Reversing Heart Disease
The Easy Way

By

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Introduction

I am going to tell you about the world's very best treatment for atherosclerosis (aka hardening of the arteries via plaque deposits). It doesn't involve drugs or surgery, primarily requires commonly available nutritional supplements and usually substantially improves the patient's condition inside of a month. This therapy has been around for 50 years, has been effective in tens of thousands of cases, and has been championed by Linus Pauling, who was a two-time recipient of the Nobel Prize. The supplements usually cost less than $90 per month and the major side-effect is that you become more resistant to colds and flu.

In this book, "heart disease" will always mean the partial-blockage of arteries by plaque deposits that can also be known as atherosclerosis, arteriosclerosis, and hardening of the arteries. There are other types of heart disease that this book does not pretend to deal with. If you have any of the other types of heart disease, you should be careful to remember that this book only applies to those partial blockages. I chose to use the words "heart disease" because the vast majority of heart disease is this type, and because average people tend to discuss it using exactly these words.

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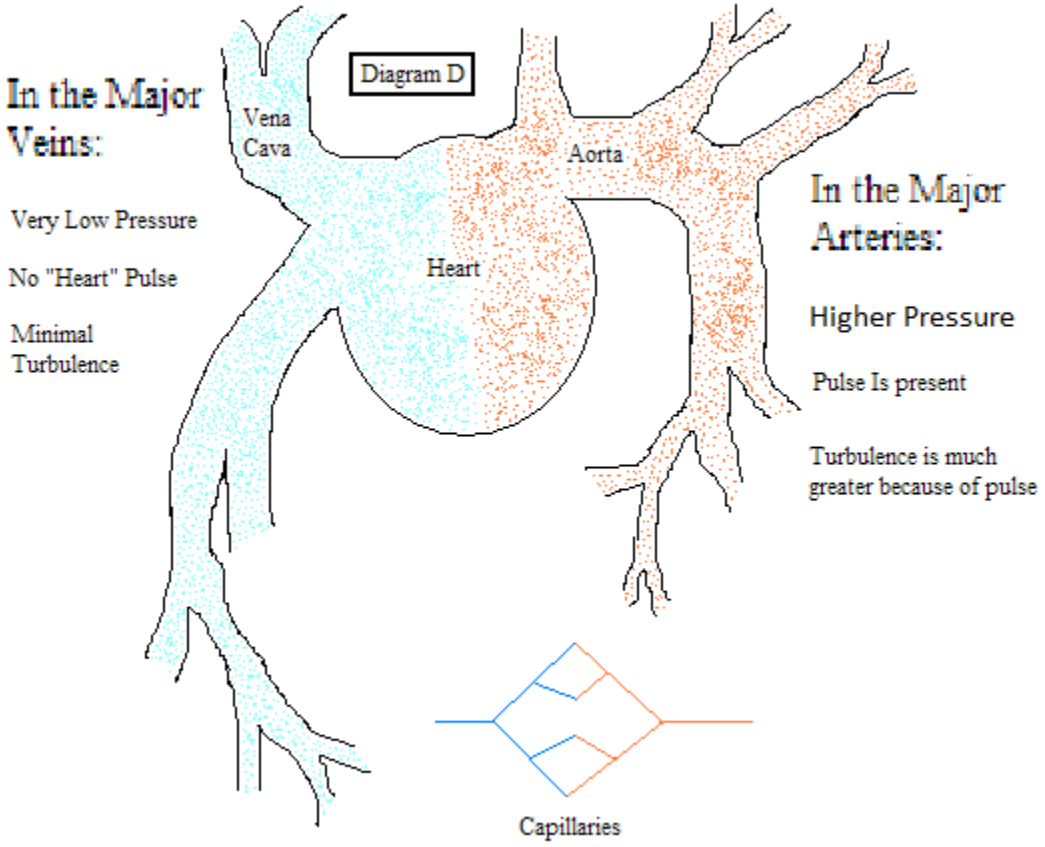
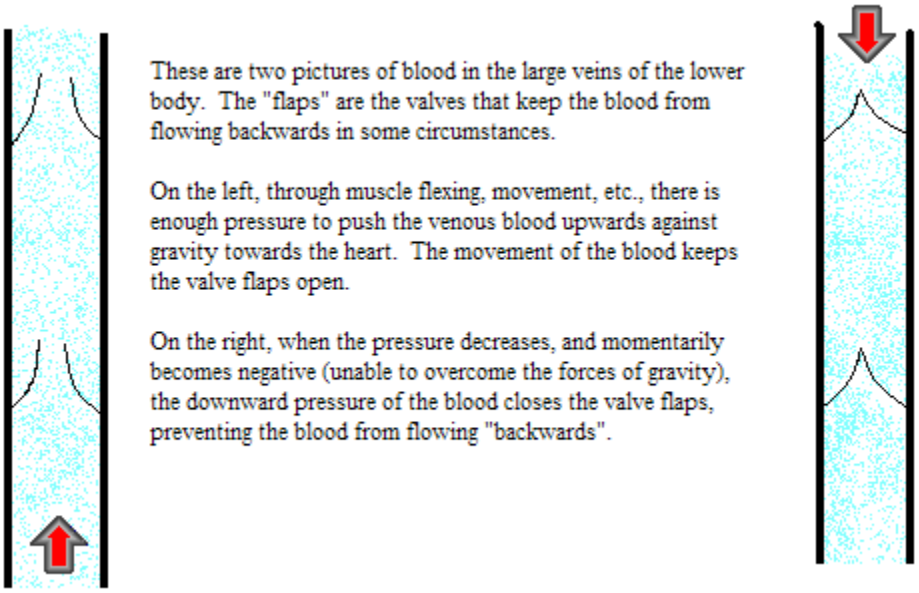
Chapter 1 - Two Conventional Wisdoms

Conventional Wisdom #1
(Can You Believe This ?)

The following is a very simple diagram of the blood flow in the cardio-vascular system:



Here is another diagram that also shows valves in the lower part of the body in the larger veins.



These are two pictures of blood in the large veins of the lower body. The "flaps" are the valves that keep the blood from flowing backwards in some circumstances.

On the left, through muscle flexing, movement, etc., there is enough pressure to push the venous blood upwards against gravity towards the heart. The movement of the blood keeps the valve flaps open.

On the right, when the pressure decreases, and momentarily becomes negative (unable to overcome the forces of gravity), the downward pressure of the blood closes the valve flaps, preventing the blood from flowing "backwards".

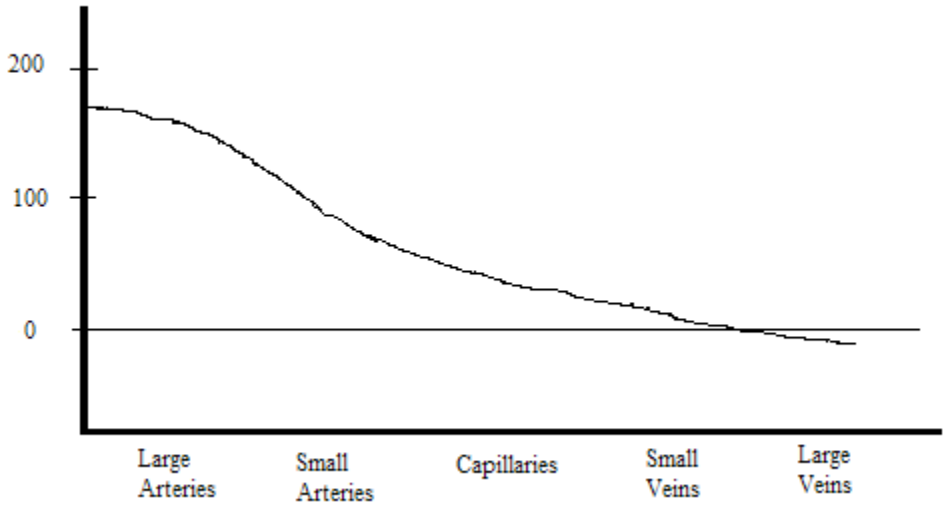
The heart pumps the blood out of the left ventricle and into the “large arteries”. Then come the smaller arteries and the capillaries. On the way back to the heart, the blood goes from the capillaries to the small veins, then to the large veins, and back to the right side of the heart. The right ventricle supplies blood to the lungs, where exchange of gasses occurs, and this blood comes back to the left auricle.

It is worth noting that the coronary arteries are the “first” arteries supplied blood from the left ventricle, as they take blood to the heart right after it passes the aortic valve. The blood that nourishes the heart muscle is not the blood contained within the heart, but instead the blood brought to the heart through the coronary arteries.

I want to point out several characteristics of the blood, as it moves along its path. Those characteristics are: pressure, speed, and turbulence.

Blood Pressure

Here is a diagram of blood pressure as it moves through the circulatory system:



The numbers on this graph are very arbitrary. With any given person they could be very different. However, the trend of the line is fairly predictable, and almost always falls slightly below zero just before the blood returns to the heart.

You will notice that the pressure is highest at the source of the pumping action of the heart (In the big arteries), and that it gradually decreases until, just before it gets back to the heart (in the big veins), the pressure actually goes just a bit below zero. That "negative" pressure is overcome partly by suction, partly by the movement of muscles, and partly by the movement of the lungs as we breathe in and out.

Speed

Keep in mind that the arteries have a significant layer of muscle in them, and it is the job of this muscular layer to perpetuate the "pulse" generated by the heart. Throughout the arterial system the speed of the blood varies within the cycle of the pulse. It flows very fast for a short period of time, and then moves more slowly for a slightly longer time. By the time the

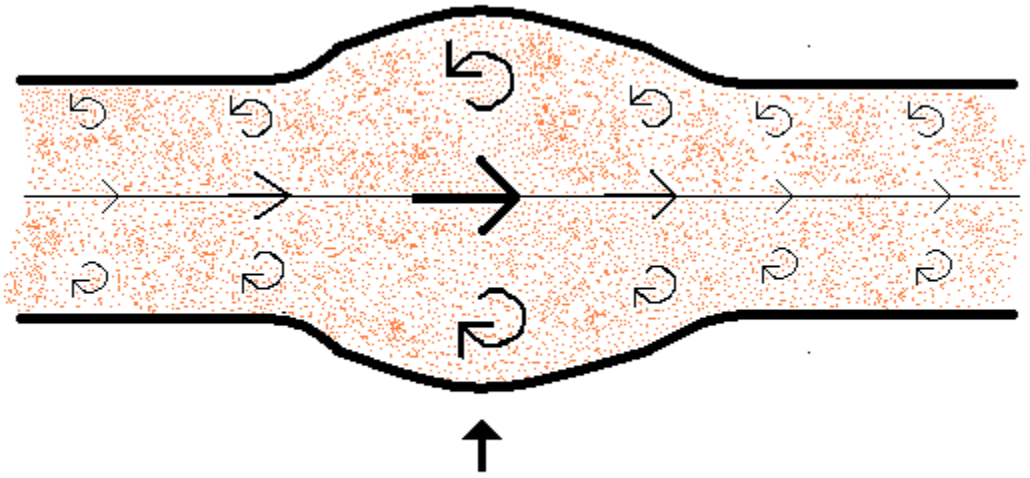
blood begins to return to the heart, the blood no longer pulses, but simply flows at a relatively constant speed.

Turbulence

If you have ever watched the flow of water in rivers and streams, you would know that the water in the center of the stream flows the most forcefully. The flow of the water at the edges is limited by friction with the river bank, and can often develop circular side eddies that even have areas where the water flows in the opposite direction from the larger flow of the river.

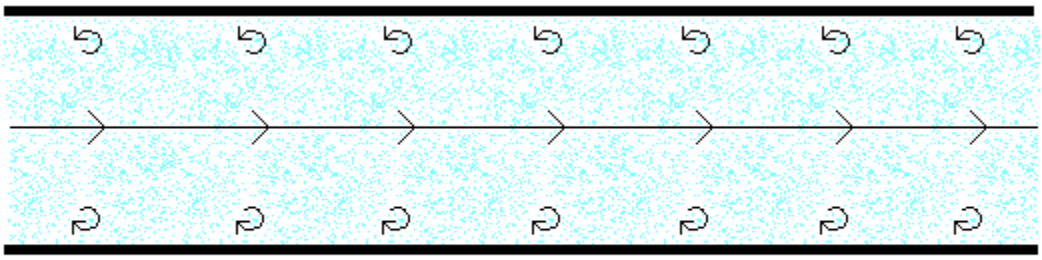
The flow of blood through the vascular system follows a similar pattern.

Here is a diagram of the flow vectors in a large artery



This is the pulse passing through the artery.

Here is a diagram of the flow vectors in a large vein



Notice that the forcefulness of the "side eddies" is greater in the arteries specifically because the blood moves more forcefully at the height of the pulse. This is why I make the statement that there is much greater "turbulence" in the arteries than in the veins.

So, you can see that the blood in the arteries has significantly greater pressure and turbulence than the blood in the veins.

The Cholesterol Problem

Cholesterol is one of the major topics tied to heart disease. Tens of billions per year are spent on blood tests to measure cholesterol levels and the drugs prescribed to treat this condition. At every step, we are warned about the deadly dangers of too much cholesterol, and we are told that, if it gets out of hand, we will end up on a first name basis with cardiologists, heart surgeons, and emergency room physicians (or, possibly dead from a heart attack).

Amidst all this talk about plaque deposits, what we really need is a model for how these plaque deposit problems develop. Here is one statement of the "conventional wisdom".

We are left to imagine that our blood can only hold so much cholesterol in solution, and when we go past that limit, some of that cholesterol will "fall out of solution" and then end up sticking somewhere in our vascular system.

I would like you to role-play that first piece of cholesterol that falls out of solution and tell me where you are going to stick. Remember the previous discussion of pressure, speed, and turbulence.

I routinely do presentations on heart disease, and steer the conversation around to just this question. The usual consensus is that first piece of cholesterol will stick somewhere in the large veins. Of course, there are some who insist that that piece of cholesterol will settle somewhere in the large arteries, but then I remind them about the pressure and turbulence that would make it almost impossible for the cholesterol to settle in the arteries, and they always acknowledge the superior logic that puts that first damaging piece of cholesterol in the large veins.

From this point, it is easier to imagine that, because cholesterol is sticky, that the next piece of cholesterol will have an even better chance to stick to the first, and so, before long, a plaque deposit will be forming.

Then I ask them to "name" the condition. If they don't come up with a really descriptive one, I suggest "hardening of the veins". I proceed to ask them if they have ever heard of "hardening of the veins". When they say they haven't, I admit to them that I haven't either, and I ask them why do they think none of us have ever heard of this condition ? Of course, the answer is that it never happens. (Actually it does happen, but it's so rare that "never" is a fairly accurate approximation of the frequency).

We then discuss the fact that heart disease always involves plaque deposits in the arteries. The point here is that plaque deposits could not possibly be caused by excess cholesterol just acting how cholesterol would act on its own. What this means is that high cholesterol doesn't "cause" plaque deposits, or at least not all by itself.

So, let me summarize Conventional Wisdom #1.

Your blood can only hold so much cholesterol, so when your levels get too high, some of that cholesterol starts to just fall out of solution. Because it is sticky stuff, it wants to find a place to stick to somewhere on the walls of the vascular system. This cholesterol curiously rejects sticking to the walls of the large veins, or even behind the valve flaps of the veins of the large veins in the lower portions of the body (where low pressure and turbulence

would never threaten to scrape it from its chosen location). Instead, this cholesterol settles into the most difficult place in all of the circulatory system to attach. It comes to rest on the walls of the large arteries, and especially the coronary arteries (which is the place where there is the highest levels of pressure and turbulence.)

From there, the plaque deposit grows and eventually a blood clot comes along and there you have it – a heart attack.

Can You Believe This ? I can't.

Conventional Wisdom #2

In the past couple of decades, medical researchers have discovered that the original bit of plaque in any plaque deposit is "drawn to" locations where there is inflammation related to damage to the artery wall. From this starting point, the development doesn't seem to differ much. Once the plaque starts, it builds (seemingly because there's too much cholesterol in the blood). Finally, the open area of the artery at the location of the plaque deposit is so small that a small blood clot can get stuck there and totally close off all blood circulation past that point.

Additional research indicates that some of the blood clots that close off these clogged arteries are blood clots formed elsewhere that just happen to be passing by this clogged artery and get stuck. However, some of these clots come into being from bleeding from the artery wall right at the site of the plaque deposit !

The medical professionals and researchers pushing this "more advanced" description of heart disease also tend to take note of "more advanced" markers and have also focused upon measuring C-Reactive protein, which is a measure of inflammation, and high homocysteine levels, which is known to promote blood clots and damage artery walls.

From this "conventional wisdom #2", we have a much more developed picture of what is really causing heart disease. We see the following:

The process starts when there is inflammation in an artery wall brought on by damage at that location.

Cholesterol and other materials needed to form plaque deposits are drawn to the locations where this inflammation exists.

High homocysteine levels promote the clotting of blood and damage the inside of artery walls. High homocysteine levels are a risk factor for heart attacks.

C-Reactive protein is an indicator of whole-body inflammation levels. High C-Reactive protein levels are a predictor of heart attacks.

Some of the blood clots that close off arteries at the site of plaque deposits come directly from bleeding in the artery walls at the location of the plaque deposit. [1]

With this more advanced information, the treatment changes very little, except that vitamins B6, B12, and folic acid are commonly recommended to reduce the homocysteine levels, and more tests are available to better evaluate the level of the heart disease.

The treatment is still primarily drugs to lower the cholesterol, lower blood pressure, and thin the blood to limit blood clots.

What bothers me about this more advanced view of heart disease is that there are several obvious questions staring us in the face which conventional medical researchers refuse to ask. Here are a few:

If localized damage/inflammation begins the process of building a plaque deposit, how can this damage be prevented or reversed ?

Why does the cholesterol seem "drawn" to the area of inflammation in the artery wall ? Is this entirely a maladaptive response ?

Is the bleeding in the artery wall that ends up forming a blood clot at the location of a plaque deposit in any way related to the original damage/inflammation that started the whole process ?

These are not hard questions to ask, and the logic of these questions is not beyond the powers of students in a junior-high science class. Yet, I have

been unable to find any such discussion. If these questions are being posed in a clinical research setting, I would like someone to e-mail me and point this out. (danielcobb2@yahoo.com)

Chapter 2 – The Vitamin C Theory

In this chapter, I am going to present what I believe to be a theory of heart disease that withstands much greater scrutiny than the conventional model.

Let's suppose that you had a very small pinhole in the vena cava (the largest vein) and the Aorta (the largest artery). Would you be worried ? If so, which pinhole would you be most worried about ? Of course, the pinhole in the large artery would be more threatening. The high pressure would cause much more bleeding and would also have the capability to tear open that pinhole and result in bleeding that could kill someone very quickly. I will call this "breakthrough bleeding".

A response to such a problem begins well before it ever reaches the pinhole stage. Your body "knows" that a damaged area in a large artery could easily become a life-threatening problem, so something needs to be done about it quickly. Of course the standard response to any damaged tissue is to repair it. Under optimal circumstances, this is exactly what would occur.

In the case of a damaged artery wall, repair revolves around laying down new collagen fibers. Collagen is one of the most abundant proteins in the body, and it forms the basis for most of the strength of connective tissues such as skin, ligaments, and artery walls.

Let's imagine that you were doing some cooking, and the list of ingredients for your dish were flour, water, butter, saffron, and salt. Each recipe has a critical ingredient. If I were to look in my kitchen, I would probably find the flour, water, butter, and salt. The saffron would not be so predictable. Even if you like to cook with saffron, I might not have it on hand because it is so expensive. So, in this recipe, the saffron is the "critical" ingredient.

Likewise, there is a "recipe" for making collagen fibers, and this recipe has a most "critical ingredient". This ingredient is vitamin C. To see why vitamin C is the critical ingredient, we need to look at why vitamin C might be commonly in short supply.

Vitamin C is abundant almost everywhere in our food supply. It is found in almost every fruit, vegetable, and even in meats. The problem is that vitamin C (ascorbic acid) is an unstable molecule and is very heat sensitive.

So, if you pick an apple from a tree, it will have plenty of vitamin C, but if you turn it into applesauce and cook it along the way, the vitamin C is gone. Similarly, if you cut the apple into pieces and dry it, most of the vitamin C would be destroyed. Also, if you put that apple in a box, send it 1000 miles away, and make it sit in a warehouse for a month before someone takes it home, the amount of vitamin C will have gradually diminished over time.

Exposure to oxygen, heat and light, over time, will all deplete or completely destroy vitamin C. So, if most of your food is cooked, dried, pickled, preserved, processed, packaged, prepared, or just plain "old", then you will not be getting very much vitamin C from your food.

Furthermore, vitamin C can't be stored in the body. What you need today needs to be consumed today, so you can't make up for a vitamin C-poor diet with the occasional gorging on kiwis and grapefruit.

The problems of vitamin C don't stop there. Vitamin C has many uses. It is a primary antioxidant, is extensively used in immune function, is essential in stress response, chelates toxic heavy metals, AND is required for the production of collagen fibers. That is, of course, if there is any left for this purpose.

Compare yourself with someone living 100 years ago. You live in a much more chemicalized, stressful world, and you food is much more likely to be processed, packaged, and prepared. You probably need more vitamin C than a comparable person from a century ago, and you probably consume less. What this means is (unless you take vitamin C supplements), you are probably almost always a little deficient in vitamin C.

Plan B

Now, let's return to the problem of the damage to the artery wall. We need vitamin C to fix it, but there isn't enough to do the job right now. Fortunately, you body has a "Plan B". While we are waiting for enough vitamin C to appear and make normal repairs, the weakened area of the artery wall will be coated with something that will reduce the danger of any breakthrough bleeding. What should we use to coat the area ? How about something that will be sticky enough and waxy enough so that it can hold onto the artery wall and not just be dissolved back into the blood right away

? This coating also needs to be flexible enough so that it doesn't break into pieces when the arteries move and flex.

Now that you know the purpose and the specs for a plaque deposit, you can see what a brilliantly-designed substance it is. Plaque deposits are not your enemy. Cholesterol and the plaque deposits that it contributes to are trying to save your life. When applied to a weakened area of an artery wall, they are nature's perfect band-aid designed to prevent breakthrough bleeding.

The problem with "Plan B" is that people don't seem to be aware of it. The formation of plaque deposits, right up until the very advanced stages of heart disease cause no pain or obvious symptoms. There is no voice whispering in our ear – "get more vitamin C".

The result is that we don't know anything is wrong, and we don't change out diet and we don't get vitamin C supplements. Instead of fixing the damaged artery wall next week or next month, we allow more and more damage to the arteries to occur. When more damage occurs in an already damaged area, the artery wall becomes weaker, and so the appropriate response is to make the plaque deposit even thicker. This process usually continues until a blood clot closes down a narrowed artery completely. When this occurs in a coronary artery, we call this a "Heart Attack".

Testing the Vitamin C Theory

The vitamin C theory sounds interesting on paper, but it is nothing more than a theory until you test it out. The logic of this theory indicates that the damaged artery walls hiding behind plaque deposits are just waiting for the correct nutrients to fix all the damage. Furthermore, this theory states that the plaque deposits were purposely placed over the damaged portion of the artery walls to protect them from breakthrough bleeding. Therefore, when the damage to the artery walls is repaired, the plaque deposits should be "released".

And this is exactly what has been observed thousands and thousands of times. Furthermore, I am not talking about a statistically significant 3% of heart patients that have a reversal of their condition, or an occasional success here and there. The observation is that the vitamin C cure for heart disease works ALMOST EVERY TIME. It works so consistently that,

within the small medical community that is aware of this therapy, further inquiry tends to focus on the cases where it *doesn't* work. [38]

History of the Vitamin C Cure

Fortunately, I am not the originator of this heart disease therapy, and so there is some history to refer back to. One of the most prominent promoters of this therapy was Linus Pauling. He was the recipient of two unshared Nobel Prizes and 48 honorary Doctorates, and he repeatedly used the word "cure" when he talked publicly about the vitamin C therapy for heart disease. Anyone with internet access can search for his articles, and even videos. He was not the first, but just the most visible to promote the vitamin C heart disease cure. The trail of proponents goes back more than 50 years. [39]

Chapter 3 - The Heart Disease Prescription

I have been referring to the "Vitamin C" theory and the "Vitamin C Cure" for heart disease as if that is all that you need to do – take enough vitamin C and your heart disease will go away. I was using vitamin C in the name because the number one nutrient is vitamin C, but there are several others that are required, and many beyond that that can be useful.

In this chapter, I will cover all of the recommendations for supplements and dietary changes that together will reverse heart disease. I will list them in their approximate order of importance and try to give you enough information on each one so that you can put together your own program.

Vitamin C

Some nutritionists say that ascorbic acid is not vitamin C. They instead make the claim that vitamin C is a composite of ascorbic acid allied with many nutritional factors that work with ascorbic acid. I accept the idea that there are a lot of nutrients that contribute towards the benefits derived from ascorbic acid. But I contend that this is just a squabble over a naming convention. When I say "vitamin C" in this book, I mean specifically ascorbic acid. Any other "allied nutrients" I will mention by name.

If you go to the health food store to purchase some vitamin C, make sure that you look at the chemical name on the back of the bottle. For example, a common form of vitamin C is calcium ascorbate. There are also other mineral-ascorbate forms. These are pH-neutralized forms of vitamin C. It limits problems with stomach upset that can occur in some people, and it also delivers some of the nutrient calcium (or other minerals). If you are going to take one or two grams of vitamin C, this might be a fine way to get your vitamin C, but if you are getting this vitamin C for the purpose of treating heart disease, you might intend to take quite a bit more that one or two grams per day. In this case, the amount of calcium (or other mineral) might be an overdose. For this reason, I always recommend that heart patients take their vitamin C as pure ascorbic acid. Usually a vitamin C product that really is pure ascorbic acid will have just one item on the list of ingredients – ascorbic acid.

For someone who is an advanced heart disease patient, I usually recommend somewhere between 6 and 12 grams/day. For someone who merely wants to take this formula as a preventative, I recommend about 3 grams/day. Vitamin C does not stay in your system for very long. Particularly when you are taking larger doses and have a more advanced heart condition, it is advisable to split up the vitamin C into several smaller doses per day.

For someone with heart disease, I recommend that you find the right dosage by increasing the dosage until you get some diarrhea. This is called "bowel tolerance" and indicates that you exceeded the amount of vitamin C that you needed. Back the dosage down a bit and continue on.

If you are taking pure ascorbic acid as a powder, be careful not to keep it in your mouth too long. The acidity of the solution is enough to erode the enamel of your teeth if you routinely drink it slowly and swish it around in your mouth.

The only overdose symptom for vitamin C is the diarrhea that I have mentioned. There are no other consequences related to the diarrhea (as long as you are taking pure ascorbic acid).

L-Lysine

L-Lysine is an amino acid. It is used in the creation of collagen fibers.

A common collagen fiber looks like a 3-strand rope. The "rope" consists of a strand of L-glycine molecules, a strand of L-proline molecules, and a strand of L-lysine molecules. These strands of amino acid chains are twisted around each other in a helical fashion and, in fact, do look like a rope. Of all the amino acids, L-glycine is the simplest one chemically and, in general, is always in ample supply in the body. L-proline and L-lysine, the other two amino acids in the collagen fiber, however, are not always in ample supply, and the body benefits from supplementation to ensure good collagen synthesis.[2]

L-Lysine also helps to "dissolve" away the plaque deposits in very small pieces as the artery walls heal and "melt" the plaque deposit. It does this by attaching to the bonding sites where the plaque deposit attaches. You

would definitely want to avoid the possibility that a plaque deposit separated as a large clump that could get stuck somewhere else in your circulatory system.

Wheat is a Lysine-deficient grain, and people who get a significant portion of their protein from wheat bread, pasta, etc. tend to be deficient in Lysine.

The dosage of L-Lysine should approximately match the dosage of vitamin C.

L-Proline

L-Proline is an amino acid. Like L-Lysine, it is part of some collagen fibers and it also helps to dissolve plaque deposits in very small pieces to prevent larger pieces of plaque from causing embolisms.

Linus Pauling And Mathias Rath MD received a US patent #5230996 in 1993 for a solution used during bypass surgery to melt-away plaque deposits near the surgical site. The solution was highly concentrated L-Lysine and L-Proline. [3] .

For the advanced heart disease patient, I recommend a dosage of about 1 to 2 grams/day. For the "preventive" patient, I recommend 500 mg/day.

Overdoses of L-Proline will cause nausea.

Vitamin E

It is a quirk of vitamin naming conventions that there are 8 different chemicals that are all called vitamin E. They have similarities, but they also do different things. To avoid vitamin E deficiency problems, you need a supplement with all 8 types. Check the back of the bottle and look for all 8 chemical names. There will be 4 tocopherols, and 4 tocotrienols. The tocotrienols (which are the least common type to be included in a supplement) are important in cancer prevention, and are critical in breast cancer prevention. [4]

It is important to note that the types of vitamin E tend to "displace" each other. Therefore, if you only supplement d-alpha tocopherol, you will be suppressing the availability and function of all the other seven types of vitamin E. [40]

There have been a lot of medical journal articles recently on how high doses of vitamin E are "dangerous". These are all either gross misinterpretations of the data or studies that were engineered to fail from the start. Many of these studies use only d-alpha tocopherol, which provides you with one of the 8 different types of vitamin E and suppresses the other seven types. Several other of these studies used dl-alpha tocopherol, which is the synthetic form of only one of the 8 vitamin E molecules. 7/8ths of dl-alpha tocopherol is plastic garbage and is not a naturally-occurring molecule. It is therefore predictable that studies done with this mostly useless chemical would produce results that dim enthusiasm for vitamin E.

Make sure you get a vitamin E with all 8 chemical names on the back of the bottle. Since the best kind of vitamin E for a heart disease patient is gamma-tocopherol, it is worthwhile to look for a brand with "High-Gamma Tocopherol". Take between 400 and 800 IU/day.

In my opinion, the best vitamin E supplements are produced by A. C. Grace. They put the 4 tocopherols in one supplement and the 4 tocotrienols in a second supplement. The tocopherols are available in a "High-Gamma" version. A. C. Grace doesn't combine the two groups of vitamin E because they compete for assimilation, and Grace's position is that they should be taken at different times during the day. Unfortunately, this vitamin E supplement is more expensive and seldom available locally.

If you are taking blood-thinners (warfarin or coumadin, for example), you need to be aware that vitamin E makes the blood "slippery" and therefore even less prone to clot. When starting to take vitamin E, you should simultaneously lower the dose of any blood-thinning medicine. A failure to do this could result in a bleeding stroke, which is the more deadly kind. Dropping the blood thinner medicine too quickly could result in a clotting stroke (not as serious as the bleeding kind) or a heart attack.

In this heart disease formula, there are several other blood-thinning nutrients, such as magnesium, B-complex, and especially L-Arginine.

Foods can also have blood-thinning effects, especially fresh fruits and vegetables that are consumed with all of their enzymes intact. You should be making your decision about when to reduce blood-thinning medications based upon your whole nutrient picture.

As time goes on, and the condition of your arteries improves, the logic behind taking blood thinners in the first place will disappear. You should check into cutting out the blood thinners entirely when related heart disease symptoms (high blood pressure, chest pains, out of breath quickly) return to normal. This indicates that your arteries have mostly healed up and the plaque deposits would be no where near as severe as when you started.

I have heard warnings that, even on a long-term basis, that high doses of vitamin E should be avoided because its tendency to promote bleeding. I pay little attention to these statements. Remember that vitamin E both promotes bleeding (has an anti-coagluant effect) and prevents bleeding at the same time. Of course, it prevents bleeding, because it is a strong anti-oxidant and therefore protects the integrity of all parts of the vascular system. At the risk of stating the obvious, vitamin E is a vitamin, and Coumadin is not. After the vascular system has been substantially repaired, there is little danger in having high and balanced levels of the 8 types of vitamin E in your blood.

Other than those who are taking blood-thinning medication, there are no overdose warnings for vitamin E until you double the dosage and reach around 1500 IU/day, at which point you might see nausea and/or tiredness in addition to increased tendency to bleed.

Co-Enzyme Q10

Co-Q10 is necessary for the production of collagen fibers, and it is needed in large amounts wherever there is high energy usage. Of course, the heart, because it is the one muscle that never rests, needs a lot of Co-Q10. Co-Q10 is naturally produced by our bodies, but this production usually declines as we age, so that most people over the age of 40 would benefit from supplementation. Heart patients, particularly those with high blood pressure, which forces the heart muscle to use more energy, stand to benefit from supplementation at even higher levels. The penalty for such heart patients whose Co-Q10 levels get too low is congestive heart failure. [5]

Co-Q10 is produced through the same biological pathway as cholesterol. The most popular class of cholesterol-reducing drugs are statins. All statin drugs work by inhibiting that biological pathway that produces cholesterol, and therefore also reduce the natural production of Co-Q10. So, when a statin drug is prescribed for a patient with heart disease, they are trading the theoretical but highly debated benefit of lower cholesterol for the almost certain problem of further reducing desperately-needed Co-Q10 levels. Red Yeast Rice is a naturally-occurring product that works by the same metabolic inhibition, so it will have the same adverse effect on Co-Q10. [6]

Merck, who produced one of the first statin drugs Mevacor, was aware of this problem from the very beginning. They even went so far as to patent a drug that would combine Mevacor with Co-Q10. During the process of getting that patent, the use of Mevacor rose so sharply that, when the patent was finally received, it was clear to Merck that the potential market for Co-Q10 combined with Mevacor was far greater than the entire world supply of Co-Q10, and that if they pushed this "combination" drug, they wouldn't be able to sell as much Mevacor. In addition they would be initiating a public discussion about the adverse side effects of statin drugs. So, as expected, they did the right thing – for the bottom line. They did not market the Mevacor/Co-Q10 combination, and we have seen a dramatic rise in congestive heart failure ever since. Merck threw us under the bus, but not of course, before they picked our pocket. [7]

Dosage – There is no overdose problem with Co-Q10, so err on the high side if you are in doubt and cost is not an issue. I usually recommend between 60 and 100 mg/day, but I have heard of benefits for doses several times this level. Co-Q10 requires oil to be properly absorbed, so take it with a meal where some fat/oil is consumed.

Country of origin can be a problem. For years, all the Co-Q10 was made in Japan. Recently, some Co-Q10 has been made in China, and there have been quality control problems that have led to allergic responses and overall negative results from the Chinese product. Until this is resolved, it is worthwhile to check with the manufacturing company to see where they get their Co-Q10.

Copper/Zinc

Copper is a more recent addition to the heart disease formula. Decades ago, most homes had copper pipes and most people drank tap water. Even the slightest bit of acidity in their water would leach sufficient copper to meet their nutritional needs. Now, a lot of people are aware that their municipal tap water should not be used for drinking (because it has chlorine, fluoride, aluminum and other contaminants) . In addition almost all new homes have water pipes made from PVC. Predictably, copper deficiencies have been popping up everywhere.

Copper is required for the creation of collagen fibers. Deficiency symptoms (besides heart disease) would primarily be microcytic anemia, where the red blood cells are too small. Overdose symptoms include nausea, digestive problems, mania, paranoia, and related mental problems.

Copper over-accumulation is much more likely in vegetarians than in meat-eaters. Zinc helps to limit copper accumulation, and zinc is likely to be deficient in a vegetarian diet. Zinc is also important in healing damaged tissues (including artery walls). Therefore the copper/zinc balance is an important but difficult topic to get exactly correct.

Copper dosage should be in the area of 2 mg/day, and Zinc should probably be in the area of 30 mg per day. If you are a vegetarian or have copper pipes in your house, you might consider skipping the copper, and just supplementing the zinc. Most of the rest of you might do best to find a zinc/copper combination supplement.

For those who have worries about Mad Cow Disease/BSE/CJD, you should be aware that it all starts as a copper deficiency. The time-line of the rise of this condition in people corresponds with the conversion of copper pipes to PVC. For all those who wish to pursue this topic, I strongly recommend the original website of Mark Purdey - http://www.markpurdey.com/.

Magnesium

Magnesium should probably be labeled as the number one mineral for heart disease patients. Magnesium is very effective at treating heart arrhythmia, is an anti-coagulant (debatably better than aspirin), is required for many energy-producing metabolic reactions, and tends to relieve cramps. It is one of the most common mineral deficiencies among people who do not take supplements.

I usually recommend between 200 and 400 mg/day. At these dosage levels, it is unlikely you will get any adverse reaction even if you are not deficient. Too much magnesium can result in diarrhea (think milk of magnesia). Avoid magnesium oxide as it is the most difficult to absorb. I prefer to recommend magnesium malate, as it is easily absorbable, and the malic acid that it is combined with will help dissolve gallstones.

The malic acid portion of magnesium malate is not just a trivial topic. You should know that "gallstones" are probably more plentiful in the liver than the gallbladder, and can "plug up" the sinusoids that filter the blood in the liver. A wide variety of problems can result even if a small group of the several hundred functions of the liver are limited because of congestion from gallstones. **8**

This country has been on a "calcium kick" for about the past twenty years and it is worth mentioning one of the adverse effects here. Calcium and magnesium work in opposition to each other. Calcium limits absorbtion of Magnesium, and it has many of the opposite effects physiologically. Where Magnesium causes muscles to relax, Calcium causes them to contract. Also, Calcium is known to cause constipation. This is important to keep in mind when supplementing either one.

I have had patients who have exhibited signs of magnesium deficiency. I advised them to start taking magnesium. They would go down to their local health food store and talk to the person working supplements to help them pick out a magnesium supplement. They would be advised that calcium and magnesium are commonly taken together and that they should buy a supplement that contained both. They would come home with a Cal/Mag supplement that had a Ca/Mg ration of 2:1. This would make their

magnesium deficiency symptoms worse because the high dose of Calcium would more than overwhelm any benefit from the low dose of Magnesium. Getting a different supplement either with no calcium or with a 1:2 ratio (more Mg than Ca) usually fixed the problem.

B-Vitamins

B-Vitamins are usually best taken as B-complex, rather than as singles. Because many of them work together on several metabolic processes, supplementing just one may rev-up the whole system for a brief time and result in deficiencies of other B-vitamins.

B-vitamins affect heart disease patients in two significant ways. A person with high blood pressure is going to have to make their heart work harder to pump the blood. This is going to require more energy usage by the heart muscle, and therefore a better supply of B-vitamins.

High homocysteine levels have drawn much attention as a problem for heart disease patients. Homocysteine tends to irritate artery walls and it tends to make blood more prone to clot. Both of these are serious problems. High homocysteine levels are resolved by taking B-6, B-12 and folic acid.

A note on B-12 supplements. Most B-12 supplements have the chemical name cyano-cobalamin. This is a precursor to the active form of B-12. It is the cobalamin molecule attached to a cyanide molecule. It needs to be converted to the active form. This will usually happen in the liver. As people age, the liver sometime weakens and in some cases is unable to perform this conversion, leaving the patient with plenty of cobalamin in the bloodstream, but no usable B-12.

The conversion involves replacing the cyanide molecule. The result of this conversion is that the cyanide is released in the liver. The amount of cyanide is very small, and is almost always detoxified adequately. I have read of one case where someone actually died from cyanide poisoning from routinely taking large doses of cyano-cobalamin over a long period of time. My concern however, isn't about the 1-in-a-billion case, but instead the stupidity of voluntarily introducing cyanide into your liver, even if it is a small amount.

I always recommend getting B-12 either as methyl-cobalamin or as dibencozide.

Niacin (B3)

Niacin has a long history of reducing cholesterol levels. Some people take this as an alternative to statin drugs or other cholesterol-reducing strategies. I want make sure that you understand what I have said previously that CHOLESTEROL IS NOT THE PROBLEM. High cholesterol in a heart disease patient is evidence that your body is responding correctly to heightened levels of damage/inflammation/tissue repair going on throughout your body.

Niacin, particularly when flushing occurs has a detoxifying effect, and if you are using it for this reason, I have no objection. However, other than as part of a B-complex, I don't recommend additional niacin.

I have been able to find studies that show that the high levels of niacin (several grams per day) used to lower cholesterol levels actually reduce mortality (unlike statin drugs), but I am wondering about two things:

What would the effect have been if a considerably lower dose of niacin – something in the neighborhood of 200 mg/day – had been used instead ? It is possible that the subjects in these trials were niacin deficient so that any additional niacin would show benefits, even if there were also overdose symptoms.

What is the mechanism for the reduction of cholesterol levels by niacin ? If the cholesterol is removed directly, then I can foresee problems. But, if the niacin works indirectly – by fixing the background problems that require high cholesterol in the blood, limit free-radical damage, and reduce inflammation, then I would be much more favorable.

Rutin and Other Bioflavonoids

Some nutritionists say that vitamin C is not just ascorbic acid, but also includes many other chemicals that work in conjunction. Bioflavonoids fall in this category. They will always help ascorbic acid to be more effective. They assist in the absorption of ascorbic acid and make it persist longer in the blood by preventing its breakdown. Rutin is the one bioflavonoid that is most specific to the circulatory system, which makes it the perfect bioflavonoid for a heart disease patient. Consequently, when I recommend bioflavonoids, I hope that you can find a supplement where Rutin is the bioflavonoid with the highest dose.

Dosage – More is better. Extremely high doses may cause diarrhea, although is makes more sense to suspect a vitamin C overdose than a bioflavonoid overdose if you do experience diarrhea. Take at least 500 mg/day. I take 1 gram per day. If you have advanced heart disease, you should consider taking 2 or 3 grams per day.

Omega-3 Fatty Acids

Omega-3 fatty acids can't be produced by humans, and so must be consumed in the diet. Common sources are flaxseeds/oil, chia seeds/oil , hempseeds/oil, and fish oil. All omega-3 oils are volatile and tend to go rancid much easier than more stable oils, such as olive oil.

Humans have a need for a variety of different types of fats and oils. Omega-3 fatty acids are one of those requirements. The reason why we are bombarded with information that omega-3 oils are so *good* for us is that the food on the supermarket shelf has just about none.

From the perspective of a food packager/processor, omega-3 oils are "the enemy", because the food that is packaged and processed will have to sit in warehouses and on the supermarket shelf so long that the omega-3 oils will turn rancid before the food is eaten. Of course, the result is that the food industry would lose billions of dollars per year in spoiled returned food unless they meticulously avoided putting these omega-3 oils into most foods.

So, we need to seek out sources of omega-3 oils in order to avoid deficiency problems. Omega-3 oils are used wherever oxygen needs to be moved around very quickly and in large quantities. Omega-3 oils are most prominently used in the brain, nervous tissue, retina of the eyes, heart, lungs, and reproductive organs. It is because of how fast the omega-3 oils can go through chemical reactions that we can see "continuously" instead of as a series of stills.

Just because you have discovered how valuable omega-3 oils can be doesn't mean that the omega-3 oils that you buy will be exempt from the rancidity problem. Keep in mind that light, heat, and oxygen all contribute to rancidity. So, NEVER cook with omega-3 oils, always keep them refrigerated, and keep the bottle closed except to dispense some oil.

If you buy liquid omega-3 oils – buy the smallest containers. This gives you the best chance to use the oil before it goes rancid. Buy it from refrigerated shelves only, and you should know that the black plastic containers do the best job of keeping the light out. Make sure you can taste the oil. This is the only way you can know if it has gone rancid. If it tastes "bad", it probably is – throw it out and get more. Rancid oil does a lot more harm than good.

If you buy gel-caps – The gel-caps do a good job of protecting the oil from oxygen and light, and are therefore not always refrigerated when you buy them. I still recommend that you get them in small bottles and I still favor the black plastic containers because it limits light energy from reaching the oil. My one strong recommendation is that you should make a point to taste the oil about once per week. Bite into one of the gel-caps. If it tastes "bad", throw away the whole bottle.

If you are buying fish oil – Remember that fish oil is the much more volatile than flaxseed oil. There will always be at least a little bit of rancidity in fish oil, but it is so "good" that it is acceptable to put up with a little bit of rancidity.

Fish oil doesn't smell or taste "fishy" naturally. The smell and taste that we have come to call "fishy" is actually a low level of rancidity that happens before any fish can be brought to market. The more fishy the oil smells/tastes, the worse it is. Even flaxseed oil can have a "fishy" taste.

Arginine

L-Arginine is an amino acid that can do triple-duty for a heart disease patient. It is an anti-coagulant which works much better than aspirin, it reduces blood pressure, and it protects the inner lining of the artery walls. By its virtues, it deserves a much higher place in this collection of "additional nutrients for heart disease", but it does have one significant drawback.

L-Arginine promotes the reproduction of a collection of viruses that include herpes, cytomegalovirus, and Epstein-Barr.[9] In that I am promoting this collection of nutrients as relatively "worry-free" and with a very low potential for overdose problems or adverse effects, I must downplay L-Arginine just a bit.

On the other hand, it is likely that some people following this nutritional prescription who have one or more of these viruses will have no adverse effects. This is because L-Lysine prevents outbreaks of these viruses, and L-Lysine is found in this formula in dosages much higher than the typical dosage of L-Arginine. Also vitamin C, vitamin E, and the mineral Selenium (to be discussed a little later in the list), contribute significantly to immune function, and would further diminish the possibility of viral outbreak.

The most comprehensive article available on the internet on the subject of L-Arginine and its uses for the heart disease patient is:
http://www.vitamincfoundation.org/arginine.htm
I strongly recommend reading this. As you read more about the use of L-Arginine as a nutritional supplement, you will also run across suggestions for dosages of 10 grams per day or more, as a way of overcoming certain biological limitations, such as getting past the blood-brain barrier. In choosing a dosage for heart disease patients, I am interested only in supplementing deficiency and working within normal biological processes. In line with this approach, I recommend dosages of L-Arginine of approximately one gram per day.

The article posted on the Vitamin C Foundation website that I have just mentioned makes several points that are worth summarizing here. The basic idea of that article is that hundreds of millions of people worldwide are taking an aspirin a day as a way of dealing with heart disease and preventing

heart attack. L-Arginine is presented as a highly superior alternative to aspirin for the following reasons:

1. A close inspection of the clinical trials used to promote the aspirin-a-day idea are seriously and obviously flawed. (See later article on An Aspirin A Day …)

2. Aspirin is an "unconditional" anticoagulant. This means that it always suppresses coagulation, even in those cases where you need coagulation to suppress bleeding. For this reason, the use of aspirin has always been associated with bleeding strokes (the more lethal kind) and ulcers of the intestinal tract.

L-Arginine, on the other hand is a "conditional" anti-coagulant. It will help thin the blood, except in the presence of inflammation and tissue damage, where it will not interfere with normal coagulation. Therefore, it would have the positive effects of aspirin without the negative side-effects.

3. Aspirin is capable of dissolving tissue. Next time you have a wart on your hand, put an aspirin tablet directly on top of the wart, and put a bandage on top of it to keep it in place. Replace the aspirin/bandage each day. In a couple of days, the wart will be gone – because the aspirin dissolved it.

Once you understand that the fundamental problem in heart disease is the integrity of connective tissue in the artery walls, it seems beyond belief that competent medical authorities would recommend the use of a substance that is capable of dissolving tissue. Of course, the concentration of aspirin is greatly reduced once it gets into the blood, but the principal is still in effect. The only difference is that the adverse effect happens at a much lower level.

Glucosamine Sulphate/Chondritin Sulphate

Glucosamine sulphate and chondritin sulphate are the raw materials to rebuild damaged cartilage. They have also been observed to help in building stronger connective tissues, so that the strength and integrity of artery walls can be improved. Though the improvement is tangential, because these supplements are not used in the production of collagen fibers, they do appear to be used to cross-link such fibers and make them more durable. [10]

Glucosamine sulphate is typically derived from the exoskeleton of shellfish, so that it is possible to have allergic reactions – even severe allergic reactions. For this reason, I put this supplement near the bottom of the list for heart-disease patients.

This, of course, should not imply that glucosamine sulphate/chondritin sulphate are not useful for such patients. There have been reports of significant benefits in heart disease, I should at least warn that the logic may be skewed here. Those who treat their cartilage/joint pain with glucosamine sulphate are often doing this in place of using COX-2 inhibitors such as Vioxx, which are known to promote heart problems.

Garlic

Garlic is a potent anti-coagulant as well as a food-source of selenium and a useful antibiotic/antifungal/antiviral. It will lower blood pressure. [11]

Lecithin

Lecithin is a food that is also a powerful emulsifier. It is used in all cells in the body, and especially in the nervous-system tissue. When a lecithin deficient person is given lecithin, a wide variety of problems may be improved or entirely cleared up.

In a heart disease patient, the primary benefit is to assist the L-Lysine/L-Proline dissolving of the plaque deposits slowly, so that no large clumps separate and cause a blockage elsewhere.

There are 3 major type of lecithin – soy, egg, and sunflower. Soy should not be used because it is almost always GMO, and can cause unpredictable problems because of unnatural proteins created by the areas of genetic modification. Sunflower and egg lecithin are both acceptable sources.

About two years ago, I was looking for some lecithin, and could not find egg lecithin on the shelf. So, I purchased soy lecithin instead. The package indicated that it was certified organic and non-GMO. I took the first teaspoonful, and within twenty minutes I had blurred vision in my left eye. This lasted for about 90 minutes. It had never happened before, and it has never happened since. I threw away the package of soy lecithin.

20 years ago, before GMO soy had ever come out of the lab, I had often consumed and recommended soy lecithin always without any adverse effect.

Cardio-C

Usually, I do not mention specific brands of supplements unless there are significant benefits to be gained from following vendor-specific recommendations. One such recommendation is the brand of vitamin C that I routinely purchase.

There are many packaged vitamin C-based heart disease formulas available over the internet. Cardio-C, which is sold by the Vitamin C Foundation is one of those formulas. I use this formula (I am my own most significant heart patient) primarily because I think that the Vitamin C Foundation sells the best vitamin C that I have been able to find.

The vitamin C in Cardio-C is L-ascorbic acid. Almost all vitamin C is synthetic (except for some food-based low-dosage sources). Almost all of the synthetic vitamin C is a 50/50 mixture of L-ascorbic acid and D-ascorbic acid. L-ascorbic acid is what is found in nature. D-ascorbic acid must be discarded by your body. Therefore, a purified L-ascorbic acid will be twice as effective as a random 50/50 mixture of both, plus it will have the additional benefit of not requiring excretion of the unusable "D-" portion.

Almost all synthetic vitamin C is produced from cornstarch. Corn is a common source of allergens, and is one of the two most common GMO

crops. I try to avoid the ingestion of all substances that are derived from corn. Cardio-C is never derived from corn.

Several decades ago, almost all the synthetic vitamin C was manufactured in Japan, the United States, or Germany. Over the past ten years, China has become the major manufacturer of vitamin C. China has a bad reputation when it comes to contamination and quality control. The Vitamin C Foundation never uses vitamin C manufactured in China.

Cardio-C also contains L-Lysine and L-Proline in proportions appropriate for the treatment of arterial weaknesses. So, there is an additional convenience for heart disease patients because three nutrients come in one package.

The phone number for the Vitamin C Foundation is 1-800-894-9025.

I have no financial connection to the Vitamin C Foundation.

Vitamin D and Selenium

Neither vitamin D nor selenium plays any significant part in creating collagen fibers or repairing artery walls. I address them solely because they are frequently mentioned in studies as being good for heart health. They are very good in this respect primarily because they prevent infectious disease, and the heart always does better when it is not suffering from an infection. A common virus that may involve the heart and create more fertile ground for heart attacks is the coxsackie virus.

Common dosages are 1000 IU/day for vitamin D, and 100 mcg/day for selenium.

A Generic Heart Disease Treatment Formula

Here is a generic formula designed to treat someone with advanced and serious arterial blockages:

Vitamin C – 6 to 12 grams in divided doses throughout the day
L-Lysine – 6+ grams per day

L-Proline – 1+ gram per day
Or
Cardio-C - 2 to 3 scoops spread throughout the day
And you may have to add vitamin C separately as 3 scoops will total about 7.5 grams ascorbic acid.

Vitamin E Complex (all 8 kinds) – Between 400 and 800 IU / day
Co-Q10 - 100 mg per day (take with oil consumption)
Magnesium Malate - 200-400 mg total magnesium per day
Zinc/Copper - Zinc 30 mg, Copper 2 mg take once per day
B-Complex - Follow dosage on bottle
Rutin / bioflavonoids – 2 grams in divided doses throughout the day
Flaxseed oil or fish oil – 1 teaspoon to 1 tablespoon per day

The cost of this level of supplementation would usually be under $90/month.

Here is a generic formula designed for prevention

Vitamin C – 3 grams per day
L-Lysine – 3 grams per day
L-Proline – 500 mg per day
Or
Cardio-C - 1 scoop per day

Vitamin E Complex (all 8 kinds) – Between 400 and 800 IU / day
Co-Q10 - 30 mg per day (take with oil consumption)
Magnesium Malate - 200 mg total magnesium per day
Copper - 1 mg per day
B-Complex - Follow dosage on bottle
Rutin / bioflavonoids – 1 gram per day
Flaxseed oil or fish oil – 1 teaspoon per day

The cost of this level of supplementation would usually be less than $50/month.

Chapter 4
What Conventional Medicine Expects To Achieve
What the Vitamin C Therapy Expects To Achieve

In this section, I am making some assumptions, and I am dividing the heart disease treatment world into two groups. One group will use primarily the "vitamin C therapy". The other will use primarily drugs and surgery. I will refer to this group as the "Conventional" group. Of course, the drugs and surgery group is by several orders of magnitude the bigger group. Both groups use recommendations such as stop smoking, reduce stress in your life, limit alcohol and routinely exercise moderately. Significant portions of the conventional group also make recommendations about omega-3 fatty acids, trans fats, saturated fats, and other dietary topics.

The following statements are not based upon specific citations of sources, because in this section, I must make very general statements.

Neither the conventional group nor the vitamin C group ever expects to completely cure their patients. Therefore, to one extent or another, both groups claims their patients for life.

The conventional group hopes that some improvement might occur through the use of the omega-3's, exercise, or even reduced stress levels. I was unable to find published percentages for such improvements. It appears the "success" in the conventional treatment world means that the damage is halted, or proceeds so gradually that the patient will likely die from something other than heart disease.

In some discussions, open heart surgery still falls within the definition of successful treatment as long as the patient doesn't die from the surgery.

Side effects are a problem. Blood thinners prevent the blood clots that might get stuck in a narrowed artery, and so they help to prevent both heart attack and clotting stroke (which is the more common but less serious kind). Unfortunately, thinning the blood also promotes bleeding strokes (the more deadly kind), and interferes with clotting where it is needed, such as healing from a bleeding injury. All drugs that reduce cholesterol levels, and especially statin drugs have a wide variety of negative side effects. Among

these are muscle pain, muscle weakness, peripheral neuropathy, dizziness, cognitive impairment, depression, low resistance to infection, and increased incidence of cancer. Then there are the blood pressure med side effects. Since there are so many different classes of hypertension medication, the list of symptoms reads like the list of just about everything that can go wrong with a human being.

The cost of conventional treatment will be in the 5-10 thousands of dollars per year even if no emergency-room visits or heart surgery are required, and closer to $60,000 per year if surgery is involved. Cardiologist visits are routine, and multiple drug prescriptions are the norm. If the patient has excellent health insurance, their out-of-pocket costs might be minimal.

The fact that heart disease is the number two cause of death in the United States is a reminder that the success of the conventional group is marginal. Please note that the only cause of death that exceeded heart disease in the United States, as of 2005 is iatrogenic diseases – which means disease caused by medical treatment. [12]

In the vitamin C group, success involves the substantial reversal of symptoms. Chest pains, energy levels, out-of-breath problems, high blood pressure and incidence of stroke, heart attack and congestive heart failure are all presumed to drop off to levels expected in populations that do not include heart patients.

The presumption is made that the patient is prone to heart disease and still has low levels of the symptoms including plaque deposits. If they reverted to their old habits, the more severe heart disease symptoms would return quickly.

Side effects are another area of significant difference.

The negative side effects of the vitamin C therapy include:

Diarrhea if the dose of vitamin C or magnesium is too high
Promotion of virus outbreaks if taking L-Arginine

The positive side effects include:

Improvements in integrity and appearance of skin
Improvements in tendons and ligaments
Better immune function
Better chelation of toxic heavy metals
Better adrenal stress response

The cost of continued care, after a period of initial improvements may or may not include regular doctor visits with occasional diagnostic tests. Certainly, the topic changes from whether or not the disease is getting worse to whether or not the disease is coming back. A common assumption, supported by observation, is that the patient that sticks with what reversed their heart disease will continue to be in good heart health. Therefore, such doctor visits and diagnostic tests are kept to a minimum or stopped entirely. Emergency heart interventions are much less common, and mostly limited to those who stop their heart-healthy habits.

The cost of supplementation, if it reverts back to maintenance doses usually costs less than $50 per month. This is almost never covered by insurance, so those with the very best health insurance might myopically conclude that the vitamin C approach is “more expensive” than conventional treatment.

Chapter 5
Stop Fixing the Adaptive Response

As doctors, scientists, and researchers try to find and refine ideas about the mechanism, prevention, and treatments for heart disease, there is a "wrong turn" that gets taken by just about everyone.

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 with heart disease, 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, and the one constant seems to be that we have more heart attack deaths and heart disease patients almost every year.

In this book, I have proposed that labeling the plaque deposit as the pathology is this "wrong turn". Instead I propose that the following sentences be prominent in discussions of heart attack deaths in heart disease patients:

The plaque deposit is NOT PATHOLOGICAL. The plaque deposit is an ADAPTIVE RESPONSE to what is found underneath the plaque deposit, which is damaged and weakened artery walls.

If doctors/researchers/scientists can be convinced that the plaque deposit is not the pathology, then maybe they will stop trying to fix it.

Here are some proposed causes of heart attacks that I have found looking through current literature on heart disease:

- Saturated fat
- Total Cholesterol
- Toxicity of oxidized cholesterol
- High Triglycerides
- The Calcium content of a plaque deposit
- The calcium sources that allow calcium buildup in the plaque deposit
- Lipoprotein(a)
- Cracks in the artery walls allowing
  - too much cholesterol into the artery tissue
- Immune response to oxidized cholesterol
- Very small, dense LDL particles squeeze through the lining of the arteries and then oxidizing
- Blood clots that get stuck in plaque deposits
- Blood that has the capability to form such clots
- The ratio of LDL to HDL
- The ratio of HDL to total cholesterol

Research into cholesterol as a cause of heart disease has been an ongoing project for more than 40 years. In the past few years there have been articles popping up everywhere with the theme of "cholesterol is not the problem" [43, 44, 45, 47]. The same pattern is already unfolding for an aspirin-a-day to prevent heart attacks [49], and the restriction of sodium [50, 51], dietary fats [43, 45], and dietary saturated fat [43, 45, 46, 48].

For each of these suspected causes, hundreds of millions of research dollars and hundreds of thousands of research hours might be spent over the course of a couple decades. At the end of that gigantic effort, the scientific community circles back to about where it started when it finally admits – "this is not the problem".

If you accept the idea that the real pathology is the damaged artery walls behind the plaque deposits, then all of these research failures are actually predictable. No amount of money or research effort is ever going to prove that suppressing an adaptive response will cure a major disease.

Most of this book is an appeal to individuals to understand how effective and appropriate the "Pauling Therapy" is for the prevention and treatment of heart disease. But here, I am acknowledging that I need some help.

Because heart disease is year by year the disease that kills the most people in the industrialized countries, it generates a lot of fear, and most people are unable to trust themselves to understand such subjects. Heart disease patients are usually afraid to do anything other than what their doctors tell them to do. Furthermore, most MD's/cardiologists are afraid to risk their license by pursuing any therapy that does not have multiple studies backing it. So, it all starts with the medical researchers. Until they realize that the plaque deposits are not pathological, we are doomed to spend billions of dollars and decades of research looking for the cure to heart disease in places where it can't possibly be.

Chapter 6 - Chelation Therapy

Chelation therapy is a general term for removing metals from your bloodstream by attaching them to various other amino acids, vitamins, etc. that make the metals inert and easy to remove. Of course, the focus is on toxic heavy metals, but not exclusively so, because the substances used to chelate will attach to a wide variety of minerals, many of them being beneficial. [13]

So, the routine is expected to be to chelate, and then replace the nutritional minerals that were lost in the process, and over time, repeat the process until enough of the toxic metals have been removed.

It is possible to take chelation formulas orally, and this getting to be a more favored method because it ends up being very low-cost. Chelation can also be accomplished by suppository. The historically most famous chelation treatment is taking EDTA by IV. This was originally done to treat lead poisoning.

The EDTA treatment for lead poisoning was very successful, but the EDTA didn't restrict itself to lead, but also removed mercury, arsenic, and other metals. Health benefits were noted that were not necessarily related to lead removal, and EDTA chelation treatments for patients with heart disease became more popular.

One of the "other metals" that di-sodium EDTA would take out in sometimes dangerous amounts was calcium. When trying to figure out the mechanism for how EDTA chelation helped heart patients, many pointed to the potential for calcium removal and also the fact that plaque deposits have a significant calcium content. The logic became that the EDTA produced its very positive results by dissolving parts of the deposits on the artery walls. [14]

It sounded like solid logic. The calcium and plaque deposits were the problem, and the EDTA helped to remove them by dissolving them. Case closed.

First of all, the plaque and calcium deposits are NOT the problem. The damage to the artery walls is the problem. The plaque and calcium deposits are a hopefully temporary solution to this problem, and if the EDTA really worked by directly dissolving the deposits, then one of the common results would be bleeding from the damaged areas of the arteries.

This did not appear to be the case. The side-effects that did commonly occur included deficient mineral levels if the nutritional minerals that were chelated out were not replaced, and kidney problems if the level of heavy metals to be excreted may have overwhelmed the kidneys.

So another explanation was necessary. Even the critics of chelation acknowledge the potential for EDTA to remove toxic heavy metals and for those toxic heavy metals to create free-radical damage. I am siding with the explanation that says that the improvement to heart disease symptoms is indirect. It reduces the potential for free-radical damage, and therefore allows the body to "catch up" on its backlog of arterial repair.

Chapter 7
High Fat, Saturated Fat, Trans Fat, Omega-3's

In the 1950's, there was a big switch in identifying the primary cause of heart attacks. The focus had been on blood clots, but the use of warfarin to prevent heart attacks was not very noteworthy, so now the focus would be on the plaque deposits. These plaque deposits contained some cholesterol, and the blood cholesterol levels were observed to be affected by the consumption of butter, lard, and animal fats, which are primarily saturated fats. So, the focus shifted to lowering cholesterol in part by limiting these "dangerous" fats.

What would be promoted in their place were the oils produced by the oil seed industry, such as corn, safflower, sunflower, etc. These were not saturated fats (they were mostly polyunsaturated), and it was presumed that they would be much less likely to "settle out" of the blood and become part of the plaque deposits.

Wayne Martin

So, how well this promotional effort for unsaturated fats go ? For the answer to this question, I will turn your attention to my favorite medical writer – Wayne Martin BS, CEng. While at Purdue University, Wayne switched his course of study from biochemistry to chemical engineering, because he didn't see many biochemistry job prospects in the great depression. He never lost his love for the medical field, and he made a habit of reading medical journals.

Wayne ended up being a stunning success as a metallurgist, but it was for his medical writing that he became known around the world. In my following comments, I am relying heavily upon Wayne's book Blood Caked Frock Coat Effect which was published by Just-Us Printers Inc, Springdale AR, and an article of his published on a website maintained by Barry Groves from the UK Reducing Deaths from Heart Attacks and Cancer. This article can be found at:

http://www.second-opinions.co.uk/martin_chd.html.

I highly recommend reading these and all medical articles written by Wayne Martin.

The Prudent Diet Trials

The "prudent diet" was a diet based upon the idea that saturated fat and animal fats would raise cholesterol levels, and that this was a major part of what was causing deaths from heart attacks. A series of trials were conducted with the expectation of proving this to be true.

> The first was run by the Joliffe Anti-Coronary Club. The controls were men of wealth who were known to have all the wrong things in their diet – butter, cheese, and high-cholesterol roast beef. They had almost none of the "good" polyunsaturated fats in their diet. The subjects who were to live on the "prudent" diet were teachers at universities in and about New York City. They had a special margarine to supply the right amount of polyunsaturated fat. All their milk was to be skim milk, and they were to avoid butter and cheese.
>
> The trial ran for six years, and was reported in 1966. The results of the trial were given the maximum PR in the news media, and were given as the reason why we should all live on the Prudent Diet. Serum cholesterol reduced from 250 to 200 in the group that lived on the Prudent Diet. One had to read the fine print to find that eight men living on the Prudent Diet had died of a heart attack, while none of the controls living on the "wrong" foods died of a heart attack. Of course, this could have been predicted, because the control group had been living on a diet similar to what was consumed in 1900 when heart attack was very rare. [15]

A second trial was paid for by the US government and headed by Dr. Irwin Page of the Cleveland Clinic, who had recently had a heart attack. This trial produced identical rates of fatal and non-fatal heart attacks in both the Prudent Diet group and the control group. During the trial Dr. Page died of a heart second heart attack.

Of course, the data was getting very clear that the prudent diet either did nothing to prevent death from heart attacks or it caused fatal heart attacks.

But it would be hard to contend that the Prudent Diet was anything short of dangerous. A following study, planned to be much larger, was cancelled "for reasons of cost". [16]

When it came to the prudent diet trials, anything that seemed to work was dragged out in front of the public with a full brass band. Anything that reflected poorly on the Prudent Diet was downplayed or hidden. In the end the doctors who had organized these trials knew that the Prudent Diet was a failure, but it seems that they preferred not to admit to the public that they were wrong.

You have to be amazed at how fast people can forget. Heart attacks were extremely infrequent in 1900. They probably happened at a rate of about 1% of what is seen today. Back in 1900, what types of fat did people consume ? It was mostly butter and lard. But, by the 1950's, doctors were telling everyone that the fats that seemed to cause no problems whatsoever just 50 years before needed to be avoided to reduce the risk of heart attacks. We still have not recovered from this misunderstanding. Everywhere I look, foods are evaluated based upon saturated fat (assumed to be bad for the heart) and low fat (assumed to be good for the heart), as if there was no other nutritional fact that need be considered.

A worthwhile footnote to the discussion of saturated fat vs. polyunsaturated fat in the consideration of heart disease is how much saturated fat ends up in plaque deposits. In the past few decades, the content of plaque deposits have been analyzed, and the amount of saturated fat in the plaque has consistently shown to be zero.

What Is Wrong With Seed Oils ?

There is a long history of the usage of seed oils and that history indicates that such oils are nutritionally beneficial and that they do not cause health problems. So what was going wrong with the polyunsaturated oils that were causing such problems with these Prudent Diet trials ?

Much of the information that describes what went wrong with the seed oils comes from the book Fats that Heal, Fats the Kill by Udo Erasmus. This can be an intimidating book to the person who reads casually, but to someone who really wants to know their fats and oils, there is no substitute.

> Traditionally, in Europe, oil pressing was a cottage industry. Large estates, villages and little towns had their own small oil press….. Many older people who lived in Europe before the second world war remember how fresh oil was sold door to door like milk and eggs…..People knew from experience that the best oils turn rancid quickly and then taste bad, so they had to be bought in small quantities and used fresh before they spoiled, just like fresh vegetables, milk and eggs…..Fresh oils are identifiable by their seed-specific characteristic odor and flavor. They are light and easy to digest. They sustain health and have therapeutic value because of the nutrients they contain. [17]

But the cottage industry did not fit into the post-war business model. Huge oil presses came into use, some that could press over 100 tons of seed per day. [18] Enormous quantities of oils were produced in one location – more than could ever be used by people in the immediate area before the oil would go rancid. Therefore, technologies were pursued that would dramatically improve the shelf-life and therefore make this oil marketable to a much larger geographical area.

Such processes aimed to remove all "impurities" including all vitamins, minerals, lecithin, chlorophyll, flavorful and aromatic molecules, natural preservatives, and natural anti-oxidants. In order to accomplish this processing, heat was applied at over 500 degrees F for up to an hour. In order to remove the maximum amount of oil from the seed, solvents such as hexane or heptane (very similar to gasoline) were added to the seed as they were being pressed. These solvents are removed, but they can never be completely removed, and traces remain in the marketable oil. [19]

At such temperatures, and chemical treatments, several unusual things happen to oils. Certain percentages can become mutagenic, trans-fats, cyclic compounds, dimers, polymers, molecules similar to plastics and vulcanized rubber. These molecules are not found in nature and are almost certainly a challenge to health. [20]

But they aren't done yet. Because all the natural antioxidants were removed, synthetic antioxidants are added. Common ones are BHA and BHT.

If the oil is intended to be used as a margarine, it is then "partially hydrogenated" to give it a texture more like butter. In this process, more trans-fats are created, and traces of nickel and aluminum leach from the catalyst into the margarine itself. [21]

Given the description of how such oils are processed, I would be willing to believe that these oils were intended to be used in bio-chemical warfare. But instead, they are intended to be sold to an unsuspecting public as *FOOD*.

In 1977, Dr. Eric Newsholme had a report in the Lancet, 1977, i 634, telling how greatly immunosuppressive the polyunsaturated fats are. He suggested that they be used to immunosuppress patients with renal transplants to prevent rejection, and to treat autoimmune diseases in general. [22]

So, it is really no surprise that the "Prudent Diet" crashed and burned whenever it was subject to clinical trials. Strangely enough, possibly because its scientific backers hated to admit defeat, focus was kept on the cholesterol data, not on the mortality data, and the idea that polyunsaturated seed oils are good for your heart has persisted to this day.

Yet Another Fats And Oils Misdirection

In the 1980's and 1990's another trend appeared in scientific research concerning fats and oils. Two conclusions kept coming up in study after study. One conclusion was that low-fat diets were good for the heart, and a variety of other ills too. The other conclusion was that olive oil was beneficial for a variety of health problems.

These two ideas could easily have come out of Fats That Heal, Fats That Kill as a *prediction*. Given the sorry state of most of the seed-oil polyunsaturated fats, the low-fat idea could have been restated – if you are forced to eat poison, try to consume as little as possible.

The olive oil “effect” was also predictable because “virgin” olive oil was the only mass-market oil not heated above 150 C, and it was also spared most of the refining processes. What is not usually pointed out in the analysis of studies of this time was that unrefined olive oil is being compared to refined versions of other oils. [23]

Chapter 8 - Sex Sells
Or
How to Get People to Reverse Their Heart Disease Without Really Trying

Inevitably, most of the people who attend my public presentations are the people who have already figured out that diet and supplements can dramatically affect most diseases. They are just trying to fine-tune their system. So the people who need my help the most seldom bother to listen to me or read my books.

For this reason, a significant number of people who come to my lectures are there because they are concerned about a friend or relative. The problem here is that the person with heart disease often doesn't care enough to actually do anything about their condition except to follow the drug and surgery path of conventional medicine. Much of the time any effort to persuade them that the nutritional approach is much better is useless.

In order to get past their resistance to the nutritional approach, you may need a "hook". You may need to offer them something that they are very interested in that comes along as a pleasant side-effect of the vitamin C heart disease therapy. Here are some possibilities.

Women are almost universally interested in their looks. A major cosmetic part of aging is seen in the skin. The stretching and wrinkling is essentially the collagen fibers giving way. Because this heart disease therapy primarily enhances the production and repairing of collagen fibers, women who follow this plan can expect that their skin will age much more gracefully.

Men are not so interested in their skin, so we have to look to the effect of L-Arginine to "hook" them. One of the things that L-Arginine does is help produce the NO (nitric oxide) radical. In this way it reduces blood pressure and it works much like Viagra. The difference is that it produces a gentler result with much fewer side effects. The age range when men start to have heart disease symptoms is also the age range where they start to have impotence problems. So, they might be more likely to protect their arteries if they knew that one of the side-effects was to improve their sex-life.

Chapter 9
Cholesterol-Reducing Strategies and Drugs

Decades ago, when test for blood cholesterol first became available, a correlation was noticed between high blood cholesterol and heart attacks/heart disease. The plaque deposits that are characteristic of heart disease were known to contain cholesterol. An entire medical industry was formed because the assumption was made that the reason why cholesterol collects in plaque deposits is because there is too much in the blood. Thus high cholesterol levels "cause" plaque deposits and plaque deposits "cause" heart disease. These assumptions were hardly ever tested, and in those rare occasions where they were, the cholesterol-lowering "industry" didn't let the facts get in the way of promoting their business.

In the first few pages of this book, I made the case that damage to artery walls is the starting point of heart disease and that plaque deposits are our second line of defense against the possibility of breakthrough bleeding in an artery. Clearly, high cholesterol does not "cause" plaque deposits, and plaque deposits should be recognized as a bunch of life-saving band-aids.

The following is an article that I write a few years ago on the topic of statin drugs for a local newspaper.

Are You Taking A Statin Drug ?

A woman's cardiologist prescribed statins for her after she had a small heart attack at the age of 68. She has since been troubled by insomnia, chronic tiredness, thinning hair, muscle weakness, non-healing itchy rashes, memory loss and loss of her skill in creative writing. She thought that these were all due to aging.

However, after she stopped taking the statin drug, she sleeps well, has greatly increased energy, her rashes have cleared, her hair is no longer so thin, her memory has improved, and her writing skills have returned. [24]

This is not an isolated case, nor is this a description of some very rare allergic reaction to her statin drug. Statin drugs work by blocking the biological pathways involved in the production of cholesterol, and that

pathway involves the creation of vitamin D with the help of sunlight, Co-enzyme Q10, and many hormones.

Cholesterol itself is required in every cell membrane in our whole body, and is a major component of the brain. Vitamin D is essential for building bones and teeth, and is critical in immune function.

The interference in these pathways frequently results in muscle pain, muscle weakness, peripheral neuropathy, dizziness, cognitive impairment, depression, and low resistance to infection.

It is also worth pointing out that co-enzyme Q10 is used heavily in the heart to keep up the energy levels needed for continuous muscle use. Therefore, when statins are taken by a person with a heart problem, (unless they supplement with Co-Q10), they are actually inducing muscle weakness that could lead to congestive heart failure.

Statin drugs have made enormous profits for pharmaceutical companies. When big pharma saw all the money coming in, their spreadsheet programs started popping out answers to the question – How much MORE money would we make if the definition of high blood cholesterol was set at a lower level ? Predictable arm-twisting has ensued. The original level for "high cholesterol" used to be 240 but ONLY for men and ONLY if they had some other risk factors, such as overweight or smoking. In 1984, the level was lowered to 200, it applied to both men and women, and the requirement for other risk factors was dropped. More recently, that number has been lowered to 180. [25] Doctors have even been known to prescribe statins to patients who have never had high cholesterol as a preventative or if they have had heart problems of some kind.

Needless to say, the drug companies are selling a lot more statins, and heart patients are feeling a lot more of the side effects of low cholesterol levels.

This medical chicanery could be mostly forgiven if the lowering of cholesterol levels actually reduced the incidence of heart disease and resulting heart attacks. Let's look at how likely that is.

Uffe Ravnskov, MD, PhD says the following in his article The Benefits of Cholesterol: Old people with low cholesterol died twice as often from a heart attack as did old people with high cholesterol. Now consider that more than 90 % of all cardiovascular disease is seen in people above age 60 also and that almost all studies have found that high cholesterol is not a risk factor for women. This means that high cholesterol is only a risk factor for less than 5 % of those who die from a heart attack.

But even in those 5%, is cholesterol the culprit ? In a previous article, I have made the case that when high cholesterol is associated with heart disease, cholesterol does not cause heart disease. It is most likely that whatever adverse conditions cause high cholesterol also cause heart disease.

One possibility is that a body full of toxins and the resulting free-radical damage will cause the cholesterol to rise, because the number of new cells that need to be created rises, and cholesterol is needed to produce all new cells. That same body full of toxins can cause damage to artery walls, which will then draw plaque deposits to the location of inflammation.

In any case, it appears that the small degree to which statin drugs (the major class of cholesterol-lowering drugs) actually lowers the rate of heart attack is not due to the lowering of cholesterol, but instead to statin drugs being a low-level anti-inflammatory. **26**

Pharmaceutical companies are very aware that they can't be sued for problems with their drugs that they clearly acknowledge in print. Could these drug companies be sued for producing a whole class of drugs that do little else to overall health and life expectancy besides create harmful side effects? Certainly this is a possibility, and it might cause them to change what they put in print about their statin drugs.

In a recent ad for Lipitor, there appeared this disclaimer: Lipitor has not been shown to prevent heart disease or heart attacks. **27**

Should You Be Taking A Statin Drug ?

No ! But please don't just take my word for it. If you are going to become the kind of person who takes control of their own health, you take on the obligation to educate yourself. Three articles that I referenced in my discussion come highly recommended. They are:

Le Fanu, James, Statin Drug Holiday, Well Being Journal, Sep/Oct 2007 p. 41

Fallon, S. and Enig, M. , Dangers of Statin Drugs: What You haven't Been Told About Popular Cholesterol-Lowering Medicines, http://www.westonaprice.org/moderndiseases/statin.html

Ravnskov, Uffe, The Benefits of Cholesterol, http://www.westonaprice.org/moderndiseases/benefits_cholest.html

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For those of you who want to dig deeply into the subject of the biochemistry of cholesterol and statin drugs, the best article I have run across was written by Stephanie Seneff and is titled:
How Statins Really Work Explains Why They Don't Really Work.
It can be found with the following link:
http://people.csail.mit.edu/seneff/why_statins_dont_really_work.html

This is the article that I give to people if I want them to never take cholesterol-lowering medication – or to stop taking it immediately.

Chapter 10 - Aspirin Therapy

Taking a low-dose aspirin has become a "standard" add-on to heart disease treatment. It seems so inexpensive, so easy, and is non-prescription. What could be wrong with it ?

The following is an article that I wrote for a local newspaper on just this topic.

An Aspirin A Day
Is The Wrong Way

Heart disease patients are frequently told by their doctors to take one low-dose aspirin a day as a way of preventing heart attacks. My purpose in this article is to present an alternate viewpoint. I want to make it clear that not all experts recommend long-term aspirin therapy. Furthermore, even within the camp that promotes the aspirin therapy, there are those who state that aspirin doesn't work so well for two significant groups: (1) Women and (2) People with high-risk heart profiles. My final point is that there are many alternatives to aspirin that are much safer and more effective.

In the 1970's, medicine had started to look at aspirin as a method of reducing platelet adhesion and thereby the blood clots that bring on heart attacks. There were 4 major trials in the United States and Great Britain over the course of a decade. [28] All of them recorded the gastric/intestinal bleeding as a significant problem, and only one study of the four showed even a slight benefit in the prevention of heart attacks.

Finally, in 1989, an aspirin study produced what seemed like a very positive result and a dramatic reduction in heart attacks. [29] The news media covered it in glowing terms, suggesting that all men over 40 should be taking aspirin. The world's fascination with taking one-a-day aspirin to prevent heart attacks was born.

Unfortunately, the fine print had another story to tell. The 44% reduction in heart attacks applied only to non-fatal heart attacks, but there was no reduction in mortality because the fatal heart attacks were not affected. There was a small, but statistically insignificant rise in hemorrhagic strokes

(the more lethal type), and a more significant incidence of gastro-intestinal ulcers. Furthermore, the reduction in the risk of heart attack only applied to those under 50, and was most significant among those with the lowest cholesterol levels.

There was one more interesting detail. This study, which became the foundational scientific reason for tens of millions of people to take one aspirin per day, DIDN'T USE ASPIRIN ![30] In the study, they used Bufferin, which is aspirin buffered with magnesium. It is worth noting that magnesium, by itself reduces platelet adhesion, is a vasodilator, and is an antiarrhythmic agent. It is probably the one mineral most likely to be needed by heart patients. I wonder what would have been found if a follow-up study had been done with 800 mg of magnesium malate per day and NO aspirin. My guess is that the results would have been even better.

Dr. John G. F. Cleland MD, a British Cardiologist, in his article Aspirin Not Recommended for Heart Disease Anymore, states that all the long-term trials of aspirin after a heart attack show no effect on mortality. Dr. Cleland contends that the meta-analyses of aspirin studies show inconclusive results. Furthermore, given that aspirin is known to cause bleeding disorders and the fact that other therapies of more proven effectiveness are available, he indicates that long-term aspirin therapy should no longer be considered.

I have recently run across articles identifying groups of people for whom the aspirin-a-day therapy may be less effective. In each case, the title of the article conveys the message, so I will just list them here:

1. Aspirin May be Less Effective Heart Treatment For Women Than Men
http://www.sciencedaily.com/releases/2007/04/070427172938.htm

2. Aspirin is ineffective in preventing heart disease when the blood pressure is high
http://www.lifeclinic.com/focus/blood/articleView.asp?MessageID=333

3. Aspirin's Risks May Outweigh Benefits For Elderly
http://health.dailynewscentral.com/content/view/804/0

If I am forced to rule out women, the elderly (people over 70 in this article), and those with high blood pressure, I am left to wonder, "who's left ?" (Maybe troops of Boy Scouts ?).

Certainly, the aspirin-a-day therapy has a multitude of supporters, and there may be some benefit to be had for some limited sub-populations. However, even if this therapy is more effective and less dangerous than I have just described, there is still no reason to use it because there are alternatives that have virtually no side-effects.

A partial list of commonly available foods and supplements that inhibit platelet adhesion better than aspirin include Vitamin E 400 IU, Vitamin B6 40 mg, fish oil, GLA, l-arginine, and grape juice 10 oz. In addition, the prescription drug dipyridamole is both more effective and much safer than aspirin for this purpose. [31]

I do not want to make heart patients throw away their aspirin bottles. Taking aspirin at the onset of heart-attack symptoms could save your life by helping to dissolve a clot stuck in a coronary artery. I also think that aspirin is acceptable for short-term use to relieve pain, but I never recommend it for long-term use. I hope that if you are taking low-dose aspirin to prevent a heart attack, that you will at least decide to check into both sides of this issue.

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Chapter 11
Some Toxic Causes of Heart Disease

In this book, I have focused primarily upon enhancing the body's ability to fix damaged arteries by making sure the materials for collagen production are in abundance. Of course, it also makes sense to pay attention to things that cause the damage to the connective tissue. I have not spent much time on this topic, because most people are aware that things such as smoking, excessive drinking, a stressful job, stressful relationships, irregular hours, bad diet, and exposure to herbicides, pesticides, and other environmental toxins all contribute free-radical damage. The fact that this damage could occur in the arteries and bring about heart disease is the logical next step.

However, I wish to bring to your attention a few sources of toxicity that contribute to heart disease because they are either very surprising or very toxic.

Chlorine

Joseph G. Hattersley has written an excellent article on the relationship between chlorine and heart disease. This is available on the internet at: http://www.orthomolecular.org/library/jom/2000/articles/2000-v15n02-p089.shtml. I highly recommend reading it.

Highly reactive chlorine is one of the industrial waste products profitably disposed of using people as garbage cans. [33] Chlorine kills beneficial bacteria in water, creates trihalomethanes and chloramines, causes miscarriages and cancer (especially melanoma and digestive cancers), turns "essential" fatty acids rancid, creates chloroform which can be inhaled, and kills plants. Unfortunately, chlorine is most dangerous when you look at artery walls. Here chlorine causes the damage that turns into plaque deposits quicker than any common toxin.

And we inflict this upon ourselves in order to kill some harmful bacteria that would be easier to kill with either hydrogen peroxide or ozone. When I mention that hydrogen peroxide and ozone would both accomplish what we are attempting to do with chlorine, I am not talking about speculative

technologies, but instead water systems that have already been successfully in place for decades.

Germany and France commonly only chlorinate their municipal water supplies and pools in an emergency. [34] In 1984, many leading European swimmers threatened to boycott the Los Angeles Olympics if the pool was chlorinated. The Olympic organizers gave in. The Olympic pool was ozonated. Two weeks after the Olympics were over, the pool was converted back to chlorine.

Everyone should try to avoid the harmful effects of chlorine, especially if you have heart disease. If your water supply is chlorinated, you should consider putting a filter on the sink in your kitchen so that chlorine can be removed from drinking and cooking water. Also, chlorine will easily absorb through your skin and lungs while you are showering. It is easy to fix this problem by installing a shower filter that will absorb the chlorine.

Homogenized Milk

There is an ongoing debate about whether or not homogenized cow's milk is a major contributor to heart disease. The theory was put forth by Dr. Kurt Oster in the 1930's. [36] His theory went like this:

When milk is consumed that has not been homogenized, xanthine oxidase is digested into smaller molecules. However, when milk is homogenized, some of the xanthine oxidase passes into the bloodstream intact. Xanthine oxidase is normally found in the liver of human beings, however, when "foreign" xanthine oxidase gets into the body, it begins to attack plasmologen in the artery walls. [35]

Many of the parts of his theory have proven to be false, but there is a lingering suspicion that his major contention might still be correct. Consider the following information:

Finns consume about 272kg of milk each per year; 90 percent is homogenized, meaning 245kg of homogenized milk per Finn per year.

Swedes drink about 60 percent as much milk, but only 2 percent of it is homogenized (only 4.9kg per year). The death rate from heart attack in Finland is more than three times the Swedish level (about 245/100,000 compared with only 75/100,000). Because there can be other factors, these statistics are not as strong as a carefully-designed study, but they still should serve to warn us that something is seriously wrong. [37]

It is very difficult to get milk that has not been homogenized. Homogenization does nothing positive for the milk except to stop the cream from rising to the top, so you are not really missing anything by getting milk that has not been homogenized.

Raw cow's milk will never be homogenized. There is a big debate about whether raw milk is wonderful (as it's proponents say) or dangerous (as many government agencies insist). At least this much is clear. If the dairy farmer uses factory-farm methods to raise the cows, then raw milk is not an option, because the cows are sickened by the factory farm methods, and are much more likely to give milk that can cause infections.

If the cows are raised with organic methods, allowed to graze on grass in open pastures, without growth hormones, antibiotics, or pesticides, then the cows and the milk will be much healthier, and this milk can be consumed raw.

Goat's milk is naturally homogenized, so this is another option.

Of course, the last option is to just not drink milk or consume dairy products.

Teeth and Jawbone problems

There is one source of toxins that can be so strong that it might overwhelm this nutritional therapy. It is possible to develop necrotic tissue in the jawbone. This could happen as a result of mercury poisoning from fillings, or problems related to tooth extraction, root-canals, or even physical injury to the jawbone that adversely affects its blood supply.

When such areas in the jawbone become necrotic, they can support bacteria which can produce substances known as thio-ethers, which are the most

toxic substances known. Once these thio-ethers get into the bloodstream, they can cause trouble just about anywhere. In most cases, they tend to focus most of their damage on specific organs. The heart and kidneys are common sites for such damage. [32]

Fixing necrotic tissue in the jawbone is difficult. Many dentists will deny that such a thing exists, or that it would be causing much of a problem. There are a few dentists and oral surgeons that will try to remove such tissue. The oral surgery required to solve this problem is both bloody and brutal. Also, sometimes the restorative capabilities of the patient are so limited that more necrotic areas of bone form again even after the surgery.

I believe that I had such a problem with necrotic tissue in the jawbone. I had 13 amalgam fillings in my mouth and had my impacted wisdom teeth removed at the age of twenty. I have had two molars extracted since then. This would make me a prime candidate for the necrotic lesions in the jawbone. I had somewhere between aches and pains at 4 specific locations in my jaw for about 20 years. I also had angina pains for about 8 years. A friend of mine, Bruce Wright, told me that Dietrich Klinghart MD had taught him that MSM can displace the thio-ethers, temporarily relieving symptoms. He indicated that this might temporarily relieve my angina pains, and if that was successful, that it would help to inexpensively diagnose the presence of the necrotic tissue in the jawbone.

So, I tried a heaping tablespoon of MSM once a day, and after 2 days, the angina pains were gone. Now that I was convinced that some of my health problems derived from my jawbone, I finally decided that I had to do something about it. I scheduled myself for about $7,000 of oral surgery. At the last moment, I backed out. Instead I put together a diet and supplement plan that I thought might heal my jawbone without surgery.

Three months later, my jaw was 95% improved. A year later, the improvement was close to 99%. I rarely have jawbone pains now, and when they do occur, they are by comparison very minimal. The chest pains that were theoretically caused by the thio-ethers are also 99% relieved.

Since I am not inclined to participate in “conventional medicine”, I never got the kind of lab tests or scans that would prove that I really had necrotic tissue in my jawbone or that thio-ethers were causing my chest pains. Still,

I contend that my explanation makes sense, and I have used it as a basis for successful recommendations a few times since.

The formula that I used to repair my jawbone is difficult to understand and subject to very painful overdose problems, so I won't write it down here, but if I ever get around to writing a book on osteoporosis, I will describe the formula in great detail.

More Help For Teeth/Gums - Oil Pulling With Coconut Oil

There have been many articles written about other approaches to improving oral/dental health in an effort to prevent/improve coronary artery disease. Many articles recommend brushing your teeth and flossing more often. [42] Others also recommend getting new toothbrushes frequently to prevent the possibility of dangerous bacteria living in older toothbrushes.

I have become a proponent of "oil pulling", which means taking about a teaspoon of oil and swishing it forcefully around the mouth for about 15 minutes to remove debris, plaque, and bacteria. I believe that oil pulling, done correctly, in conjunction with brushing/flossing, is far superior to even compulsive levels of brushing and flossing. In addition, I have chosen to use coconut oil as my toothpaste.

My experience is that organic extra virgin unrefined coconut oil produces the best results especially with respect to knocking down infections. The high levels of medium chain triglycerides are primarily responsible for the antimicrobial effects. [41]

Coconut oil is known for many other beneficial effects when taken internally, however, on occasion, individuals may suffer from the strong antimicrobial effects knocking out beneficial flora if they have poor intestinal function and the oil takes too long to absorb.

Remember that you should not swallow the coconut oil, but instead spit it out after the 15 minutes. By then it will be full of bacteria, viruses, food particles etc. that you do not want to run through your digestive system.

Footnotes

A note about my footnotes.

I have given internet references in many of my footnotes. I did this because it would give readers much easier access to some background articles. Inevitably, some of these links may disappear. Periodically, I expect to go through my internet links and find new ones to replace those that have disappeared.

Specific Footnotes

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