

# A New Way to Look at Heart Disease – Plus Dr. Mercola's Best New Treatment Options

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By [Dr. Joseph Mercola](#) | [mercola.com](#)

We have an epidemic of heart disease in this country and the conventional treatments, such as the use of [statin drugs](#) and surgeries involving artery bypasses and stents, typically do not work well. So, what does?

Dr. Thomas Cowan is a family physician and a founding member of the Weston A. Price Foundation.

In his book, "[Human Heart, Cosmic Heart: A Doctor's Quest to Understand, Treat, and Prevent Cardiovascular Disease](#)," which is also available as an [audiobook from Audible](#), he helps answer that question.

It's a fascinating book, and not overly technical, making it an excellent addition to any layman's health library.

*"Basically, the book has three parts," Cowan says. "For whatever reason, my destiny in my career is that I take on some of the biggest accepted wisdom... [and] I try to figure out whether they're actually true or not.*

*The first part is my [personal] story ... [In] the second part, I examine the theory that the heart is a pump. I say that the heart is not a pump. Then I explain why the blood moves and what the heart is doing, and the interesting ramifications of that.*

*The third part is ... [about] what causes heart attacks ... Here*

*is an interesting point: I learned in medical school there were four major coronary arteries. In some places, it says three. In some places, it says two.*

*Even the basics of how many major coronary arteries we have is actually in dispute. It's a matter of semantics."*

## **Questioning the Role of Arterial Plaque in Heart Attacks**

Regardless of the exact number, conventional wisdom states that the coronary arteries, i.e., major blood vessels, supply all of the blood flow to the heart. If one or more of them gets blocked with plaque, a bottleneck form that prevents blood from getting through.

The area downstream from that blockage doesn't get any blood, and hence no oxygen or nutrients. The first indication that this is occurring is a pain, which we call angina. As the problem progresses, the pain worsens, which is called unstable angina. Eventually, if left untreated, you end up with a heart attack.

The field of cardiology is primarily focused on getting rid of the plaque, whether by using stents, doing bypasses, angioplasties, lowering cholesterol (since the plaque is supposedly caused by excess cholesterol) or putting the patient on a low-fat diet.

*"[Conventionally], it's all about the plaque," Cowan says. "My point in the book is that it's NOT about the plaque."*

**[Related Article: How To Recognize You May Have A Heart Attack 1 Month Before It Happens](#)**

# The Problem With Viewing the Heart as a Pump

Cardiologists and doctors, in general, are taught that the walls of the heart create pressure, which causes propulsion of the blood through the body. In essence, the heart is viewed as a pump – a pressure propulsion system caused by the muscular contraction of the ventricles.

However, your body actually contains an enormous amount of blood vessels. Most of the blood vessels in your heart and body are capillaries, which are very thin-walled, very narrow tubes.

If you were to spread these blood vessels out, they would cover three football fields. If you were to place the blood vessels end to end, in a series, they would encircle the Earth between one and three times.

*“The pump theory is you have a 1-pound, somewhat thin-walled organ, and it’s going to pump [blood] around the Earth every single day for 70 years; 60 to 70 times a minute. That 1-pound, a thin-walled organ can [supposedly] generate enough pressure [to do that] by squeezing ...*

*Frankly, that’s ridiculous. But it actually gets worse than that. If you do a flow velocity diagram, it turns out that the blood is moving the fastest at the heart, both before and after the heart.*

*As it goes into the arterioles and then the smaller arteries, it gets to the capillaries ... [where] it actually stops and does a little shimmy, or it goes very slow, depending on who you believe ... The analogy is, a narrow river goes fast and when it goes out into a wetland, it goes very slow.*

*It has to go slow – it has to stop almost – to exchange the gasses and the food. So not only are we pushing all the way*

*around the Earth but halfway around our travel, we stop and then we get going again. You're expecting that to be all from the push from behind ...*

*It even gets worse than that because we have an outflow tube of the left ventricle called the aortic arch ... which is shaped like McDonald's arch. The blood goes from the left ventricle, out the aortic valve, through the arch, then down to the body.*

*The analogy here is if you stick a similarly shaped arched garden hose off your spigot outside your house, and then turn it on really hard, which recreates the pumping ... you would expect the garden hose to straighten out because if you put pressure, the arch would straighten.*

*In fact, you can look on any angiogram and catheterization and you can see that arch actually bends in a little bit during systole, which from a pressure propulsion model makes absolutely no sense at all."*

## **The Hydraulic Ram Model of the Heart**

Clearly, if your heart stops beating, you won't live very long, but if the heart isn't actually pumping the blood, how does it work? In his book, Cowan describes the heart as a hydraulic ram, which he explains thus:

*"What does the heart do? The blood is moving fast. It comes into the heart. The heart stops the blood, and like a hydraulic ram, it holds it back. The walls expand. The pressure differential happens, and then it opens the gate and comes out.*

*More so when the blood is in the heart, because of the unique shape of the heart ... The heart is a vortex-creating machine ... [I]t has these trabeculae (fibers) inside the heart. Each area of the trabeculae is connected with a certain part of the*

body.

*[One] area of the heart is connected with the spleen, another area of the inner part of the heart is connected with the foot, and so on.*

*The blood comes in and these areas of the heart create their individual spirals, and package up certain parts of the blood, like the old red blood cells, into a vortex and send it to the spleen, whereas another part sends the fresh new red blood cells up to the brain.*

*If there's a cut on your leg, it dissolves some of the inner fibers, puts that in a vortex and sends that to the cut on your leg. It's so wild. Again, there's an article about this on my website, as hard as it is to believe, that actually documents that in very clear terminology how this happens."*

## **What's Water Got to Do With It?**

Interestingly, the work of Gerald Pollack, author of "[The Fourth Phase of Water](#)," was instrumental in helping Cowan understand the function of the heart and how blood flows if it isn't being pushed or pumped by the heart.

First off, if any pumping action were to be involved, it would actually have to occur at the capillaries because that's where the blood stops and needs to get moving again. However, the solution nature came up with is far simpler. As the blood moves up the venous tree, the blood vessels narrow and eventually coalesce to come back to the heart.

This narrowing of the vessels makes the blood flow faster, in and of itself. Valves and muscular contractions also play a role. However, the primary way blood moves have to do with water. As Pollack has described, water can exist in four phases, not just three. The fourth phase of water is formed by the interaction of water and a hydrophilic surface.

*“What happens with that is you form a gel layer, or protective layer, on that hydrophilic surface, which is negatively charged. Therefore, the opposite of positive charge is dissolved into the bulk water in the middle of the tube (capillary or blood vessel) ... All you need is a hydrophilic tube, which forms a gel layer, which is negatively charged, and then the bulk water is positively charged. The positive charges repel each other and that starts the flow going up the hill,”* Cowan explains.

## **Sun, Earth and the Human Touch – 3 Key Principles for Healthy Blood Flow**

Pollack has also clearly demonstrated there are three natural energies that result in the separation of charges that create flow:

**1. Sunlight** charges up your blood vessels, which increases the flow of blood. When the sun’s rays penetrate your skin, it causes a massive increase of nitric oxide that acts as a vasodilator. As much as 60 percent of your blood can be shunted to the surface of your skin through the action of nitric oxide. This helps absorb solar radiation, which then causes the water in your blood to capture the energy and become structured.

This is a key component for a healthy heart. The ideal is to be [exposed to the sun](#) while [grounding](#), meaning walking barefoot. This forms a biological circuit that makes it work even better.

**2. Negative ions from the Earth**, also known as earthing or grounding. This also charges up your blood vessels, creates a separation of charges, creates more positive ions and allows the blood to flow upward, against gravity.

**3. The field effect or touch from another living being, such as laying on of hands.**

As noted by Cowan, “The best thing is to be, more or less, with shorts or naked on the beach, with the saltwater, which acts as an electrical conductor, holding hands with somebody you love. That’s how you structure the water.” Sun exposure, grounding and skin-to-skin contact are three prevention strategies that, ideally, everyone should be doing. It doesn’t get a whole lot easier or less expensive than that.

*“The water is a battery. Those inputs separate the charges, charge the battery, the battery does work and it starts the flow. That flow, just through Bernoulli’s principle, which is the wider it is, the slower it goes, [when it] narrows, it goes faster. That is the reason the blood moves, in a nutshell.”*

## **Does Plaque Really Cause Heart Attacks?**

As mentioned, Cowan does not ascribe to the plaque theory of heart disease. Instead, he makes a strong case for heart disease being a problem rooted in mitochondrial dysfunction. What’s wrong with the plaque theory? For starters, if the plaque were responsible, there would have to be something in the blood or blood vessels causing the plaque, such as cholesterol or inflammation.

And, since all blood vessels are identical – there’s no difference between the splenic artery, the femoral artery or the coronary artery, for example – if there’s plaque in one artery, there should be plaque everywhere, and an attack should theoretically occur just about anywhere in the body, depending on where the blockage is. Yet people do not have “spleen attacks,” or “foot attacks,” which would be the result of a bottleneck of plaque forming near these organs.

*“There is such a thing as renal artery ischemia. But basically, there are only two organs that have attacks. The brain, we call that a stroke, and the heart, we call that a myocardial infarction (MI) or a heart attack,”* Cowan says.

*“Why not the other organs? Because that suggests there’s something different about those organs. It’s not the blood vessels because the blood vessels, they’re the same. There’s something different about the heart and the brain that’s causing the attacks. It’s not the blood flow.”*

In the '40s and '50s when the plaque theory began to emerge, most cardiologists rejected it, noting there’s massive collateral circulation between the coronary arteries and this massive network of fine blood vessels. It doesn’t really matter whether one area gets blocked or not, because the whole thing is like the wetlands; it will simply compensate for a blockage in one area by increasing blood flow elsewhere.

## **What’s Wrong With the Plaque Theory?**

Post-mortem autopsy studies – which are available on Cowan’s website, [humanheartcosmicheart.com](http://humanheartcosmicheart.com) – looking at arterial blockages in the area leading to the part that had an attack showed that only 18 percent were actually blocked. That means that in 82 percent of cases, a blocked artery was NOT the cause of the heart attack.

So, what caused it? In another study, 66 percent of normal 50-year-olds who died in car accidents were found to have a one or more, greater than 90 percent stenosis or blockage of a coronary artery! Yet none of them had any symptoms.

*“I’m not saying blockages are good. I’m not saying plaque is good. What I am saying is it’s nowhere near sufficient to explain why people have heart attacks,”* Cowan says.



*“Every week somebody comes in and says ‘I’m not feeling as well as I used to. I have some chest pain, a little shortness of breath walking up the hills. I went on a 5-mile walk yesterday and I’m not doing as well as I used to. I went to the cardiologist. He did tests and found I have a 95 percent blockage in one of my coronary arteries. He said if it blocks any more, I’ll have a heart attack and die... [and that I] better have a stent or an angioplasty.’*

*I think to myself, No. 1 if all of the blood flow comes through these coronary arteries and he’s got 95 percent blockage of this major vessel, how did he walk up this 5-mile hill? In fact, how is he even standing upright if he’s got less than 5 percent blood flow to a major part of his heart?*

*So, you mean to tell me if he blocks from 5 percent to 2 percent, that’s it? Curtains in, you die? The reality is 5 percent is 0 percent, and blocking to 2 percent is the same as 0 percent. It’s very clear that the theory that the blood squeezes through the bottle neck in the vessel is complete nonsense.*

*The blood does not squeeze through the bottleneck. It bypasses it. It goes through these collateral vessels and the flow is more or less normal, although there is some problem in the heart, it’s not because of that blockage. That’s why the Mayo Clinic and other studies when they unblock the blockage, it doesn’t do any good for the patient.”*

*In Cowan’s view, there is only a small subset of patients that might benefit from bypass intervention, specifically if you have a greater than 90 percent stenosis (blockage) of the proximal part (the early part) of the left anterior descending (the primary artery that supplies blood to your heart).*

# The Real Cause of Heart Attacks

If a blockage isn't the cause of the heart attack, then what is? Cowan makes a strong case for three basic causes of heart attacks, in the following order of importance or likelihood:

**1. Decreased parasympathetic tone followed by sympathetic nervous system activation.** You have two nervous systems, a central and an autonomic. Your autonomic nervous system has two arms: the sympathetic fight-or-flight, and the parasympathetic, which governs rest and digestion.

Decreased parasympathetic tone results from [stress](#), [diabetes](#), [high blood pressure](#) and other factors, including emotional and psychological ones. That's the first thing that happens. Then, while under the influence of a low parasympathetic tone, you experience some sort of emotional, psychological or physical stress that activates your sympathetic nervous system.

***Related Article: [Here's How Microscopic Drones May Soon Be Used to Prevent Heart Attacks](#)***

This shifts your cell metabolism from the mitochondria to the cytoplasm, meaning the cells in your heart shift from using fat for fuel, to generating fuel in a glycolytic way through the fermentation of sugar. Once that glycolytic shift occurs, you enter into glycolytic metabolism where you burn sugar for fuel and make lactic acid. As in other muscles, lactic acid in the heart muscle causes the telltale cramps and pain known as angina.

Since your heart cannot stop contracting to allow the blood flow to flush out the lactic acid, the lactic acid builds up, causing localized metabolic acidosis that necroses or destroys the cardiac tissue. Also, when the tissue becomes acidic, calcium cannot enter the tissue. As a result, the heart muscle cannot contract properly.

Next, pressure in the arteries embedded in the non-moving area of your heart builds, which then breaks off little pieces. These are the “clots” conventional cardiology believes are the cause of the heart attack.

But the clots are not due to plaque, they’re the result of pressure in the non-moving area of your heart, which is the result of not getting calcium into the cells, which is the result of lactic acid forming from the altered metabolism in the heart. This chain of events, Cowan believes, is the real cause of most heart attacks.

**2. Collateral circulation failure.** Diabetes, smoking, and high-stress all affect collateral circulation, not major blood vessels, and all of these are known to raise your risk of a heart attack.

**3. Particularly badly placed plaque formation.** This is not the norm but could occur.

Indeed, one of the problems with using carbohydrates as a primary fuel – which a majority of people in the West are doing – is that it generates more reactive oxygen species (ROS) and secondary free radicals. Chronically, this will cause mitochondrial damage. I like to simplify it by saying that carbs are dirty fuels – dirty in the sense that they generate excessive amounts of free radicals that poison the mitochondria.

It’s this dirty fuel – the net carbs – that creates fermentation metabolism and subsequent lactic acid production. The answer is not to take more [antioxidants](#). The answer is to reduce the production of free radicals by reducing net carbs and increasing the amount of healthy dietary fats you eat.

This is a core tenet of a healthy diet, and if you understand Cowan’s explanation above, and how carbs act like a dirty fuel, you’ll have a good understanding of why a high-sugar diet causes heart disease and heart attacks.

# Treatment Alternative for Heart Disease

To address the primary issue of decreased parasympathetic tone followed by sympathetic nervous system activation, an adrenal hormone called ouabain, or strophanthin, could be used. Strophanthus is the name of the plant, the active ingredient of which is called g-strophanthin in Europe, and ouabain in the United States.

G-strophanthin is an endogenous (meaning "made in us") hormone that goes into your blood, to your heart, where it converts the lactic acid into pyruvate, which is actually the preferred fuel for your heart. In this way, g-strophanthin breaks and eliminates the buildup of lactic acid that is causing all the trouble. Not only that, it converts it to fully usable fuel, allowing your heart to function properly again.

G-strophanthin also helps create more neurotransmitters of the parasympathetic nervous system. So it performs two central functions: 1) It supports your parasympathetic nervous system, and 2), It flushes out lactic acid. Unfortunately, strophanthus can be hard to find. You cannot simply pick it up at your local health food store.

*"Strophanthus was first identified by the famous African explorer, Livingston, who apparently saw the natives dip their arrows in it. They would make a really high dose and it would stun their prey ... He dipped his toothbrush in a strophanthus extract and noticed the change in his heart rate. It slowed down. Basically, from there, it became a heart medicine.*

*It's in the same family as digitalis, but digitalis doesn't convert lactic acid into pyruvate. Digitalis does not support the parasympathetic system. It's really different because digitalis is fat soluble, while ouabain, g-[strophanthin] is water soluble. There are a lot of differences."*

# How to Find Strophanthus

For over 20 years, strophanthus was the main treatment for angina and heart attack prevention in Germany. Millions of doses were given and hundreds of studies were done. One 1972 study involved 150 patients with angina. After taking strophanthus for one week, 144 were symptom-free. After two weeks, 146 were without symptoms. It clearly has a long history of successful clinical use.

*"In fact, in the '50s and '60s, there was a test called a strophanthin challenge test ... All physicians know, sometimes a person comes in with chest pain. We don't know if it's because they're breathing too hard or if it's muscle pain or something.*

*You want to figure out whether that's from their heart. They [would] give them g-strophanthin. If the pain went away, it was considered from their heart. That was the g-strophanthin challenge test because simply, it flushes the lactic acid. No lactic acid, no pain. But it's not just for pain relief. It actually breaks the cycle that leads to heart attacks,"* Cowan says.

*"Now, there are very few places to get it. There's one compounding pharmacy in Germany, which you can import [from]. There's a company in Brazil that makes an extract of the strophanthus seeds. That's what I've been using mostly for about 10, 15 years. I've had it tested so I know how much ouabain per milliliter is in there.*

*It's been one of the best medicines I've ever used. People [who] can't walk to the mailbox, they take it for a couple of weeks, they can walk to the mailbox, go skiing, etc. It relieves their chest pain and it does the exact things that you would hope a medicine would do."*

To make strophanthus more available, Cowan suggests finding a

practitioner who is willing to give it to you and supervise your medical condition. Then contact Cowan's office via [HumanHeartCosmicHeart.com](http://HumanHeartCosmicHeart.com). Cowan will talk to the practitioner and explain how strophanthus works and how it should be taken. The practitioner can then obtain it through the website and give it to you.

## **Enhanced External Counterpulsation – Another Alternative Treatment for Heart Disease**

Enhanced External Counterpulsation (EECP) is an alternative for bypass, provided you're not dealing with a proximal left anterior descending (LAD) obstruction. EECP will increase collateral circulation, which is another common factor responsible for heart attacks.

*"[EECP.com](http://EECP.com) will tell you if or where there is a site that does this in your area. It's a Medicare insurance-approved therapy, believe it or not. There are studies that show just EECP alone will relieve about 80 percent of angina. It definitely has some conventional literature behind its effectiveness. It's very simple and straightforward,"* Cowan says.

As explained earlier, the reason you don't experience a heart attack due to blockage is that you're protected by collateral circulation. However, if you have diabetes or chronic inflammation, that will eventually deteriorate your small blood vessels (capillaries), reducing this built-in protection.

EECP works by inflating compression cuffs on your thighs and calves that are synchronized with your EKG. When your heart is in diastole (relaxed), the balloons inflate, squeezing the blood. This is a very powerful and safe alternative to coronary bypass surgery for most. Rather than bypassing one or

two large arteries you create thousands of new capillary beds that supply even more blood than bypassed vessels.

The sessions are about one hour long, and one requires about 35 sessions to receive the benefit. It has insurance approval for angina, and even if you had to pay the \$5,000 dollars out of pocket, it is certainly far safer than having your chest cracked open.

It is also very effective for many other conditions like heart failure and diastolic dysfunction (which is an emerging cardiac epidemic). Many professional and elite athletes use it as an aid to maintain cardiac fitness when they are injured and unable to actively exercise.

## **EECP Triggers Growth of New Blood Vessels**

By doing that for an hour, five days a week for seven weeks (a total of 35 treatments), your body will form new blood vessels, thereby improving your collateral circulation. It's as simple as that. Your body will literally sprout new blood vessels in response to the increased pressure. In addition to eliminating angina, the new flow may also increase your physical endurance and sexual function by 20 and 40 percent. The effects typically last five to eight years.

*"Some people call this 'passive exercise,' because [that's] the only other thing I know of that actually really encourages the sprouting of new blood vessels. [H]igh-intensity strength training ... encourages new blood vessel formation. If you're going to make muscle, you have to make more small blood vessels to nourish the flow.*

*That's what happens. Anytime you're doing high-intensity strength training or running up hills or whatever it is you're doing, that also does it. It makes more collateral*

*circulation,” Cowan explains.*

*“The problem is a lot of people who come with heart disease, you can’t tell them to do high-intensity training or hardly any exercise. The only thing they can do is just lay on the bed and do this passive exercise. Then they have much more capacity. Then they can get into more of a strength training or some sort of exercise program, and have a much greater capacity.”*

## **More Information**

Hopefully, this interview has intrigued, encouraged and inspired you to pursue and investigate this topic in more detail, because the potential to transform your life and the lives of those you love is certainly available. Cardiovascular disease, heart attacks, and strokes are enormously common, and they simply do not need to be.

To learn more, I highly recommend picking up a copy of Cowan’s book, [“Human Heart, Cosmic Heart: A Doctor’s Quest to Understand, Treat, and Prevent Cardiovascular Disease.”](#) You can also find more information on [HumanHeartCosmicHeart.com](#). I also published an article written by Cowan in 2014, in which he provides his perspective on [the real cause of heart attacks](#), which you can read through.

*“Hopefully, we’ll have some sort of newsletter and be able to really develop a community of people who are interested in looking at a whole different way of understanding and approaching heart disease,” Cowan says.*

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