

## CHELATION - THERAPY

Atherosclerosis, or "hardening of the arteries", is the cause of two most deadly health problems - atherosclerotic heart disease and cerebro-vascular disease. Unfortunately, it begins quite early in life and continues relentlessly until circulation is so compromised that a heart attack or a stroke is almost certain. The process begins innocently enough, by formation of a small plaque on the wall of an artery. It attracts platelets that form a small blood clot. Later on, additional clotting elements increase the size of the clot. Eventually cholesterol and calcium get deposited into the growing plaque. Calcium completes this process, making the arteries "hard".

Normally arteries have the ability to expand or contract, depending on the need of the body. But once the calcium is settled on the arterial walls, they become rigid, unable to either expand or contract. That's where the expression "hardening of the arteries" comes from.

As more and more such plaques accumulate on the walls of the arteries, the diameter becomes smaller, making it harder for blood to circulate. Eventually the opening becomes so small that blood flow is completely cut off.

The cells of the body require continuous blood supply in order to live. When it stops, most cells die within a few minutes. If this happens in the heart, the result is known as a heart attack. In the brain, it is called a stroke.

By using nutritional adjustments and lifestyle modifications, many of these risk factors can be reduced or even eliminated. However, no matter how hard they try, people still develop hardening of the arteries. In fact, studies of young people who die from accidents show that significant plaque accumulation is already present very early in life.

## MAJOR SYMPTOMS

Chest pain (angina) because of decreased circulation within the heart, memory loss, dizziness, poor balance from reduced blood flow to the brain, pain in the legs after walking which is relieved by rest, also known as *intermittent claudication*.

## TRADITIONAL - TREATMENT

Hardening of the arteries is a systemic disease. In other words, it happens throughout the body, not just in one or 2 areas. If you understand this, you will realize that the current approach to treatment is crude, primitive and misguided. Some experts have compared it to putting a band-aid on a major injury.

When a surgeon performs a bypass surgery or an angioplasty, it does nothing to correct the widespread atherosclerosis already present in other parts of the body, such as brain, kidneys, lungs, legs and everywhere else.

To complicate matters further, most of the arteries are very small. They are called capillaries, and they comprise the majority of the 40 to 60 thousand miles of arteries feeding the tissues of the body. The diameter of a capillary is smaller than the size of a red blood cell. This is necessary for the exchange of oxygen and

nutrients to take place. Obviously, these arteries can not be bypassed or surgically manipulated.

Various medications used for "treatment" of heart disease are designed to deal only with the symptoms, not the real causes of the problem.

Clearly, the real treatment for atherosclerosis would be a procedure that removes the plaques from the arteries and restores blood flow all over the body, in large arteries as well as small ones. And this brings us to

## CHELATION - THERAPY

Chelation therapy is probably one of the most effective treatments for hardening of the arteries, yet it is being ignored and even maligned by mainstream medicine.

Chelation therapy was used successfully in over 1 million patients over the last 40 plus years. The main ingredient of chelation therapy is a synthetic amino acid known as EDTA (ethylene-diamine-tetra-acetic acid). It has a peculiar ability to strongly attract minerals, especially toxic metals - lead, mercury, cadmium, aluminum and others. The word "chelation" is derived from a Greek word *chele*, which means "claw".

Chelation therapy was first used for medicinal purposes in the 1950s, when it was given intravenously to people with lead toxicity. As expected, the symptoms of lead toxicity promptly improved. But, to the surprise of the doctors, an unexpected benefit was also observed - patients with symptoms of heart disease started feeling remarkably better.

Since then, a number of studies published in reputable medical journals have confirmed the effectiveness of IV chelation therapy for treating atherosclerosis and improving blood flow to the heart, the legs and the brain.

## CHELATION - PROTOCOL

A specific protocol for the administration of chelation therapy has been developed by the American College for Advancement in Medicine (ACAM). This organization trains and certifies physicians in the proper use of this treatment.

Chelation is administered intravenously over a period of 1.5 to 3 hours. The mixture contains EDTA, magnesium, B complex vitamins, vitamin C and some additional elements (all natural) depending on the patient's unique requirements.

This procedure is performed in the doctor's office, with a patient sitting in a comfortable chair while reading, chatting with other patients, watching TV or even sleeping.

The full course of treatment is 20 to 40 intravenous infusions. Treatments are usually performed once a week, but can range from 3 times a week to once a month.

## DOES IT HURT? WHAT DOES IT FEEL LIKE TO BE CHELATED?

Being "chelated" is quite a different experience from other medical treatments. There is no pain, and in most cases, very

little discomfort. Patients are seated in reclining chairs and can read, nap, watch TV, do needlework, or chat with other patients while the fluid containing the EDTA flows into their veins. If necessary, patients can walk around. They can visit the restroom, eat and drink as they desire, or make telephone calls, being careful not to dislodge the needle attached to the intravenous infusion they carry with them. Some patients even run their businesses by telephone or computer while receiving chelation therapy.

## WHAT TYPES OF EXAMINATIONS AND TESTING MUST BE DONE PRIOR TO BEGINNING CHELATION THERAPY?

Prior to commencing a course of chelation therapy a complete medical history is obtained. Diet is analyzed for nutritional adequacy and balance. Copies of pertinent medical records and summaries of hospital admissions may be sent for. A thorough head-to-toe, hands-on physical examination will be performed. A complete list of current medications will be recorded, including the time and strength of each dose. Special note will be made of any allergies.

Blood and urine specimens will be obtained in a battery of tests to insure that no conditions exist which may be worsened by chelation therapy. Kidney function will be carefully assessed. An electrocardiogram is usually obtained. Noninvasive tests will be performed, as medically indicated, to determine the status of arterial blood flow prior to therapy. A consultation with other medical specialists may be requested.

## THE BENEFITS OF CHELATION

Chelation therapy is used for removal of toxic metals and other toxic substances and to improve the circulation. Circulation improves in all the arteries of the body, both large and small. Chelation will improve circulation to the heart, brain, legs and all the other organs. That's why it is very useful in heart disease (even after a heart attack), angina, high blood pressure, poor circulation in the legs, certain cases of impotence and as a stroke prevention.

Chelation is also used with success in such conditions as diabetes, abnormalities in heart rhythm, cataracts, ulcers from diabetes or poor circulation, gangrene, high calcium levels, macular degeneration, osteoporosis, rheumatoid arthritis and osteoarthritis, senile dementia and Alzheimer's disease and many other degenerative conditions in which blood circulation is impaired.

## SIDE - EFFECTS

There are no major side effects associated with chelation therapy, when it is performed according to the established protocol. Minor side effects are rare. They may include burning at the site of injection and a temporary "tired" feeling which usually does not last more than a few hours. This is the result of detoxification - removal of some toxic metals and other chemicals.

When doctors first began using chelation therapy some 50 years ago, they did not have as much experience with its use as we do today. They have used huge doses (5 to 15 times what is used today) and simply injected the entire amount into a vein, instead of dripping it slowly over the course of 1.5 to 3 hours. As a result, some patients developed low blood pressure and even kidney problems.

But when today's safe protocol is followed, kidney functions actually improve. In addition, a blood test for kidney functions is performed after every 5-6 treatments.

## MECHANISM OF ACTION

Chelation has a definite and profound positive effect on the health of blood vessels and blood circulation. But exactly how this is accomplished, is not yet fully understood.

It is known that chelation improves the balance of calcium and magnesium in the muscle cells lining the arterial walls. As we become older, more and more calcium accumulates on the walls of the arteries, creating a relative lack of magnesium. Chelation corrects that by removing the extra calcium.

EDTA also reduces the production of free radicals in the body. Free radicals are highly active molecular fragments that form when cells produce energy. When they get out of control, they can damage the tissues and cells of the body. Free radicals have been implicated as a cause of age-related deterioration of the body, heart disease, cancer, arthritis, immune dysfunction and many other diseases.

Toxic metals can increase the production of free radicals. Since chelation removes these metals from the body, it reduces the free radical load. One study showed a markedly lower incidence of cancer among patients who had received chelation therapy, confirming beneficial effect of EDTA on free radical production.

## WHY IS CHELATION - THERAPY STILL RELATIVELY UNKNOWN?

In other words, if it's so good, why doesn't every doctor use it and recommend it? Good question. There are a few reasons for it.

1. The patent on EDTA has expired in the early 1960s, which means that any pharmaceutical company can manufacture it. This immediately removed any financial incentive to promote EDTA, just like you don't hear too many commercials about Penicillin.

2. Bypass surgery became widespread and today it is a multibillion-dollar industry, despite the findings that 50 to 70% of all surgeries may not even be necessary. According to one large study called "Coronary Artery Surgery Study (CASS)", published in 1983, many patients do better *without* the surgical treatment.

Yet, the cardiac surgery department is usually the biggest money maker for any hospital. Obviously, with all the money at stake and with the power and respect accorded to cardiac surgeons and cardiologists, there is a lot of opposition to a procedure that can make all that obsolete.

## WHAT DOES IT COST?

A course of chelation therapy for a patient with advanced hardening of the arteries generally requires from six weeks to six months and costs up to \$2,000 or more for 30 treatments. This is considerable less than bypass surgery which is normally well over \$40,000. A person can expect to pay approximately \$75 per treatment, including the associated kidney tests. Each chelation treatment takes 3 to 4 hours to complete.

## CONCLUSION

Despite all the new drugs and advances in surgical techniques, heart disease remains the number one killer in America. Bypass surgery is expensive and risky, and its benefits are questionable at best. If you have a vascular problem (chest pain, angina, high blood pressure, peripheral vascular disease, stroke, heart attack) or have many risk factors, consider chelation therapy. It can be used both as a therapeutic and a preventative technique. With so many benefits and no side effects, it's a clear winner.

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