



Detoxification Through the Skin

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The detox experience can be made much easier, shorter and more effective.

Since our exposure to general chemical toxins in the environment is only going to get worse with time, any reasonable and cost effective method that reduces concentrations of toxic metals and other poisonous chemicals in the human body will find great use in the 21st century (the Age of Toxicity). Until recently a select few doctors have been using intravenous chelation therapy to eliminate toxic poison loads for both acute and chronic exposures. Recently the movement has been toward oral applications of chelation drugs and even more recently to transdermal applications which seems convenient, less expensive, and even more effective. No matter which method of application (IV is expensive and the most dangerous method of chelation) synthetic drugs are used that depend on specific biochemical dynamics that include the sequestering of toxic materials out of their hiding places. Once chelated the complex compounds need to be eliminated. Unfortunately this is neither easy nor automatic. Faulty avenues of elimination can create a nightmare for both patient and physician thus great care needs to be taken with any chelation or detoxification program.

Dr. Dietrich Klinghardt, one of the founding fathers of chelation therapy, is very clear that there is a difference between mobilization and detoxification. Mobilization, according to Dr. Klinghardt, means stirring mercury up from its hiding places. "Mobilization may lead to excretion. It also may lead to redistribution. Detoxifying or detoxing means mobilizing and moving it out of the body. **There are no true detoxifying agents. All we have are mobilizing agents.** The body has to do the excreting with the help of the proper agents. The body is not always able to do this! Often perpetuating factors are present that disable the body's mechanisms to detox." The term "chelation" generally implies a chemical binding and excretion of mercury and other heavy metals, by DMPS, DMSA, and EDTA and these drugs

mobilize mercury and other heavy metals but do not necessarily carry them out of the body.



Representation of Chelator Molecule Binding with a Mercury Atom.

There are other agents, some which help with the mobilization and others that assist the body with the process of elimination. The nutrient ALA (alpha lipoic acid) is a dithiol (with 2 sulfur atoms) compound that is normally used by the body in small amounts as part of the enzymes for producing cellular energy. Because of its two sulfurs, ALA can bind and transport mercury for excretion from the body. The healthy body also uses glutathione stores to detoxify and remove mercury and other poisons from the body. NAC (N-acetylcysteine) is a widely available glutathione precursor that has the ability to directly bind and excrete mercury via its single thiol (sulfur atom) as well as support and increase the body's store of glutathione as a precursor. Thus both glutathione and NAC, though not true chelators, do part of the work that chelators do. True chelators penetrate into the body's tissues and actually pull the mercury and other heavy metals out of their hiding places. These other "non chelators," which some refer to as chelators, are more effective when the mercury is first entering into the body and or when it is being pulled out of the cells and again being dumped back into the blood. Clinically it is usually thought that glutathione and glutathione precursors are best utilized in combination with a traditional synthetic chelator like DMPS. This chapter is about another way of forcing the mercury and other hostile chemicals out of their hiding places.

If accumulation of heavy metals and hundreds if not thousands of other foreign chemicals are infiltrating our systems it is only logical that removing their insulting influences is a medical necessity. If a treatment itself causes more damage, or leads to a long term worsening of problems -- one has to beware, be fully informed, and take steps to mitigate risk before fully embarking on any such a treatment. This is certainly the case with amalgam removal, medicine in general, as well as the specific medical area of chelation. In general chelation drugs have proven to be relatively non toxic but that is not everyone's experience especially with the IV forms of administration,

which is highly shocking to the body, to say the least. Oral and transdermal applications are softer, work gradually through time and thus are safer even though the drug used is the same.

There are several factors that influence the safety of a chelating substance beyond the method of application. Is a person able to metabolize and excrete the drug with and without mercury attached? What adverse effects does the chelating agent have on other minerals and nutrients in the body? Will the chelating agent cause the redistribution of mercury in an unhealthy way? It is possible to pull mercury from tissues only to have it quickly increase blood serum levels that create acute problems that cannot be controlled. **If mercury is not excreted it is reabsorbed and this is a critical in the success or failure of chelation therapy.**

In 1904 a Russian Naturopathic Physician by the name of Eli Metchnikof discovered that the body would recycle any toxin that it was not capable of purging. In the recycling process the body would utilize all 7 channels of elimination to try and get the toxic substance removed from the body: lungs, liver, kidneys, the skin, colon, lymphatic system and the blood. If one or more of the body's channels of elimination are not working effectively, or if a physician ignores one of these essential systems in his deliberations for treatment protocols, the patient will suffer from a lack of dramatic results. Dr. Dietrich Klinghardt says, "The body is constantly trying to eliminate neurotoxins via the available exit routes. However because of the lipophilic/neurotropic nature of the neurotoxins, most are reabsorbed by the abundant nerve endings of the enteric nervous system (ENS) in the intestinal wall."

Treating heavy metal toxicity is a demanding challenge that tests our responsibility to be incredibly informed about a wide spectrum of issues, many of them complex. One of the most overlooked aspects of elimination is actually the skin which offers a vast exit route to poisons trapped in the body. The skin is actually an amazingly complex organ and, by weight, the largest in the body. It covers, on average, some 22 square feet and weighs around nine pounds (roughly 7% of body weight). The skin provides the front line of defense for the body, as well as being expressive of both physiological conditions and emotional states. The skin is the extension of our nervous system to the outside and defines our existence as a physical form. The skin is involved in dynamic exchange between the internal and external environments through respiration, absorption and **elimination**. The skin is highly permeable though it has the ability to maintain its important bacteria-inhibiting barrier with the environment. The keratin layer, a tough, compact sheet of interwoven proteins waterproofs the

body preventing dehydration. It also keeps water and other foreign substances out. However, under certain circumstances, the permeability changes and allows increasing amounts of fluids, dissolved gases and compounds, to either enter or exit the body through the skin barrier. Small molecules that have both lipid and water solubility can quickly penetrate the skin and enter into the circulatory system and as the scientific community witnessed to its horror - dimethyl-mercury can enter and easily kill through the skin in the smallest quantities. A general principle to apply when it comes to the skin and detoxification is:

What gets in through the skin can get out.

Thus it is in a physicians favor to become familiar with the keys to the skin's permeability. In general heat, activity, and body temperature facilitate the ease with which these "border exchanges" can take place. Herbal poultices, therapeutic baths, steam and dry saunas and now transdermal patches, rely on the permeability of the skin for either introducing substances into systemic circulation via the skin or mucous membranes, or for drawing toxic substances out of the system via the eliminative channels of perspiration.

Thus the **skin is an important organ of detoxification and elimination**. One of the worst cases of environmental toxicity in U.S. medical history was treated by a Dr. Ziem at the Johns Hopkins Center for Environmental Medicine. The patient was off the charts with cadmium, aluminum, silver, and mercury but was able to receive a complete cure. The skin on his entire upper body was slate grey. Dr. Ziem had to design a complete protocol from scratch in order to treat this patient. This included a strong supplement program, including high doses of Vitamin E and Selenium. No standard chelating agents were used. The most critical part of Ziem's treatment protocol was very simple: Steam Sauna Therapy. Dr. Ziem sweated the poison out of the man to the point where the patient literally sweated metals that could be wiped off with a towel.

It is commonly thought that sweat from conventional saunas is 95 to 97% water with salt making up a part of the rest. Our skin contains sweat glands and oil glands, both of which help us move things through the skin. Sweat gets rid of water-soluble toxins, and even helps to eliminate toxic heavy metals such as mercury and cadmium as Dr. Zeim successfully demonstrated with his patient. Oil glands help remove oil-soluble toxins such as gasoline, solvents, pesticides and ingredients in toothpaste and personal care products, which the body is not able to dispose of unless heavy sweat is provoked. It is generally thought that the longer the skin is heated, the more oil-soluble toxins

are eliminated. Even if one half to one percent of the sweat is carrying out heavy toxins we are greatly assisting the body's elimination needs with saunas.

Far infrared saunas can mobilize mercury in deeper tissues.

Dr. Dietrich Klinghardt

Dr. Klinghardt is combining the use of far-infrared saunas with the chelating agent DMPS in a heavy metal detox protocol. These special saunas are believed to be more effective in moving toxins through the skin than steam saunas because in the far-infrared thermal system only 80 to 85% of the sweat is water with the non-water portion being principally cholesterol, fat-soluble toxins, toxic heavy metals, sulfuric acid, sodium, ammonia and uric acid. Using the skin as an essential aspect of chelation therapy is important and makes complete medical sense.

I do a sauna every day and have for a number of years. Usually I go to the YMCA and they have a regular dry sauna. Recently I got an infrared and I was intrigued that the sweat felt different, less watery, and slimier. It made me think there was some truth to the assertions being made about far infrared and its ability to draw more toxins than the standard regular sauna.

Dr. David Minkoff

We have to help the body detoxify and the skin should be used as a major instrument and avenue of exit for accumulated heavy metals. It should be obvious that an organ as large as the skin, which is highly permeable when heated (or when heat is generated deep in the body as it is through far infrared therapy) would be useful in heavy metal detoxification. It was reported by National Geographic many years ago that the workers in the Cinnabar mines in Spain used to

detoxify themselves through sweat baths after work. It makes perfect sense to bypass as much as possible the kidneys and large intestines, which are already overloaded with toxicity and greatly reduced in their capacity to eliminate toxic substances. If a person is heavy metal toxic it is because their normal channels of elimination have not been able to keep up with the load. When this is the case there are no secure avenues of escape when we chelate and mobilize heavy metals that have been locked in the cells.

Peer reviewed literature shows that sweating during sauna therapy eliminates high levels of toxic metals, organic compounds, dioxin, and other toxins. Sauna therapy is ideal to mobilize toxins from their hiding places.

Dr. Dietrich Klinghardt

"One of the best passive exercises is the radiant heat of an infrared sauna which, causes a profound deep sweat. After about 30 minutes of exposure, the blood vessels of the skin dilate to allow more blood to flow to the surface to support the cooling process. The millions of sweat glands covering the body are infused with fluid from the blood. In turn, they empty to the skin's surface, thereby flushing large amounts of toxins, including toxic acids and heavy metals, from the body," writes Dr. Robert O. Young who found in his research that radiant heat [infrared] sauna provides the following benefits:

- 1. Speeds up metabolic processes of vital organs and glands, including endocrine glands.**
- 2. Inhibits the development of pleomorphic microforms [fungis, yeasts, bacteria and molds] and creates a 'fever reaction' of rising temperature that neutralizes them.**
- 3. Increases the number of leukocytes in the blood.**
- 4. Places demand on the heart to work harder thus, exercising it and also producing a drop in diastolic**

blood pressure (the low side).

5. Stimulates dilation of peripheral blood vessels thus, relieving pain (including muscle pain) and speeding the healing of sprain, strain, bursitis, arthritis, and peripheral vascular disease symptoms.

6. Promotes relaxation thereby creating a feeling of well-being.

The volume of sweat produced in the Far-InfraRed sauna is profuse and may induce two or three times the sweat volume of conventional saunas, yet they operate at a much cooler air temperature range: about 110 to 130 degrees F, compared with 180 to 235 degrees F in a conventional sauna. Using sauna for detoxification purposes is an ancient tradition practiced by different cultures around the world. The skin is our largest organ and sweating is one of the body's most important ?detoxification? pathways. The combination of modern Far-InfraRed heating technology with the ancient sauna ritual seems to have resulted in an effective way to deeply cleanse the tissues of the body.

When we get serious about detoxification we investigate every tool to facilitate the process. When it comes to using the skin there are other techniques and options besides sauna and deep sweating. The most basic and ancient earth materials can be used to literally suck the poisons through the skin and this can be enormously helpful and safe. Clay, specifically bentonite clay (a very fine volcanic clay), is ideal for this and it is very inexpensive, practical and can be used in a patient's own bathtub. Bentonite used in a bath, can draw out toxic chemicals through the pores of the skin.

The proof of this method of drawing poisons through the skin is not in the scientific literature but in the ring around the tub. When cleaning a tub after taking a bath with pure bentonite clay, if one is toxic one will undoubtedly be astonished to find the clay remaining in the bottom of the tub turned from a light-grey color into a black substance. The dark

colored sediment is the mirror of the filth that comes out through the skin and it would not take much to have this tested for heavy metals. As one detoxifies the body the proof of the pudding is in the color. The clay will retain its light grey color when the poisons are gone.

Raymond Dextreit, the French naturopath who popularized the clay cure noted that many heavy metals "are positively charged, whereas clay has a negative electrical attraction." He states that, "These toxins cannot resist being drawn toward the clay." The mostly negatively charged clay mineral ions are swapped for the ions of the toxic substance that are mostly positive and this contributes greatly to its power of attraction for everything from pesticides in the blood to heavy metals like mercury. The clay molecule becomes electrically satisfied and holds onto the toxin until our bodies can eliminate both safely. The absorption power of clay acts like a sponge with the clay molecules drawing other substances into its internal structure. Clay then can and does both adsorb and then absorb damaging substances with adsorption being a first step of "getting close" and absorption being the final act of "binding securely" the toxins needing to be eliminated.

Clay has been used for 1000s of years and anyone who puts some on their hands and lets it dry can easily feel its drawing or suction power. Its power is in absorption (see next chapter) and the skin opens easily to its pull. There are literally thousands of chemicals to worry about and many hundreds of them are now identifiable in peoples' blood streams. **Thus it is important for chelation therapists to know that clay baths and far infrared saunas are capable of covering a broader range of chemicals than any single chelation agent.** Chelation is focused almost exclusively on heavy metals while sweat detoxification and clay detoxification pull on all foreign materials that need to be eliminated from the body.

As most physicians notice the major organs of the body, including the liver and kidneys, are often negatively impacted by any kind of toxic condition in the body. And due to modern diets the colon is a toxic cesspool with deeply diminished capacity to eliminate toxic loads. So here lies the catch 22 of chelation therapy. Often the treatment increased stress to the elimination organs of the body. It is not enough to pull the contaminants out of the cells only to have them do extensive damage because they are not being eliminated by the kidneys or colon. We need to pull out the heavy metals without dumping them into the body where they do extensive damage on the way out or worse just get redistributed to other organ systems. A slow moving flow through a congested colon will see heavy metals being reabsorbed unless special and sensitive care is taken. **During**

chelation we need to provide support for both the kidneys and the liver directly but indirectly we can take a great load off these overworked organs by opening up an exit channel through the skin.

This is where healing clay treatments come in. As simple as recommending our patients to increase their water intake we should automatically be suggesting they go home and take a series of baths that can open up the flow of toxins through the skin. Even one short week of clay therapy prior to any other treatment options could make a difference. The same can be augmented by far infrared saunas and even by hot steam saunas during the entire course of chelation treatments. Physicians might be more comfortable recommending far infrared because of its FDA approval but clay should never be overlooked as appropriate nutrition should not be, nor proper hydration which is absolutely essential when navigating a body through detoxification. We do not need to send our patients to expensive spas nor resort to chelation IVs unless a patient is suffering from acute heavy metal poisoning and even then the skin as an exit route should never be overlooked and should certainly be favored especially where there are financial concerns, which there almost always is. When it comes to budgeting a person's financial resources in treatment, with so many possibilities for valuable agents which cost considerably, it is medically irresponsible to ignore simple low cost solutions.

Dr. Vesna Humo, who is a surgeon, has all her patients use clay after mastectomy with radiotherapy. She advises patients to use clay directly on the skin to prevent skin damage and has seen excellent results from this. Importantly she is using clay for bed sores and every necrotic and septic wound also with excellent results. In addition to clay and saunas, which have both been used since the dawn of civilization, we now have new emerging technologies that also use the skin as avenues of toxic escape.

Recently detox foot patches that contain an interesting list of natural [ingredients\[i\]](#) have become popular for detoxifying and healing. People apply the patches at night, and see the results in the morning. The patch will be dry before use, but after usage it will range from light brown to almost black, wet and in some cases will have a foul smell, depending on the amount of toxins in your body.



The visual evidence after using these pads is not only compelling but give us a low cost method of testing our levels of toxicity while we simultaneously detoxify. By simply removing the patch we can actually see some of the materials that have been ?suctioned? out of the body. Our progress is apparent when we see what comes out onto the pads when used over consecutive days, weeks or months. Though it seems the clay rings in the bathtub have not been tested companies that sell these patches have sent the used pads to the SCR Analytical Lab, which is a highly accredited Environmental Laboratory. The results demonstrated absorption into the patches of nickel, arsenic and mercury, as well as benzene, isopropyl alcohol, methyl alcohol, aluminum, cadmium, copper, lead, thallium, asbestos, DAB dye, fast green dye, sudan black dye and PCB (plastic byproduct).



Mercury Poisoning in Children from Teething Powders Pink Disease (Acrodynia)

A [woman\[ii\]](#) who had pink disease (mercury poisoning), as a baby reported, "I tried the (foot) patches for the first time last night and was amazed at what toxins came out overnight! She reported outstanding results with her arthritis in hands, thumbs and fingers gone saying, "I am completely off my arthritis medication after 2 years on VIOOX." After using 37 of these patches she reported: Her eyes have changed colour from brown/hazel to green/hazel. That the whites of her eyes have changed to clear white from yellowy colour with blood throughout. She also reported increased vitality and general feeling of well being and that the puffiness was gone from her feet so that her shoes became a bit loose. And most significantly her persistent cough of 2 years duration had completely gone.

These patches, instead of using clay use bamboo and wood vinegars (pyroligneous acids) which essentially are the fluid or sap derived from tree cells which have great absorbing power like clay does. Using natural products like clay with these sap based tree resins makes good sense. Each seems to have properties and methods of application that compliment the other. It should be interesting to note, when it comes to the placement of these patches on the soles of the feet that if one tapes a clove of garlic to the sole of one's foot, one will taste the garlic on his or her breath within minutes. This shows again the open permeability of the skin and its ability to transport chemicals into the entire system. Thus we can experiment with using the feet as a

possible site for application of a glutathione gel taped to the sole of one's foot overnight and this might allow for better absorption. Transdermal TD-DMPS, which is being used so successfully to pull kids out of the shadows of autism, is four parts glutathione to one part DMPS, and is applied on the soft skin of the arms or thighs.

"There are around 4,000 sweat glands in the feet through which the toxins are emitted," says Platinum Energy Systems, a company that has made an ionizing footbath that works by energizing the water to attract positive and negative ions from both the body and the water. "The water in the foot spa becomes an extension of the water in the body, from which it is separated by nothing more than a thin membrane of skin on your feet. This process makes use of the 2,000 pores in the existing membrane of the sebaceous and eccrine glands in each foot to remove by-products of excretion, which includes toxins," says the company. The below pictures show yet again what can be pulled out of the skin from a widening variety of mechanisms. Detoxification through the skin is basic to any program whose goal is the elimination of heavy metals and other toxic substances from the body.



The lungs, for all practical purposes, can be seen as inner skin, as is the entire lining of the alimentary tract, and both are major points or highways of entry for pharmaceuticals and natural substances. Most importantly for chelation and detoxification glutathione can be applied as an aerosol effectively, applied once or twice a week in the same way an asthma sufferer inhales medication. And in mentioning the intestines as internal skin we see EDTA suppositories though certain physicians are now experimenting with transdermal EDTA use as well as the DMPS. The large intestine is a crucial organ of elimination that is a subject unto itself. As we shall see in the next chapter, clay can also play a strategic role in cleaning the intestines and increasing elimination velocities and this is very important when fighting a war against toxic buildups in the body.

This chapter is introducing several important therapies that have an important place in chelation therapy. Using the skin as an avenue of elimination will make heroes out of doctors who are desperate to help patients and even little children with heavy metal toxicity. Medicine in general is obsessed with the biochemical dynamics which everyone knows is a tricky business. Using steam and far infrared saunas as well as clay to pump poisons out of the skin brings us into bio-physics and bio-mechanics. When we mix therapeutic approaches utilizing multi-level approaches we greatly facilitate our successful work with people. From water and clay to DMPS, glutathione precursors and glutathione itself we now have an expanding bag of instruments with which to help our patients recover from difficult diseases. The detox side-effects experienced when taking chelators are a result of the extra strain the released toxins put on the eliminatory organs such as the kidneys, liver, digestive system, lungs and skin (referred to as a healing crisis). All of the suggestions in this chapter help to relieve those side effects by removing the toxins through the skin therefore reducing the stress on these eliminative organs.

[i] Brazilian Agaricus Mushroom (Beta-Glucan known for its strong immunity building), Eucalyptus Tree Sap, Bamboo Vinegar, Tourmaline Mineral (emanates far infrared rays to release Negative Ions), Chitosan, Caururus Chinensis Baill, Houttuynia Cordata, Oak Vinegar, Starch.

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