

## Cardiovascular Disease as Chronic Scurvy

Dear Editor:

In this correspondence, I will explain why cardiovascular disease should be named chronic scurvy. When I say “chronic scurvy,” “heart disease,” or “cardiovascular 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).

“Pauling Therapy” is a nutritional treatment for CVD/chronic scurvy that was championed by Linus Pauling, Ph.D., 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 correspondence 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 Pauling and Mathias Rath, M.D., examined some research and concluded that there was a connection between vitamin C and CVD.

Here is the conclusion from the Pauling and Rath (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.”

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 fallen entirely 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. 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 and prevention.

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 back-

wards. 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.

### 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 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 and Rath (1992) 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.”

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 and Rath (1992) 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 im-

paired vascular wall that had become destabilized by ascorbate deficiency.”

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.

In 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.

### 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 & 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 cholesterol
7. Ratios of HDL to LDL cholesterol
8. Tracking & 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 1950s, they stuck one foot into the “lipid hypothesis” of Ancel Keys, and then for the past six plus 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 this correspondence.

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.

1. Vitamin C (pure ascorbic acid, NOT mineral ascorbates) – 6+ grams per day. Smaller doses of vitamin C might be alright 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 C. 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 more to get the most effective result. I always recommend a purified L-ascorbic acid that is not derived from corn, and it is never manufactured in China.

2. 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.

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

4. Vitamin E – You should aim for between 400 and 800 IU of vitamin E per day. 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. 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. Vitamin E is also a mild anticoagulant.

5. 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. 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.

6. 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. Magnesium is also a mild anti-coagulant.

7. CoEnzyme 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. This is even more critical in CVD patients, where hypertension is common. Statin drugs suppress the body’s normal creation of CoQ10, so many CVD patients are weakening their heart by taking their medications.

8. Vitamin K – 100 mcg per day. Vitamin K is a natural blood coagulant. 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.

9. Copper – 2 mg per day, and Zinc – 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). 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. 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.

10. B-Complex – Use dosage on bottle. High homocysteine levels will damage artery walls. Vitamin B6, B12, and folate will reduce the homocysteine levels dramatically.

11. Rutin – About 500 mg/day. Rutin is a bio-flavonoid that assists Vitamin C.

12. 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. 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, 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 inexpensive. 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:

Cardiovascular 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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### References

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### Probiotics: Yes or No?

Dear Editor:

Dr. Doris Rapp recommends the book, *The pH Miracle* (Young & Young, 2010). I am reading it. What is in this book sounds logical. But I am also pained to read the review in Quackwatch (<http://www.quackwatch.com/>) where a mainstream doctor criticizes Robert Young. This doctor attacks Young personally, not scientifically. For example, he says that Young's degrees are from bogus institutions and that Young is in jail. So what? Is Young in jail because he wrote unscientific stuff or illogical stuff? No. He was jailed for practicing without a license. I am not bothered by that. To me the charge is irrelevant. Young advocates for keeping track of our urinary and salivary pH, and keeping it above 7. All very logical. After all the late Nobel laureate, Dr. Otto Warburg, the discoverer of cancer, said that no virus, bacteria, fungus, illness including cancer can survive in an alkaline environment. Remember, he was the discoverer of cancer.

But I am also pained by Young's views on probiotics. He is against the use of probiotics. He says there is no good bacteria or bad bacteria. Bacteria are bacteria. Bacteria require an acidic environment to survive. But an acidic environment is unhealthy because all illness thrives in an acidic environment (a la Dr. Otto Warburg).

So should probiotics, i.e., the good bacteria, be taken or not? I have found them beneficial in relieving my gut problem that even gastroenterologists could not relieve. I used to have severe gut cramps, stomach

upset, etc. It is known that probiotics, also known as psycho-biotics (for their tranquilizing effect and the “gut and brain connection” in general) make many vitamins (e.g., K and B vitamins) and amino acids, and produce antibiotics to protect us. They also keep *Candida albicans* and bad bacteria under control. We all usually take yogurt/curd, “Yakult,” and “Boza” (in Eastern Europe such as Bulgaria). These products help in the production of good bacteria. Is that harmful?

Another Nobel laureate, the late Professor Ilya Metchnikov apparently said, “Death begins in the colon.” He was the discoverer of the probiotic *Lactobacillus bulgaricus*. This bacteria later on was called *Lactobacillus acidophilus*, and it’s the same that we use to make curd/yogurt with. Many other good bacteria are now known. Bifido strains of bacteria are dominant in the colon, and lactobacillus strains are dominant in the small intestine and visceral cavities, nose, lungs, etc. What Metchnikov meant is that we should keep our colon richly populated with good bacteria.

So my question is: Should we keep taking probiotics or stop them? My own conclusion is to keep taking a maintenance dose of 5 billion live cells comprised of bifido and lactobacillus strains, sometimes adding *saccharomyces boulardii* that fights *Candida*. The purpose is to maintain my body pH at 7 or above. By the way, my throat now stays clear and my voice output has normalized (i.e., no hoarseness) since I started maintaining the pH at 7. When my gut or stomach feels bad, I take at least 20 billion for a few days before settling down to my maintenance dose. I appreciate any comments from readers on my position.

–Ratan Singh, PhD<sup>1</sup>

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