# **Benefits of EDTA Chelation Therapy**

Here at Quest Rehab and Wellness Group, Chelation is performed by way of IV Infusion Therapy with liquid EDTA, and other supplementing substances that will chelate calcium as well as other minerals and waste products and heavy metals out of your body resulting in clean arteries. By cleansing the veins and arteries, this increases blood flow. Blood

provides your body (tissues, organs, nerves, etc.) with oxygen and nutrients. If your blood flow is restricted due to blockage, your body is not receiving the proper nourishment, which causes poor health conditions. Now, if you reduce the blockage and increase circulation, your body receives the proper blood rich in oxygen and nutrients which can allow it to recuperate, regenerate and operate normally once again.



EDTA Chelation Therapy has successfully been used to boost energy levels, improve memory & mental alertness, normalize blood pressure & cholesterol

levels as well as help the following conditions.

- <u>Age Spots</u>
- <u>Alzheimer's Disease</u>
- Angina Pectoris
- <u>Arteriosclerosis</u>
- <u>Atherosclerosis</u>
- <u>Bursitis</u>
- <u>Calcium Deposits</u>
- <u>Cardiac Arrhythmia</u>
- <u>Cardiovascular Disease</u>
- <u>Cataracts</u>
- <u>Cholesterol Reduction</u>
- <u>Coronary Artery Disease</u>
- Diabetes Mellitus
- Diabetes Neuropathy
- Diabetic Retinopathy
- <u>Elevated Blood Fats</u> (Hyperlipidemia)
- Erectile Dysfunction (ED) / Impotence
- <u>Fatigue</u>
- <u>Fibromyalgia</u>
- <u>Gangrene</u>
- <u>Glaucoma</u>
- Hair loss

- Heart Failure
- Heavy Metal Poisoning
- <u>High Blood Pressure</u>
- <u>Hyperglycemia</u>
- <u>Hypertension</u>
- Intermittent Claudication
- <u>Ischemia</u>
- Macular Degeneration
- Multiple Sclerosis
- Osteoarthritis
- Parkinson's Disease
- Peyronie's Disease
- Psoriasis
- Raynaud's Disease
- <u>Rheumatoid Arthritis</u>
- <u>Scleroderma</u>
- Senile Dementia
- Skin Ulcers
- <u>Strokes</u>
- Thrombophlebitis
- Transient Ischemic Attack (TIA)

"AM I AT RISK" AND REQUIRE IV – INFUSION THERAPY ASSESSMENT QUESTIONNAIRE This questionnaire is designed solely for the purposes of assessing the chance and probability of requiring "Chelation" and the Chelation Protocol of cleansing, and internal balancing, strengthening and restoration. Each question is to be answered to the best of your knowledge and only one answer is accepted. The questionnaire is graded, enabling us to share with you the necessity of this procedure. It is scored out of a 100 total possible score. The higher the percentage of Chelation Assessment, the higher the need for this treatment possibility! Quest Rehab or any of their affiliates make no claim to efficacy, healing powers or promises as to its treatment possibilities.

### 1-NEVER 2-OCCASIONAL 3-FREQUENT 4-REGULARLY 5-CURRENTLY CIRCLE THE BEST ANSWER

1)	Do you have or have had, heart disease, hardening of the arteries, high blood pressure, arteriosclerosis, or systemic infection?	1	2	3	4	5
2)	Do you eat raw fish, shell fish, or fish oil products?	1	2	3	4	5
3)	Do you have, or have had Dogs, Cats, Birds as pets?	1	2	3	4	5
4)	Do you work with or have worked with manure, soil, paints, led or other metals?	1	2	3	4	5
5)	Do you suffer from Thyroid, Adrenal, Liver Problems?	1	2	3	4	5
6)	Have you suffered from or are you suffering from Low grade fevers, itching, Pruritis, hand or foot chaffing?	1	2	3	4	5
7)	Do you suffer from high blood pressure, light headedness, Dizziness, Head Aches or feel forgetful during the day?	1	2	3	4	5
8)	Do you have or have ever been diagnosed with Cancer, Tumors, Lupus, MS, Cysts, whether Benign or Malignant?	1	2	3	4	5
9)	Have you had blood transfusions, sepsis, or participate in Kidney Dialysis?	1	2	3	4	5
10)	) Do you suffer from Chronic Yeast or Lyme's Disease?	1	2	3	4	5
	TOTAL					_/50
TIMES - 2			%			

If by answering these questions you scored more than 45% then you are a prime candidate for the possible benefits of IV – INFUSION THERAPY! Talk to the doctor for more specific details as to your Chelation and Nutritional needs!

It may be covered under your insurance policy as IV Infusion Therapy. Just Ask?

#### How Is IV–Infusion "Chelation" Therapy Administered?

#### Medical Examination:

Prior to administering EDTA infusion, the practitioner will conduct tests to determine whether the patient has a condition that will benefit from the therapy and that it is an appropriate remedy.

A comprehensive personal and family history is taken with special emphasis on all aspects of previous health problems and current status. Patient will be asked questions regarding diet, habits, emotional status,

exercise, stress levels and a detailed listing of symptoms. A full physical examination will also be performed with special emphasis on the circulatory and respiratory systems.

This is followed by a series of medical tests such as electrocardiogram, chest XRay, blood tests, urine tests, diet and other tests and hair analysis. Exercise tolerance tests are used to determine how the heart, lungs and circulation responds to activity. A Doppler (sound wave) examination will be carried out to establish a 'before' picture of circulatory system.

#### EDTA Treatment:

Once it has been established that there is a problem which could benefit from EDTA infusion, a series of treatments are scheduled, about two or three times per week. Most chelation centers treat patients in a group setting.

The infusion will usually be administered in a large room with appropriate seating. A needle is inserted into a vein (usually in the hand or forearm, but sometimes on the lower leg). The needle is attached to the container (hung on an adjustable stand), from which is dripfed about half a liter of fluid over the 3 1/2 hours' duration of each treatment. This liquid will contain 2 to 3 grams of EDTA and whatever additional minerals or supplements the doctor has prescribed for the patient to achieve a balanced blood content.

#### Other Substances that are administered along with EDTA during Chelation Therapy

During the medical examination of the patient, the practitioner will determine what chemicals, herbs or nutrients can benefit the patient. Accordingly, the EDTA mixture for infusement will be custom prepared.

These additives typically contain a complex of B vitamins, vitamin C, magnesium (extremely useful for cardiovascular health) and heparin (an anticoagulant, which is sometimes used to prevent any clotting at the injection site).

While the infusion is being performed, the arm is kept stable by taping it to a padded board which rests on a cushion for comfort.

In most cases, the EDTA solution is dripped into the bloodstream at a rate of one drop per second. Two to three of such infusions are given each week. The complete treatment consists of anything from 20 (for relatively mild problems) to 30 infusions.

Periodical blood and urine screenings will be done to make sure that the kidney and other organs are operating sufficiently well to cope with the EDTA detoxification.

In rare instances, follow-up infusions will be given. Some patients may undergo as much as 100 infusions.

The EDTA is eliminated from the body, 95 per cent via the kidneys and 5 per cent via the bile, along with the toxic metals and free ionic calcium which it has locked on to in its transit through the circulatory system.

Chelating agents were introduced into medicine as a result of the use of poison gas in

World War I. The first widely used chelating agent—the organic dithiol compound

dimercaprol, also named British Anti-Lewisite or BAL—was used as an antidote to the

arsenic-based poison gas, <u>Lewisite</u>. The sulphur atoms in BAL's <u>mercaptan</u> groups strongly bond to the arsenic in Lewisite, forming a water-soluble compound that entered the bloodstream, allowing it to be removed from the body by the kidneys and liver. BAL had severe side-effects.

After World War II, a large number of navy personnel suffered from <u>lead poisoning</u> as a result of their jobs repainting the hulls of ships. The medical use of <u>EDTA</u> as a lead chelating agent was introduced. Unlike BAL, it is a synthetic <u>amino acid</u> and contains no mercaptans. While EDTA had some uncomfortable side effects, they were not as severe as BAL.

In the 1960s, BAL was modified into <u>DMSA</u>, a related dithiol with far fewer side effects. DMSA quickly replaced both BAL and EDTA, becoming the US <u>standard of care</u> for the treatment of lead, arsenic, and mercury poisoning, which it remains today.

Research in the former Soviet Union led to the introduction of <u>DMPS</u>, another dithiol, as a mercury-chelating agent. The Soviets also introduced <u>ALA</u>, which is transformed by the body into the dithiol dihydrolipoic acid, a mercury- and arsenic-chelating agent. DMPS has experimental status in the US FDA, while ALA is a common nutritional supplement. Since the 1970s, iron chelation therapy has been used as an alternative to regular phlebotomy to treat excess iron stores in people with <u>haemochromatosis</u>.<sup>[1]</sup>

Other chelating agents have been discovered. They all function by making several chemical bonds with metal ions, thus rendering them much less chemically reactive. The resulting complex is water-soluble, allowing it to enter the bloodstream and be excreted harmlessly.

EDTA chelation is approved by the U.S. Food and Drug Administration (FDA) for treating lead poisoning and heavy metal toxicity.<sup>[2]</sup>

5

Two molecules of <u>deferasirox</u>, an orally administered chelator, binding <u>iron</u>. Deferasirox is used in the treatment of <u>transfusional iron overload</u> in people with <u>thalassemia</u>.

Chelation therapy is used as a treatment for acute mercury, iron (including in cases of <u>thalassemia</u>), arsenic, lead, <u>uranium</u>, <u>plutonium</u> and other forms of <u>toxic metal</u> poisoning. The chelating agent may be administered <u>intravenously</u>, <u>intramuscularly</u>, or orally, depending on the agent and the type of poisoning.

One example of successful chelation therapy is the case of <u>Harold McCluskey</u>, a nuclear worker who became badly contaminated with <u>americium</u> in 1976. He was treated with

diethylene triamine pentaacetic acid (DTPA) over many years, removing 41 MBq (1.1 mCi) of americium from his body. His death, 11 years later, was from unrelated causes. Several chelating agents are available, having different affinities for different metals.

<u>Cilantro</u> (coriander) has been shown to suppress lead deposition and lead-induced kidney damage in mice,<sup>[3]</sup> and is present in numerous alternative medications. Although cilantro was widely described as a chelator of lead, mercury, or other heavy metals in internet literature,<sup>[4][5]</sup> and is often used as such, there is little research about such claims.<sup>[6]</sup> Chelation therapy was used by the British after World War II to remove arsenic, lead, and other metals. Patients' conditions improved as these metals were removed from their bodies<sup>[7]</sup>. Treatment may be applied to the skin via a transdermal patch<sup>[8]</sup>. Another treatment is administered intravenously, a process that takes 2-3 hours, costs about \$100 per treatment, and 20-30 treatments are often required<sup>[9]</sup>.

Some common chelating agents are <u>EDTA</u> (ethylenediaminetetraacetic acid), <u>DMSA</u> (sodium 2,3 dimercaptopropane-1 sulfate), <u>TTFD</u> (thiamine tetrahydrofurfuryl disulfide), and DMPS (2,3 dimercaptosuccinic acid). EDTA and DMSA are only approved for the removal of lead by the Food and Drug Administration while DMPS and TTFD are not approved by the FDA. These drugs bind to heavy metals in the body and prevent them from binding to other agents. They are then excreted from the body. The chelating process also removes vital nutrients such as vitamins C and E, therefore these must be supplemented<sup>[10]</sup>.

# Use in alternative medicine

<u>Alternative medicine</u> uses chelation therapy as a non-standard treatment for some ailments, including heart disease and autism.<sup>[11][12]</sup> Currently there is a US National Institutes of Health trial (TACT) being conducted on the chelation therapy's efficacy in treating heart disease.<sup>[13]</sup>

# Heart disease

Some alternative medicine practitioners administer chelating agents, usually <u>EDTA</u>, to patients with <u>hardening of the arteries</u>. The use of EDTA chelation therapy as a treatment for coronary artery disease has not been shown to be effective and is not approved by the FDA.<sup>[15]</sup> Several possible mechanisms have been proposed, though none have been

scientifically validated. The procedure might leech calcium directly from the fatty plaques that block the arteries; stimulate the release of a hormone that removes deposited calcium or lowers cholesterol levels; or reduce oxidative stress on the blood vessel walls.<sup>[2]</sup> The US <u>National Center for Complementary and Alternative Medicine</u> is currently conducting a trial of efficacy, expected to complete around July 2009.<sup>[16]</sup> Enrollment in the trial was suspended on September 26, 2008 for an investigation by <u>OHRP</u> after complaints about ethical concerns such as inadequate informed consent.<sup>[17]</sup>

The <u>American Heart Association</u> states that there is currently "no scientific evidence to demonstrate any benefit from this form of therapy" and that the "United States Food and Drug Administration (FDA), the National Institutes of Health (NIH) and the American College of Cardiology all agree with the American Heart Association" that "there have been no adequate, controlled, published scientific studies using currently approved scientific methodology to support this therapy for cardiovascular disease."<sup>[15]</sup> Atwood *et al.* consider that methodological flaws and lack of prior probability make this trial "unethical, dangerous, pointless, and wasteful."<sup>[14]</sup>

## Autism

### Main article: *Thiomersal controversy*

Based on speculation that <u>mercury poisoning</u> may trigger the symptoms of autism,<sup>[18]</sup> chelation therapy is widely used to treat autism, with some surveys suggesting 2–8% of children with autism have had the therapy. Parents either have a doctor use a treatment for lead poisoning, or buy unregulated supplements.<sup>[19]</sup> There is strong <u>epidemiological</u> evidence that refutes links between environmental triggers, in particular <u>thimerosal</u>-containing <u>vaccines</u>, and the onset of autistic symptoms.<sup>[20][21][22][23]</sup> There is no scientific support for chelation therapy as a treatment for autism.<sup>[12][24]</sup>

### Prevalence

The <u>American College for Advancement in Medicine</u>, which promotes chelation therapy, estimates that 800,000 patient visits for chelation therapy were made in the United States in 1997.<sup>[28]</sup>

# Side effects and safety concerns

There is a low occurrence of side effects when chelation is used at the dose and infusion rates approved by the U.S. FDA. A burning sensation at the site of delivery into the vein is common. Rarer side effects include fever, headache, nausea, stomach upset, vomiting, a drop in blood pressure, and <u>hypocalcemia</u>. Kidney toxicity is a safety concern, but a rare occurrence. When EDTA is not administered correctly, more serious side effects can occur.<sup>[2]</sup>

Chelation therapy can be hazardous. In August 2005, botched chelation therapy killed a 5year-old autistic boy, a nonautistic child died in February 2005, and a nonautistic adult died in August 2003. These deaths were due to <u>cardiac arrest</u> caused by <u>hypocalcemia</u> during chelation therapy.<sup>[29]</sup>

# Links and References on File