

CHELATION THERAPY

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With added comments by

There is a safe and effective alternative to a bypass surgery for atherosclerosis. Your case of severe hardening of the arteries need not lead to coronary bypass surgery, heart attack, amputation, stroke, or senility. There is new hope of recovery for victims of these and numerous related diseases. Despite what you may have heard from other sources, EDTA chelation therapy, administered by a properly trained physician and given in conjunction with lifestyle and dietary changes with specialized nutritional supplements, is an option to be seriously considered by persons suffering from coronary artery disease, generalized atherosclerosis and related ailments which lead to senility and accelerated physical decline.

Clinical benefits from chelation therapy vary with the total number of treatments received and with severity of the condition being treated. More than 75 percent of patients treated showed significant improvement from chelation therapy. More than 90 percent of patients receiving 35 or more treatments have benefited when they have also corrected dietary, exercise and smoking habits, which are known to aggravate occlusive arterial disease. Symptoms improve; blood flow to diseased organs increases, need for medication decreases and, most importantly, the quality of life becomes much more enjoyable.

When patients first hear about or consider EDTA chelation therapy, they normally have lots of questions. Undoubtedly, you do, too. Here are the answers to those most commonly asked questions, explained in non-technical language.

1. What is chelation?

Chelation (pronounced KEY-LAY-SHUN) is the chemical process by which a metal or mineral (such as lead, mercury, copper, iron, arsenic, aluminum, calcium, etc.) is bonded to another substance. It is a natural process, basic to life itself. Chelation is one mechanism by which such common substances as aspirin, antibiotics, vitamins, minerals and trace elements work in the body. Hemoglobin, the red pigment in blood which carries oxygen, is a chelate of iron.

2. What is chelation as a medical therapy?

Chelation is a treatment by which a man-made amino acid called ethylene diamine tetraacetic acid (commonly abbreviated to EDTA) is administered to a patient intravenously, prescribed by and under the supervision of a fully licensed physician (possessing a M.D. or D.O. degree.) The fluid containing EDTA is infused through a small catheter placed in the vein of a patient's arm. The EDTA in the solution bonds with metals in the body and carries them away in the urine. Abnormally situated nutritional metal, which speed free radical damage, and toxic metals, such as lead, is most easily removed by EDTA.

3. What are free radicals?

A free radical is an unpaired electron in an outer orbit of a cell, it is considered to be unstable and will react almost instantaneously with any substance in its vicinity. Free radical reactions often produce a cascade of free radicals in a multiplying effect (one free radical trigger thousands). Many free radical reactions occur in the body and are necessary for health. Normal human bodies have many control systems that regulate necessary and desirable free radical reactions. When the human free radical control system fails, damage is caused in many of the bodies tissues. Damage includes cross linkages (which damages tissues), the collagen damage of connective tissue, lipid peroxides (fat breakdown and other damaging breakdown products). This kind of damage is the cause of human aging. Chelation therapy helps excess free radicals so that body repairs systems can repair past damage and prevent future damage.

4. What is chelation therapy normally used for?

The most common conditions treated and researched are those associated with impaired circulation. This includes:

atherosclerosis	Buerger's disease
arteriosclerosis (cerebral, coronary, extremity)	gas poisoning
angina pectoris	elevated cholesterol
coronary heart disease	free radical pathology
congested heart disease	thrombophlebitis
transient ischemic attacks	tachycardia
heavy & toxic metal syndrome (lead, copper, mercury & iron)	cardiac irregularities
nuclear radiation poisoning	skin ulcers
vision impairment (due to vascular loss)	Reynaud's disease
intermittent claudication	gangrenous extremities
diabetic circulatory problems	COPD
hypoglycemia	

Other conditions commonly treated with excellent to fair clinical results are:

scleroderma	Lupus erythematosus
immune system dysfunction	psoriasis
rheumatoid arthritis	osteoarthritis
early senile dementia	early Alzheimer's
strokes and post stroke syndrome	Parkinson's
kidney disease	

There has also been work on multiple sclerosis with new research done frequently.

5. Is it done just once?

Unfortunately not. The conditions treated by chelation are chronic and of long duration in developing. These ravages to your body took time to develop and will take time and treatment to repair. Chelation therapy is a course of treatments which usually consists of anywhere from 20 to 50 separate infusions, depending on each patient's individual status.

Thirty treatments is the average number required for benefit in patients with symptoms of arterial blockage. Some patients eventually receive more than 100 infusions, both for relief and as a preventative maintenance program. Each treatment takes about three hours and patients normally receive one to three treatments a week. Over a period of time, these injections halt the progress of the free radical disease, which is the underlying condition triggering the development of atherosclerosis – and many other degenerative diseases of aging – giving the body time to heal and time to restore blood flow through diseased blood vessels. After several months these injections bring profound improvement to many metabolic and physiologic processes in the body. The body's regulation of calcium and cholesterol is improved by normalizing the internal chemistry of cells.

Chelation benefits every blood vessel in the body, from the largest to the tiniest capillaries and arterioles, most of which are far too small for surgical treatment or are deep within the brain and other vital organs where they cannot be safely reached by surgery. In many patients, the smallest blood vessels are the most severely diseased. The benefits of chelation occur from the top of the head to the bottom of the feet, not just in short segments of a few large arteries which can be bypassed or opened by other invasive treatments.

6. Do you have to go to a hospital to be chelated?

No, it is an outpatient treatment available at **The Shaw Clinic**.

7. Does it hurt? What does it feel like to be chelated?

Being chelated is quite a different experience from other medical treatments. There is no pain, and in most cases, very little discomfort. Patients are seated in reclining chairs and can read, nap, watch TV, do needlework or chat with other patients while the fluid containing the EDTA flows into their veins. If necessary, patients can walk around. They can visit the restroom, eat and drink as they desire, or make telephone calls, being careful not to dislodge the catheter attached to the intravenous infusion they carry with them.

8. Are there risks – or unpleasant side effects?

EDTA is relatively non-toxic and risk-free, especially when compared with other treatments. The risk of serious side effects, when properly administered, is less than 1 in 10,000 patients treated. By comparison, the overall death rate as a direct result of bypass is approximately 3 out of every 100 patients undergoing surgery, varying with the hospital and the operating team. The incidence of other serious complications following surgery are much higher, including heart attacks, strokes, blood clots, permanent brain damage with personality changes and prolonged pain. Chelation is more than 300 times safer than bypass surgery.

Occasionally, patients may suffer minor discomfort at the site where the needle enters the vein. Some temporarily experience mild nausea, dizziness, or headache as an immediate aftermath of treatment, but in the vast majority of cases, eating a

proper meal before chelation and a good shake during will relieve these minor symptoms. When properly administered by a physician expert in this type of therapy, chelation is as safe as taking aspirin. Patients routinely drive themselves home after treatment with no difficulty.

If EDTA is given too rapidly, or in too large a dose, it may cause harmful side effects, just as an overdose of any other medication can be dangerous. Report of serious and even rare fatal complications have stemmed from excessive doses of EDTA improperly administered. If you choose a physician with proper training and experience, who is an expert in the use of EDTA, the risk of chelation therapy will be kept to a very low level. The *American College for Advancement in Medicine (ACAM)* provides training and examines physicians for competence in the specialized field of chelation therapy. A physician who has successfully completed the ACAM courses is knowledgeable in the safe and effective use of EDTA chelation therapy.

It has often been incorrectly stated that EDTA chelation therapy is damaging to the kidneys. Research indicates the reverse is often true: In one study consisting of kidney function tests done on 383 consecutive chelation patients, before and after treatment with EDTA for chronic degenerative diseases there was, on the average significant improvement in kidney function following chelation. An occasional patient may be unduly sensitive, however, and physicians expert in chelation monitor kidney function very closely to avoid overloading the kidneys. Treatments must be given more slowly and less frequently if kidney function is not normal. Patients with some types of severe kidney problems should not receive EDTA

9. **Is chelation therapy new?**

Not at all. Its earliest application with humans was during World War II when the British used another chelating agent, British Anti-Lewesite (BAL) as a poison gas antidote. BAL is still used today in medicine.

EDTA was first introduced into medicine in the United States in 1948 as a treatment for industrial workers suffering from lead poisoning in a battery factory. Shortly thereafter, the U.S. Navy advocated chelation therapy for sailors who had absorbed lead while painting government ships and dock facilities. Physicians then observed that adults receiving EDTA chelation treatments that had atherosclerosis also experienced health improvements, diminished angina, better memory, sight, hearing, sense of smell and increased vigor. A number of physicians then began to treat individuals suffering from occlusive vascular conditions with chelation therapy and reported consistent improvements.

Chelation therapy remains the undisputed treatment-of-choice for lead poisoning, even in children with toxic accumulations of lead in their bodies as a result of eating leaded paint from toys, cribs, or walls.

10. Is it legal?

Absolutely! There is no legal prohibition against a licensed physician (M.D. or D.O.) using chelation therapy for whatever conditions he deems it to be correct, even though the drug involved, EDTA, does not yet have atherosclerosis listed as an indication on the FDA – approved package insert. The FDA does not regulate the practice of medicine, but merely approves marketing, labeling, and advertising claims for drugs and devices in interstate commerce.

It costs millions of dollars to perform the required research and to provide the FDA with documentation for a new drug claim, or even to add new use to marketing brochures of a long established medicine like EDTA. Physicians routinely prescribe medicines for conditions not yet included on FDA approved advertising and marketing literature.

Several respected physician organizations sponsor educational courses in the proper and safe use of intravenous EDTA chelation. The American College for Advancement in Medicine publishes a physicians protocol for the safe and effective method of treatment with EDTA. This protocol is used in training courses and in a certification program for chelating physicians. ACAM's educational programs for physicians, followed by oral and written examinations, lead to credentials which certify demonstrated competence in the proper use of EDTA chelation therapy.

On the question of legality, the interpretation of laws pertaining to “informed consent” is evolving in the courts and it is now possible that a physician who withholds information about the availability of other treatment choices, such as chelation therapy, prior to performing vascular surgery (along with all other treatment modalities) could be found legally liable. Withholding information about a different form of treatment may be tantamount to medical malpractice, if as a result, a patient is deprived of possible benefit. Thus, it is the doctors who refuse to recognize and inform their patients of chelation who are risking legal liability – not those chelating physicians who provide an innovative treatment which they feel to be the safest, the most effective, and the least expensive for many of their patients.

11. What proof do you have that it works?

Physicians with extensive experience in the use of chelation therapy observe dramatic improvement in the vast majority of their patients. They see angina routinely relieved, patients who suffered searing chest pains when walking only a short distance are frequently able to return to normal, productive living after undergoing chelation. Far more dramatic, but equally common, is seeing diabetic ulcers and gangrenous feet heal. Many individuals who have been told their limbs would have to be amputated because of gangrene are thrilled to watch their feet heal with chelation, although some areas of dead tissue may have

to be trimmed away surgically. The approximately 1,000 American physicians practicing chelation therapy have countless files to prove they are able to reverse serious cases of arterial disease. Men and women often arrive at their offices near death with diseases caused by blocked arteries. Weeks or months later, they're remarkably improved. There is a wealth of evidence from clinical experience that symptoms of reduced blood flow improve in more than 75 percent of patients treated. In addition, several research studies have been published with results of before and after diagnostic tests using radioisotopes which prove statistically that blood flow improves following chelation. Regardless of blood flow studies, if claudication is relieved, if angina becomes less bothersome, and if physical endurance or mental acuity improves, such benefits would be quite enough to justify EDTA chelation therapy. Quality of life and relief of symptoms are far more important than the results of laboratory tests.

12. **What about bypass surgery?**

Coronary artery bypass surgery, the popularly – prescribed procedure in which occluded portions of major coronary arteries are bypassed with grafts from a patient's leg veins, has never been proven by properly controlled studies to offer an advantage over non-surgical treatments, other than relief of pain in a minority of patients who cannot be controlled with medicine. It has even been suggested that the relief of pain following surgery might result from the cutting of nerve fibers which carry pain impulses from the heart and which also stimulate spasm of coronary arteries. It is not possible to perform bypass surgery without interrupting those nerves.

Indeed, the most recent research suggests that many of the 400,000 or more bypasses and other invasive procedures performed each year for the relief of pain and other symptoms brought on by clogged or blocked arteries are not necessary. A good case against rushing into surgery is made by the findings of a ten-year, \$24 million study conducted by the National Institute of Health (NIH) which compared post-operative survival rates of "bypassed" patients with a matched group of equally diseased patients treated non-surgically.

The study uncovered no additional benefits for most patients who had been operated upon, compared with non-surgical therapy. It is important to note that the non-surgical therapy reported in that study did not include either chelation therapy or the new calcium blocker drugs, and that only half of the patients received beta blocker drugs. Having surgery did not improve their chances to live longer, healthier, better lives, or enjoy life more, when the results were statistically analyzed. The incidence of heart attacks (myocardial infarction) and both employment and recreational status were the same in patients treated surgically and non-surgically, even without using chelation therapy for the non-surgical treatment group.

Most important, cardiovascular surgery does nothing to arrest or reverse the underlying disease which exists in varying degrees throughout the body. It is at

best a piecemeal “cure” for a system-wide problem. Bypassing a restricted portion of the body’s blood vessels can have little lasting benefit when the same degenerating condition which caused the most extreme blockage at one or two sites must of necessity be taking place everywhere, throughout the circulatory network.

One thing the general public is not fully aware of is that many people who have bypass operation later have a second bypass. Sometimes the blood vessels that weren’t bypassed become clogged; sometimes the transplanted vessels used in the first graft become filled with the new plaque; sometimes the transplants malfunction or turn out to be too small for the job. As a matter of fact, studies have shown that by ten years after surgery, grafted vessels had closed in 40 percent of patients, and in the remaining 60 percent, half developed further coronary narrowing. Once you have had a bypass, your chances of having another go up about 5 percent a year. After five years, some specialist estimate, your chances of receiving a second operation could be as high as 30 to 40 percent. And some patients go on to even a third operation or more. And approximately 2 to 3 out of every 100 patients undergoing bypass surgery die as a result of the procedure – even more if they are severely ill at the time of surgery. The balloon treatments and other invasive procedures to open arteries are also risky.

Chelation patients are frequently able to return to work and to resume their sports and other activities, without the need to undergo surgery. Chelation is equally as effective in patients who have previously undergone one or more bypass operations or balloon procedures. If they stay on a proper diet, exercise regularly, continue to take the prescribed program of nutritional supplements and receive periodic maintenance chelation treatments (monthly, more or less, depending on the severity of the underlying medical diagnosis) they can usually go many years without suffering further heart attacks, strokes, senility or gangrenous extremities.

If you, like most people, are eager for additional information about chelation therapy, have been told you have advanced arterial disease, you may have been advised to have vascular surgery. If so, it is essential for you to understand the nature of your disease and all possible treatment choices, before you can make an intelligent decision concerning the various options. Even if chelation and other non-surgical therapies should fail, bypass still remains a choice.

13. **What is the cost comparison?**

Bypass surgery is the mechanical repair of only a small portion of the arterial tree. Total costs average about \$85,000 and can be as high as \$120,000 or even more. Chelation therapy is an office treatment which improves blood flow throughout the entire vascular system at a fraction of the cost of bypass surgery. For example, if 20 to 40 three-hour chelation treatments in a physician’s office were required for a given patient, it would cost an estimated \$2,000 - \$4,000.

14. Does Medicare or other insurance cover chelation therapy?

Even though the clinical studies show the benefits of chelation are significant, Medicare and many other insurances consider this “not usual and customary” and do not pay for chelation. We will fill out all of your insurance forms for your insurance to reimburse you directly. You will be expected to pay for chelation at the time of treatment.

15. What is the cost of chelation?

Initial blood and lab fees will cost approximately \$200.00. If you have had recent lab work done (within the last two months), we only ask for copies of the results. If any abnormalities are detected, repeat lab work may be necessary. An EKG (\$75.00) and chest x-ray (\$64.00) are also required. Again, if you have had recent tests done, a copy is requested. Each patient must have a physical examination by the medical doctor on staff. The approximate cost of this is \$59.50 - \$105.50, depending on whether you are an established patient or a new patient. Each chelation treatment will cost \$100.00. A complete blood count and serum creatinine level will be drawn periodically (approximately every 5-7 treatments, depending on the results) and the cost of this is \$35.00. We ask that you pay for lab work the day that it is drawn. This will allow you to avoid a \$650.00 lab fee. We will give you a receipt that you may file with your insurance company. The IV solutions are mixed at 7:30 A.M. for all morning doses and by 11:30 A.M. for afternoon doses. You **must** call ahead of this time if you need to cancel your appointment. The nurse will check the answering service before she begins in the morning for any messages. If you are a “no-show”, you will be charged \$50.00. Once the solution is mixed, it can no longer be used for anyone else. This fee must be paid before you are allowed another treatment.

16. Why can't chelation be taken by mouth or in pill form, instead of by intravenous injection?

Chelation therapy is gaining recognition so rapidly that there is growing interest in developing a safe and effective oral chelator. Many nutritional substances administered by mouth are known to have weak chelating properties. But, none have the spectrum of activity of intravenous EDTA. Many nutrients such as Vitamin C and the amino acid cysteine have the ability to weakly chelate metals. To label nutritional supplements containing vitamins and amino acids as “oral chelation”, however, is misleading. EDTA can be taken by mouth in small doses but less than 5 percent is not adequate to treat established disease, although preventative and maintenance benefits might be obtained by that route.

Claims are being increasingly made for the use of vitamin supplements containing weak chelators in patients with atherosclerosis. There is nothing new about the benefits of vitamin-mineral supplements, which have recently been aggressively and deceptively marketed as “oral chelation”. The use of vitamin-mineral supplements by mouth is a routine adjunct to a total program of chelation

therapy, but they do not provide significant chelation to themselves. There are no potent oral chelating agents now available which are safe to take by mouth and which produce improvement comparable to intravenous EDTA.

17. **Is it true that chelation therapy combats atherosclerosis by acting like a “liquid plumber” – by leeching calcium out of the atherosclerotic plaque?**

Before recent medical breakthrough in the area of free radical pathology, it was hypothesized that EDTA chelation therapy had its major beneficial effect on calcium metabolism; that it stripped away the excess calcium from the plaque, restoring arteries to their pliable pre-calcified state. This frequently offered explanation – the so-called “3” concept, is not the whole reason, as previously postulated, that chelation therapy produces major health benefits.

More important, EDTA has an affinity for the so-called transition metal, iron and copper, and for the related toxic metals, lead, mercury, cadmium and others, that are potent catalysts of excessive free radical reactions. Free radical pathology, it is now believed, is the underlying process triggering the development of most age-related ailments, including atherosclerosis, cancer, dementia, and arthritis. Thus, EDTA’s primary benefit is that it greatly reduces the ongoing production of free radicals within the body by removing accumulations of metallic catalysts which accumulate as a person grows older at abnormal sights in the body, speeding the aging process.

This is greatly oversimplified explanation of what actually occurs. For those of you with a decided interest in the scientific technicalities, you can send for the manuscript entitled “*Free Radical Pathology in Age Associated Disease; Treatment with EDTA, Nutrition and Antioxidants*” by Doctors Elmer M. Cranton and James P. Frackelton (available at the Chelation Centers of South Florida). For a fuller explanation of the many issues involved, written in popular form for the general public, you might enjoy reading “*Bypassing Bypass*” by Dr. Elmer M. Cranton and Arline Brecher (*Forty Something Forever*). Both publications, as well as others, are available from the American College for Advancement in Medicine, 23121 Verdugo Drive, Suite 204, Laguna Hills, CA 92653, telephone (714) 583-7666. Telephone before ordering to find out costs.

18. **Why haven’t I heard about chelation before?**

If EDTA chelation therapy is as safe and effective as indicated by scientific studies and by the experience of hundreds of doctors, why haven’t you heard more about it? That is a good question!

Until quite recently, relatively few patients have been informed that this therapy is available. Most heart specialists may not have even heard of the treatment and would be reluctant to prescribe it if they had. The American Medical Association has not yet approved chelation therapy for atherosclerosis although it does endorse its use in the treatment of lead and other heavy metal poisoning. Many insurance companies will not compensate policyholders

for chelation therapy unless it is given for lead poisoning. If chelation therapy is given for atherosclerosis, it is often labeled “experimental” or “not customary” by medical insurance companies and payment is denied. They deny payment to patients even though they do pay for bypass surgery, and even though chelation might have saved them tens of thousands of dollars.

Traditional medical organizations, politically powerful, have consistently attempted to suppress chelation therapy, perhaps because of large vested interests in other methods of health care. The cost of all medical care for victims of heart disease in the United States in 1986, including coronary bypass surgery and prescription drugs, exceeded \$40 billion (much higher in 1996). Obviously, many hospitals and physicians would be in serious financial difficulty, and might even have to find other outlets for their services, if this procedure, which might displace a gigantic industry, became universally popular. *Physicians who remain skeptical about chelation are those who have never used it.* They are either completely uninformed about the extensive research that has been done to document the safety and effectiveness of chelation therapy or they are committed by training or source of income to other therapeutic procedures, such as vascular surgery.

19. **What else is involved in a complete program of chelation?**

Your lifestyle counts. Chelation therapy is only part of the curative process. Improved nutrition and improved lifestyle are absolutely imperative for lasting benefit from chelation treatments. Chelation is not in and of itself a “cure-all”; it merely reduces abnormal free radical activity, allowing normal control mechanisms to come into play so that free radical damage can be repaired and health can be restored with the help of applied clinical nutrition, antioxidants supplementation and lifestyle corrections. Chelation therapy involves all of these factors. Chelation is also compatible with other forms of therapy, including bypass surgery.

In addition to receiving the necessary number of chelation treatments, patients eager for long term benefits should be warned: chelation alone won't last for long. Individuals suffering any form of free radical disease must be prepared to improve the diet that started the disease, take nutritional supplements, be physically active and eliminate destructive lifestyle habits such as tobacco. We offer a complete dietary program and in house rehabilitation as well as home advice.

Nutritional Supplements. A scientifically balanced regimen of nutritional supplements reinforces the body's antioxidants defenses and should include Vitamins E, C, B1, B2, B6, B12, pantothenate, PABA, and beta carotene. A balanced program of mineral and trace element supplementation should include magnesium, zinc, selenium, manganese and chromium.

Destructive Habits. It is important to eliminate the use of tobacco altogether, but if that is not possible, a marked reduction in exposure would be helpful. This applies to cigarettes, pipe tobacco, cigars, snuff or chewing tobacco. It has been consistently observed that patients who continue to smoke following chelation have demonstrated less improvement and for a much briefer time in comparison to non-smokers.

Only relatively healthy adults are able to tolerate alcoholic beverages without generating more free radicals than they can detoxify. Anyone who drinks more than one or two ounces of pure ethanol in 24 hours (four eight ounce glasses of beer, four small glasses of wine, or two or three shot glasses of hard liquor) risks free radical damage. Even that amount is harmful on a regular basis. Victims of chronic degenerative disease should usually avoid the consumption of alcohol.

Exercise. Finally, physical exercise is very helpful. Even a brisk 45 minute walk several times per week will help maintain the health benefits and improve circulation resulting from chelation therapy. Lactate normally builds up in tissues during sustained exercise and lactate is a natural chelator produced within the body.

Which brings us to the final question.....

20. **Is chelation therapy for you?**
Only you can make the decision.

Chances are your current doctor won't help you decide. Patients who choose chelation often do so against the advice of their personal physicians or cardiologists. Many have already been advised to undergo vascular surgery. Occasionally, a patient never hears about chelation until he is hospitalized and a friend or relative begs him to look into this non-invasive therapy before proceeding to surgery. In an impressively large number of instances, a new patient comes for chelation on the recommendation of someone who has been successfully chelated.

If you would like to attend our one hour chelation seminars, call us at 217-224-3935 and request seminar times, date and an appointment.