

## **“Reverse Heart Disease Now!” – Quick Start**

**Go to:** [www.HealthyLivingforBusyPeople.com](http://www.HealthyLivingforBusyPeople.com) → **Click on:** “Heart Disease Reversal”

### **EDUCATE**

**Read:** “Prevent and Reverse Heart Disease” Caldwell B. Esselstyn, MD

**Use:** “Prevent and Reverse Heart Disease Cookbook,” Ann Crile Esselstyn & Jane Esselstyn

### **DIET**

**Foods Allowed:** Eat Only UNPROCESSED Whole Plant Foods

**Unlimited:** Vegetables - non-starchy & starchy vegetables, whole “intact” grains, legumes/beans, lentils peas, squash, yams, sweet potatoes, potatoes, whole fruits, herbs (salt may be used when eating a whole food plant-based diet if no high blood pressure exists), water

**Limited:** Chia seeds or flaxseed (ground) 1-2 tablespoons per day, 2-3 cups of tea (green or black), decaffeinated coffee, 1 palm full or less of raw nuts daily

**Foods to Avoid:** No free oils, meat, poultry, fish, eggs, dairy products, raw nuts no more than a palm full per day, caffeinated beverages, including caffeinated coffee, alcohol

### **Quick Start – Heart Reversal “Sample” Diet**

- **BREAKFAST** - Cooked whole grain (or soaked in a nutmilk overnight) for breakfast with unsweetened nut milk, berries, 1-2 tbs ground flaxseed, 3-4 walnuts (i.e. steel cut oats, rolled oats, quinoa, brown rice, barely, etc) OR big bowl of chopped mixed fruit, including berries with 1-2 tablespoons of ground flax seed, 3-4 walnuts.
- **LUNCH** – Large vegetable salad – greens, vegetables, beans, oil-free dressing OR vegetable soup with beans, lentils, peas and/or whole grains
- **DINNER** – Half plate vegetables, mostly green, steamed or “quick” boiled; ½ plate any mix of cooked whole grains, beans/legumes and/or yam, sweet potato, potato, squash
- **SNACKS:** whole fruit, oil-free bean dip, raw vegetables, < 1 palm full of raw nuts daily
- **DRINK:** Water, green or black tea, unsweetened nut milks, decaffeinated coffee

# Key ‘Quick Start’ “Aids” for Heart Disease Reversal



Go To: [www.HealthyLivingforBusyPeople.com](http://www.HealthyLivingforBusyPeople.com) →

Click On: **Heart Disease Reversal** (Menu Bar) →

Scroll Down Page for **Educational Links of Interest to You:**



- Sign-Up for “Kirk’s Healthy Living Tips” on any of his websites
- Happy Cow App for your phone – plant-based restaurants & stores
- FREE whole food plant-based recipes
- PlantPure Jump Start – Educational package to get you started quickly (DVD, books, etc.)
- Whole food plant-based companies shipped WFPB meals to your doorstep
- Skim through “The Plant-Based Diet – A Healthier Way to Eat” (Kaiser Permanente)
- Consider whole-food-plant-based immersion programs 3-18 days – McDougall Programs, NewStart, 2Forks
- Online plant-based cooking courses: “Culinary-Rx.com” or “Forks Over Knives Online Cooking Course”
- Medical papers, books and cookbooks providing the scientific proof, and recipes on reversing heart disease
- Podcasts with plant-based cardiologists & surgeons, and heart reversal patient successes
- FREE transition program to a more whole food, mainly plant-based diet by following “Kirk’s 21 Day Healthy Living Program” – for 1 month (23 videos on right side of home page) then switch to a whole food plant based diet (no animal food) with no added oils as your Heart Disease Reversal Diet
- Health Coaching with Kirk Hamilton PA-C if needed

## Please Also Visit

- [HealthyLivingforBusyPeople.com](http://HealthyLivingforBusyPeople.com)
- [StayingHealthyToday.com](http://StayingHealthyToday.com)
- [SloppyVegan.com](http://SloppyVegan.com)
- [KwikerMedical.com](http://KwikerMedical.com)
- [Calciumscan.com/wellness-2/](http://Calciumscan.com/wellness-2/)

## Educational Resources

- Staying Healthy Today Show podcasts (iTunes/Website)
- <https://www.youtube.com/user/StayHealthyTodayShow>
- <https://www.youtube.com/user/TheSloppyVegan>

## Social Media

- [Facebook.com/kirkham.hamilton](https://www.facebook.com/kirkham.hamilton) [Facebook.com/kirkhamilton.author](https://www.facebook.com/kirkhamilton.author) and/or [Twitter.com/kirk\\_hamilton](https://twitter.com/kirk_hamilton)

## SUPPLEMENTS & TESTS SUPPORTIVE OF CARDIOVASCULAR HEALTH

### SUPPLEMENTS

Aged Garlic Extract 600 mg 4/d (↑plaque reversal)  
Arteriosil 1-2/d (↓ soft plaque; ↑ artery elasticity; ↓ ED)  
Berberine 150 mg 2 x daily (lower lipids)  
Berkeley Life Nitric Oxide Support 2/d (↓BP, ↑EF)  
Carnitine 1000-4000 mg/d (check TMAO levels)  
(↑ energy production)  
Coenzyme Q10 100-500 mg/d (ubiquinol)  
(↑energy production myocyte)  
EPA/DHA (algae) 2-4 gm/d (anti-inflammatory,  
lower triglycerides)  
Magnesium 200-600 mg/d (vasodilator, anti-arrhythmic)  
Meriva (turmeric) 500 mg 2 x day (anti-inflammatory)  
Pantethine 300 mg 3 x day (↓cholesterol)  
Policosanol 5-10 mg/d (↓cholesterol)  
Red rice yeast 1200 mg 2 x daily (cholesterol lowering)  
Ribose 5 gm 3 x daily (energy production myocyte)  
Vitamin B1 50-100 mg (glucose utilization for energy)  
Vitamin B2 50-100 mg (energy production myocyte)  
Folic acid – 5MTHF 1 mg (↓ homocysteine)  
Vitamin B6 25-50 mg (↓ homocysteine)  
Vitamin B12 1000 mcg (↓ homocysteine)  
Vitamin C 1000 mg (vasodilator, antioxidant)  
Vitamin D 5000-10,000 IU (anti-inflammatory, ↓ CHF)

### TESTING

Total cholesterol < 150 mg/dl, LDL < 100 mg/dl, HDL > 50 mg/dl  
Triglycerides < 100 mg/dl  
Triglyceride:HDL ratio < 2-3 > 4-5 ↑ risk  
Cholesterol particle number <1000 optimal  
Cholesterol particle size – smaller LDL < 700 optimal  
Cholesterol larger, buoyant LDLs less dangerous  
Homocysteine < 7 umol/l toxic amino acid ↑ stroke risk  
LpPla2 < 75 nmol/l marker of plaque activity  
Myeloperoxidase <470 pmol/L – plaque instability  
ADMA (asymmetric dimethylarginine) < 100 ng/ml  
(↑ADMA ↓NO)  
HS-C reactive protein <1 mg/L  
Insulin < 5 uIU/mL, HgA1C < 5.6%  
Coronary Calcium Score – 0/no plaque; 1-10 minimal plaque; 11-100 mild plaque & CT Angio  
([www.calciumscan.com](http://www.calciumscan.com))  
Endothelial function ([www.Endothelix.com](http://www.Endothelix.com))  
Increased arterial elasticity and heart rate variability  
(Max/Pulse [www.longlifecardio.com](http://www.longlifecardio.com))  
PULS CARIDAC TEST – measures immune response to endothelial damage [www.pulscardiactest](http://www.pulscardiactest)  
CORUS CAD – 23 gene expression profiling for CAD  
[www.cardopdx.com](http://www.cardopdx.com) REV 11/13/19

# Kirk's 21 Day "Healthy Living"

## Program For Busy People

➤ Read "Staying Healthy in the *Fast Lane*" **TRIAD Wellness Program** pages 133-193 (1-3/wks)

### Week 1

### Add: Week 2

### Add: Week 3

- **1 large salad daily** – as the meal (oil free dressings only) (81-88, 135-7, 140, 144-148)
- **No dairy products AT ALL** (10, 89-94, 115-117)
- **Greens/Fruit (75/25) Smoothie with ¼ cup flax or chia seeds** 64 oz in day or **2-3 whole fruits daily**. (140, 142, 144-145, 153)
- **Walks 15-30 minutes daily** (39, 159-167)
- **½ - 1 cup cooked beans daily** (145-146)
- **No Oils** (4, 5, 9, 12, 139, 143, 149)
- **No processed carbohydrates** (only whole or sprouted grains, starchy vegetables, fruit & no added sugars) (6,11,12, 24, 37-38, 94-100, 106-114, 116, 136, 140-142,148)
- **Sit still for 15-30 minutes daily** (188-193)
- **Eat off BED Diet food list x 2 weeks** (118,119, 135, 201-204)
- **No more than a palmful or 'deck of cards' of animal food daily (Preferably None)** (xvii-xviii, 5, 6, 9, 38, 67-88,135)
- **1-2 palmfuls of raw nuts or seeds daily** (142, 147-148)
- **Strength training 3-4 days weekly 15-30 minutes** (167-177)

**Super Salad:** Commit to eating one **LARGE** salad every day for 21 days (even if it takes all day). Use Tupperware type container 3 inches deep and 8 X 8 inches square.

**Leafy Greens** - Mix 1 to 3 different kinds of organic greens – Romaine, mixed or spring greens, spinach, kale, arugula, etc. into container (above).

**Vegetables** – add at least 4-5 different vegetables – bell peppers, carrots, celery, cucumber, parsley, snap peas, green onions, leeks, tomatoes, Jicama, olives (actually a fruit), etc..

**Fruit** – add 1-2 fruits to the salad - berries (blue, black, raspberries, pomegranate, grapes, etc) and whole fruit sliced (apples, pears, nectarines, peaches, orange, tangerine, grapefruit, etc).

**Legumes/Beans** – ½ - 1 cup organic beans (garbanzo, black, kidney, pinto, edamame, canned are acceptable). Rinse beans off in strainer before use.

**Nuts/Seeds** – 1-2 tablespoons of raw nuts or seeds (1 tablespoon flax or chi seeds always) are optional in salad.

**Dressing** - Cut up wedges of oranges, lime, lemons or grapefruit – 4-6 wedges per salad. Can freshly squeezed juice directly onto salad – or - add to these juices that are freshly squeezed – dill, sea salt, garlic pepper, curry powder, bay leaves, sesame seeds. Vinegars may be used.

**Super Green "Hyper-Nourishing" Smoothie** (in strong blender) – (For healing, energy, weight loss and increased metabolism) - 75% compressed greens / 25% raw or frozen berries, banana, mango, pineapple; 1 palm full (1/4 cup) raw flax or chia seeds (start with 1 tbsp. and increase 1 tbsp. each day; water to fruit line – 64 oz to be consumed in a day. If muscle building can add tofu, edamame, almond butter, non-soy vegan plant protein, organic nut milks (almond, oat, rice) – water total (including smoothie) 96 oz per day.

**Super Simple Soup** - 2-4 quarts of organic vegetable broth; chop up 3-5 different kinds of vegetables; ½ - 1 cup of beans; herbs and spices (garlic, onion, sea salt, dill, basil, etc.); simmer 10-20 minutes; add 5 minutes before serving a palmful of cooked brown rice, quinoa or other non-glutinous grain. The grains may be precooked. Simmer for 5 minutes and serve.

**Super Simple "Lifesaver" Bean Dip to Smooth Your Blood Sugar, Reduce Cravings and Provide Good Carbs, Protein and Fats** – 1 – 2 cans of organic cooked beans (pinto, black, kidney, garbonza, etc.) poured in Quisinart (food processor) or hand mash in bowl. Add juice from lemon, lime or orange (or vinegar) to taste with garlic powder (or real garlic), dill, and any other herbs and spiced to taste. Can add avocado if weight is under control, or any other juicy vegetable (tomatoes, etc.) for texture. **Blend to desired smoothness**. Use for vegetable dips, sandwich spreads, finger food, between meal hunger! (No added oils!). **NO MORE CREAMY, CHEESEY, FATTY, GOOEY DIPS!**

It is also recommended that you:

Use the **Diet-Exercise-Symptom Diary** sheet under **Educational Handouts** (on the home page, [www.KirkHamiltonHealth.com](http://www.KirkHamiltonHealth.com)) to follow foods eaten and how you feel on **page 6** of this handout.

- **Weigh yourself daily** in the morning and evening and log weight on your **Food-Diary**.
- Do some form of **aerobic exercise** daily for a minimum of 15-30 minutes (pgs. 166-167).
- **Sit physically still** 15-30 minutes twice daily (pg. 188).
- Do some form of **strength training** (i.e. circuit training) 3-4 days per week (pgs. 167-177).

# Basic Elimination Diet (BED)

## (Shopping List – Foods to Eat)

### Vegetables (75% raw/greens)

Alfalfa Sprouts  
Artichoke  
Asparagus  
Avocado  
Beans (string)  
Beets  
Bok Choy  
Broccoli  
Brussels Sprout  
Cabbage  
Carrots  
Cauliflower  
Celery  
Chard  
Collard Greens  
Cucumber  
Daikon Radish  
Endive  
Escarole  
Jicama  
Kale  
Kelp  
Kohlrabi  
Leeks  
Lettuce  
Mushrooms  
Mustard Greens  
Okra  
Onions  
Parsnips  
Radishes  
Rutabaga  
Seaweed  
Snow Peas  
Spinach  
Squash  
Sweet Potato  
Swiss Chard  
Taro

Turnips  
Water Chestnuts  
Yams  
Zucchini  
(add night shades back in 2 weeks –  
tomato, eggplant, peppers,  
potatoes)

### Fruit (add citrus back in 2 weeks)

Apples  
Apricots  
Banana  
Blackberries  
Blueberries  
Grapes  
Kiwi  
Mango  
Melon  
Nectarine  
Papaya  
Peaches  
Pears  
Pineapple  
Plums  
Pomegranate  
Prunes  
Raspberries  
Strawberries  
Watermelon

### Grains

Amaranth  
Buckwheat  
Millet  
Puffed Rice  
Rice Brown  
Rice Bread  
Rice Cakes (plain)  
Rice Cereals (plain)  
Rice Milk  
Rice Pasta  
Quinoa

### Beans/Legumes

Dried Beans  
Dried Peas  
Edamame  
Lentils  
Miso  
Soy Milk  
Tempeh  
Tofu (Soy Bean)

### Nuts and Seeds

Almonds (& almond milk)  
Cashews  
Chia seeds  
Flax seeds  
Hazelnuts  
Pecans  
Pumpkin Seeds  
Sesame Seeds  
Sunflower Seeds  
Walnuts

### Animal Foods (optional)

Beef  
Chicken  
Lamb  
Pork  
Poultry  
Turkey  
Wild Game  
Cod  
Halibut  
Mackerel  
Salmon  
Sole  
Trout  
Tuna

Updated 11-13-19

# A Midlife Epiphany – A Doctor Reverses His Own Heart Disease with Diet and Lifestyle



Rajiv Misquitta, MD, FACP

Nine years ago, life was going extremely well for me. I had just turned 40 and my boys were 1 and 3 years old. I was enjoying a robust medical practice and had also just been elected to the board of directors of the largest physician led group in the nation. Nutrition and lifestyle were not really on my radar. Suddenly, things took a turn for the worst. Driving to work on a cold November morning, I experienced chest pain and shortness of breath. Vivid memories of my father suffering from a heart attack at the age of 49 flashed through my mind. I stepped on the gas and somehow arrived at the parking lot of my hospital a few miles away. After steeling myself, I stumbled into

the emergency room, which was two hundred yards from my car. After barely making it through the doors without fainting, I turned to my emergency medicine physician colleague and said the words you never want to hear “I think I’m having a heart attack.” I was quickly placed on a gurney and an EKG was taken. When the nurse showed me the EKG, it was clear to me that I was having a heart attack. The blood tests also confirmed my suspicion. I was rushed to the cath lab and had two stents placed in my coronaries. As I lay in the recovery room with a sandbag on my leg to stem any bleeding, I was struck with worry about what the future held for me. I had just shattered my youthful illusion of being indestructible.

On the road to recovery, I switched to the diet recommended by the American Heart Association (AHA), absent of most meat except fish and olive oil, and changed my lifestyle to include regular exercise. Four months later, I began to experience chest pain while running on a treadmill at the gym. This progressed to chest pain at rest which is also called unstable angina. I called 911 and the emergency rescue personnel rushed me to the nearest hospital. At the hospital a repeat cardiac cath revealed that my coronary disease had progressed and I would need bypass surgery. This was a horrifying thought as I had scrubbed on these procedures as a medical student. I had once

again switched roles from being a physician to a patient, and I felt powerless in the wake of this terrifying disease.

After my bypass surgery, I once again embarked on the road to recovery and was determined to be even stronger than before and prevent this event from happening again. Modern medications (statins) and surgical procedures seemed at best to delay the advancement of heart disease. To me this was not acceptable. Fortunately, I stumbled upon the peer reviewed research, published by Drs. Dean Ornish and Caldwell Esselstyn, which showed intensive lifestyle changes can halt and even reverse heart disease.<sup>1,2</sup> I made a drastic change to my diet, following their recommendations, and gave up animal products and switched to a low fat whole-foods, plant-based diet. I also turned my attention towards finding ways of dealing with the increasing stressful demands of modern life. I found that reverting to the ancient teachings of yoga and taichi useful, and I became a yoga instructor and personal trainer. My grueling experience served as a doorway to total transformation. I lost 25 pounds following this lifestyle change and have never felt better. I also made it my mission to help others make positive changes in their lifestyle.

To help others make the transition to a healthier lifestyle, my wife and I published [Healthy](http://www.HealthyLivingForBusyPeople.com)



[Heart, Healthy Planet.](#) It provides a framework on how to switch to a low-fat, plant-based diet with simple recipes that are easy to follow. Heart disease is the leading cause of death in the United States, killing roughly 600,000 each year. The standard American diet (SAD) is composed of far too much animal protein and refined, nutrient-poor food. Furthermore, the inflated marketing budget of fast food pushes our population towards an unhealthy diet. We consume an average of 185 pounds of added sugar or sweeteners a year. That is about as much as a whole person. It is no surprise that 70% of Americans are overweight or obese. Rates of type 2 diabetes have also increased steadily, to the point where we now have 100 million Americans who are diabetic or pre-diabetic. We live in a world where calories are unavoidable and exercise is hard to come by, and this is contrary to our genetic programming.

I began to advocate a whole food plant-based diet to my patients. And for those who were able to follow it, the changes were dramatic. Their medicines were reduced and in some cases their chronic illness such as diabetes and sleep apnea were even reversed. I became a plant-based chef to better understand the infusion of taste in healthy food. I also quickly realized that just providing someone with information was not enough. Behavior change is far too complex. I introduced plant-based kickstarts to my colleagues

at my medical Center and noticed tremendous results. However, to truly help my patients sustain behavior change over the long term, I realized that I would need to develop a structured pathway. I became consumed by this dilemma and teamed up with a psychologist and a program manager and began my adventure on developing a system to further study this issue. Our team has now expanded to include plant-based health educators and medical assistants. Our endeavor has evolved, and I am now a principal investigator of a clinical trial called H.A.L.T. or Health Achieved Through Lifestyle Transformation. It facilitates lifestyle transformation on patients with heart disease and diabetes. A whole foods plant-based diet is one of the interventions along with stress reduction and exercise. We are also studying food addiction, mood and outlook on life. Our preliminary results show a reduction in weight, HbA1c, cholesterol and systolic blood pressure. It is truly gratifying to witness the transformation on the lives of our patients. We have since developed a plant-based pre-diabetes program that is also beginning to show good results in its early phase. To house our fast growing collection of lifestyle programs, we developed the first department of Lifestyle Medicine at our South Sacramento Kaiser Permanente Medical Center. It straddles almost every field as the potential applications are enormous. I used the standards put out by the American College

of Lifestyle Medicine as guideposts.

It has been 9 years since my cardiac event and I feel better than ever. I exercise 6 days a week and am far more engaged in life than ever before. The true epiphany for me was the realization that the foundational pillars of our health aren't in high tech procedures or fancy drugs, but in what we eat, how much we exercise, how we deal with stress, our sleep habits, and our connection with others. As a nation, we cannot afford to continue building more hospitals, performing more surgeries and dispensing more medication. We will need to stop the rising tide of chronic illness that plagues our nation at the source, by influencing the lifestyle that is causing it with structured evidence based programs.

<sup>1</sup> Ornish D., Scherwitz L.W., Billings J. et al., "Intensive Lifestyle Changes for Reversal of Coronary Heart Disease." *Journal of the American Medical Association* vol. 280, no. 23 (1998): 2001–2008.

<sup>2</sup> Esselstyn C.B., Ellis S.G., Medendorp S.V. et al., "A Strategy to Arrest and Reverse Coronary Artery Disease: A 5-Year Longitudinal Study of a Single Physician's Practice." *The Journal of Family Practice* vol. 41, no. 6 (1995): 560–568.

The Plantrician Project  
<http://plantricianproject.org/plant-rician-showcase-1/rajiv-misquitta>

## **Does Chelation Therapy Reduce Heart Attacks and Cardiovascular Events By Excreting Toxic Metals? By IV or Oral Supplements? Or Both? A Review of the TACT 1 & 2 Trials with Cardiologist Gervasio Lamas, MD**

**Listen to Podcast/Interview with Dr. Lamas at StayingHealthyToday.com**  
(<http://www.stayinghealthytoday.com/chelation-therapy-heart-disease-toxic-metals-gervasio-lamas-md/> )

### **Background to The TACT 1 & TACT 2 Trials of IV Chelation in Patients with Previous Heart Attacks**

Dr. Gervasio Lamas has been studying chelation therapy for more than 20 years (TACT 1, [9/2003-8/2012] and TACT 2 [10/2016-4/2021estimated] Trials). He chose to study chelation therapy to challenge his own belief that chelation therapy was not valid after being asked by a patient in August of 1999 if chelation therapy was a legitimate cardiovascular therapy. He later acknowledged that he based his initial skepticism from his professional bias, and it was not evidence-based. ([JAMA](#). 2013 Mar 27;309(12):1241-50.) (Full article; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3243954/> Abstract <https://www.ncbi.nlm.nih.gov/pubmed/23532240>; ClinicalTrials.Gov

<https://clinicaltrials.gov/ct2/show/NCT00044213> )

### **Early Chelation Studies**

Initially he looked at the current studies on chelation and it was split down the middle. There were positive case studies on the one side and on the other there were 3-4 small studies by conventional cardiologists saying chelation therapy didn't work and had no validity. The negative studies were so small you couldn't exclude that there was some benefit. EDTA was developed in 1937. It lost its patent in the 1960s. It's current I&D (FDA license to use it in research) is under Dr. Lamas's name.

### **TACT 1 Trial**

He contacted colleagues at the National Institutes of Health (NIH) and stated there was the methodology available to put the question of whether chelation therapy was valid or not to the test and he felt that chelation would be found to be non-efficacious and the question of chelation's value could be put to rest. Three years after that he received a 30-million-dollar grant to do the TACT 1 study (Trial to Assess Chelation Therapy). Ten years later in 2012 the study became unblinded (1708 subjects, 55,222 chelation infusions, 40 chelation per participant (infusions including vitamins with the EDTA – vitamin C and B vitamins) all subjects had previous heart attacks, were at least 50 years of age, and had adequate kidney function). The statisticians

were from Duke University, the cardiac events were judged to be real or not from Harvard. He made sure he had the best statisticians (Duke University) and clinical event evaluators (Harvard University).

### **TACT 1 Study Results**

When they looked at the data, they were surprised to see that the study was positive. They were able to show a reduction of the combined clinical endpoint for death, heart attack, stroke, bypass, angioplasties, hospitalizations for unstable angina in all subjects who previously had a heart attack, which was a "spectacular" result.

A third of the patients had diabetes (633 patients) in TACT 1 and the effect of the EDTA chelation was spectacular, reducing the combined cardiovascular end point by 41%; reducing the risk of death from all causes over 5 years by 43%; reducing the risk of another heart attack in these diabetics by 50%.

Eighty-three percent of these patients were taking statins. There was no reduction of effect with or without statins. So, chelation works by a different mechanism than statins. Compared to the old statin studies (statin vs. a placebo) the effect size of the chelation was much greater.

### **How Does Chelation Work – Toxic Metal Excretion?**

EDTA chelates positive divalent ions with great efficacy – like the

metals lead and cadmium (++)  
Measuring metals in the urine before and after the IV EDTA challenge you will find after individuals will excrete 3000-4000% more of these metals into the urine harmlessly.

Lead runs with calcium and goes initially in the red blood cell, then after one month goes into bone. Lead has a half-life in bone of 30 years. About 50% of cadmium is stored in your kidneys and the rest is the liver, lungs, neural tissue, the soft organs essentially.

You don't want any metals in your body. Lead slowly leaches out of bone. In older people lead will have blood levels of 1-2 micrograms/dl. The EPA says this is acceptable. Lead is very "vasculo-toxic." It poisons the endothelium, the lining of the arteries. It replaces calcium in intracellular reactions and "gums-up" the works, is an oxidant stressor and increases oxygen free radicals.

All of these toxic metals increase oxidative stress. And then each metal has their own individual metabolic mechanism of cellular poisoning. Diabetics live in a state of high oxidative stress and may be more susceptible to the toxic effects of heavy metals.

Lead and cadmium effect the acetylation of histones, the proteins that unspool DNA or 'spool it back up' your DNA. These metals may "gum up" how your DNA is transcribed (created).

We all have these toxic metals being taken up by our bodies. These metals may be causing or contributing to disease and health professionals are not paying any real attention to this problem and have no real knowledge how this toxic metal burden is contributing to common diseases.

Dr. Lamas equates the current situation with everyone being exposed to toxic metals, and probably having a significant burden of them, to the problem of smoking after World War II and the Korean War. Everyone smoked so initially it was difficult to prove that diseases were caused by smoking. But eventually people started looking at smoking as a cause of many diseases. Like-wise, sooner or later, the medical community will eventually start to ask and study the question of what effects do all these toxic metals have on the body and the burden of chronic disease. Cadmium and lead are just two of 5-10 toxic metals seen frequently in the urine upon EDTA IV provocation.

Dr. Lamas's focus is to look at the effect of toxic metals and chelation with respect to cardiovascular diseases which he believes is significant and can be potentially treated. To look at the effect of toxic metals as a global health problem is beyond the scope of his investigations, but the environmental and health problems from global toxic metal burden are probably significant. He notes science and medicine moves forward in small parts and

pieces by evaluating and testing aspects of one disease. In this case he is focusing cardiovascular disease and the effect of chelation therapy.

### **TACT 1 Trial Results, The Acceptance of EDTA for Cardiovascular Disease and the FDA**

He went to the FDA and sat down with the experts in cardiovascular disease in 2014 and requested from the results of TACT 1 that EDTA chelation therapy be approved for the treatment of cardiovascular disease. The FDA said the study was positive, the drug (EDTA) was safe, but it was only one study. None of the other previous studies mattered because they were too small and with questionable in outcome. In reality the FDA said when only one study shows a positive outcome a drug is usually not approved. Without a second confirmatory study of cardiovascular benefit EDTA would "fade" off in the public and health professional's memory as something that failed and was "shot down." So, the FDA recommended doing the study again (TACT 2) studying the most responsive group in the TACT 1 trial which was diabetics who had a previous heart attack. If the outcome was as positive as the first study, as it should be if EDTA chelation really is a valid therapy, then he could come back to the FDA and it would be "smoother sailing" to getting EDTA chelation therapy approved for cardiovascular disease.



## **TACT 2 Trial**

TACT 2 will follow 1200 patients who will receive 40 infusions. Presently (April 2019) they have almost 700 patients enrolled in TACT 2. The study is ongoing and proceeding smoothly in multiple centers and there will be an answer in a couple of years. (<https://clinicaltrials.gov/ct2/show/NCT02733185>)

There is an oral vitamin arm of the TACT 2 trial since in TACT 1 chelation patients also took oral, high dose, antioxidant rich supplements as part of the IV chelation protocol. Dr. Lamas is a conventional cardiologist and he is not an expert in dietary supplement use and asked a consensus panel of expert chelation doctors on what a multivitamin and mineral supplement should contain to be given along with the intravenous chelation therapy. In the TACT 1 trial there was a vitamin supplement arm and a placebo arm along with the chelation therapy. There was an 11% reduction in cardiovascular events in the vitamin consuming group in TACT 1 which was not clinically significant, but this doesn't necessarily mean there was no benefit from the oral vitamins. There may not have been enough patients to have statistical power to show an effect. It was also observed that there was a "HUGE" benefit from the vitamins in the 27% of subjects who were NOT taking statins. In the 83% of subjects who took statins there was no appreciable benefit in cardiovascular risk reduction with

vitamin supplementation. Dr. Lamas has no idea what the mechanism might be from this possible benefit of the vitamin supplements in the statin non-users in the TACT 1 trial, but this is another reason they are studying an oral vitamin supplemented group in the TACT 2 trial. If this benefit is confirmed in this diabetic population then this will open a whole new area of study on the role of high dose antioxidant supplements and their use in cardiovascular disease patients.

## **Side Effects and Conventional Cardiologist's Attitudes Towards Chelation**

Most traditional cardiologists still believe that chelation therapy has no benefit and may have side effects like causing kidney problems, which it doesn't. Dr. Lamas has recently given lectures to leading cardiologists at Harvard University, Brigham's and Women's Hospital, where he worked and is well received. There was no hostility, no disbelief and patronizing. There were friendly questions and the desire for more information. The physicians saw the evidence, along with pictures of case studies of gangrenous limbs being reversed (amputation avoided) with chelation therapy, and they wanted more information. That said you won't find these open-minded conventional cardiologists who want more information prescribing chelation therapy or referring their patients to chelation doctors.

**Chelation Therapy at Mount Sinai Medical Center, Miami, Florida**  
Mount Sinai Hospital (Miami, Florida) is the only hospital that he knows of in the U.S. where chelation has been approved through the pharmacy and therapeutics committee and can be prescribed, though it is rarely done so. Dr. Lamas is not out there as a chelation physician but as a scientist trying to develop a new treatment for an unrecognized risk factor for cardiovascular disease. Like cholesterol was before the Framingham study, he is out to prove that chelation therapy is a valid new therapy for cardiovascular disease, possibly by reducing toxic metal burden. He would have no problem putting patients on a statin and utilizing chelation therapy concurrently. They are both proven and safe therapies with no adverse interactions.

## **Dr. Lamas's Diet Recommendations**

He has poor compliance with any dietary recommendations he makes and doesn't recommend a specific diet. The diet pattern he encourages is the one that assists the patient in losing weight. He just wants less weight in his patients because "fat is toxic." He is open to plant-based diets and Mediterranean diets if people will adhere to them and if they have lost weight.

## **Infection as A Cause Atherosclerosis**

He has not seen any good evidence of an infectious cause of

atherosclerosis. Chronic infections in general may increase overall inflammation and may have an adverse effect on the endothelium and other components of the blood vessels in a secondary kind of way. He has not seen evidence of microorganisms growing in plaque that could be treated with an antibiotic or antimicrobial that would lead to a reduction in cardiovascular events. He still believes that coronary calcification is due to **microvascular ruptures of inflamed plaque that is walled off by the body with calcium.**

### **Closing Comments**

He hopes that individuals who hear this recognize that there is much more than meets the eye in terms of cardiovascular risk factors.

### **Critical Limb Ischemia Studies with Chelation Therapy**

He just started TACT “3A” which is a 50-patient study with critical limb ischemia subjects. Thirty will receive active treatment and 20 will receive placebo. I shared a case study of an 83-year-old diabetic female who was partially blind who was to have her foot amputated because of a wound that wasn’t healing on her foot. After 2-3 weeks of daily chelation the wound started to heal, and she didn’t have to have the amputation.

Dr Lamas stated, “There is something just so sterile about the Kaplan–Meier curve. You can...you know you can just say well blah blah blah, blah blah blah. You can’t ‘blah blah’ a foot that has

gangrene, that had gangrene six months ago and it is still attached now without gangrene. YOU CANNOT ‘SCIENCE’ THAT AWAY after chelation therapy!” He shared that’s how he finished his talk at Brigham’s and Women’s Hospital at Harvard speaking to a cardiologist audience about the TACT 1 & 2 trials and there was nothing that the audience could really respond to with regards to in these critical limb ischemia patients who didn’t lose their limbs due to gangrene because of intravenous chelation therapy.

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