

## ORAL CHELATION WITH EDTA IS INEFFECTIVE AND POTENTIALLY DANGEROUS

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It is deceptive, irresponsible and perhaps even dangerous to promote EDTA (ethylene diamine tetraacetic acid) by mouth as so-called “oral chelation”.

**NOTE WELL:** The information below applies only to use of EDTA. EDTA does not remove mercury (even when given intravenously). The correct treatment of mercury or arsenic toxicity is DMSA by mouth. EDTA, on the other hand, is only proven to be effective for cardiovascular disease when give intravenously, and can be toxic when taken daily by mouth for a prolonged time. Treatment for mercury and arsenic are thus quite different in terms of chelation therapy. Lead toxicity can also be treated by oral DMSA. Intravenous treatment is not appropriate for mercury and arsenic toxicity, although DMPS is sometimes recommended by clinics that profit from that practice. Unlike EDTA, intravenous DMPS can itself be toxic. [Click here for more information on DMPS toxicity.](#) In my opinion, DMPS no longer has any use in the practice of medicine. DMSA by mouth is more effective, much more convenient, safer and also much less expensive.

Intravenous EDTA chelation therapy has been proven safe, effective and inexpensive as a treatment for coronary heart disease, atherosclerosis and other age-related diseases. Dozens of scientific studies spanning 50 years prove that intravenous EDTA safely increases blood flow and alleviates symptoms of cardiovascular disease. There are no scientific studies of any kind showing similar benefit using EDTA by mouth. And there’s good reason to believe that prolonged use of high-dose oral EDTA is harmful.

EDTA is very poorly absorbed by mouth—only about five percent. Although even that small amount does remove lead from the body, it also increases the absorption of lead.

It is theoretically possible to slowly absorb a substantial amount of EDTA by mouth over a prolonged period of time. But, there are serious potential problems with that:

1. The unabsorbed 95 percent of EDTA remains within the digestive tract, mixing with undigested food and nutrients while passing on out of the body in stool. This unabsorbed EDTA tightly binds to and blocks absorption of many essential nutritional trace elements as it passes through. It blocks the uptake of zinc, manganese, chromium, vanadium, copper, chromium, molybdenum and other essential nutrients, causing deficiencies.
2. When EDTA enters the body, either by mouth or intravenously, it removes 10 to 20 times more of the essential nutritional trace elements (such as zinc and manganese) than it does the undesired iron and other elements that can speed ageing and cause atherosclerosis. When given intravenously, with 100% absorption, a full therapeutic dose of EDTA can be administered with 20 to 30 doses. Replenishment of essential trace elements from diet and supplements can then take place during the remaining 330 days of the year, when EDTA is not present to interfere. Because such a small amount is absorbed by mouth, oral EDTA must be given every day to accumulate what is alleged to be an effective dose, with no break to replenish the essential nutrients that are continuously being blocked and depleted.

3. Intravenous EDTA results in high therapeutic blood levels. EDTA by mouth results in very low blood levels with no proven benefit in treatment of cardiovascular disease.

Daily use of EDTA by mouth causes progressive deficiencies of zinc, manganese and other essential trace nutrients, which are an essential part of the body's antioxidant defenses. For example, superoxide dismutase (SOD), a very important intracellular antioxidant, cannot function without zinc and manganese. By inactivating antioxidant enzymes, daily EDTA by mouth actually worsens the very problems supposedly being treated.

EDTA remains outside of cells. Oral EDTA produces only a low concentration at cell surfaces throughout the body, while intravenous infusions result in much higher levels, which are maintained for several hours. Intravenous EDTA can thus draw unwanted metals out through cell walls by diffusion. That will not occur with EDTA by mouth.

EDTA by mouth will not produce a pulsatile release of parathormone that is associated with intravenous chelation therapy. If that mechanism of action is important to achieve benefit, it will not occur with oral EDTA.

Oral chelation has been deceptively marketed for many years. High potency nutritional supplements containing vitamins, antioxidants, amino acids and chelated minerals are sometimes advertised and marketed as "oral chelation." Although people do feel better while taking high-potency vitamin supplements, as evidenced by testimonials from people selling those products, that is not chelation therapy. Similar supplements are available at much lower cost without the misleading claim for "oral chelation."

Some nutrients are chelators in a laboratory test-tube, including vitamin C, citric acid, methionine, and cysteine. When taken into the body, however, they do not pass on out into the urine like EDTA. They quickly enter into the body's metabolism where they're consumed by cells in biochemical reactions. They don't remove unwanted metals the body.

DMSA (dimercaptosuccinic acid) is one effective oral chelating agent and it is well absorbed. But it works only for mercury, lead, and arsenic. DMSA does not reverse coronary heart disease and doesn't treat arterial blockage from atherosclerosis. DMSA doesn't remove metallic catalysts that act as precursors of damaging free radical pathology and accelerated aging. DMSA is used only as an oral chelator of mercury and lead.

I recently examined a patient with very severe heart disease, extensive coronary calcification on EBCT, and an enlarged heart. For many years he'd been taking a nutritional supplement containing up to 800 milligrams of EDTA daily. He was in excellent health prior to starting his so-called "oral chelation" program and he had no other risk factors for heart disease. He thought this would prevent heart disease. Instead he was found to be deficient in many nutritional trace elements and he developed serious atherosclerosis, which was very advanced for his age, while taking oral EDTA.

Chelated minerals are sometimes marketed deceptively as "oral chelation." Minerals in nutritional supplements are often chelated (bound) with amino acids to improve digestive uptake. Chelated minerals more closely resemble minerals found naturally in food. The label on those products may therefore contain the word "chelated." That's not chelation therapy. It's just the opposite—using chelation to increase uptake of desired metals rather than removing unwanted elements. Some products marketed as "oral chelation" are nothing more than multiple vitamin and mineral supplements with excessively high prices. Those that contain significant amounts of EDTA are potentially dangerous.

Marketers of oral EDTA products point to the fact that the FDA approves its use in tiny amounts as a food preservative. Because EDTA binds tightly to trace metals, depriving bacteria of the essential nutrients they need to grow, small amounts are used to preserve food products such as mayonnaise. EDTA prevents lipid oxidation (rancidity) in foods by binding metallic catalysts of free radical production. However, the amount of EDTA ingested in foods is much less than the amounts in so-called “oral chelation” products. It would be virtually impossible to eat enough mayonnaise on a daily basis to ingest any significant quantity of EDTA.

There’s been a recent upsurge of aggressive marketing and advertising for oral products containing relatively large amounts of EDTA. The EDTA is sometimes added to garlic tablets or vitamin supplements. Marketers of oral EDTA products point to studies showing that urinary lead excretion increases after giving EDTA by mouth. It does, but they neglect to point out that intestinal absorption of lead also increases. And they ignore the substantial urinary losses of zinc, manganese and other essential nutritional elements that occur with oral EDTA—10 to 15 times greater than the excretion of lead. Lead is not the cause of cardiovascular disease and if EDTA is given daily it will eventually cause deficiencies.

EDTA by mouth has never been studied in a large group of people over a long enough time to determine the extent of resulting trace element deficiencies. It’s therefore not possible to say that oral EDTA in doses currently being marketed is safe. We need reliable scientific data to determine how much and how often EDTA by mouth can safely be taken over the long term. When carefully reviewed, the many scientific references used by marketers to promote sales of oral EDTA products do not contain the kind of supportive evidence they claim.

The promotion of oral EDTA chelation as a treatment or preventive for heart disease, vascular disease, atherosclerosis and other age-related diseases is deceptive and dangerous.

**THE EXAGGERATION OF HEAVY METAL DETOXIFICATION:** Although mercury, arsenic and lead toxicity do occur, they do not contribute significantly to coronary heart disease or atherosclerosis. Laboratories used by chelationists often exaggerate toxic limits, mistakenly causing a high percentage of patients to appear toxic. **EDTA does not significantly remove mercury from the body. DMSA by mouth does remove mercury and arsenic, as well as lead. If heavy metal detoxification is the goal, DMSA can be now be purchased without a prescription and taken by mouth at home, without the need for frequent clinic visits. EDTA in any form is not effective for mercury toxicity.** DMPS was one used but no longer has a place in treatment.

Most lead in the adult body is hidden deep within bones. EDTA does remove the small amount of lead that is free in body fluids, but more lead soon seeps out of the bones causing a rebound in body fluids. Intermittent DMSA by mouth, taken Monday, Wednesday and Friday for several months can gradually reduce total body lead.