THE THINKING PERSON'S GUIDE TO PERFECT HEALTH

CHELATION

Chelation (pronounced key-lay-shun) is a chemical reaction that results in a bond being formed between a metal ion and an organic (i.e., carbon-based made mostly of carbon) molecule. The resulting complex, metal bound to molecule, is called a "chelate" and contains one or more rings of atoms in which the metal ion is so firmly bound it cannot escape. This allows the metal ion to be transported in the same manner as a prisoner, first handcuffed, then moved from one location to another.

In the presence of aging and disease, the cells' ability to move metal ions through the system and eliminate them when they are in excess becomes progressively impaired. This is especially true for calcium.

Calcium has vital functions in the human body. Without calcium, teeth and bones could not exist. Nevertheless, as the body ages, lipid peroxidation damages the walls of the arterial tree which is repaired leaving a scar. Then calcium and oxidized cholesterol are incorporated into the resulting scar tissue.

There are several known, and easily avoided, risk factors at work in the creation of arteriosclerosis. Lipid peroxidation begins the inflammatory process in the wall of the artery and is facilitated by the presence of: (1) polyunsaturated fatty acids (present in many "junk-foods"), (2) oxidized cholesterol (from cooked, i.e., pasteurized, milk and other animal foods cooked in open air), (3) the relative absence of antioxidants, such as vitamins A, C and E, and (4) high levels of homocysteine (a condition easily prevented with vitamins B_6, B_{12} and folate). Tobacco smoke drains the body's resources of antioxidants, particularly vitamin C, and further accelerates arteriosclerosis.

If you know and apply these facts from an early age, there is no reason for arteriosclerosis to develop in your body. "Hardening of the arteries" is not an inevitable disease of aging, as you have been led to believe; it is a disease of bad habits. To know and apply these facts, you have to be willing to think for yourself and ah, there is the reason arteriosclerosis will continue to kill people. Maybe the good do die young but so do the uninformed and dogmatic.

As the years pass, calcium deposits build up, and in association with cholesterol, calcified plaques and atherosclerotic plaques form, lining the arterial vessels. When calcium predominates, this process is called "hardening of the arteries" or arteriosclerosis, and when cholesterol predominates it is called "atherosclerosis." The exact content of the plaques is determined by the individual's diet, antioxidant intake and duration of the process. Regardless of where on the arterio-/athero- sclerotic continuum any particular individual falls, the result is the same: less and less fresh oxygen delivered to the tissues of the body.

It once was thought this process began in middle or old age. It is now known to begin in childhood in many people. The severity of this life-long process is determined by genetics,

level of exercise and dietary habits. By age 21, many individuals have arterial disease, easily recognized at surgery or autopsy.

This is a disease of modern civilization. Never before have people so young had arteriosclerosis. As recently as the year 1900, heart disease was very rare. It may be that airborne industrial pollutants, as well as herbicides, pesticides and preservatives in our food, have a lot to do with arterio-/athero-sclerosis.

The cholesterol content of these plaques can be handled by shifting to a no-fat, high-fiber diet. Plaques actually decrease in size, and the cholesterol content can eventually disappear. Lipid peroxidation itself can be halted by the liberal intake of antioxidants such as Beta-carotene (the precursor of vitamin A), mixed tocopherols (vitamin E) and vitamin C, so no further damage is caused to the arterial tree.

The calcium content of the scar-plaques already present is another matter. Diet and pure water have little effect on it. Therefore, if you want to restore your health to a completely youthful condition, you are facing a real challenge with arteriosclerosis.

The list of problems that can be caused by artery disease is truly impressive, but it should not be surprising that it is so extensive given that a fresh supply of oxygenated blood is absolutely necessary for proper functioning in any organ. Even diseases that are more complicated, in that they have causes other than decreased blood flow, are made worse by arterial disease.

A prime example is Alzheimer's Disease. True Alzheimer's Disease is mimicked by simple aterio-/athero-sclerosis of the arteries and arterioles supplying the brain. Diabetes is known to be made worse by poor blood flow to the pancreas, and poor blood supply also can cause decreased output of digestive enzymes from the exocrine part of the pancreas, causing incomplete digestion.

Decreased blood supply to the kidneys results in the inappropriate release of angiotensin by the kidneys, inducing hypertension throughout the vascular tree. The joints, particularly the joints of the low back, react with inflammation and pain to decreasing blood flow and this, along with the degeneration of ligament tissue and disc disease, is responsible for the so-called "low back syndrome."

Arterio-/athero-sclerosis plays a big part in the cause of arthritis throughout the body. The effect of this process on the heart is angina (chest pain originating in the heart) and eventually infarc- tion and death. Poor blood supply to the stomach and small intestines results in poor digestion. Poor blood supply to the colon causes slowing of the colon with resulting colon disease.

The effect on the extremities is cold hands and feet, and in an advanced case, gangrene of the extremities can result. Impotence can be caused by decreased blood flow to the penis due to clogged arterioles. Frigidity can be caused by decreased blood flow to the pelvis. Cancer is known to be accelerated by decreased blood flow to the affected tissues. When blood flow is decreased to the immunocompetent cells in the bone marrow and spleen, the immune system itself is weakened.

The list of pains, aches, discomforts and diseases caused, or made worse by, arterio-/athero-

sclerosis goes on and on. The above discussion is not complete and could not be made complete unless expanded to book size. Fortunately, there is a way to deal with arteriosclerosis. The answer is chelation.

Prevention of Arteriosclerosis: Oral Chelation

An ounce of prevention certainly is worth a pound of cure. The oral chelating agents serve admirably to prevent or halt the progression of arteriosclerosis, but do little to reverse the disease once it is present. You probably already are taking one of the oral chelating agents, vitamin C. This is an excellent oral chelating agent and also easily available. Also, fresh vegetables are loaded with other natural and effective chelating agents.

Exercise-generated Chelation

Lactic acid, produced from exercise, is an excellent chelating agent. It is the metabolic byproduct of sustained, vigorous muscle contraction. To get this chelating agent, you must exercise regu- larly. Exercise also increases your body's ability to reduce, and thus neutralize, free radicals, which are at the heart of degenerative diseases.

There is a host of more exotic substances (Anginin, Unithol, Vaso Elastin, DMS, NTA, Hexopal Forte, Syntrival) that I think you should ignore, since they are not readily available, they are expensive, and the agents already easily available to you are excellent.

Reversal of the Effects of Arteriosclerosis by Intravenous Chelation

In distinction to the oral chelating agents that serve to prevent arteriosclerosis, intravenous chela- tion has been shown to actually reverse the effects of the disease. The agent used is Ethylene-diamine-tetra-acetic Acid, also known as "EDTA," sold commercially as Sodium Edetate.

EDTA is a synthetic amino acid. The usual dose is 2000-3000 mg. (adjusted to body weight, age, and kidney function) added to 500 ml. of "carrier solution" sterile water with a mixture of vitamins and minerals. Most chelation doctors add vitamin C along with B vitamins, bicarbonate and magnesium.

The solution is infused slowly, one drop per second, and one treatment requires about three hours. The prisoner (calcium) is moved out of the body using the sheriff's handcuffs (EDTA). The half life of EDTA in the body is one hour; i.e., one-half is removed (filtered into the urine) after one hour, another half of what is left is removed after one more hour, etc. Within 24 hours 99% of the EDTA is gone from the body, and you are left with only the therapeutic benefit.

In addition, to the transitory transport of calcium, many other metal ions are transported and rearranged, which brings up the subject of how EDTA works. In the early days of EDTA therapy, physicians had no idea how it worked. As physicians do, they reached for the nearest reasonable explanation. They said it decalcified the walls of arteries clogged with arterio-/athero-sclerotic plaque, a kind of chemical ROTO-ROOTER ®. This is now known not to be the only benefit of EDTA, even though decalcification of plaques does occur. The action of EDTA is more complex than the simple-minded comparison with a ROTO-ROOTER can reflect.

To be sure, the action of EDTA is to increase blood flow throughout the body. One of the hallmarks of aging is decreased blood flow to all the organs. It has been shown conclusively: EDTA restores this lost blood flow. How can this happen, if EDTA is not a "ROTO-ROOTER?"

Delivery of oxygen to cells is not explainable by merely comparing the circulatory system to a set of pipes. Blood vessels are living organs, not pipes. Once oxygen is delivered to a cell there is still the matter of how efficiently it can be used. EDTA, as it turns out, operates at all these levels. Here are the effects of EDTA, the final manifestation of which is the healing of degenerative diseases of many kinds.

1. EDTA lowers blood calcium and thus stimulates the production of parathormone from the parathyroid glands. This mild pulse of parathormone is responsible for the removal of calcium from abnormal locations (such as arteries) and the deposition of calcium in locations (such as bones) where it should be. This accounts for the mild recalcification of osteoporotic bones seen with EDTA.

2. EDTA stimulates the enlargement of small vessels, so that they serve the purpose of collateral circulation around a blockage, rendering the blockage irrelevant.

3. EDTA controls free radical damage due to lipid peroxidation by serving as a powerful antioxidant.

4. EDTA removes abnormally located metal ions, such as copper and iron, that accumulate with age.

5. EDTA removes lead, cadmium, aluminum, mercury and other metals, restoring enzyme systems to their proper functions.

6. EDTA enhances the integrity of cellular and mitochondrial membranes.

7. EDTA helps reestablish prostaglandin hormone balance. Prostaglandins, among other things, are responsible for the balancing act between contraction and relaxation of arterial walls and between clotting and the free flow of blood. Prostaglandins are produced from fatty acids, therefore lipid peroxidation upsets the balance of these vital hormones. EDTA chelates out the catalyzing metallic co-enzymes and thus inhibits lipid peroxidation, also serving the same function as an antioxidant.

8. EDTA reduces the tendency of platelets to cause coagulation too readily. This tends to prevent inappropriate thrombosis, which blocks coronary arteries during a heart attack.

9. EDTA increases tissue flexibility by uncoupling age-related cross-linkages that are responsible for loss of skin tone and for wrinkling.

I recommend any individual over the age of forty to have a series of twenty EDTA treatments, followed by six to twelve per year for maintenance after that, simply to restore youthful vitality lost due to aging and arteriosclerosis. A person who is already symptomatic with a cardiovascular disease will require more than twenty treatments. We look for the end of troublesome symptoms such as chest pain, leg pain, transient dizziness,

intellectual impairment, and fatigue all attributable to loss of blood flow to vital organs to know when there have been enough treatments. A good rule of thumb to estimate the maximum number of treatments needed is one treatment for every year of your age, minus 20, but this is only a rough estimate.

You should expect to pay $90-120 per treatment, which admittedly is a nice piece of change. Most people would spend more money on a new car than on their health, so you have to ask yourself how much your health is worth. In the long run, the money you spend on chelation should more than repay itself in health, vitality and the absence of illness. If this were not so, I would not recommend it to you, and I would not be a chelation therapist. The number of physicians who carry out this procedure is relatively small, but growing rapidly a few hundred in the U.S. at present. This relative unavailability is surprising, given the great benefits available through this relatively inexpensive, extremely safe treatment.

A Short History of EDTA

EDTA was developed in Germany in the early 1930s as a substitute for citric acid. Citric acid was produced in England and used by Germany for binding mordant dyes. The development of EDTA was part of Germany's effort to become independent of other countries. No one dreamed at the time that it would ever have a medical use. It has been available in the U.S. for medical purposes since 1948. The controversy has been raging since then, and it is not going away, much to the chagrin of the medical/pharmaceutical complex.

Background Information

Many physicians who administer EDTA are people who have benefited from it themselves, many of whom have been brought back from death's door, most commonly from heart disease. As I write this, I am experiencing the absence of a severe low back pain condition, which had been with me for thirteen years, relief I attribute to EDTA! Also my hearing, which was beginning to fail, has cleared up dramatically, and my kids are now puzzled that I can hear them from the other room.

I was introduced to EDTA by an 84-year-old former surgeon, Martin Weiss, M.D., who had been given a death sentence by a cardiovascular surgeon at age 67 unless he would immediately undergo coronary bypass. He knew the dangers of surgery and looked around for an alternative. He learned of EDTA and through treatment became free of heart disease without the risk of anesthesia or surgery. He then decided to offer EDTA to his patients.

Many physicians are closet chelators who perform chelations on themselves and their loved ones and relatives, but do not offer it to the general public because of the threat of condemnation by the medical community. These physicians are severely constrained by their need to be accepted by their peers. The freedoms we enjoy in America were not won by such people.

Medical Politics

One can speculate about why this treatment is not more well-known and commonly administered in modern medicine in the U.S. It is interesting to observe, the patent on EDTA ran out in 1948, and it is therefore very inexpensive, because it can be produced by

any drug company and must therefore face free market competition. It hardly matters how effective any drug is, when the patent expires, you probably will not hear much more about it. Drug companies have no fortune to make and thus no motivation to advertise EDTA to doctors. This kind of advertisement, believe it or not, is the most important factor determining which drugs many doctors prescribe, because it is this advertising doctors rely on for the bulk of their "continuing education."

Also, if EDTA became commonly used, there would be a lot of cardiovascular surgeons looking for something else to do, as EDTA is a reasonably priced (cost: $2,000-4000), safe, nonsurgical alternative to balloon angioplasty (cost: around $15,000), and coronary bypass operations (cost: in the range of $50,000!). Many of these surgeons make over two million dollars per year doing drastic procedures for illnesses which could have been prevented with oral chelation, and many even most of which can still be treated successfully with EDTA. If these surgeons go out of business so does a section of hospital surgery suites and with those, many hospitals. The economic phalanx lined up against chelation therapy is solid and deep.

It is interesting to note a recent study in a publication called Medical Care (1995;33(7):715-728). This study reports that coronary bypass surgery is 96% more likely to be recommended when the patient is covered by private insurance versus Medicare (which pays less), and 117% more likely to be recommended versus the noninsured (which pays even less).

I recently attended the thirty year reunion at the university where I took my premed training. There I met an old friend who had become a vascular surgeon. This man was a wonderful student who never made less than an "A" on any test. I thought that, of all people, Ed would have looked over the relevant studies and would have a well-thought-out opinion for or against bypass surgery. So, I asked him, "Ed, what do you think of bypass surgery now? Is that good for people? Should we be doing that to people?" His reply: "It pays the bills!" And that was it. I could not persuade him to say anything more about the matter. He did offer that he was looking forward to an early retirement, but he had no more to say about bypass surgery.

One can only speculate about why the mass consciousness of doctors is not simply neutral to EDTA, but is, instead, openly hostile and disparaging. Otherwise open-minded docs will say absurd things like "I don't know anything about it except it is no good!" How can you know it is no good, if you know nothing about it? My guess is: it is a combination of unconsciousness, ignorance and pure capitalism on the part of both pharmaceutical companies and medical practitioners.

Many courageous physicians have faced censure from medical societies, loss of hospital privileges, and worse for administration of this incredibly effective and safe treatment. Those days are coming to an end, however, because of the massive evidence which has accumulated to validate the safety and effectiveness of EDTA and the power of ACAM, the medical society for chelating doctors.

Nevertheless, we cannot take this therapy for granted. The California Medical Board is striving, right now, 1996, to regulate the use of EDTA to the point that it will not be available for the conditions for which most people need it. The Board is evenly split on whether to do this or not with (predictably) the vascular surgeon on the Board rabidly for suppression of chelation, despite the evidence of its effectiveness. As one of these rigid,

righteous, closed-minded doctors said at a recent board meeting, "As long as chelation therapy was limited to being used by only a few docs, it did not need to be regulated, but now that it is becoming well-known, this ripoff therapy must be suppressed." What he did not say, that is clearly true, is he wants to stamp out the competition to his enormous coronary bypass fees. This meeting was open to the public, and the room was full of hundreds of people whose lives had been saved by chelation, one of whom shouted out "Coronary bypass is the real ripoff!"

Let me quote this surgeon a little more. "If EDTA is so good, let them prove it. Proof is not so hard to get! Let them prove it with controlled, double-blind, placebo studies and then publish these results in the top peer-reviewed journals." He apparently had an attack of attention deficit disorder when these very studies had been presented to the Board only a few minutes before.

Only a few of the thousands of fine studies on EDTA have been published in what were once the distinguished journals of medical research. The reason for this: the pharmaceutical industry bought these journals out with "donations" and advertising dollars years ago. Studies on the uses of EDTA threaten the profits of the pharmaceutical industry with its panoply of patented, toxic, synthetic drugs and the surgical industry with its dangerous unnecessary interventions such as bypass surgery. These studies simply are not allowed to be published in what were once the best medical journals, but that now are disrespected by doctors who are knowledgeable about the political process behind these publications.

Indeed, the surgical, pharmaceutical and hospital industries would like to stamp out chelation therapy. I am sure some people at MacDonald's would like to outlaw other restaurants and make the Big Mac the required "food" for every person on the planet. Quality meals, like quality medical care, are not served at every standardized outlet.

A Vignette

Ten days ago one of my patients finished his course of chelation therapy. He went back for a visit to his cardiologist, who had recommended angioplasty and who strongly opposes chelation therapy. This man informed my patient that chelation therapy is dangerous, unproven, a financial ripoff and then insisted that my patient get back on his Mevacor (a toxic synthetic drug for lowering cholesterol). He then mailed to me a nasty little "progress note." A few days later my patient dropped by my office for a chat and pointed out that as a result of chelation therapy his blood pressure is down, his diabetes is under control, his arrythmia is no longer present, and he has a new-found experience of well-being.

When informed by his cardiologist that my fee was a ripoff, my patient reports that he leaned toward that doctor and asked "Just how much does angioplasty cost?" (Answer: $20,000 for a two-hour procedure which typically is a failure versus my fee of less than $2,300 for 25 three-hour chelation treatments which typically are successful.) Almost any chelation therapist can tell you several such stories.

I am proud to be a physician. I studied and worked hard for my degree. The only time I am embarassed to be a doctor is when I see performances like this one by a colleague. I am embarassed that this man has the same degree I have. I know better than to hope this doctor will change. The facts do not matter to righteous, closed minds. Things will change, but as a result of people like that growing rich, old, retired, and replaced by a new generation.

Insurance Politics

Insurance companies, including Medicare, will not cover the cost of chelation therapy with EDTA, even though the cost is only around $3,000 compared to $15,000 for angioplasty and $50,000 for a bypass. The excuse is, EDTA is not an "accepted" therapy. What that actually means is: not accepted by cardiovascular surgeons who compete with chelation therapy and not accepted by the drug industry, which depends on people remaining sick and taking loads of synthetic drugs, and not accepted by the leading medical journals, which have been bought out by the pharmaceutical and surgical industries.

What is most strange, on the surface, is the fact that insurance companies do not cover the costs of chelation, even though they will shell out for coronary bypass which costs fifteen times as much and treats only two, three or four of the hundreds of arteries in the body. However, if you consider how widespread is the incidence of arterio-/athero-sclerosis, the number of insured people who would need EDTA as a preventive measure is truly astounding, and the cost of covering those people is clearly outside what is possible for any insurance carrier. Perhaps Medicare and the insurance companies have thought rather deeply into what it would cost to cover chelation therapy.

Nevertheless, if you are willing to have your treatment and then sue your insurance company for coverage, you probably will win, provided you present the facts about EDTA clearly. Historically this has been the case. I have a stack of several hundred scientific articles on EDTA, and I am prepared to prove my point in any forum.

To locate a doctor in your area, we offer two options:

- Check our posted list of doctors, or for more detail
- order a list of 10 physicians, who practice in your area.

Sources

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