

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

Chelators are substances that attach to certain metals in the blood and some body tissues. These bound compounds are then more quickly eliminated from the body in the urine or stool. This process is called chelation therapy.

## Is chelation medication given by pill or by injection?

Some chelation medication is swallowed and some is injected into the muscle or vein. The type of chelation medication used depends on the type of medical situation for which the patient is being treated.

## When has chelation therapy been scientifically shown to be helpful?

When given by competent medical professionals chelation therapy has been scientifically proven to be of benefit to some patients with high levels of certain metals such as lead, mercury, and arsenic. It has also been 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 proven to be useful in the treatment of many medical conditions including but not limited to; autistic spectrum disorder (ASD); cancer; heart disease; eye problems (macular degeneration); Parkinson's disease; chronic fatigue syndrome; gout; and multiple sclerosis.

There is no scientific proof that chelation therapy can help return a person's good health by removing metals or toxic substances from the body.

## Does an elevated level of a certain metal always mean that I have poisoning?

No. Because metals such as lead, mercury, and arsenic are found in all parts of our environment, we will all have detectable levels. These levels do not necessarily cause illness. The need to treat a patient with chelation depends on the patient's age, their symptoms, the history of exposure, and the appropriateness and accuracy of the lab results.

Sometimes a laboratory test known as "provocation testing" is used which involves giving a chelation medicine to "provoke" and measure the excretion of potentially toxic substances. This type of testing is not recommended since it doesn't give a good picture of what the actual 'body burden' is. It does not provide an interpretable level nor prove the benefit of taking chelation therapy.

Provocation tests are misleading and potentially dangerous. They are not reliable diagnostic tools and they have been associated with harm.

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"?

Alternative therapies are often thought to be safe and effective because they are natural. Many natural and herbal products available claim they will cure health problems or help a person get back to good health by detoxifying the body. These claims have not been scientifically proven. Some of these herbs and vitamins may be good for you, but when used in amounts that are more than the body needs they may be harmful.

## What are some examples of remedies that have not been proven to act as chelating agents or to cure the health problems related to toxins?

- Seaweed
- Chlorella
- Cilantro
- Chlorophyll
- Clay bentonite
- Cysteine
- NAC
- Vitamin C
- Garlic

## Are there any other concerns about chelation therapy in general?

Even when used appropriately chelators may have significant side effects.

Chelators not only remove toxic metals, but also remove good minerals that are important for health. It is not clear that taking vitamin supplements will replace all of the needed minerals and nutrients that chelators have removed.

Lack of knowledge and improper use of chelators can be very dangerous. Calcium disodium ethylenediamine tetraacetic acid (CaNaEDTA) given intravenously or injected into the muscle has been used to treat severe lead poisoning. It is not given by mouth because almost none is absorbed from the stomach and intestines and therefore would not be helpful.

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. Chelators can cause damage to other organ systems, such as the liver and kidneys.

Herbal 'chelating' products and remedies can cause allergic reactions in sensitive individuals or those with underlying eczema, asthma, or allergies.

Sometimes life-threatening, allergic reactions can occur from taking chelating agents.

A person 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. This may be particularly important for children because they may lose essential nutrients for growth and development.

If you have questions about metal toxicity or chelation therapy call PADIS (Poison and Drug Information Service) at 1-800-332-1414. Information Specialists are available 24/7 to help answer your questions.