

Chelation Therapy - Guidance for the General Public

Note: This information is only provided as a service to the public and is not meant to replace medical advice given to individuals seeking treatment. Please talk to your health care provider.

What is "chelation (key-lay-shun) therapy"?

In standard medical practice, certain medications (also known as 'chelants' [key-lints]) are used in specific situations to help remove high levels of certain metals from the body. The chelators bind to these metals in the blood and some body tissues causing them to be more quickly eliminated in the urine or stool. Whether the chelation medication is swallowed, or injected into the muscle or vein, depends on the type of chelation medication used and the medical situation of the patient being treated. Some practitioners of complementary medicine use medications or natural products, labeled as chelators, to treat a variety of chronic medical conditions (see below)

When has chelation therapy been scientifically shown to be useful?

Chelation therapy has been scientifically proven to be beneficial treatment for poisoning (high exposure) from metals such as lead, mercury, and arsenic when carried out under competent medical supervision. It is also used to treat large amounts of iron or copper that accumulates in the body due to certain diseases.

For what type of medical conditions has chelation therapy not been shown to be useful?

Chelation therapy has not been scientifically proven to be beneficial in the treatment of autistic spectrum disorder (ASD), cancer, heart disease, eye problems (macular degeneration), Parkinson's disease, chronic fatigue syndrome, gout, multiple sclerosis and other medical conditions. There is no proof that chelation therapy can help a person get back to good health from these conditions by removing metals or toxicants from the body. In a press release of October 14, 2010, the Food and Drug Administration (FDA)¹ warned eight companies to stop making false statements about

¹ The Food and Drug Administration (FDA) is a federal government agency that helps protect the public from unsafe medical drugs and equipment, biological products, and cosmetics along with protecting the U.S. food supply. (taken from www.fda.gov). Statement available at <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm229358.htm>

“chelation” products that claimed to treat a range of disorders. The FDA said that the companies had not proven their products are safe or effective in treating the disorders or diseases that they claimed. An expert from FDA said that the companies were “preying on people made vulnerable because of serious illness” and that there are no FDA approved over-the-counter chelation products.

What about using results of laboratory tests to suggest chelation therapy should be given?

Sometimes chelation therapy is recommended based on the results of non-standard laboratory tests for multiple elements performed on samples of hair, blood, urine or other specimens. Such testing may show levels of chemicals above the laboratory’s reference range, but these are not necessarily levels that cause health problems. Sometimes a laboratory test known as “provocation testing” is used which involves giving a chelation medicine to “provoke” and measure the excretion of toxicants. This type of testing is not recommended. It does not reliably show high or toxic levels in the body nor prove the benefit of taking chelation therapy. It is also misleading to compare test results after taking “provoking” chelation medicine to test results from the reference population who have not taken the medicine. In standard medical practice, chelation therapy is given after carefully considering the results of standard laboratory tests, clinical factors, and scientific evidence.

What about natural and herbal remedies used for “chelation therapy”?

Many herbal remedies are sold claiming to cure health problems or help a person get back to good health by drawing various toxicants out of the body. These claims have not been scientifically proven. Some of these herbs and vitamins may be good for you, but when used in large amounts (more than the body needs) they can sometimes be harmful.

Examples of remedies that have not been proven to act as chelating agents or to cure the health problems related to toxicants or biological toxins

- SEAWEED – a mixture of chemicals with no proven value as a chelating agent
- CHLORELLA - a chemical mixture taken from algae with no proven value as a chelating agent
- CILANTRO – an herb that supposedly makes the metals in the body change
- CHLOROPHYLL - a chemical mixture taken from plants with no proven value as a chelating agent
- CLAY BENTONITE – a type of clay that when eaten, still has no proven value as a chelating agent

- CYSTEINE – an amino acid that has no proven value as a chelating agent
- NAC – a chemical that has no proven value as a chelating agent
- VITAMIN C – a vitamin and anti-oxidant (anti-oxidants help the cells in the body) that has no proven value as a chelating agent
- GARLIC – a dietary supplement that has no proven value as a chelating agent.

What about taking EDTA for chelation therapy?

Calcium ethylenediamine tetraacetic acid (CaNaEDTA) given by vein (intravenously) or injected into the muscle has been used to treat severe lead poisoning (usually with very high blood lead levels). It is not given by mouth because almost none is absorbed from the stomach and intestines. There are no scientific studies that show EDTA in an oral or suppository form helps any medical conditions or whether or not there are harmful side effects (in children or adults). Some forms of EDTA, such as the sodium form (NaEDTA) can be harmful because they remove calcium from the blood. Low blood calcium can cause the heart to beat abnormally and has caused death. For this reason, when giving EDTA to treat actual poisonings, physicians give the proper form of EDTA by vein and monitor the patient carefully.

Are there any other concerns about chelation therapy in general?

- Chelators (the chemicals used in chelation medicines) not only remove toxic metals, but also remove good minerals that are important for health. This may be particularly important for children who need these nutrients for growth and development. It is not clear that taking vitamin supplements will replace all of the needed minerals and nutrients that chelators have removed. Herbal remedies, including some chelation treatments, can cause allergic reactions in sensitive individuals or those with underlying eczema (a kind of skin rash), asthma, or allergies.
- **Chelators can also cause damage to other organ systems, such as the liver and kidneys.**
- Allergic, sometimes life-threatening, reactions can occur from taking chelating agents.
- Persons under treatment of an illness may delay or avoid taking proven effective medical therapies because of misleading information they are given about the value of chelation.

Recommendations

- Avoid taking any of the non-prescription oral or suppository forms of chelators and *do not give them to your children*
- If you have questions about metal toxicity or chelation therapy call your nearest regional Pediatric Environmental Health Center (PEHSU). A list of PEHSU sites and their contact information is available at: www.pehsu.net

- For questions about an emergency toxic exposure, please contact your nearest regional poison control center at (800) 222-1222.

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