

Chelation Therapy - Fad Treatment with Real Risks



By *Lila Abassi* — August 8, 2017



Pseudoscience is sexy and it sells – big time. Fraudsters, hucksters, and snake oil salesmen will always be a plague to our society as long as there is a susceptible public. Let's be honest. In the age of information (and misinformation) it can be very difficult to determine what is real and what is not, allowing potentially dangerous medical products and procedures to become fads.

When it comes to making a buck, the utter lack of supportive data has not hampered charlatans. While there is a legitimate medical use for chelation therapy – a treatment for toxic acute metal poisonings from mercury, iron, arsenic, lead, uranium, and plutonium, to name a few. But some people are misusing this therapy claiming that it treats problems other than toxic metal poisoning.

Luckily for the public, there are organizations like ours. We exist to shoot down pseudoscientific nonsense and provide the public with actual facts based on actual scientific evidence. We may not be the winner of a popularity contest but that's because the truth is boring. Okay, enough about us, let us discuss chelation.

Chelation therapy has gained notoriety in junk science circles as a treatment for a variety of ailments, ranging from atherosclerosis to aging and autism. It has been touted as the "roto-rooter" of arteries, essentially eliminating the need for statins - a dangerously false claim. [T^{\[1\]}here is no evidence^{\[1\]}](#) that chelation therapy works any better than placebo in the treatment of coronary artery plaques. So, the benefits of chelation therapy, in this instance, are imaginary while in reality, the risks associated with it are real and significant.

Some of the [common side effects^{\[2\]}](#) of chelating agents include:

- Burning sensation when injected into a vein
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Fever and chills

- Headache
- Nausea and vomiting
- Diarrhea
- Convulsions or seizures
- Fall in blood pressure
- Breathlessness or tightness in the chest
- Respiratory failure
- Low blood calcium
- Irregular heartbeats or cardiac arrhythmias
- Severe allergic reactions may occur with the use of some chelators and lead to skin rash, eczema, exacerbation of asthma or asthma attacks.
- Severe hypersensitivity reactions may lead to anaphylactic shock and even death.
- Depression of the bone marrow leading to low counts of red blood cells, white blood cells and platelets. This can lead to anemia, infections and an increased bleeding tendency.
- Kidney damage and failure leading to end stage renal disease requiring dialysis.
- Liver damage may be seen with some chelating agents and some patients may develop liver failure.
- Damage to the brain leading to a decline in cognitive function
- Vitamins and vital nutrients may leave the body along with the heavy metal. This can be a particular problem among children who require adequate levels of nutrients for normal growth and development. In addition, vitamin supplements may not always replenish the loss of vital nutrients caused by long term chelation therapy.

Dr. Gary Gordon, MD, DO, is a co-founder of the American College of Advancement in Medicine (ACAM) - an organization created solely for the promotion of chelation therapy - is unrecognized by the scientific community. Gordon feels all humanity is suffering from lead poisoning, but we are not.



"Everybody on Earth now has a minimum of about a thousand times more lead in their bones than can be found in any human bones from over two hundred years. So we're reaching the point of maximum tolerance... [e]very time we turn on a power plant we create more cases of autism."

(Insert eye roll). This will be a topic for a different conversation. Click here for [full text](#) [3] of his blathering.

The [treatment](#) [4] for lead poisoning, first and foremost, has always been prevention – to identify and remove potential sources of lead from the environment. Community-wide preventive actions are recommended when children are found to have blood lead levels (BLLs) of 10 µg/dL or higher. With BLLs of 15-19 µg/dL, nutritional and educational interventions are recommended. With BLLs of 20 µg/dL or higher, medical evaluations and environmental interventions are recommended. Chelation therapy provides transient benefit in the patient in whom the source has not been identified. Even then, treatment should be performed in a pediatric intensive care unit at a legitimate medical center that is familiar with this treatment. Patients' cardiovascular, neurologic, renal and hepatic functions must be closely followed, and the treatment itself can precipitate kidney injury.

Quacks and others who seem to have a financial stake in promoting chelation therapy argue that this treatment should be provided not just for those in whom BLLs are 45 µg/dL (absolute indication for medical treatment) but for any child with BLL above five µg/dL. These recommendations are unnecessary, reckless and irresponsible. There is a large push for chelation therapy in places like Flint, Michigan, even though the actual harm from lead in the water was greatly overstated.

A [study](#) [5], which was conducted between 1994 and 2003 by Kim Dietrich, an epidemiologist at University of Cincinnati College of Medicine, focused on one and two-year-old with BLLs between 20 and 44 µg/dL. Some children received a placebo and others chelation therapy. Dietrich and his team followed up with the kids when they were five, and again at age seven. Although chelation therapy was successful in reducing the BLLs of the treatment group at the time, "the active drug group was no better in terms of their neurobehavioral development or neurological development, or in any other areas of health that we examined than the group that received placebo," [Dietrich stated](#) [6]. *Children treated with chelation therapy were equally as likely to have developmental delays and cognitive problems as the kids who got the placebo.*

Another concern about the use of chelating agents is that they [carry the risk](#) [7] of redistributing lead from bone (its main depot in the body) to soft tissues such as brain and liver - definitely not good - or it could simply redeposit the lead into bone. This risk can be mitigated by choice of chelating agent used. Utilizing chelation therapy requires some understanding of pharmacokinetics as well as an understanding of body's metal ion homeostasis - meaning when essential minerals in the body are lost through chelation, bad things can happen such as abnormal heart rhythms. Caution is required as there are real risks involved. It is doubtful that pop-up infusion centers catering to the latest fad will be adequately equipped to monitor patients

appropriately.

Alarmism and sensationalism are akin to cults – that proponents of "alternative medicine" or what I refer to as "prophets of fear," parasitize society by promoting junk science on their walk to the bank. Dr. Gary Gordon is just one stinky fish in a whole sea of liars. When you are the co-founder of the sham [accreditation body](#) [8] for chelation therapy training, charging folks \$1,745 for an advanced chelation workshop for the Certified Chelation Therapist (CCT) designation with renewal every seven years seems like motivation enough to legitimize your existence.

Profiting off fear and subjecting people (especially children) to unnecessary and dangerous treatments seems not only unconscionable but criminal, in my humble opinion.

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Links

[1] <http://doi.org/ololo.sci-hub.cc/10.1067/mhj.2000.107548>

[2] <https://www.news-medical.net/health/Chelation-Therapy-Side-Effects.aspx>

[3] <http://www.smart-publications.com/articles/dr-garry-gordon-interview-the-health-benefits-of-EDTA-chelation-therap/page-2>

[4] <http://emedicine.medscape.com/article/1174752-treatment?pa=eC9eMYmbrCRBNEcU6UY%2BzK2JOau%2FDPXHfvfmpNwW4n86b4C7QZphkjeoxL89F3Y%2BCrb0lv>

[5] <https://www.ncbi.nlm.nih.gov/pubmed/15231903>

[6] <https://www.wired.com/2016/01/flints-high-lead-levels-have-doctors-struggling-for-answers/>

[7] <http://sci-hub.cc/10.1021/tx00041a001>

[8] <http://www.acam.org/mpage/ChelationHome>