DR CRANTON'S PROTOCOL
FOR IV EDTA CHELATION THERAPY
Revised 2015, Elmer M. Cranton, M.D.

3 ESSENTIAL INGREDIENTS

1. Isotonic carrier Solution, 500 to 1,000 ml, i.e., 5% Dextrose in Water (D5W) or Normal Saline. The infusion must be at least half normal to prevent hemolysis. Osmolality is not a problem using this protocol.

2. Disodium EDTA, 3 Grams; with a reduced dose computed for impaired kidney function using the Cockcroft-Gault formula if serum creatinine is above 1.8 mg/dL. Infuse slowly over 3 hours or more. Not more than once every 24 hours. Duration of infusion may be as important as dose. Use of calcium EDTA probably also brings substantial benefit but is not believed to be as effective as disodium EDTA. Comparison studies for calcium EDTA have never been done.

3. Lidocaine, up to 200 mg, to prevent pain at the infusion site.

This link will take you to a video of a series of patients who describe, in their own voices, their personal experiences and remarkable benefits from chelation. If chelation is administered properly, using this protocol, your patients should have similar experiences.

EACH OF THE FOLLOWING EIGHT INGREDIENTS IS OPTIONAL BUT NOT NECESSARY FOR CHELATION THERAPY TO BE FULLY EFFECTIVE

EDTA, infused slowly, painlessly, and safely, is the important active ingredient. There is no evidence that additional ingredients increase benefit. Many published studies performed between 1955 through 1995 used only disodium EDTA (without calcium), with added lidocaine in an isotonic saline carrier solution with excellent results. Since that time studies have used a mixture containing more ingredients but the results were not any better—and quite possibly not as good.

4. Sodium bicarbonate, 20 meq, may reduce the potential for discomfort but may also reduce benefit.

5. Heparin 2,500 to 5,000 units may reduce incidence of local phlebitis at the point of infusion—although EDTA itself is an effective anticoagulant.

6. Folic Acid, 1 mg

7. Cyanocobalamin (Vitamin B-12), 1 mg (adds a reddish color)
8. **Additional lidocaine** may be added during the infusion if needed for discomfort —40 mg to 80 mg slowly injected directly into the IV tubing—total lidocaine not to exceed 400 mg in 24 hours. Moist heat may also help discomfort. The use of a larger antecubital vein will reduce any tendency for pain at the infusion site.

**NOTES**

Some clinicians prefer calcium EDTA because it can be infused rapidly without warning signs of hypocalcemia. They seem to forget that renal toxicity can occur silently, without any warning symptoms in susceptible patients when a full dose of any form of EDTA is infused in less than three hours. Anecdotal reports using calcium EDTA indicate substantial benefit when the infusion is given slowly over 3 hours. No study comparing results with disodium EDTA has ever been done. In fact, no clinical trial using calcium EDTA has ever been published. All published studies were conducted with disodium EDTA.

Note: Vitamin C (sodium ascorbate) has sometimes been added to the EDTA infusion bottle, but when ascorbate is combined with EDTA in solution it can trigger a [Haber-Weiss cycle with an ascorbate-driven Fenton reaction](https://en.wikipedia.org/wiki/Haber%E2%80%93Weiss_cycle). That reaction can convert ascorbate from an anti-oxidant to a pro-oxidant when infused into the body's iron-rich circulation. Added vitamin C may thus reduce benefit. Such a reaction would increase production of hydroxyl-radicals, superoxide radicals, and hydrogen peroxide, resulting in redox-cycling reactions between iron, oxygen, EDTA, and ascorbate. This could accelerate cell death, which is the opposite of what is intended. For that reason, it is recommended that intravenous vitamin C (ascorbate) not be added to the EDTA infusion, but be administered at a separate time from EDTA.

Nutritional supplements can safely be given by mouth, but that is a separate issue, unrelated to chelation. Supplemental minerals and trace elements are best avoided within 12 hours before or after EDTA infusion.

Virtually all of the published clinical trials achieved excellent results using only ingredients 1 through 3 listed above. No additional improvement has ever been reported from adding other ingredients. To the contrary, careful observation and analysis of data over the years seem to indicate that overall benefit was reduced when more ingredients were added.

A temporary drop in plasma pH occurs during infusion of disodium EDTA (without calcium or magnesium). Two hydrogen ions are released intravenously for each polyvalent cation that is chelated. The resulting acid shift in plasma pH increases the chelating properties of EDTA. This may be another reason why disodium EDTA seems more effective than calcium EDTA. That acid shift does not occur when infusing either calcium EDTA or magnesium EDTA.

Because disodium EDTA can cause pain at the infusion site (venous spasm as a result of the acid shift in pH), lidocaine is added to the infusion. If discomfort is still a problem, the use of a larger antecubital vain, application of
moist heat, or infusing a bit more lidocaine directly into the IV tubing will usually solve that problem. If patients are informed that discomfort is related to beneficial effect, they may be reassured.

In some geographic locations it is difficult to find disodium EDTA (without the calcium). In that case it is possible to have a compounding pharmacy make the necessary supply.

The TACT study used a complex infusion solution with magnesium EDTA and many other added ingredients. Personal observations over the years indicate that benefits were better with the simple protocol above, which was used for many years, from 1955 through 1995, with only disodium EDTA and lidocaine in an isotonic carrier solution. The many earlier published studies using that simple protocol showed results that appear even better than TACT results. For a more thorough discussion of this topic, refer to the link below.

http://drcranton.com/chlamydia.htm