin is used. These long molecules have a special ability to not only bind water in foods, but other chemicals as well. The length of the chains are selected in the supplemental forms of MCP so as to ensure bioavailability and absorption by the body. Essentially, once absorbed these MCP molecules act as large sponges that attract certain kinds of chemicals, such as mercury, and soak them up.

Low Molecular Weight Alginates

One of the most effective combinations of gentle nutritional chelation is to combine MCP with low molecular weight alginates. Alginates are extracted seaweed cell wall components and are safe for vegetarians. Alginates have been found to be able to biosorb heavy metals from the body or in other words, to be able to passively bind to heavy metals and sequester them in an alginate biomass in the aqueous portions of the body which then pass out of the body in normal excretory processes. Of the many types of substances that have been tested for their ability to biosorb heavy metals, alginates have performed in scientific investigations most favorably, showing a superior ability to bind heavy metals, such as mercury, lead, copper, cadmium, and zinc (Davis et al., 2003; Kim et al., 2005; Carr et al., 1968; Korotaev et al., 1992; Sutton et al., 1972; Sutton et al., 1971).

Antioxidants-Glutathione, alpha-lipoic acid, Vitamins C & E

Alpha-lipoic acid has been shown to be able to not only act as an antioxidant and regenerate other antioxidants, it is also able to detoxify the effects of several heavy metals. One study specifically focused on the regeneration ability of two different alpha-lipoic acid regimens to improve the condition of neurotoxicity caused by mercury toxicity. Glutathione status in individuals has also been found to be an important factor in protecting against the toxic effects of certain heavy metals, such as mercury, lead, iron and cadmium. Additionally, glutathione is known to play roles in the body in immune system and liver function (Patrick, 2002).

Research has shown that Vitamin C can help reduce the effects of certain toxic heavy metals (Cai et al., 2001; Dhir et al., 1993; Dhir et al., 1990; Vij et al., 1998). Vitamin E is another antioxidant vitamin that has been shown to be able to protect the lungs from toxins. Studies have shown that vitamin E has a protective effect on tissues from necrosis caused by several other heavy metals, such as cadmium, zinc and cobalt (Tandon et al., 1992; Van Vleet et al., 1981).

Herbs- Cilantro, Chlorella

Herbs have been used for centuries in the protection and support of many body functions, including in purification and detoxification of blood. Cilantro has been found to be able to eliminate mercury deposits. It has not only been found to increase the efficacy of antibiotic drugs in certain infections (that might have a mercury toxicity component), but also to be able to accelerate the elimination of certain metals, such as mercury, lead and aluminum in the urine (Omura and Beckman, 1995).

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Source; Dr. Eliaz