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Supplement to
The Art of Getting Well
Chelation Therapy

Sources are given in references.

Authors of contributions/quotations are alphabetically arranged; major author, if any, is underlined.

John M. Baron, D.O., Walter Blumer, M.D., Dr. J. Peter Bercz, James P. Carter, M.D., Dr. P.H. H. Richard Casdorff, M.D., Ph.D., E. Cheraskin, M.D., D.M.D., Dr. Norman Clarke, Elmer Cranton, M.D., Arabinda Das, M.D., Charles H. Farr, M.D., James P. Frackleton, M.D., W. Grant, M.D., E.L. Hannan, M.D., Robert Haskell, M.D., Phillip Hoekstra, Sr., James Julian, M.D., Benjamin Lau, M.D., Ph.D., Warren M. Levin, M.D., William J. Mauer, D.O., E.W. McDonagh, D.O., Henry D. McIntosh, M.D., Dr. O'Connor, Efrain Olszewere, M.D., Gordon E. Potter, M.D., C.J. Rudolph, D.O., Ph.D., Calil Sabbag, M.D., Zigarts Strauts, M.D., John Parks Trowbridge, Jr., M.D., John Parks Trowbridge, Sr., M.D., Fred Walker, Ph.D., Morton Walker, D.P.M., Alfred Werner, Dr. J. Zelen/Responsible editor/writer Anthony di Fabio.

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for Eradication of Rheumatoid Disease
AKA The Arthritis Trust of America®
7376 Walker Road, Fairview, Tn 37062

What is Chelation Therapy?

Pronounced "Key-lay'-shun," Chelation Therapy is one of the most effective treatments for a wide spectrum of diseases or aging conditions. But it is more than a treatment, it is a preventive process and most certainly a treatment of the 21st century effectively practiced by many physicians today. It is the only therapy where physicians who practice it habitually use it on themselves and their loved ones as either curative or preventive treatment. Critics of Chelation Therapy have never used it on themselves, nor their loved ones, nor on their patients, nor have they read the voluminous literature that has been compiled by various physicians and scientists who are members of the American College of Advancement in Medicine¹ (ACAM), an organization dedicated to certification in the practice of Chelation Therapy and to further its research.

In Chelation Therapy, the imagery is often used of the lobster claw, grabbing onto a cation -- a positive metal ion -- in the blood stream during the process of surrounding a positive (metal) ion. The chemical equivalent of the lobster claw is a protein, an amino acid called EDTA (Ethylene Diamine Tetracetic Acid). EDTA combines with cations in the blood stream, flushing them out with urine. Do not think, however, that this is the only form of chelation that can take place within the body. The most common form of chelation is that which takes place during strenuous exercise, producing lactic acid, a natural chelator.

According to James J. Julian, M.D.² "Chelation is a basic process of life itself. Without the chelation mechanism, life as we know it would not exist on this planet.

"Chelation is the process that enables plants to take inorganic elements and change them into organic plant structure.

Chlorophyll of green plants is a chelate of the mineral magnesium; blood hemoglobin (the oxygen carrier) is a chelate of iron. Chelation is the process by which the body utilizes aspirin, penicillin, vitamins, minerals and trace elements."

Chelation is a natural process found in nature. Soap is a chelator, taking off grime and dirt. When you soften water through a house water-softener, you use a chelating agent to take out minerals. EDTA, when used in your 100,000 miles of internal plumbing called capillaries, veins and arteries, acts in a similar manner, by taking out metal ions that will otherwise damage us⁷.

As Julian² further explains, "A modified copy of one of these natural amino acids called ethylene diamine tetracetic acid (EDTA), is used in Chelation Therapy. It is modified to make it more predictable and dependable in removing specific elements with [positive] electric charges such as calcium and heavy metals; namely lead, arsenic, mercury, cadmium and aluminum from the body."

In 1893, Swiss Nobel Laureate Alfred Werner proposed a theory of metal which provided the foundation for modern chelation therapy^{10,11}. In the early 1930's Germany and the United States both experimented with chemical processes for synthesizing EDTA¹¹. Chelation therapy was first used by the British in WWII as an antidote to poison gas inhalation. According to John Parks Trowbridge, M.D. and Morton Walker, "The earliest reported research using EDTA for removal of plaque-producing calcium deposits was conducted in 1946 at the University of Zurich, and in 1947 and 1948 at the University of Bern³⁹." In 1948 the U.S. Navy used EDTA to treat lead poisoning. Dr. Norman E. Clarke, Director of Research at Providence Hospital in Detroit, observed that after a series of treatments with EDTA, patients' overall health appeared to improve. Patients who had angina reported that their chest pain was gone. Others with gangrene of the legs reported healing. Memory, sight, hearing and sense of smell all improved. People treated with chelation reported increased vigor¹¹.

Clarke's observations stirred up interest in physicians who reported a wide-range of benefits to patients suffering from heart disease, brain disorders, and arteriosclerosis. It was clear that EDTA was effective not only in removing toxic metals, but also in helping restore blood vessels blocked by plaque.

In 1952 W. Grant, M.D., in a research paper, "described the use of EDTA chelation therapy as a solution for removing calcium from the eyes of human patients with post-keratitis corneal opacities which had resulted in cataracts³⁹."

During the 1960's there was demonstrated a wide-range of benefits to patients suffering from various diseases. These demonstrations included both human and animal studies. In particular, "That EDTA is able to remove calcium from the arterial wall was conclusively shown in a study by Fred Walker, Ph.D. and outlined in his doctoral thesis³⁹." But, a serious blow to EDTA study occurred in 1969 when a patient expired. This resulted in reduced motivation to establish the positive effects of EDTA in cardio-vascular and age-associated diseases¹¹.

During the 1970's thru 2000's there were numerous medical/legal battles surrounding chelation therapy. Some MD's were placed on probation by their State Medical Boards. (This battle continues in certain states to this day. Many states, such as Kentucky, has arbitrarily ruled against physicians using chelation therapy. In 2000 the State of Tennessee Board of Medical Examiners scheduled hearings with the same end in mind. However, the hue and cry from patients was so great that the Board wisely backed down. Their hearings resulted in the largest turnout of any board hearing in the history of the State of Tennessee.) Others have won battles which allowed them to use EDTA, which was approved by the FDA for

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metal toxicity. Other State Medical Boards either ignored the dispute, or tacitly approved the use of Chelation Therapy. Chelation Therapy is a treatment not generally accepted by the general medical establishment. In those few states where medical boards have closed down or prosecuted physicians who practice Chelation Therapy, the State Medical Boards for the most part consist of well-meaning physicians who are concerned with our welfare (and their own pocketbooks in some cases), but who know absolutely nothing about the therapy other than what they've read that was written by others who knew nothing about it. It is safe to say that every article written against Chelation Therapy and printed in "respectable" journals has been written by a physician or researcher who has assumed the mantle of Authority, yet has absolutely no knowledge of it. A presumed exception is a study performed by Danish surgeons (with conflict of interest) and published in the 1991 *American Journal of Surgery* and in the *Journal of Internal Medicine* 231:261-267 1992. It is clear from an analysis performed by the American Institute of Medical Preventics⁴⁴ that this study was either done in total ignorance of the appropriate methodology of scientific studies or, most probably, was fraudulently designed to cast aspersions for financial gain against this otherwise wholly successful treatment. Contrary to wide-spread opinion, neither science or the field of medical practice is free of fraud, dishonesty and incompetence.

In 1973 the American Academy of Medical Preventics (now the American College of Advancement in Medicine [ACAM]) developed a safe and effective protocol for this therapy. Since that time more than a million people [2002] have been helped according to documented case histories, "most of them victims of hardening of the arteries³⁹." According to James P. Frackelton, President of the American Institute of Medical Preventics (AIMP), AIMP "is the holder of an Investigational New Drug permit issued by the U.S. Food and Drug Administration and is cosponsor of [an] ongoing FDA approved stud[y]of EDTA chelation therapy to treat atherosclerotic peripheral vascular disease with claudication. AIMP works closely with FDA officials to ensure that the studies are meticulously conducted, and that all FDA requirements can be met. If and when the studies are successful, the FDA would then approve atherosclerosis to be listed on the package insert of MgEDTA⁴⁵."

The National Institute of Health has now [2002] launched a \$30 million clinical trial on EDTA Chelation Therapy for coronary artery disease. The two components involved are the National Center for Complementary and Alternative Medicine and the National, Heart, Lung and Blood Institute. It is a 5-year randomized, double-blind study involving 2,372 patients at more than 100 research sites across the United States⁴⁸.

This therapy historically began with the use of Calcium EDTA as a treatment for lead poisoning, called plumbism, after the chemical name for lead, plumbum. If you remember history, you'll recall that the Roman Empire was gifted with great engineers, and those engineers created a gigantic system of water plumbing made of lead. Some historians have hypothesized that lead poisoning from water contacting tubes of lead, and dissolving lead compounds, was a contributing factor to the downfall of the Roman Empire.

But you don't have to go as far back as the Roman Empire to observe lead poisoning. It was only rather recently that the U.S. Government banned lead from automotive gasoline engines, and also from interior paints which have poisoned so many children who have unwittingly eaten peeling lead paint.

Various doctors have been called upon from time to time to use Calcium EDTA chelation to rid a patient of lead poisoning acquired by one means or another, such as inhaling the fumes from

the burning of lead batteries. In this process, the physician inserts a needle into the bloodstream and "pushes" a one-shot substance into the veins in the recognition that a chelating chemical will grab onto poisonous lead in the body, surround it, and allow the body to flush the poison out with the patient's urine.

That's the extent of knowledge that most physicians have about Chelation Therapy. If you ask them if they know anything about Chelation Therapy, they'll say "Yes!" thinking that you mean this single-push process developed in 1948 for ridding the body of excessive lead. Some fewer physicians will know of the use of flushing out bone-attractive materials such as plutonium.

EDTA Chelation Therapy described herein is gentler than the one-shot lead "push" and in many ways more beneficial. EDTA can surround, combine with and flush out many unwanted substances, such as calcium, lead, arsenic, aluminum and, indeed, any positive ion that is undesired and capable of being combined with this amino acid. Calcium EDTA is usually used for lead poisoning, whereas disodium EDTA is usually used in the described Chelation Therapy. Magnesium EDTA is being used with increasing frequency. At the termination of infusion of disodium EDTA, Calcium Gluconate is often placed in the infusion bottle, converting the remainder of the EDTA to Calcium EDTA, to help prevent calcium tetony. However Calcium, disodium and Magnesium EDTA are all suitable for their various purposes. Gordon E. Potter, M.D. reports that while EDTA is excellent for bivalent ions, Desferrioxamine is superior for chelating out trivalent ions such as Iron (Fe⁺⁺⁺) and Aluminum (Al⁺⁺⁺). Since Desferrioxamine passes through the blood brain barrier, it may also be superior for Alzheimer's disease; i.e. in chelating out aluminum. He has no knowledge of the safety of using EDTA and Desferrioxamine at the same time, however⁴⁶. According to Warren M. Levin, M.D. "EDTA binds mercury avidly *in vitro* (in the test tube), but is ineffective *in vivo* (in the human body)⁴⁷."

There are many poisons that we breathe in, eat, drink or are exposed to by bodily contact and skin absorption. The subject of environmental pollution is entirely too big to describe here, but everyone who reads newspapers, watches television, or hears radio will surely know that our bodies are currently bathed in undesirable pollutants of every kind. EDTA Chelation Therapy cannot rid us of everything foreign, of course, but it does an excellent job of chelating out many undesirable pollutants.

How Does Chelation Therapy Work?

While EDTA Chelation Therapy will "flush out" many undesirable substances, it has been said that its chief effect is to contact, combine with and to flush out calcium that is found in plaques in the arteries. This theory is probably not correct, but it has been strongly advocated.

The molecules and atoms that "seek" out or have a very strong affinity for, other compounds and atoms are called "free radicals." Free radicals are always formed within the body as a natural consequence of a balance between catabolism and anabolism, the building up and breaking down of cellular tissue, respectively. Free radicals also have a vital place in killing foreign microorganisms. Whenever the balance is seriously upset, and especially for extended periods, when more free radicals are formed than can be balanced off by natural bodily processes, disease and often accompanying inflammation occurs. Chelation Therapy has a definite place in the ridding of free-radicals that cause inflammation. It performs other duties that permit functioning for health, such as ridding the body of toxic pollutants which interfere with enzymal functions. Chelation Therapy operates at a level that is basic for the health of individual cells -- optimally functioning cells promote optimally functioning organs, and these, in turn, optimally functioning systems -- and consequent health. Because virtually all diseases have

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some component of production of an excess of free-radicals, Chelation Therapy can be and often is indicated as curative or supportive for many disease states, especially chronic diseases. Oxygen atoms and other chemicals within the body are attracted to other compounds and atoms forming free radicals during combinatorial stages. Free radicals damage tissues and promote cartilage decomposition and many other cascading problems for organs, systems and tissues generally. In addition, cells cannot eliminate their waste products. Cellular breakdown occurs leading to deterioration and disease. Over time, the entire arterial system is slowly disturbed, as are organs and tissues, all of them composed of individual cells with lowered reserves and capacities.

There are three explanations for the way EDTA Chelation Therapy works. Possibly all theories or explanations are correct, at least in part. One theory is the free radical theory; another is the calcium binding theory, the removal of calcium that binds together the ingredients of plaques in our arteries. A third and latest theory, described by Gary Gordon, M.D., D.O., M.D.(H). is the Nitric Oxide production theory.

Free Radical Theory

According to the free radical theory, perhaps 80-90% of all disease process is an excess of free radical activity^{11, 12, 13, 14, 15}. Excessive free radicals create havoc by damaging cells and their DNA, changing biochemicals, damaging cell membranes and sometimes killing cells outright. Every oxygen factor also has an anti-oxidant factor in our physiological systems. We, in other words, are normally capable of neutralizing the harmful effects of atoms and molecules that have a high affinity for other elements and chemicals, and would otherwise damage tissue and cells in attaching to cellular components.

Whenever one side or the other of this oxidation/anti-oxidation, free-radical system becomes unbalanced, damage accrues. This damage leads to diseases of the circulatory system, malignancies, inflammatory conditions and immunologic disorders¹³. According to Elmer Cranton, M.D., "The free radical concept explains contradictory epidemiologic and clinical observations and provides a scientific rationale for treatment and prevention of many of the major causes of long-term disability and death: atherosclerosis, dementia, cancer, arthritis, and other age-related diseases²²."

EDTA chelation therapy removes metals that act as catalysts for the production of excessive free radical reactions, thus halting the disease process and/ or repairing the damage. Cranton says that "EDTA can reduce the production of free radicals by a million-fold²⁴."

Karl Loren says:

"My opinion, and that of others, is that chelation therapy offers the brightest promise of health help on the medical horizon today!

"Probably the foremost authority and expert on chelation therapy today is Dr. Elmer Cranton, author of *Bypassing Bypass*, and other Books. He says:

"Free Radical Causes of Degenerative Disease

"The field of free radical biochemistry is as revolutionary and profound in its implications for medicine as the germ theory was for the science of microbiology. It has created a new paradigm for viewing the disease process. Emerging knowledge in this field gives us a compelling scientific rationale for treatment and prevention of major causes of long-term disability and death with EDTA chelation therapy.(98-107) (source)'

"It is increasingly being accepted that free radicals are the SOLE cause of heart disease and cancer. These two diseases are responsible for over 70% of all death in

Western Society. Most doctors do not yet acknowledge this truth.

"There is no direct equivalent between intravenous chelation and oral chelation. I consider Dr. Cranton the foremost expert on intravenous chelation therapy. Yet he claims that oral chelation is quackery! I disagree with him. So, I mostly quote his explanations of IV chelation, and try to compare it with oral chelation — here.

"You can get an approximate relationship between the two.

"First let's look at the word "chelate."

"The word means to "bind" or to "grab." Chelation is the process of some substance (such as EDTA, Cysteine or N Acetyl Cysteine) grabbing a heavy metal.

"Metals are grabbed in a sequential sequence, per Dr. Cranton:

"The affinity of EDTA to bind various metals at physiologic pH, in order of decreasing stability, is listed below. In the presence of a more tightly bound metal, EDTA releases metals lower in the series and binds to the metal for which it has a greater affinity.(273) Calcium is near the bottom of the list.

Chromium2+
Iron 3+
Mercury 2+
Copper 2+
Lead 2+
Zinc 2+
Cadmium 2+
Cobalt 2+
Aluminum 3+
Iron 2+
Manganese 2+
Calcium 2+
Magnesium 2+
(source)

"Thus the chelating substance start off bound to calcium, so it cannot pick up any new calcium. This, incidentally, is the proving evidence that chelation does NOT remove calcium blockage from the arteries — as many IV chelation doctors still claim!

"But it is the nature of a chelating substance to 'let go' of the lighter mineral in order to grab the heavier metal, or more accurately, the metals in the sequence shown in the above list provided by Dr. Cranton.

"Thus the chelating substance starts off bound to calcium, but it would let go of the calcium if it 'bumps into' iron, or even Aluminum. It would then let go of the aluminum if it bumps into lead. Then, bound to lead if it bumps into iron, it would NOT let go of the lead to bind to the iron.

"When you are dealing with the artificial amino acid, EDTA, about half of it stays in the blood stream for an hour or so — so it is binding to, and letting go of, heavy metals during that hour, then it is ejected from the body through the kidneys and urine. The body considers it a 'foreign substance' from the very start and wants to get rid of it. That is why it stays active in the body for such a short time.

"Cysteine and N Acetyl Cysteine (NAC), however, are natural amino acids. They can stay active in the blood stream for many hours (until they are used for chelating, used for protein structure building, or converted to sugar).

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When EDTA is taken orally it works to bind to metals in the stomach and intestine. It can also attract metals from inside the body, through the intestinal wall, to be bound to the EDTA in the intestine. This EDTA would remain active as long as it is in the stomach and intestine. Since the contents of the stomach would usually stay inside the body for about 24 hours or so, EDTA is active longer when taken orally than when taken intravenously.

"Thus, oral chelation "works" in the body for more hours than does IV chelation using EDTA only.

"Those particles of Cysteine and NAC that bind to metals? They would then be considered a 'foreign particle' by the body and processed through the kidney for elimination in the urine. The same would be true of the small amount of EDTA that is absorbed into the body when taken orally.

"Intravenous chelation generally relies only on the artificial Amino Acid, EDTA, and generally about 2,000 mg of the EDTA is put into a water solution and dripped into one of your veins over a two or three hour period. Sometimes 3,000 mg of EDTA is used. Generally 100% of this EDTA would be in the blood stream, since it is put directly there.

"Oral chelation depends on nutrients being useful when taken through the mouth. Generally the 'chelating substances' are EDTA, Cysteine and N Acetyl Cysteine. Cysteine and NAC are easily absorbed through the mouth into the body and blood stream, Since EDTA is an 'artificial amino acid' it is not readily absorbed into the body when taken through the mouth. The Cysteine and NAC would do their chelating in the normal fashion of any chelating substance, when taken through the mouth. Since only about 5% of EDTA taken orally gets into the blood, the 95% moves through the stomach and intestines — where the 'chelating action' is different than when the chelating substances is in the blood stream.

"The one or two hours are called the 'half life' of the EDTA. In about 2 hours, half of the EDTA has been processed out of the blood stream, through the kidneys, and into the bladder, in the urine, awaiting elimination. The other half of the EDTA would be working longer, but you can see that if half of the EDTA is 'used up' every two hours, there would be very, very little left after say 8 hours.

"Now, if you just put EDTA in water, there would normally not be any metals in the water and it might hang on to calcium or it might let go of calcium — depending on what WAS in the water.

"But, in your body we don't want the EDTA to grab calcium, so the calcium and EDTA are deliberately included in the same dose — and in most cases the EDTA will let go of the calcium it came in with, and grab something heavier.

"So you now have this interesting action — oral EDTA is removing metals from the food you have just eaten, but it is also removing metals from inside the body — attracting them from inside the body to move through the wall of the intestine, into the feces in the intestine, to bind with the EDTA that is still there.

"The other ingredients in the formula, mostly cysteine and NAC, bind to metals from inside the body — and do it in the same sequential fashion.

"The only minerals that could be removed during chelation would be those that are heavier than calcium =

most of them are harmful. Zinc is heavier, and not harmful, but my formula provides lots of zinc, anyway.

"The EDTA which is moving through the stomach? Well, it is NOT going to be eliminated through the kidneys, but through the feces. Thus, THIS EDTA will actually have a longer time of effectiveness. The EDTA will remain effective in the intestine as long as it is still in the intestine — that would usually be about 24 hours. During that time it is constantly grabbing metals, letting go of the lighter ones and switching to the heavier metals.

"In this sense EDTA taken orally is much more effective than EDTA taken intravenously.

"When you chelate with Cysteine, or NAC, or intravenous EDTA, you would look in the urine to test for how much metal is being dumped from the body. A urine test before using the chelating materials, and another urine test (for metals) within a couple days after starting the chelating — would tell you how much of an increase in metal there is. It would not be unusual for the increase in metal in the urine to be as much as FIFTY TIMES!

"Now, the EDTA going through the stomach and intestine? It is not being eliminated in the urine, but in the feces, so if you really wanted to do the proper test you would check a 'stool sample' before and after starting the oral EDTA.

"You can see, now that it is a complex question to try to compare intravenous with oral chelation.

"If a person is taking the recommended dose of Super Life Glow, he is getting 1,800 mg of daily chelating materials, of which 500 mg is EDTA.

"If a person is taking an IV treatment, he would be getting between 2,000 and 3,000 mg of EDTA. The EDTA would NOT be active for very long when taken intravenously, and would be active longer when taken orally.

"There is another issue. Intravenous EDTA would be all working within the blood stream, and generally its ONLY action would be to remove metals.

"Cystine and NAC, however, would not be active ONLY as binding materials. These are natural amino acids and the body may well have other uses for them besides chelating metals. It would not be very possible to know how much Cysteine, for instance, would be used to remove metals and how much would be used for other purposes in the body.

"Is this a complex question? or not?"

"Finally, perhaps the best way of comparing is to simply look at results of use, rather than the mechanics of action.

"EDTA taken intravenously seems faster than oral chelation. People will often get dramatic changes in their body after only three or four IV treatments. These dramatic changes usually take 30 days with oral chelation.

"My personal belief on this is that if you have an urgent need for fast action, IV chelation would be the best way to go.

"But, after about 30 days, or perhaps 60, I think the daily oral chelation would be at least as effective, and probably more effective, than a series of 30 treatments of IV EDTA.

"I have a complete analysis of one of the most recent approaches to chelation — using EDTA in a suppository. It would be more effective through the mouth, since it would stay active longer, but the suppositories

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are being hyped as prescription only, provided only by doctors, and costing as much as \$50 for one suppository containing 750 mg of EDTA.

"There are also many examples of different combinations of the three different oral chelation formulas — .

One more thing.

Mercury is a common toxic metal in the body. It is generally accepted that EDTA, taken intravenously, does NOT remove mercury. However, Cysteine and N Acetyl Cysteine do remove mercury. So, intravenous EDTA is not useful in removing one of the most dangerous of all toxic metals we have in our bodies, while oral chelation does remove mercury.

"There are some interesting studies, not well known or validated, that show that oral EDTA may, in fact remove mercury, into the feces. This would make the oral chelation approach even more valuable than the intravenous approach." (See Karl Loren: at <http://www.chelationtherapyonline.com/>)

Calcium Binding Theory

A proper diet can also act as a chelator. "The proper program of low-fat, high-complex-carbohydrate diet and aerobic exercise actually is partially a natural process of chelation therapy.²³" Specific foods and combinations of foods can, then, act as partial chelators. The extent and distribution of these foods would be too lengthy for this volume. However, as an example, specific studies have been completed on the chelating effects of garlic which show that garlic has a chelating effect on those suffering excessive lipid deposits. Benjamin Lau, M.D., Ph.D., who has accomplished a great deal of research on garlic, shows that the ratio of Low Density Lipids to Very Low Density Lipids decreased in a study over a period of six months using a particular form of aged garlic, 1 gram per day. At the same time, with the same ingredients and same dosage, Cholesterol also decreased. In both instances during an initial 60 day period, the measurable levels of lipids increased, which was interpreted as an initial sloughing off of the excessive lipid deposits, after which a continuous decrease was discovered²⁰.

Gradually, free radicals affect tissues so that localized accumulations of lipid-containing (oil/fat) material (atheromas) within or beneath the intima (lining of vessels) surfaces of blood vessels clog up the 100,000 miles of capillaries, veins and arteries⁷. Exposure to pollutants over a lifetime from food, air, water and drugs collect in various tissues throughout the body, in various ways. When EDTA chelates out many of these pollutants we find that we can now handle life better than before and we are healthier.

When EDTA binds with calcium, the consequence is the break-up of the plaque hindering the flow of blood in the arterial system. Probably, for many people, plaque formation in the arterial system begins sometime after birth about ages 4, 5 and 6 and continues onward until more than 50% of the system is plugged, and blood has a difficult time flowing, and thence disease conditions become evident. Military records show on autopsies from Korean and Vietnam conflicts that many United States' soldiers aged 18-25 had coronary artery disease¹⁶. Even two of the three pioneer astronauts who died in the notorious oxygen fire prior to take-off -- three men picked for their excellent physical condition -- showed signs of atherosclerosis on autopsy.

There is a margin of safety built into every organ, and the circulatory system can compensate for increased demands for many years, until its flexibility and capacity is decreased to a critical limit.

In the calcium binding theory, calcium acts like a cement-binder, in that it binds fatty substances together, probably over a

scar tissue, and forms the plaque linings that cause the arterial system to decrease in flow volume. By Chelating out the calcium binder, the plaque dissolves and increases the diameter of the artery while also increasing the artery's flexibility.

When a fluid flows through a pipe or tube, the rate of flow depends on a number of factors, including the pipe's length, its radius, the fluid's viscosity and the time of flow. All other factors staying constant, a very small decrease or increase in the radius of the tube decreases or increases the rate of flow, respectively, by a factor of the power of three. Since a smaller vascular opening also requires higher blood pressure to pump the blood through, more work is placed on the heart and overall vascular system. With increased clogging of the circulatory system, therefore, our blood pressure increases while the quantity or volume of blood flow decreases drastically⁸. Since the human vascular system is not rigid, like metal pipes, the subject of cross-sectional diameter and fluid flow can be over-simplified, as the arteries may also stretch with higher pressure, therefore compensating to some extent for a smaller diameter of flow openings. However "perfusion scans have demonstrated increased brain blood flow after Chelation treatment . . . doppler ultrasound studies in sample groups of up to 30 patients have demonstrated some cases of complete patency [the condition of being wide open] of carotid arteries following treatment . . . [and] there is a 28% improvement or enlargement of the lumen [inner lining] diameter . . . improvement in brachial-ankle blood pressure ratios . . .²³" according to Zigurts Strauts, M.D. A 10% increase in vascular diameter of the arteries is enough to double the blood flow⁴³.

As atherosclerosis progresses, and the pipes — the capillaries, arteries and veins — decrease in size, each cell of our body also receives considerably less nourishment than before partial clogging, as the amount of nourishment lessens with the decrease of blood flow. There is literally less opportunity to bring molecular food particles and oxygen to each cell. With less food and oxygen at each cell, the cell has less capacity to function. Less functioning of each cell means less ability to resist disease and stress, and less ability to repair damage already done. That, of course, means increased opportunity for every kind of disease⁷! Perhaps two-time Nobel winner, Linus Pauling, Ph.D. has again scored with his theory of damage to the interior of the artery being the beginning of its clogging.

The Nitric Oxide Theory

Dr. Gary Gordon says, "Chelation therapy has significantly helped more than one million people enjoy a higher level of health. Yet for many it clearly is not reversing plaque, although most patients see significant clinical improvement when treated with EDTA. I believe this is due, among other things, to enhanced NITRIC OXIDE produced in the body by our endothelium that simply functions far better when all lead and other toxic metals are removed. When this simple idea is understood we can make EDTA chelation a standard part of medicine. The nitric oxide benefit is already published and we can now help virtually everyone by giving up on the complex, and nearly impossible to prove, idea of reversing plaque.

There are over 32,000 published articles on Nitric Oxide. These explain why chelation can enhance blood flow, even without reversing plaque, and this research clearly proves that almost every other benefit that has been reported in patients receiving the standard 1.5-3 hour chelation therapy can now be fully explained simply by the increased production of Nitric Oxide. I believe once this need to improve function of tissues through heavy metal detoxification is understood by everyone, we can then immediately extend most of the benefits we ascribe to EDTA therapy to everyone living

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. on our metal toxic planet, affordably and conveniently, by switching to CALCIUM EDTA given orally everyday and further enhanced by periodic parenteral administration for deeper cleansing." [See <http://www.arthritisrust.org> for "Where is the New Chelation Movement Headed?"]

How Are Treatments Given?

The chemical EDTA, an amino acid, acts like a magnet for positively charged calcium and other metal ions. The chemical EDTA "claws" onto the metallic ions and converts them to a chemical that is solvent, safe and easily washed through urine. While EDTA to some extent also flushes out beneficial compounds and elements, such as zinc and Vitamin B₆, these beneficial substances are replaced during the chelating process. A mixture of EDTA and vitamins and minerals is placed in an intravenous solution, and the patient takes an intravenous drip for about 3-1/2 hours in a clinic's out-patient room. New studies have shown that the same good effects can be achieved in half the time, with a smaller volume of fluids. The patient usually sits beside others who watch television or read or simply visit with one another.

According to physicians who routinely use Chelation Therapy with their patients, it takes about 20 to 22 treatments for first results to make themselves known to the patient. Depending on severity of the patient's overall problems, s/he may need 30, 40, ..., 100 treatments given, usually, at the rate of about three per week which, according to some physicians, is an optimum frequency of treatment. Other physicians may vary the frequency of treatment, depending upon the patient's condition. Evaluation of the patient should be made at 3, 6 and 12 month intervals⁹.

For the treatment to be maximally effective, good dietary habits and appropriate exercise are important. Alcohol, drugs (including many prescription drugs) and smoking will reverse the whole process, again causing free-radical damage that leads to atherosclerosis and subsequent disease problems that occur as a secondary condition of the inability of cells to receive their proper nourishment. Physicians who provide patients with EDTA Chelation Therapy will also counsel on the negative effects of bad diet and consumption of alcohol, drugs and smoking. They will advise appropriate diets that will either assist in the chelating process or will, by themselves, provide the body with natural chelating mechanisms.

EDTA should not be used during pregnancy⁹.

Chelation Therapy should normally be postponed until active liver diseases are properly treated or resolved, unless there is no other choice available⁹.

Usually a physician will supplement EDTA treatment with proper diet counseling and antioxidants which are synergistic with the benefits of EDTA. These are Vitamins C, E, beta carotene, selenium, glutathione and a spectrum of B complex vitamins. Iron and copper are free radical catalysts and excesses may counteract the benefits of chelation therapy⁹.

EDTA Safety

Any drug can be dangerous under the right conditions, to the wrong person. Even milk can be exceptionally dangerous to one who is allergic to it. According to the manner in which drug safety is determined EDTA is about 3-1/2 times safer or less toxic than taking aspirin⁶. This measure is taken from a standard known as the LD-50, the Lethal Dosage at which 50% of experimental animals will die in a specified period. "More than 1,000,000 patients have been treated in the United States alone, without a single reported incident of renal failure or death since 1960^{43, 48}."

As with any treatment, EDTA can be misused by those who do not follow a proper treatment protocol, and it is recommended that physicians use the protocol developed by The American

College for Advancement in Medicine⁷. This pioneer organization has long sought to establish certification and standards of practices including appropriate training and education for all those physicians who wish to chelate patients.

What Conditions Are Benefited?

Some time after John Parks Trowbridge, Sr. retired from the U.S. Air Force, at age 70, it was discovered that he had an aortic aneurysm, a balloon-like swelling in the wall of the main artery. As this condition indicates a weakened structure that is likely to break and lead to quick death, he consulted with several physicians, including his son, John Parks Trowbridge, Jr., M.D. who, along with other physicians, recommended immediate surgery, which was accomplished. It was not until several years passed that the younger Trowbridge came to understand the benefits of Chelation Therapy, learning first from Robert Haskell, M.D., who told him, "Of all the regimens you can use to help your patients combat degenerative disease and restore their health, chelation therapy is the most powerful. It produces the greatest number of benefits to the body - far beyond those of improved blood flow. If you want to get your prescribed nutrition to those parts of the body in which they must work, John, chelation therapy is the way to do it³⁹."

The primary reason for recommending Chelation Therapy to you when you have degenerative disease or have aged has to do with its ability to restore your vital functions. Virtually everyone has some degree of clogging up of the 100,000 miles of plumbing. Often the process of atherosclerosis begins in children's arteries and progresses through adulthood, so that even the finest physical specimens show evidence of this beginning on autopsy. It is virtually certain that you have some of this clogging, to some degree, and that it contributes to your state of health at least indirectly.

EDTA intravenous Chelation Therapy has proved to be safe and effective in the treatment of many varied disease conditions related to abnormal or diseased vascular conditions. Because this therapy involves the vascular system, and because blood flow affects every cell in the body, it is not surprising to find a wide ranging set of lack-of-health conditions improved or outright cured after its use. According to James J. Julian, M.D.², EDTA Chelation Therapy reduces "toxic metal deposits, abnormal calcium deposits, blood cholesterol, blood pressure, leg cramps, pigmentation, varicosities, size of kidney stones. [It] improves circulation, skin texture and tone, vision, hearing, liver function. [It] relieves to various degrees: digitalis toxicity, lead toxicity, symptoms of senility, pain, symptoms of irregular rhythm, hypoglycemia, phlebitis, scleroderma, skin ulcers, and Wilson's Disease," a disease of the liver thought to be related to copper.

Doctors who use disodium EDTA Chelation Therapy would agree with James Julian. Morton Walker D.P.M. quotes Rudolph Alsleben, M.D. and Wilfrid E. Shute, M.D.⁵ who have asserted that beneficial effects are: "prevents the deposit of cholesterol in the liver, reduces blood cholesterol levels, causes high blood pressure to drop in 60 percent of the cases, reverses the toxic effects of digitalis excess, converts to normal 50 percent of cardiac arrhythmias, reduces or relaxes excessive heart contractions, increases intracellular potassium, reduces heart irritability, increases the removal of lead, removes calcium from atherosclerotic plaques, dissolves kidney stones, reduces serum iron, protects against iron poisoning and iron storage disease, reduces heart valve calcification, improves heart function, detoxifies several snake and spider venoms, reduces the dark pigmentation of varicose veins, heals calcified necrotic ulcers, reduces the disabling effects of intermittent claudication, improves vision in diabetic retinopathy, decreases macular degeneration, and dissolves small cataracts."

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William J. Mauer, D.O., according to Walker⁵, also provided an additional listing gathered from his own and the experience of other physicians. These include: "Eliminates heavy metal toxicity, makes arterial walls more flexible, manages excess quantities of fat in the blood, prevents osteoarthritis, causes rheumatoid arthritis symptoms to disappear, has an antiaging effect, smooths skin wrinkles, offers psychological relief, assures the presence of adequate zinc in the blood, lowers insulin requirements for diabetics, and dissolves large and small thrombi."

Other physicians have listed other health improvements, including reversal of impotence, when impotence is caused by blockage or decreased flow of blood.

Heart Disease

According to Arabinda Das, M.D.²⁶, in speaking of heart disease "In the U.S. 600,000 sudden deaths occur each year. This is one death from coronary heart disease every 32 seconds. Per capita expenditure for treatment of coronary artery disease is \$160 per year for every individual in the U.S. Coronary artery disease is one of the foremost diseases of this country and the number one killer. This dangerous condition develops when the blood supply to the heart muscle is impaired, usually by a narrowing process leading to stenosis. This may be due to plaque formation or atherosclerosis or spasming.

"In the U.S. the diagnosis is made with vast amounts of expense, provided by the insurance companies and still carry serious complications after treatment. . . . Complications of acute heart attacks include the heart's failure to pump enough blood (congestive heart failure), acute pulmonary edema, bronchitis, cardiac asthma, collapse (shock due to arterial blood circuit with loss of blood pressure); ineffective heart rhythm, such as the multiple supraventricular extra systole, leading to ventricular tachycardia, frequent fatal ventricular fibrillation; travelling blood clots (emboli) to brain, dilations of heart muscle, and ventricular aneurysm. These are the ways patients die at home or are brought to hospitals for intensive care."

The American Heart Association³⁴, in its 1992 *Heart and Stroke Facts* report, says 980,000 Americans died of cardiovascular disease in 1988, the latest year for which figures are available. Women accounted for . . . 51%. ". . . more Americans died of cardiovascular disease in 1988 than succumbed to cancer, accidents, pneumonia, influenza, suicide and, AIDS combined."

Chelation vs By-Pass Surgery and Angioplasty

According to the American Heart Association³⁴, "The disease cost to the nation is staggering . . . an estimated \$108.9 billion in health services and lost productivity this year [1993] alone."

According to Zigurts Strauts, M.D.²³ ". . . there are close to 300,000 bypass procedures done in the United States annually and 5,000-7,000 angioplasties. There is, at the most conservative estimates, a 1.4% mortality rate in the top centers of the United States for bypass surgery and a mortality rate approaching 2% for angioplasty. In California, . . . , the mortality rate on count in 1987 was 4.7%. One out of 20 people therefore do not walk out of the operating room. We are talking about 15-20 *thousand* deaths annually due to these two procedures. The morbidity statistics are no better. In fact, it is said that up to 20% of patients going through bypass surgery have at least minimal brain dysfunction and numerous other cases involving other complications have been reported in the literature. Kidney failure is one of them. . . . research has been done measuring ejection fractions [of the heart] of Chelation therapy in patients and the results have shown a significant improvement. . . . This cannot be said for bypass surgery where the improvement is only minimal at best and then only in a few patients. In fact, the patients with poor ejection fractions are not accepted as bypass

candidates. One could say therefore that for those patients Chelation Therapy may be the only hope that they have."

Zigurts Strauts' 1987 report does not seem to be affected by the passage of time. Most recent studies have concentrated on segregating out classes of patients that have averaged out to his reported 4.7% California mortality rate.

Severity of initial disease, age of patients, type of heart condition, surgeon skill, hospital surgery load and so on have all provided grist for the statistical evaluation mill.

E.L. Hannan³⁶, et. al. reported that "for all patients receiving coronary artery bypass surgery in New York State in 1989, . . . demonstrate that both annual surgeon volume and annual hospital volume are significantly (inversely) related to mortality rate. Coronary bypass operations performed in hospitals with annual bypass volumes of 700 or more by surgeons with annual bypass volumes of 180 or more had a risk-adjusted mortality rate of 2.67% in comparison to a risk-adjusted mortality rate of 4.29%." In other words, the more experienced the surgeon, the less the mortality rate, an obvious conclusion. So, if the mortality rate overall is still close to 4.7%, there must be something more drastic wrong with the procedure -- or the vast majority of operations are being performed by inexperienced surgeons in low-volume hospitals.

O'Connor³⁷ et. al. reported in 1989 that "the overall crude in-hospital mortality rate for isolated Cardiac Artery By-pass Grafting was 4.3%." The rate varied among centers . . . but they concluded "that the observed differences in in-hospital mortality rates among institutions and among surgeons in northern New England are not solely the result of differences in case mix . . ."

J. Zelen³⁸, et. al. reported on a variation of mortality rate from 4% for simple, 14.7% for complex, and 5.3% for all Cardiac Artery By-Pass Grafting operations at a University medical center in Greater New York.

From a survey of current research literature it is clear that selection of patients to improve survival outcome can be made on the basis of age, physician, hospital and type of disease, but it is equally clear that overall survival rates show very little, if any statistical difference from those reported in 1987.

By-Pass Surgery and Angioplasty

By-pass surgery involves the replacing of a defective artery, usually near the heart, with a less defective vein from somewhere else in the body, usually the leg. The vein is thinner than the artery and not exactly the artery's equivalent as a replacement. It can be weaker. There are about 100,000 miles of tubing -- capillaries, veins and arteries -- in the circulatory system. Although the region near the heart, with increased turbulence of blood flow, is most likely to be blocked by plaques, blockage will also be found throughout the arteries. It is unlikely that replacing one foot of 100,000 miles of blocked circulation will have more than a temporary palliative affect, except for a limited and well-defined condition.

By-pass surgery is exceedingly expensive, supporting costly hospital rooms and staffs, expensive surgical equipment, and high professional fees.

But the main reason for avoiding by-pass surgery is that it has been found to be relatively ineffective (with the exception of certain infrequent conditions). As Morton Walker D.P.M. reports, "Henry D. McIntosh, M.D., of the Methodist Hospital in Houston, Texas, said at a symposium of the American Heart Association in Miami Beach that bypass surgery should be reserved for patients with *crippling* angina who did not respond to more conservative treatment."¹⁹ Dr. McIntosh's statement has since been supported by many studies, including some reported by the Institute of Health, and by some of the very same physicians who pioneered in heart by-pass.

What sense, then, to have bypass surgery? And especially what

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. sense when all of the medical literature has already demonstrated its failure except in a very limited diagnosis of crippling angina?

The diseases that chelation can improve as a matter of routine include many of the intransigents. Instead of cutting off a gangrenous leg, the leg is healed, according to Norman E. Clarke and Warren M. Levin. Instead of expensive heart bypass surgery, the patient is healed. Instead of Carotid Artery bypass, the brain is again nourished. Senility and Alzheimers Disease can be reversed provided brain cells have not been starved of oxygen to the point where they have died. Other diseases that stem from failing organs due to lack of nourishment, including the skin, may be halted or reversed⁷.

Retrospective Study of Chelation Therapy

Philip Hoekstra, Sr. and John M. Baron, D.O.³, founders of Cypher, Inc. of Ohio, along with other physicians and Ph.D.s, funded one of the first objective studies, an unpublished clinical analysis on the use of Chelation Therapy from clinical data gathered over fifteen years, and involving 20,000 patients. Statistical evaluations were performed by an independent organization, free from all bias. Their retrospective study unequivocally proved that Chelation Therapy solves the problem in 80% of the cases of clogging in peripheral circulation and also the Carotid Artery preventing blood from reaching the brain, intermittent claudication, and reverses Osteoporosis (a 1% sampling), placing calcium back into bones and teeth, where calcium belongs. In the Chelation Study, the 20,000 patients came from many different clinical settings, and they represent patients with a wide diversity of disease conditions.

The cost of the study was funded privately, and **not** paid by any pharmaceutical company. The main ingredient, a chemical titled in brief as EDTA (Ethylene Diamine Tetracetic Acid), is not protected by patent. No pharmaceutical company can pay large returns to stockholders from its sale. No heart surgeon can assess tens of thousands of dollars applying it to heart problems. No hospital can submit bills of tens of thousands of dollars more for use of its operating rooms and services when EDTA is given. There are recent reports, however, that a large pharmaceutical company is funding a \$6,000,000 double-blind study on a chelating substance (Magnesium EDTA) for which they hold some or all of the patent rights²¹. Elmer Cranton, M.D. states that "Magnesium is a calcium antagonist, relatively deficient in many chelation patients, and is the metallic ion least likely to be removed by EDTA. In fact, EDTA is best administered as magnesium-EDTA, providing an efficient delivery system that increases magnesium stores."^{25"}

Heart Study

H. Richard Casdorff, M.D., PhD.²⁷ reported on "18 patients with documented arteriosclerotic heart disease" using a technetium isotope to measure the left heart ventricular ejection fraction "before and after the administration of EDTA chelation therapy. . . A statistically significant improvement in left ventricular ejection fraction occurred in this group of patients."

Retrospective Study of 2,870 Patients With Atherosclerosis and Other Degenerative States

Efrain Olszewer, M.D. and James P. Carter, M.D., Dr. P.H.³³ presented a 28-month retrospective analysis of 2,870 patients with documented atherosclerosis and other degenerative, age-associated diseases who were treated with intravenous disodium magnesium EDTA chelation therapy. Marked improvement occurred in 76.9% and good improvement occurred in 17% of treated patients with ischemic heart disease. Marked improvement occurred in 91% and good improvement occurred in 8% of treated patients with peripheral vascular disease and intermittent claudication. In patients with cerebrovascular and other degenerative cerebral diseases, 24% had

marked improvement, and 30% had good improvement. Of four patients with scleroderma, three had marked improvement and one had good improvement. Seventy-five percent of all patients had marked improvement in symptoms of vascular origin. Independent of pathology, 89% of all treated patients had marked or good improvement."

The First Published

Double-Blind/Single-Blind Crossover Study

Efrain Olszewer, M.D., Fuad Calil Sabbag, M.D. and James Carter, M.D., Dr.PH conducted the first study to be published involving first a double-blind and then a single-blind study, using those who were on the placebo in the single-blind after the code was broken for the double-blind. "Ten male patients with peripheral vascular disease, . . . , were randomly assigned to receive either Na₂ ethylene diamine tetra acetic acid (EDTA) plus MgSO₄, B complex, and vitamin C, or a placebo of MgSO₄, B complex, and vitamin C. . . A total of 20 Intravenous Infusions were planned for administration to each patient. Clinical and laboratory . . . tests showed dramatic improvements after 10 infusions in some patients, and thus was broken the code indicating who was receiving EDTA and who was receiving placebo. The group that improved had been receiving EDTA; there was no change in the placebo group. The trial was then completed in a single-blind fashion. Patients originally assigned to receive placebo then received 10 EDTA Infusions, while the group originally assigned to EDTA received 20 EDTA Infusions. The group that had formerly received placebo showed improvements comparable to those seen in the first EDTA group after 10 treatments⁴³."

Brain Disorders

Casdorff³⁸ also reports on "fifteen patients with well-documented impairment of cerebral blood flow," also using technetium isotope. He says, "A highly significant improvement (p = .0005) in cerebral blood flow occurred following approximately twenty intravenous infusions of disodium EDTA. All fifteen patients improved clinically, including one with little or no improvement in cerebral blood flow."

Cerebral Vascular Arterial Occlusion

E.W. McDonagh, D.O., FACGP, C.J. Rudolph, D.O., Ph.D. and E. Cheraskin, M.D., D.M.D.²⁹ in a study of fifty-seven patients evaluated for cerebral vascular arterial occlusion "Measurements of arterial occlusion were made with the relatively simple, noninvasive oculocerebrovasculometric analysis. Cerebrovascular arterial occlusion diminished by an average of 18% (from a mean of 28% to a mean of 10%) following therapy (P<0.001). Eighty-eight percent of patients treated with EDTA chelation therapy showed objective improvements in cerebrovascular blood flow."

Peripheral Vascular Stenosis

McDonagh, Rudolph and Cheraskin³⁰ also studied "117 lower extremities in 77 elderly patients with documented occlusive peripheral vascular stenosis, diagnosed by the Doppler systolic ankle/brachial blood pressure ratio. . . ." revealing "that intravenous ethylene diamine tetraacetic acid (EDTA) chelation therapy with supportive multivitamin/trace mineral supplementation improved arterial blood flow significantly after approximately 60 days and 26 infusions (P<0.001)."

Peripheral Arterial Occlusion, an Alternative to Amputation

H. Richard Casdorff, M.D., Ph.D. and Charles H. Farr, M.D., Ph.D.³¹ presented four patients, "each of whom represents end-stage occlusive peripheral arterial disease with gangrene of the involved extremity. These patients had exhausted all traditional forms of therapy and they had all been referred for surgical amputation. Instead of surgery, intravenous EDTA chelation therapy was instituted with complete success in each case. These gangrenous ex-

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. tremities all healed and were saved from amputation. Long-term follow-up, extending for more than a year, indicates that all four patients are continuing to do well, with their previously gangrenous extremities intact and pain free. Adjunctive therapies included vitamin and mineral supplementation and, in two cases, hyperbaric oxygen therapy (HBO)."

A Case of Chelation Therapy

Warren Levin, M.D.³⁵ says: "I guess my favorite chelation story is about the psychoanalyst who was on the staff of a major medical center -- one of the institutions that I call a mosque in this Mecca of American Medicine that is New York City. I first saw him as an emergency. He was in his fifties and looked remarkably healthy, except that he was in a wheelchair. I asked him what the emergency was and he said that he had been told he needed an amputation. It turns out he had awakened the same morning that I saw him to discover that his lower leg was cold, numb, mottled, blue, with two black-looking toes. He had immediately hied [hastened] himself over to his hospital and had a consultation with the chief of vascular surgery. The recommendation was for an immediate trip to the operating room to amputate above the knee in the hope of saving the rest of his leg. I don't know where he had heard about chelation therapy, but he asked this world-renowned surgeon about the possibility of using chelation in this situation. He was told, 'Don't bother me with that voodoo,' -- that if he was going to have a good result, it required surgery. Well, he decided to get a second opinion, so he just crutched down the hall a couple of doors to one of the associate professors. He, too, suggested immediate amputation, but when asked about chelation therapy, the response was, 'Well, this is not yet infected. It looks like dry gangrene, so you have a little time. You can try it if you want, but it's a waste of time.' With that as his only hope, [the psychoanalyst] showed up in my office.

"We started emergency chelation the next day, and after about nine chelations [one taken] every other day, he was pain-free and pinking up, and after about seventeen chelations, he was walking on the leg again!

"So, he never had an amputation, and he lived the rest of his life with not only two legs but all ten toes. It's incredible that I never got a phone call from either of these two surgeons who are just blocks away from my office to say, 'Hey, what the hell did you do Levin?' and I am certain that the next patient with a similar problem that showed up in their offices was told that the only thing to do is to amputate. What a tragedy."

Preventive Reduction in Cancer Mortality

Walter Blumer, M.D. and Elmer M. Cranton, M.D.³² report that mortality from cancer was reduced 90% during an 18-year follow-up of 59 patients treated with calcium-EDTA. Only one of 59 treated patients (1.7%) died of cancer while 30 of 172 nontreated control subjects (17.6%) died of cancer ($P = 0.002$). Death from atherosclerosis was also reduced. Treated patients had no evidence of cancer at the time of entry into this study. Observations relate only to long term prevention of death from malignant disease, if chelation therapy is begun before clinical evidence of cancer occurs."

Claudication and Joint Deformation

Before trying Chelation Therapy, one 58 year old male⁴ patient prepared a detailed list of symptoms, or at least perceived symptoms, of what he felt was wrong and would like to have corrected. Since the patient didn't know what the treatment would do, he simply wrote down everything he didn't like about himself or felt was physically or emotionally wrong. He also planned to have a number of periodic laboratory tests during the course of his chelation treatments. He wanted to be able to evaluate for himself what was true or not true about this new form of treatment.

There were many items listed that did not change under

Chelation Therapy. But those symptoms that did change were quite striking and are among clinical signs and symptoms that no amount of traditional drug treatment would have solved. He had to lie down at three o'clock every afternoon to rest for three to six hours. He often felt like the world could come to an end, and he'd not care. Also whenever he lay down his legs cramped terribly. This kind of pain and muscle cramping is known as "claudication," and can be a product of calcium/magnesium insufficiency and/or oxygen lack, both of which can stem from lack of proper cellular nourishment.

Pain and inflammation in one joint on one little finger would not respond to various treatments and medicines tried by his family doctor. Probably the reason -- deduced after the fact -- is that iron from vascular blood leakage acted as a catalyst that cycled through a chemical reaction resulting in the decomposition of the cartilage. And, as the cartilage decomposed into various forms of free radicals, those, in turn, created additional secondary and tertiary effects, thence leaving the iron radical free to begin the cycle again. It could not have been halted without chelating out the free iron catalyst.

After three treatments by Chelation Therapy, the little finger joint inflammation disappeared entirely for the first time in two years. Claudication disappeared at about 22 treatments given over eight weeks. It didn't disappear suddenly, but gradually, over several treatments, the cramping and pain lessening each time. Extreme tiredness disappeared after 30 to 40 treatments, ten to fourteen weeks. In all this patient had 81 chelations over the next 6 years.

No other known traditional treatment, no amount of taking of known drugs to control symptoms could have brought about the improvements noted.

The patient was 67 years of age (1992) and danced with ladies a generation younger than he was from three to four times each week. His dancing was not nice, sedate, "safe" ballroom dancing, but rather the modern version of the wildly active jitterbug of the forties, only now called "Bop" (East Coast and West Coast Swing). It was fascinating to watch younger ladies cave in under this strenuous exercise, while the old-timer -- who was hardly fit at one time -- co

At 2003, age 78, this old-timer married a young lady, and now dances but once a week! Marriage does settle one down!!

Glaucoma

Glaucoma is traditionally treated by means of medicines that control the inflow or defects in drainage of intra-ocular fluid. In the traditional approach only symptoms are being treated, not the causation of imbalance in intra-ocular fluids. Since "simple glaucoma is the effect in the eye of a disturbance of the water-salt economy of the body, there must be a drop in the chemistry of the blood, such as a drop in sodium salts, a rise in potassium salts, and a rise in blood cholesterol."¹⁷

According to John Baron, D.O. of Ohio most Glaucoma is not a problem simply of the eye, but rather a problem that is systemic; i.e., pervades the whole body -- the eye being simply one physical manifestation of the total problem.

A thermograph of the neck and head will tell whether or not the patient is getting sufficient blood to his facial features. If he is not, the patient is a candidate for Chelation Therapy, as he most probably suffers from progressive atherosclerosis. The glaucoma can be a result of vascular disorder arteriosclerosis of the optic artery', which means insufficient blood to the eyeball, etc. Only Chelation Therapy has a chance of solving that problem if it has not gone too far. Again you need a doctor who specializes in this kind of treatment and uses the correct protocol. In addition to Chelation Therapy, one needs to look after one's general health, which means decreasing stress and

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improving dietary and nutritional intake. If it is not a problem of blood flow, then you have a different situation, and the use of adrenal cortex hormone will be useful in any case, until you have the intra-ocular pressure under systemic control.

Toenail Fungus Infection

John Parks Trowbridge, Sr. suffered from fungus infection of the toenails after trips to the Orient while serving the United States Air Force. Twenty five years of medical attention could not rid him of this scourge. Administration of Chelation Therapy alone did so, and he said, "After my chelation therapy, the big toes have grown healthy nails that came in behind and shoved the diseased nails off³⁹."

Generalized Benefits

According to Morton Walker⁴¹, D.P.M., John Sorenson is ecstatic with the changes in himself. Sorenson says, ". . . major benefits [include]: improved hair growth, freedom from headaches, a good memory, ability to think clearly, no aches and pains except from physical injuries, clear vision, the ability to walk up to eight miles a day, weight loss to a normal 175 pounds, reversal of impotency, a healthy, tough, and flexible skin, a better skin color, bright red blood color versus muddy looking blood, no skin eruptions, wounds that heal twice as quickly as before, and no hyperacidity. I have won back 25 years of my life. At age 68, I am doing more and better work than I did at age 40 . . .

"Since taking chelation therapy my life has been a constant process of improving health, happiness, and productivity."

Eliminating Pollutants and Damaging Metallic Ions

Anything you can do to better nourish (and oxygenate) individual cells, you should do, to relieve the burdens that you already carry. Anything you can do to avoid pollutants in water, food, and air you should do. One example, of a recently hidden negative, is the use of chlorine in drinking water as a disinfectant. The "Environmental Protection Agency study showed that drinking highly chlorinated water 'subtly but noticeably shifted' a mouse's transport of cholesterol from high-density lipoproteins (the 'good' lipoproteins) in the blood to the 'bad' low-density lipoproteins, which foster atherosclerosis." J. Peter Bercz, who headed the study, reported that hypochlorite, a very reactive by-product of standard water chlorination, "can also destroy polyunsaturated fatty acids . . . , including those essential to health⁴²." Multiply this single effect of a standard, assumed-to-be-safe disinfectant of water, by the thousands of impurities found in air and food. Pure food, water and air are extremely important! But more — EDTA will also help you to eliminate many of these pollutants that are acquired over a lifetime, the same that contribute in so many ways to your overall condition. In addition, by stimulating a gland called the parathyroid, your body will reverse the flow of calcium to harden bones and teeth, thereby reversing Osteoporosis.

Investigative Medical Journalist

Morton Walker D.P.M. says, "Usually, the conclusion that an objective observer draws, especially someone trained in science and medicine, like myself, is that . . . More often than not anecdotal medicine is nothing more than 'buffaloe dew.' . . . In the past I have believed that to be true. But what must an investigative medical journalist do when . . . exposed to story after story and to one case history after another that reports potentially imminent death, blindness, amputation, paralysis and other problems among people, and upon visiting those people to check their stories, he sees them presently free of all signs of their former health problems. This has happened to me! About 200 individuals who were victims of hardening of the arteries are much changed. . . . they are vibrant, productive, youthful looking, vigorous, full of zest for life, and they

"I have . . . turned up not a single untruth⁴⁰."

Where To Get Help

There are a large number of physicians throughout the world who now routinely offer Chelation Therapy to their patients. The best source for finding a physician in your area is the American College of Advancement in Medicine (ACAM), 23121 Verdugo Dr., Suite 204, Laguna Hills, CA 92653. Its members of physicians and scientists meet semi-annually where professional papers and discoveries are presented by other physicians and scientists. One can get acquainted with the latest research discoveries by other physicians and scientists and the latest treatment protocol recommendations. This organization will also refer you to good sources of valid materials as well as provide sources of rebut against those who unwittingly seek to halt this great, new therapy.

The Rheumatoid Disease Foundation, a non-profit, charitable organization, also has a listing of physicians listed on its website at <http://www.arthritis-trust.org>, who will perform Chelation Therapy.

Additional valuable resources are any or all of the books and references below.

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