

Stop Fixing the Adaptive Response Why Cardio-Vascular Disease Should Be Named Chronic Scurvy

Defining My Terms

In this article, when I say “chronic scurvy”, “heart disease”, or “cardio-vascular disease (CVD)”, I mean the accumulation of damage most commonly in the coronary arteries that is associated with high blood pressure, plaque deposits, and the increased incidence of heart attacks. You may think of this condition by several other names, such as coronary artery disease (CAD), atherosclerosis, hardening of the arteries, or coronary heart disease (CHD).

Introduction

“Pauling Therapy” is a nutritional treatment for CVD/chronic scurvy that was championed by Linus Pauling PhD and is based upon research into the relationship between CVD and Vitamin C. It was first publicly described in 1991. In the 24 years since, it has, despite its’ exceptionally high success rate, has never been used by mainstream cardiologists.

This article is primarily about how naming the condition “Chronic Scurvy” can focus attention on the true location of the pathology and logically lead many more people to use “Pauling Therapy”

Pauling Therapy History

The earliest public pronouncement that I am aware of was 1991 when Linus Pauling and Mathias Rath MD examined some research and concluded that there was a connection between vitamin C and CVD.

Here is the conclusion to Pauling and Rath’s 1992 paper:

In this paper we present a unified theory of human CVD (cardio vascular disease). This disease is the direct consequence of the inability of man to synthesize ascorbate in combination with insufficient intake of ascorbate in the modern diet. Since ascorbate deficiency is the common cause of human CVD, ascorbate supplementation is the universal treatment for this disease. The available epidemiological and clinical evidence is reasonably convincing. Further clinical confirmation of this theory should lead to the abolition of CVD as a cause of human mortality for the present and future generations of mankind.¹⁷

I’m sure they felt like they were at the stage where they dust off their hands and proclaim “done with that disease”. Although this treatment has yet to hit mainstream medicine, it has not entirely fallen on deaf ears. The small group who feel confident to research their own medical challenges and make their own medical decisions have frequently discovered some version of

Pauling Therapy and are routinely reversing their CVD/chronic scurvy ¹. But what about the vast majority of people who depend upon the “experts” for their heart disease choices? When will they be advised by their cardiologists that their heart disease can be reversed in a matter of months instead of being mired in a managed disease for the rest of their life? I will attempt to point out what has gone wrong, and how it might be fixed.

The Conventional Viewpoint

The plaque deposit/blood clot combination is the focal point of the discussion and the inquiry into prevention and treatment.

A person’s view of the plaque deposit may be theoretical – in the case of a relative or friend, or it may be more visceral – in the case of a medical professional. Once you see that big ugly plaque deposit that certainly played a big part in killing your friend/family member/patient, or if you are a coroner – member of your community, it holds your attention. Once you have seen this deadly, messy glob that looks about as far away from a healthy artery as anything you have ever examined, you are usually repulsed with some degree of terror or disgust. It dominates your emotions and your thoughts about treatment, prevention, etc.

We are often asked to look at a system that has failed, analyze what went wrong, and propose a solution. In the case of a death from heart attack in a patient where one of the plaque deposit blockages suddenly became 100% blocked, we instinctively look at the plaque deposit and then work backwards. Almost all of our proposals are about the deadly plaque deposit. We discuss the fatty nature of the plaque, the cholesterol, the calcium buildup, the blood clot, how to prevent them, and how to remove them.

The medical community has been coming up with solutions for heart attacks caused by these plaque/blood clot combinations for decades, but heart disease still remains as the number one disease cause of death ².

A Wholistic Viewpoint

To understand how the nutritional treatment of “chronic scurvy” really works, you need to see the plaque deposit in a totally different way. If you do have the plaque deposits in the coronary arteries, then you do have this disease, but if you want to find the disease, you must look UNDERNEATH the plaque deposits. There, you will find weak and damaged artery walls.

Scurvy is essentially a bleeding disease. Chronic scurvy differs from the normal experience of scurvy only in degree and by the body’s response. Both have at their core the inability to repair/replace collagen fibers in the vascular tissue and the resulting failure of that vascular tissue to “contain” the blood. The difference appears because whereas scurvy results from several months of near-zero levels of vitamin C, chronic scurvy results from years if not decades of merely inadequate levels of vitamin C, and so allows our bodies a chance to mount a secondary defense.

Here are relevant comments from the same Pauling/Rath paper (the bolding is mine).

The invariable morphological consequences of chronic ascorbate deficiency in the vascular wall are the loosening of the connective tissue and the loss of the endothelial barrier function. Thus human CVD is a form of pre-scurvy.

The multitude of pathomechanisms that lead to the clinical manifestation of CVD are primarily **defense mechanisms aiming at the stabilization of the vascular wall**. After the loss of endogenous ascorbate production during the evolution of man these defense mechanisms became life-saving. They counteracted the fatal consequences of scurvy and particularly of blood loss through the scorbutic vascular wall.¹⁷

Keep in mind that the arteries are a high-pressure system compared to the veins, and that a primary purpose of the artery is to “contain” the blood. If enough damage accumulated in one area of an artery, it might become weak enough that “breakthrough bleeding” could occur, which would be a catastrophic event.

Whenever there is damage to artery walls, the first order of business is to repair the damage. These repairs require a collection of nutrients. But what happens if one or more of those nutrients are absent or in short supply ? Repairs get backlogged, and the arteries get weaker.

When the arteries get to the point where breakthrough bleeding becomes a danger, and the required repairs still can't be made due to nutrient deficiencies, your body has a “plan B”. It will build up a layer of material on the inside of the artery wall to protect the damaged artery wall against the force of the blood pressure. What I have just described, of course, is a plaque deposit, but I prefer to call it “nature's perfect band-aid”. This is one way that I remind people that the plaque deposit is NOT PATHOLOGICAL, but instead an ADAPTIVE RESPONSE to weakened artery walls. The plaque deposits occur on purpose, not by accident, and they are saving your life by preventing the possibility of breakthrough bleeding.

One more time, I will quote the Pauling/Rath paper to point out that this idea has been around the full 24 years.

The genetic countermeasures are characterized by an evolutionary advantage of genetic features and include inherited disorders that are associated with atherosclerosis and CVD. With sufficient ascorbate supply these disorders stay latent. In ascorbate deficiency, however, they become unmasked, leading to an increased deposition of plasma constituents in the vascular wall and other mechanisms that thicken the vascular wall. This thickening of the vascular wall is a defense measure compensating for the impaired vascular wall that had become destabilized by ascorbate deficiency.¹⁷

The positive resolution of this messy scenario involves making sure that the nutrients required to catch up on the backlog of vascular tissue repairs are in abundant supply. The result that has

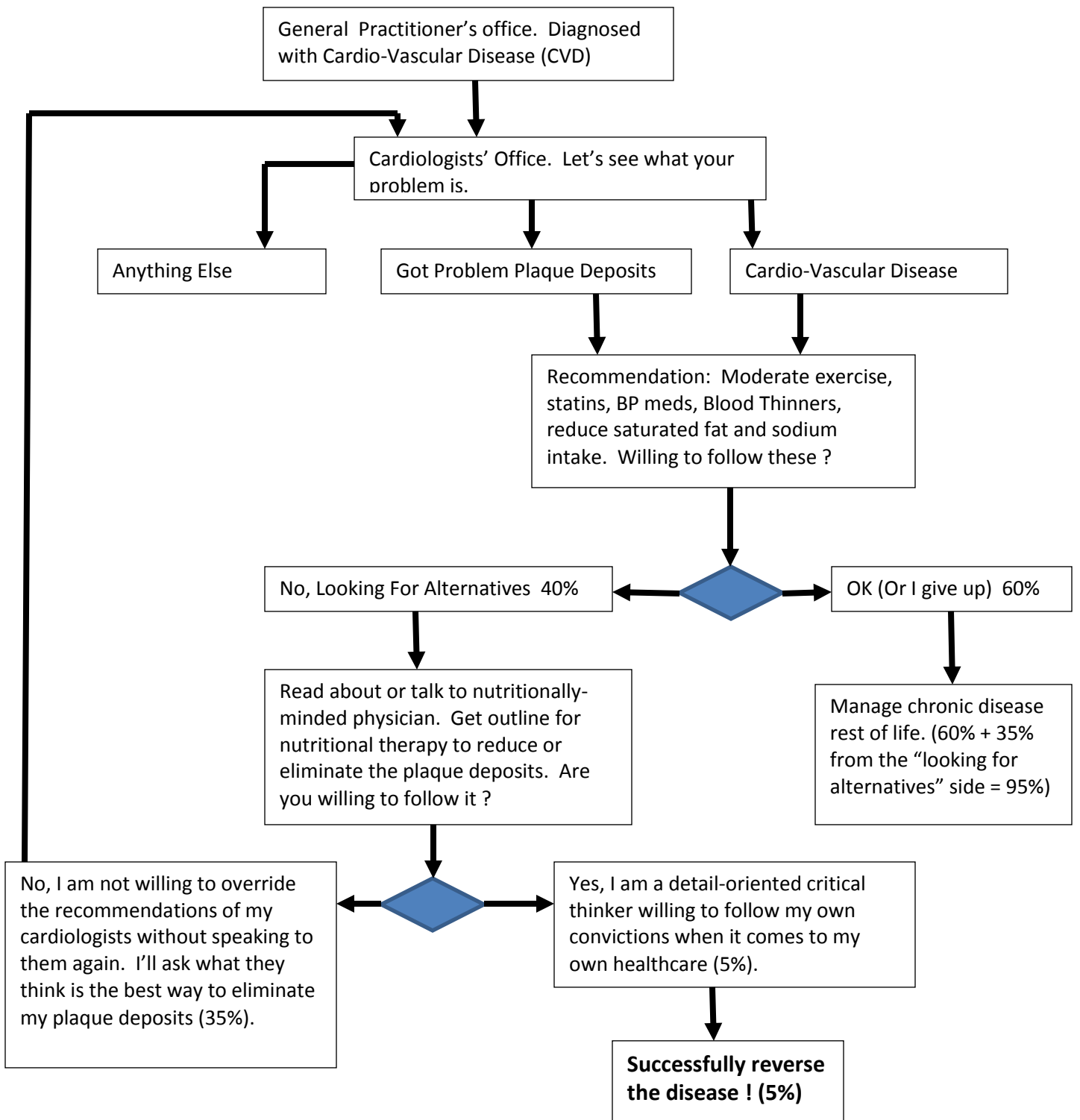
always been observed when this occurs is that as the arteries are repaired (thus removing the purpose for the plaque deposits), the plaque deposits gradually disappear on their own.

I my clinic, we have a saying – that heart disease is easier to treat than low-back pain. Treating chronic scurvy nutritionally, because it directly addresses the cause, almost always works ¹.

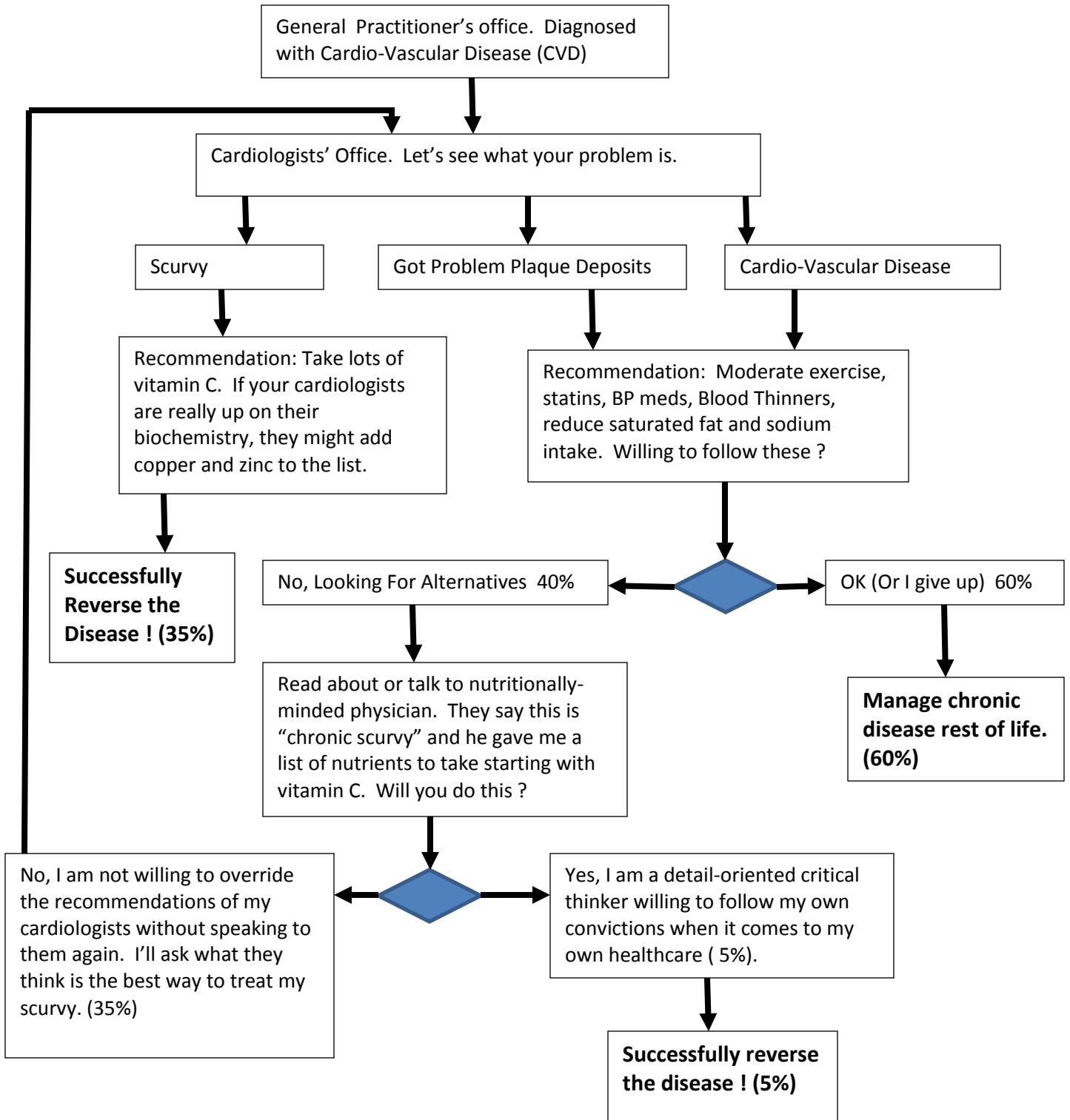
Why Is Naming This Disease “Chronic Scurvy” Important ?

There is an abundant public discussion of the nutritional treatment of heart disease and how successful it is. You might think that this alone would be enough to gather a wildly-increasing number of converts. Yet, there is a significant problem in how the wholistically-minded physicians tend to describe their treatment.

How Heart Patients Are Funnelled Back Into Conventional Treatment



How “Chronic Scurvy” Can Change the Treatment of Heart Disease



These are approximate percentages. There are no statistics kept on how many people are looking for nutritional alternative treatments for their CVD, or how many actually follow through with such a treatment. This result isn't perfect, but 40% is a lot closer to getting into the mainstream than 5% on the previous diagram. It also tips the balance quite a bit because a lot more people become public examples of how the Pauling therapy really does work.

In the first example, the patient consults with a nutritionally-oriented physician. The doctor names the disease atherosclerosis, which describes the complex development of the plaque deposit in a major artery. They discuss the nutritional treatment in terms of how it would heal/remove the plaque deposits. When the patient leaves the consultation, their attention is focused on the plaque deposits.

The patient goes back to their cardiologist to discuss this asks – “How do I get rid of my plaque deposits ?” Most of the time, the cardiologist is able to steer him right back into mostly conventional treatment, because the conventional treatment looks like it is designed to fight those “deadly plaque deposits”.

In the second example, the patient consults with a different nutritionally-oriented health care professional. They discuss this condition by the name of “chronic scurvy”. It is made clear to the patient that this is a disease of weakened connective tissue in the arteries, and the discussion centers around which nutrients are required to repair connective tissue. When the patient leaves the consultation, they are completely focused on treating “chronic scurvy” by nutritionally facilitating repairs to the artery walls.

The patient goes back to their cardiologist and asks – “How do I treat my scurvy ?”. The cardiologist’s answer inevitably centers around the idea of taking high and regular doses of vitamin C. This is the same answer the patient would have received if they asked a carpenter, a bartender, or a cashier at a restaurant. This is because it is hard to avoid learning that scurvy is a vitamin C deficiency by the time they get through elementary school.

Optimal nutritional treatment involves a few more nutrients, but at least the patient is now headed in the right direction.

It is worth noting here that the nutritional protocols outlined by the two wholistic doctors were probably almost identical and both would have worked to reverse the disease. The difference is that naming the disease scurvy keeps the focus on the real pathology in the artery walls. In this way, the treatment focus stays on the integrity of the arteries, and does not wander back to the plaque deposits as more people become involved in the discussion.

Medical Writers and Medical Researchers Make This Same Mistake

You might think that how a disease is named would have almost no effect on how it is researched and treated, but in the case of heart disease, a quick look tells you otherwise. The patients and their doctors are not the only ones making this mistake. Medical writers, and medical researchers are doing the same thing. They seem to be almost totally focused on the plaque deposit. I have read an abundance of peer-reviewed journal articles on:

1. Tracking and evaluating the “Calcium Score”

2. Using Vitamin K2 to reduce the calcium levels in the plaque deposits
3. Lowering total blood cholesterol
4. Lowering LDL cholesterol
5. Raising HDL cholesterol
6. The dangers of oxidized of cholesterol
7. Ratios of HDL to LDL cholesterol
8. Tracking and lowering blood Lipoprotein(a) levels
9. Lowering blood triglycerides
10. Lowering consumption of saturated fat

All of these share the same problem. They are addressing the problem of the plaque deposit, and therefore attacking an “adaptive response”. Unfortunately, no amount of treatment of an adaptive response is ever going to cure a major disease. Simultaneously, they are ignoring the real pathology of the damage to the artery walls. It is as if, in the 1950’s, they stuck one foot into the “lipid hypothesis” of Ancel Keys, and then for the past 6+ decades, haven’t been able to find their way back out.

The Prescription

I have spoken in general terms of the “vitamin C” treatment for chronic scurvy. The actual formula is never quite so simple. The “basic” formula is vitamins C, E, zinc, copper, sulfur, and a couple of amino acids. Other optional nutrients can be considered. Also, dietary improvements always help, but are very hard to describe in a short article or presentation.

What follows is a common prescription that I would use for a chronic scurvy patient. Other doctors are likely to use different but similar nutritional prescriptions. As long as they contain an abundant source of vitamin C, full-spectrum vitamin E, sulfur, L-Lysine, and address the copper/zinc status of their patient, I would have confidence that they would also work well.

I do not like to specify brand names, but I feel obligated to do so in the case where there is a dramatic difference in the benefit received when using the best available.

Vitamin C (pure ascorbic acid, NOT mineral ascorbates) – 6 + grams per day
Smaller doses of vitamin C might be OK to take as mineral ascorbates, but at these high doses, the minerals used to make the ascorbate might turn into an overdose or create mineral imbalances. Purified L-ascorbic acid (the active isomer) is definitely important, because if your vitamin C is not purified L-ascorbic acid, then you are only getting half of the indicated dose. The other half will be D-ascorbic acid, which is not true vitamin C³. Take the vitamin C in small doses throughout the day. This will give you better “coverage” of your vitamin C needs.

Not all vitamin C is equally useful. Especially when treating an advanced case of chronic scurvy, it is worthwhile to spend a more to get the most effective result. I always recommend the vitamin C from the Vitamin C Foundation⁴ (1-800-894-9025). Besides the fact that they only sell purified L-ascorbic acid, their vitamin C is never derived from corn, and it is never

manufactured in China. It is worthwhile to note that almost all high-dose vitamin C that does not specifically state to the contrary is not purified for the L-isomer, derived from corn starch, and probably manufactured in China ⁴.

L-Lysine – 6 grams per day L-Lysine is used in the production of collagen fibers and makes plaques release in very small pieces to avoid embolisms ⁵.

L-Proline – 1 gram per day L-Proline is similar in its functions and effects to L-Lysine ⁵.

Vitamin E – You should aim for between 400 and 800 mg of vitamin E. You should be getting all 4 tocopherols and all 4 tocotrienols. The best results for CAD can be obtained by taking a “full spectrum” vitamin E that is highest in d-gamma tocopherol, because the gamma form of tocopherol is known to be the most effective form of vitamin E for the prevention/treatment of heart disease ⁶. One of the “tricks” of vitamin E studies for CVD that are “designed to fail” is to only use d-alpha tocopherol, which will not do much for CVD, and will actually suppress the levels of all the other types of vitamin E, including the gamma tocopherol ⁷. Vitamin E is also a mild anticoagulant.

To get the best vitamin E, you should get both the tocopherols and the tocotrienols (2 bottles) of “Unique E” from AC Grace ⁸. This is available on-line at a reasonable price from Swanson.

Organic Sulfur – This is also known as MSM, but I recommend looking for products that describe themselves as “Organic Sulfur” because they tend to be much more pure, and therefore much more effective. Organic sulfur will deliver oxygen to cells, is excellent at removing a wide variety of toxins, and is required to form disulfide bonds in the creation of collagen fibers. ¹⁸ The only downside to organic sulfur is that it will also “sulfate out” some beneficial minerals. Therefore, some users can develop mineral-deficiency problems after some months of usage. For best results, take one teaspoon of organic sulfur in chlorine-free water upon waking up in the morning on an empty stomach. Then wait 30 minutes before you eat or drink anything else. To prevent long-term mineral deficiencies, upping the dose of magnesium and adding a multi-mineral supplement are good ideas. I order mine at 1-801-290-2013.

Magnesium (as citrate or chelated) – 400 mg / day. Magnesium helps to keep energy levels up, and is very useful in maintaining a good heart rhythm ⁹. Magnesium is also a mild anti-coagulant.

Co-Enzyme Q10 – 100+ mg per day. Co-Q10 is used by the heart more than any other tissue in the body because it enables the use of higher amounts of energy ¹⁰. This is even more critical in CVD patients, where hypertension is common. Statin drugs suppress the body’s normal creation of Co-Q10, so many CVD patients are weakening their heart by taking their medications ¹⁰. My favorite Co-Q10 is from Natural Factors.

Vitamin K – 100 micrograms (mcg) / day. Vitamin K is a natural blood coagulant ¹¹. Blood clots and the effects of blood-thinning drugs are touchy topics for CAD patients. I include the

vitamin K to neutralize the anticoagulant effects of magnesium and vitamin E. This results in an overall formula that is roughly neutral in its coagulant/anticoagulant effects.

Copper – 2 mg / day Zinc – About 20 - 30 mg per day

Zinc and copper work in opposition. High zinc levels will depress copper, and high copper levels will depress zinc. Zinc is useful for the immune system and also for the repair of tissue (such as artery wall repairs) ¹². Overdoses of zinc will depress the immune system.

Copper is necessary for the production of collagen fibers, and so is an essential part of artery wall repairs ¹³. Overdoses of copper usually result in nausea, digestive problems, and occasionally mania.

You might want to get your copper in a zinc/copper combination supplement so you don't get these two minerals out of balance. If you are a vegetarian, you are likely to be deficient in zinc and much more prone to copper overdose, so you might want to supplement zinc and rely on your diet for copper. If you have copper water pipes, then you probably don't need to supplement copper.

B Complex – use dosage on bottle. High homocysteine levels will damage artery walls.

Vitamin B6, B12, and folate (avoid folic acid) will reduce the homocysteine levels dramatically ¹⁴.

Rutin – About 500 mg/day. Rutin is a bioflavonoid that assists Vitamin C ¹⁵.

Some source of omega-3 fats (fish oil or flaxseed oil) - somewhere between 1 teaspoon and 1 tablespoon per day. An abundance of studies have indicated that fish oil can be very valuable in keeping the heart healthy ¹⁶. These highly volatile unsaturated fatty acids are very prone to rancidity. If you take a spoonful and it tastes bad, the rancidity has kicked in to the point that it is doing more harm than good. Throw it away and get more. I usually recommend getting a small bottle so you can use it up while it is still fresh.

For the same reason, if you are taking fish oil gel-caps, you will not know if the oil is OK because the gel-caps conceal the taste. Once a week you should bite one open and taste it to see if it is rancid.

My Conclusions

The pathology in heart disease is damaged artery walls. The plaque deposits that the medical industry is so fond of treating are an adaptive response – like a band-aid over a damaged area – to prevent breakthrough bleeding. Treating an adaptive response doesn't work, and we have decades worth of examples of the “management” of heart disease to prove it. Treating the plaque deposits with cholesterol-reduction and manipulating the HDL/LDL ratio etc., is the logical equivalent to treating a skin abrasion by picking at the scab. On the other hand, providing an abundant supply of the nutrients required to repair arterial damage works almost

every time and it is orders of magnitude less expensive. It uses normal body processes to heal naturally.

As attractive as that sounds, Pauling therapy might never become a mainstream practice until hordes of alternative health care professionals and medical researchers achieve “escape velocity” from the idea of treating the plaque deposits by repeating over and over the following:

Cardio-Vascular disease should be properly named “chronic scurvy”, which is a bleeding disease brought on by damage to the artery walls. Treatment should start much like you would treat scurvy - with high and frequent doses of vitamin C along with a few additional related nutrients. The focus should be almost exclusively upon the efficient repair of the artery walls. Plaque deposits are not the pathology, but are instead an adaptive and protective response to the damaged artery walls. Once the artery walls are repaired, the plaque deposits will disappear on their own.

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