Toxicity Considerations Part 1: Heavy Metals and Metalloids

Forget Milk, Got Metal?

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If you haven’t already, please read the Toxicity Considerations: Introduction page first.


Although still a large percentage of populations are oblivious to it, exposure to heavy metals and metalloids coupled with the inability to effectively excrete these substances from the body, and the damaging effects produced as a result, is a growing concern as more people are becoming increasingly aware of the deleterious nature of these metals. The harmful impact inherent to these toxic metals is not a new awareness that has recently surfaced, and some metals have had hundreds if not several thousand years of history of application ranging from construction work (lead) to having been deployed by the Romans as a treatment for syphilis (mercury; 1300s-1800s). One of the major product uses for mercury today, however, is deploying it for dental silver amalgam fillings (where
mercury constitutes roughly 43-54% of the amalgam compound) which, according to the Food and Drug Administration (FDA), has been done for more than 150 years in hundreds of millions of patients. This practice of using dental amalgam in fillings has, for good reason, been banned in 3 countries so far (Norway, Sweden, and Denmark).

Despite today’s awareness of heavy metal toxicity, exposure continues to rise in some parts of the world (notably in less developed countries).

A heavy metal can be loosely defined as a metal generally known to act as a contaminant exhibiting toxic effects in living organisms. Cadmium, lead, mercury, nickel, [inorganic] iron, and aluminum are well-known heavy metals.

A metalloid is essentially an element with metal and nonmetal properties, the two most commonly known metalloids being arsenic and antimony.

There are metals – many of which are considered heavy metals – that have no known nutritive value to the human body (e.g. lead, mercury, and cadmium), while there are also trace element [nutrient] metals considered essential to maintenance of health.

“Trace elements are minerals needed in small amounts by plants, animals and human beings. There are trace amounts of over sixty-five minerals in our bodies […] They play a major role in health and are essential in the assimilation and utilization of vitamins and other nutrients. They aid in digestion and provide the catalyst for many hormones, enzymes and essential body functions and reactions. They also aid in replacing electrolytes lost through heavy perspiration or extended diarrhea and protect against toxic reactions and heavy metal poisoning. Current research now proves that human beings should get the required trace elements from their food in a balanced diet, especially fresh fruits and vegetables.” – Robert Morse, N.D., from ‘The Detox Miracle Sourcebook’ (p. 83-84)

While heavy metals can have acute fatal effects on people’s physical health, or induce long-term, chronic sickness or emotional and mental instability, this form of toxicity often goes undiagnosed, unrecognized, and is thus left unaddressed.

“Every person on this planet have been subjected to various forms of pollution. The World Health Organization (WHO) acknowledges that environmental pollution is the underlying cause of 80% of all chronic degenerative diseases, proof has been established as to the causative effect of heavy metals in many neurological conditions, the FDA now warns women of childbearing age (all women above age 18) and children to not eat certain (heavy metal containing) fish. Yet testing for heavy metal toxicity is not a standard diagnostic procedure. If you are suffering with a chronic degenerative issue, or just don’t feel well and don’t know why, there is enough evidence to suggest that you should make it a priority to find out if you do have high levels of toxic metals and chemicals in your body.” – Dr. Gabriel Cousens, M.D., M.D.(H)

Heavy metal toxicity always affects multiple sites and organ systems within the body. What tissues become majorly affected will be dependent upon the specific metal(s) involved as the various metals tend to be polarized to specific parts of the body.

How a person is ultimately affected by toxic metals, and what symptoms may be experienced, will, again, come down to the specific metal(s) involved, but also the amount that has entered the person’s system following acute or chronic exposure, age (young children, as an example, will absorb more of the ingested lead into their bodies rendering them increasingly prone to the harmful effects of this element and may compromise proper neurological development), how sensitive they may be to the metal(s) involved, and their ability to detoxify these metals out of their body.

There is a plethora of ways in which a person can be exposed to the various metals
(sources of notable metals outlined below), ranging from diet and supplements to the use of medications, or environmental/occupational exposure (the latter being considered the greatest source of exposure historically).

### Mercury

Mercury is a naturally occurring heavy metal that exists in three forms:

- Elemental mercury (it’s metallic, silvery liquid pure state)
- Inorganic mercury
- Organic mercury compounds (e.g. ethylmercury and methylmercury; the latter being the most ubiquitous in the environment)

#### 1.) Elemental (metallic) Mercury

In its pure elemental state, it is most notably found in thermometers, fluorescent light bulbs, and dental amalgam fillings. It enters the body in vapor form by being breathed in, and can cause devastating harm.

**According to the Department of Environmental Conservation:**

"It easily crosses blood/brain and placental barriers and can enter breast milk. It is a potent neurotoxin that impacts the central nervous system. Some of the neurological effects are: tremors, mood swings, irritability, excessive shyness, insomnia, loss of coordination, slurred speech, and ‘pins and needles sensation’. Very high exposures can cause kidney effects, respiratory failure, and death."

**NOTE:** Dr. Morse doesn’t support the concept of a blood-brain barrier.

#### 2.) Inorganic Mercury

Inorganic mercury (powder or crystal mercury salts), which is formed when mercury (Hg) combines with elements other than carbon, are most commonly found in skin-lightening products or freckle creams. When it is deposited in nature, bacterial processes can convert it into the highly toxic and most common organic form of mercury found in the environment: methylmercury (see organic mercury section below).

**According to the Department of Environmental Conservation:**

"Inorganic mercury is the least toxic of the three forms of mercury. It can damage the GI tract, as well as the kidneys and nervous system. High exposures can lead to skin rashes, dermatitis, mood swings, memory loss, mental disturbance, and muscle weakness.”
3.) Organic Mercury

Organic mercury exists in many forms including dimethylmercury, phenylmercury, ethylmercury and methylmercury, with the latter two being the most common forms we're exposed to as ethylmercury is found in some vaccine preservatives and antiseptics, while we're exposed to methylmercury through consumption of freshwater and saltwater fish, shellfish and (even) marine mammals, in which methylmercury has bioaccumulated.

According to the Department of Environmental Conservation:

“Methylmercury crosses blood/brain and placental barriers, which can damage the central nervous system and causes birth defects, neurological problems and developmental delays. Fetuses are the most vulnerable to methylmercury’s toxic effects because studies have shown that chord blood levels are twice as concentrated as maternal blood levels for mercury. Chronic exposure to methylmercury can cause an impairment in vision, speech, walking, hearing, lack of coordination and cause a ‘pins and needles’ sensation. Extreme exposures can lead to death.”

NOTE: Dr. Morse doesn’t support the concept of a blood-brain barrier.

According to the U.S. Environmental Protection Agency:

“Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system. High levels of methylmercury in the bloodstream of unborn babies and young children may harm the developing nervous system, making the child less able to think and learn.”

Testing for Heavy Metals

If you suspect that you have any heavy metals in your body affecting your health negatively, it is recommended that you have the appropriate tests done to determine to what extent heavy metals may be involved.

Amongst the several tests that offer to measure and illuminate heavy metal levels, the following are 3 tests that are often utilized for this purpose, all of which have their pros and drawbacks (of which differ from practitioner to practitioner):

1.) Urine Challenge Test/Urine Mobilization Test/Provoked Urine Test

This test involves the administration of a synthetic chelating agent (EDTA, DMPS, or DMSA) to “provoke” or “mobilize” the heavy metals for urinary excretion, the concentration of which is then measured. Individual’s with amalgam fillings or that are allergic to sulfa drugs or sulfites should completely abstain from DMPS.

- Pros: results are quick and very accurately show both heavy metals, metalloids, and nutrient minerals; reflects mercury from dental amalgam fillings and moderately reflects methylmercury that has been converted from inorganic mercury (the same form of mercury that is released from fillings).
- Cons: requires a physician; tends to be fairly expensive; requires that you take chelating agents which can yield serious side effects due the amount that needs to be taken to achieve results, or as they mobilize dormant heavy metals to the point of exceeding the body’s ability to cope with clearing these heavy metals out.


From a blood sample, this test measures the levels of intracellular minerals including toxic metals. Since many minerals are not easily measured by serum levels, this test measures what is available inside the cell.
Pros: shows if there is recent or ongoing heavy metal exposure; can be considered the most accurate method for testing nutrient minerals.

Cons: requires a physician’s authorization and lab visit for blood draw; doesn’t reveal if toxic metals are situated in the tissues (and in what tissues); can fail to reveal toxic metals that are impairing one’s health (i.e. a “false negative”).

3.) Hair Tissue Mineral Analysis (HTMA)

NOTE: This is Dr. Morse’s preferred way of testing for heavy metals.

NOTE: Dr. Lawrence Wilson, M.D., a nutrition consultant and expert in the field of Nutritional Balancing Science, has extensive experience conducting hair tissue mineral analyses, claiming to have reviewed more than 50,000 tests over the course of 30 years. Dr. Wilson recommends Analytical Research Labs, Inc. (ARL) for HTMA tests as they follow the proper guidelines for maximum accuracy in measuring water-soluble elements.

A hair tissue mineral analysis is a screening test for measuring the mineral content of a person’s hair (that is cut close to the scalp). According to ARL, it “provides information about the mineral activity in the hair that took place over the past three to four months, depending on the rate of hair growth.”

Pros: very accurate way of testing for metals; is, according to Dr. Chris Shade, accurate at reflecting methylmercury from seafood consumption as opposed to inorganic mercury from dental amalgam fillings; shows us in what tissues they are stored; affordable test; can be done at home with a kit which is sent back to lab for analysis.

Cons: can take several weeks for results to return; may not be the most accurate test for nutrient minerals (therefore, some practitioners combine the Hair Analysis with the Red Blood Cell Mineral Panel); is, according to Dr. Chris Shade, highly inaccurate at measuring mercury deposits from mercury amalgam fillings.

Chris Shade, Ph.D. is a mercury toxicity expert that has recovered from mercury poisoning, and later proceeded to research and develop an advanced system for testing for mercury and other heavy metals (as well as constructing an effective detoxification plan for getting these heavy metals out of the body, offering an equally effective alternative to the detoxification strategies laid out by mercury detoxification expert, Andrew Hall Cutler, Ph.D, P.E.).

QuickSilver Scientific (Chris Shade’s company) laboratory tests can be requested by individual’s in certain states or must otherwise be requested through a practitioner. His analytical testing process combines and analyses hair, blood and urine samples, and for mercury specifically, a speciation (meaning identifying and separating into different species) analysis is performed. This analysis separates and measures the different forms of mercury that are identified in the collected blood and urine samples. A very detailed report elaborating on the test findings is submitted back to the practitioner/individual.

Chris touches on what in his view is the proper way to test for mercury and other metals in the following videos:
Detoxifying Heavy Metals

Before embarking on a detoxification plan there are certain preparational steps that should be taken. These are outlined below.

1.) Testing

You should have sufficient heavy metal testing done to determine toxicity levels. Periodic follow-up tests are advisable to monitor progress (or the lack thereof).

2.) Complete Health Assessment OR Seek A Practitioner First

Fulfill the Self-Assessment Health Questionnaire, have an iris analysis done by an iridologist or someone experienced in the practice, and include any additional tests that may be relevant.

However, you may want to initiate cooperation with a detoxification specialist or other competent holistic practitioner prior to doing the above, in case the practitioner may approach the process differently.

It is STRONGLY recommended that you find a practitioner to work with in order to have someone that can help you navigate the process, especially should a potential adverse reaction or other unforeseen event occur, or if you’re pregnant/nursing.

You can locate a detoxification specialist here.

3.) Remove Fillings

If applicable, and unless pregnant or nursing, proceed to have your silver amalgam fillings gradually removed through the proper removal protocols (conducted by a holistic/biological dentist experienced in this specific process) as to avoid further harm from having them removed improperly.

Outlined below, you will find resources for deciding on the best approach for you to take to have your fillings removed:

- International Academy of Oral Medicine & Toxicology (IAOMT)
- International Academy of Biological Dentistry and Medicine (IABDM)
- Consumers for Dental Choice
- Holistic Dental Association
- HealthyDentistry (Dr. James M. Heltzel’s website)

IMPORTANT NOTE: To avoid unnecessary harm and struggles, it is NOT advisable to begin any aggressive detoxification plan before all amalgam fillings have been removed.

4.) Limit Sources of Exposure

Phase out as many sources of exposure as possible starting with changing your diet and replacing toxic bodycare products with natural and pure (preferably edible) alternatives; make sure you have access to a source of clean water. If your work exposes you to elevated levels of toxic metals, you will have to consider...
changing occupation.

5.) Diet

How you go about adjusting your diet will depend on the recommendations provided by the practitioner you decide to work with (if you've chosen to do so) and the information derived from tests, health history, health questionnaire, iris findings and the like.

To offer some general tips, if you're on your own, begin by embarking on a gradual transition toward a diet rich in raw and cooked fruits and vegetables. Overly processed foods, seafood, dairy products, cooked oils (apart from coconut, almond, and avocado oil, which can be used in the transition phase), should all be abstained from immediately.

Additional tidbits can be found [here](#).

6.) Using "Natural Chelators"

Before you begin taking a product that is specifically made for heavy metal detoxification, learn as much as you can about the product (contact the company behind the product if needed). Get to know the suggested usage recommendations and inquire about any specific preparations that should be undertaken before using any company's product(s).

Dr. Morse is not a fan of *chelation therapy*, per se, given that the therapy exclusively revolves around cleaning the blood, “blood detoxification,” as he refers to it, while the therapy completely ignores the lymphatic system. He will still recommend it if the situation is urgent.

In a non-urgent setting, Dr. Morse encourages the detoxification of toxic metals to be undertaken in a similar manner much like how you would go about eliminating anything else undesired from the body. With metals, however, be sure to keep in mind it’s a matter of “slow and gentle” as opposed to “fast and aggressive” detoxification. This is important to heed as to avoid rapidly stirring up the metals within the body resulting in metals potentially redistributing and settling in a new location; adverse reactions can and often are spawned from this – and these reactions are an example of when it is NOT an actual healing crisis the individual is experiencing.

It’s also important to continuously support the body’s elimination pathways in preparation for clearing toxic metals. If constipated, try to *restore normal bowel function* before beginning. There is a possibility that some heavy metals will compromise peristalsis (smooth muscle contractions) by suppressing the adrenal glands or autonomic nervous system. If that’s the case, make sure to:

1. Use a liquid heavy metal chelation product (suggestions provided below) instead of a powder (e.g. zeolite powder or other clay powders)
2. Start with a low dosage and gradually increase amount taken (which is generally recommended either way)
3. Include an intestinal restorative (e.g. Stomach & Bowels) and neurological restorative (e.g. Adrenal Glands and/or Brain & Nervous System formula(s)).

Now, as you begin researching the various and most well-known botanical and non-botanical chelating aids that exist, you will come to find that there is broad controversy concerning which to use and which to stay away from, when to use them and how much to use at any given time.

Popular foods include:

- Chlorella (binder)
- Cilantro (mobilizer)
Chlorella/Cilantro/Parsley

Chlorella, cilantro and parsley are all commonly recommended for heavy metal detoxification, but should be approached with caution and awareness of how to incorporate them.

Although Dr. Morse has included chlorella in his Chem/Metal Detox formula, for its binding effect, he is not in favor of using it for any other purposes (it’s not necessary). The same applies to spirulina and klammath lake algae.

When using large quantities of cilantro*, also known as coriander, be sure to incorporate a binding substance** as part of your regimen, such as chlorella (I would personally use tablets, if it were me), parsley and/or zeolites, to bind with any metals the cilantro may draw out.

*Constituting daily consumption as an addition to salads or as part of juices.

**A binding substance is essentially an insoluble particle that passes through the intestines, and as it moves through, is supposed to attract and facilitate excretion of toxins out of the body using the GI tract as the exit route. Activated charcoal, bentonite clay, chlorella, citrus pectin, and zeolites are all binders, but are not equally effective at binding specifically with heavy metals.

Chlorella can be taken roughly 30 minutes prior to meals or 30-60 minutes after juices (starting with 5-10 tablets).

Parsley can be included as part of the juices containing cilantro and added to salads.

Simple (heavy metal detox) Juice Recipe

You’ll need:

- 1 cup of cilantro leaves with or without roots
- 1 chopped apple
- ½ cup parsley
- ½ cup chopped celery
- 1 ½ cups of water

Directions:

1. Pour ingredients into a (preferably powerful) blender
2. Process into a pulp
3. Strain through a cloth and it’s ready for serving

Drink half of the juice and leave the other half for later in the day. Repeat this daily.

Do understand that relying exclusively on these food items is unlikely to produce any significant changes in your situation, and therefore should be implemented as an adjunct to a comprehensive protocol.

Popular products include:

- [Within our community] Chem/Metal Detox by Dr. Morse’s Cellular Botanicals
- Heavy Metal Detox (HMD) (chlorella/cilantro) by HMD
- Magnetic clay bath products from Lauana Lei’s Magnetic Clay Baths
- Natural Cellular Defense (NCD) (liquid zeolite) by Waiora
- Natural Detox Formula (NDF) (chlorella/cilantro) by BioRay
1.) Chem/Metal Detox

Dr. Morse’s Chem/Metal Detox herbal formula was created for detoxifying the body of toxic metals, radiation, and chemicals (in tandem with emphasis on the lymphatic system).

The Chem/Metal Detox formula should be part of a protocol that includes GI tract, kidney, liver, endocrine system and/or adrenal gland supporting botanical formulas, as well as lymphatic system effectuating herbs.

2.) Heavy Metal Detox (HMD)

HMD, a heavy metal detox formula combining chlorella and cilantro, is recognized as the only natural heavy metal chelator that has undergone a $1 million, three-year research trial using a double blind placebo controlled trial, which showed efficacy in removal of all toxic metals tested including arsenic, antimony, bismuth, lead, mercury, nickel and uranium.

Dr. Georgiou, the formulator of HMD, recommends combining HMD with botanical products that will support the body’s detoxification pathways.

3.) Magnetic Clay Baths

LL’s Magnetic Clay bath blends utilize a synergistic combination of herbs, spices, charcoal, and clays to effectively pull toxins, radiation, and metals from the body out through the skin. They have specific clay bath products for specific metals.

The clay baths can and sometimes should be paired with an oral chelation product (1, 2, 4, 5, or 6).

4.) Natural Cellular Defense (NCD)

NCD is a liquid zeolite product sold by Waoira. Dr. Gabriel Cousens, M.D., M.D.(H) has reviewed and strongly recommends this product. Based on (1) long-term personal usage experience, (2) a promising pilot study conducted at the Tree of Life Rejuvenation Center, and (3) extended period of time of seeing positive results achieved by his patients that have taken it, Dr. Cousens has found it to be extremely effective at removing toxins and heavy metals from the body – within a short frame of time (a few weeks) – when taken during a green juice fast.

5.) Natural Detox Formula (NDF)

BioRay’s NDF formulas were created specifically for heavy metal detoxification. In these formulas, BioRay have combined raw and micronized chlorella and cilantro for a product with potent mobilizing and binding effects.

BioRay recommends supporting and strengthening the liver (extend this to kidneys and gastrointestinal tract) for a brief period before beginning their NDF formulas.

6.) ZeoForce Zeolite

ZeoForce is Jameth Sheridan’s powdered zeolite product.

**Biomagnetic Therapy**

Biomagnetic therapy, using medical grade, properly designed and high quality magnets applied topically (and correctly), is another powerful and complementary therapy worth considering primarily because it inspires more energy at the cell level (essentially recharging the cells like a battery in a similar fashion to how raw foods do), contributes to
altering the cellular environment favorably, alleviates pain and supports detoxification and regeneration, through magnetic fields, while bypassing the gastrointestinal tract (helpful for those having trouble ingesting foods and supplements).

Heavy metals have a positively charged electromagnetic field. A positive electromagnetic field (south pole) has a stimulating, damaging, and acidifying effect on the body, while a negative electromagnetic field (north pole) has the opposite effect, supporting the body in healing itself.

**NOTE:** According to the extensive research and many years of user-feedback, Peter Kulish, founder of BiomagScience Corp. and researcher in the field of biomagnetism, has found that properly conducted biomagnetic therapy can and often does increase the potency of any botanical or non-botanical supplements, as well as drugs, taken internally. So, especially if taking an oral chelating agent/product or pharmaceutical medication, practice caution.

From client feedback and personal experience, I can so far conclude that this therapy form is excellent for pain relief (while allowing the area to heal so pain doesn’t return); reducing “lymphatic pockets,” otherwise known as tumors/cysts; increasing wellbeing (energizing the body) and better sleep (when used to support and strengthen the pineal gland); completely preventing jet lag and disorientation from air travel in individual’s that would experience these problems every time.

LaShanda Greene ([HigherPurposeHealing.com](http://HigherPurposeHealing.com)), another detoxification specialist, has had phenomenal client feedback using the magnets as well (particularly in the “better sleep” and hypothyroid departments, without using glandulars).

**Excerpts from article entitled, 'Magnetism for Healing':**

“An acid state produces swollen cells. Acidity, lack of oxygen and swollen cells are painful. Dr. William Philpott has proven that a north magnetic field will increase oxidation, reduce swelling and alkalize (normalize) the body, in effect reversing the effects of over acidification, temporarily correcting these disorders, allowing our body to heal itself better while fighting these problems.”

“Magnetic energy and magnetic health are just one spoke in the wheel of perfect health. Ideally we should exercise, watch our diets and drink filtered water. Magnetic therapy is the most natural alternative to chemicals and drugs. Magnetic therapy enhances your body’s utilization of healthful foods and herbs, as well as making exercise and physical therapy more effective. Researchers, medical doctors and scientists have proven that properly designed therapeutic magnets work by helping the body maintain and restore itself naturally.”

**Dr. William Philpott:**

“The common heavy metals producing toxicity are such as mercury, lead, aluminum, and there are also rare heavy metals that cause toxicity. Atomic weight heavy metals have a positive magnetic field. When the body is placed in a negative magnetic field, it cancels out the positive magnetic field of the heavy metals. These are then processed out of the body as non-toxic metals charged with a negative magnetic field. Therefore, processing these metals out of the body with magnetics does not injure kidney function. Heavy metal toxicity should always be considered.”

**Determining Your Approach**

In this section, I will provide general guidelines for getting started. Do understand that every case is unique, and affordability situations differ from person to person, so there may be instances where the case will need to be approached differently than what is to follow.
You have now briefly been introduced to several options that are at your disposal for aiding in the heavy metal detoxification process: Oral heavy metal detoxification formulas, clay baths, and biomagnetic therapy. So, how do you proceed from here and which of these tools do you incorporate (if any)?

Affordability aside, it will depend on your overall genetic constitution (can be gauged through an iris analysis; predominantly determines how rapidly your body responds to the measures you take) and how compromised your elimination channels are versus how saturated with toxic metals your body has become.

For the majority of people, all it takes is an individualized detoxification protocol with the addition of Dr. Morse’s Chem/Metal Detox formula (and sometimes that formula isn’t even necessary), and, with a predominantly raw food, high fruit diet – along with periodic juice or water fasts – that’ll suffice to take care of everything. These are going to be the moderate to strong constitution people with fairly to very responsive body systems.

In a small percentage of cases, it gets much more difficult, where a weak constitution and high levels of metal and chemical toxicity is involved coupled with hypersensitivity to not only the toxic substances, but also most botanical products, supplements and sometimes even a majority of the food items we would normally rely on for detoxification purposes. Add to this that such people’s elimination pathways are often quite compromised and further deteriorating. These are the cases where detoxification truly stands out as an artful practice that puts a practitioner’s competency to the test. These are also the cases that may require the practitioner to temporarily step outside of their default regimen and expand their toolset to include certain things they otherwise normally wouldn’t use (hence temporary use of zeolites, for instance, is a recommendation on this page although Dr. Morse doesn’t favor the use of zeolites).

It is also for exceptionally sensitive cases like these that companies such as LL’s Magnetic Clay and BioRay have created and offer a modified and gentle product option (‘LL’s Natural Detox’ and ‘NDF Plus’ respectively).

Now, with these tricky cases, following a thorough health assessment, I prefer to focus first on figuring out what the person CAN tolerate in terms of food (if anything at all), whether it’s raw; steamed; thoroughly cooked, solid; liquefied; or fiberless liquid. It may take some trial and error to figure this out. Then I’ll recommend using the best of what they can cope with (unless it’s the sort of food that’ll only produce more harm in time).

Secondly, the easiest way to favorably alter the internal environment of a person’s body in a case like this, initially, is to work from the outside in, utilizing such modalities as sauna therapy, magnetic clay baths, biomagnetic therapy, energy work, neuromuscular medicine and other tissue-manipulating techniques.

1.) As a baseline, I would suggest biomagnetic therapy (using BiomagScience Corp.’s Wellness Kit).

2.) I would then decide on whether to use a product taken orally or if to try magnetic clay baths first.
   a. If I choose magnetic clay baths, I would then select the most appropriate blend from LL’s Magnetic Clays; or
   b. If I decide to use an oral formula, this is where the affordability and literacy components come in; I would research and learn about each product, prior to making a selection.

Chem/Metal Detox Formula:

- I would potentially try this formula first

Heavy Metal Detox (HMD):
I would not take HMD on its own
I would combine this with ZeoForce Zeolite for additional binding effect
I would only take HMD if working with a practitioner

Natural Cellular Defense (NCD):

- I would potentially try NCD first
- I suggest reading this article before taking NCD
- If applicable, try taking NCD during a green juice fast

Natural Detox Formula (NDF):

- I would not take this on its own
- I would combine this with ZeoForce Zeolite for additional binding effect
- I would only take NDF if working with a practitioner

Zeoforce Zeolite:

- I would potentially try this product first
- I would not take this product if constipated
- If having only 1 bowel movement per day, I would pair this with an intestinal restorative formula (e.g. Stomach & Bowels Tonic formula)

As the person’s vitality slowly increases in due time – and sensitivities are diminished – they will be readily capable of gradually transitioning toward an increasingly cleansing diet. At this point doing more “inside out” work will become a more appropriate and comfortable route to traverse.

Sources (in order used):

1. http://bmb.oxfordjournals.org/content/68/1/167.full (hazards of heavy metal contamination)
7. http://www.nurturehealth.ca/metal.html (list of sources of heavy metal exposure)
12. http://www.holistichelp.net/blog/what-is-the-best-way-to-test-for-heavy-metal-toxicity/ (ways of testing for heavy metals)
13. http://drwilson.com/Articles/DETECTING%20METALS.htm (Dr. Lawrence Wilson’s view on different heavy metal tests)
17. [http://drlwilson.com/Dr.%20Wilson.htm](http://drlwilson.com/Dr.%20Wilson.htm) (about Dr. Lawrence Wilson, M.D.)
19. [http://www.arltma.com/HairAnalysis.htm](http://www.arltma.com/HairAnalysis.htm) (Hair Tissue Mineral Analysis information)
20. [http://www.quicksilverscientific.com/clinical/clinical-testing.html](http://www.quicksilverscientific.com/clinical/clinical-testing.html) (Mercury Speciation Analysis; Chris Shade, Ph.D's company website)
23. [http://www.detoxmetals.com/pages/A-Natural-Heavy-Metal-Chelator-is-Born.html](http://www.detoxmetals.com/pages/A-Natural-Heavy-Metal-Chelator-is-Born.html) (HMD research article abstract and full article)
26. [http://www.azunimag.com/magneticdetox.html](http://www.azunimag.com/magneticdetox.html) (magnetic detoxification of heavy metals excerpt by Dr. William Philpott)
27. [http://www.e-magnetshop.com/magnetism_for_healing.htm](http://www.e-magnetshop.com/magnetism_for_healing.htm) (‘Magnetism for Healing’ article)