

Primary Care Cures

Episode 159: Dr. Malcom Kendrick 2

Ron Barshop:

Okay, we're back again with Dr. Malcolm Kendrick. Dr. Kendrick, last time we spoke we discussed some counterintuitive things about the cholesterol hypothesis and LDL and statins and we talked about the thrombogenic hypothesis, which you explained very nicely so we're not going to go over it again. Today we want to talk about, what should we be doing for heart health to be wise, and I want to tie that in with what appears to be some things we're seeing on the embalmer tables, which are massive blood clots on people that are younger who have died not from COVID, but from apparently these booster shots. So maybe we're veering into some territory we don't need to, but we'll talk about it.

Ron Barshop:

Let's go ahead and get into it. It looks to me like there's a lot of free things in your book we could be doing. The first we start with is, add more sun in your life. It'll add 10 years of life and the melanoma impact is almost de minimis. Can you talk about adding sunshine in our lives?

Malcolm Kendrick:

Yeah. I'm beginning to sound more and more like a raving lunatic probably to some of your audience. Salt's good for you, cholesterol's good for you. And now, sunshine is good for you. I looked at a study from the International Journal of Epidemiology some years ago and what they showed was that... This was looking in the United States, that people who had greater sun exposure were 50% less likely to get prostate cancer, where women were 50% less likely to get breast cancer, and men and women between them were 75% less likely to get colorectal cancer. Just for three examples. There's another study came out in Denmark and they looked at women who sunbathed a lot versus women who avoided the sun. This was over a 10-year period and they found that women who sunbathed a lot had an increased life expectancy that was the equivalent of in reverse of smoking 40 cigarettes a day.

Malcolm Kendrick:

The main difference was in cardiovascular disease. Now, these are again, facts. Now everyone's terrified of malignant melanoma. I hate to say it. There's another fact which is there's very little to know to perhaps inverse evidence that sun exposure causes malignant melanoma. I mean, there's no doubt in fair-skinned people that it causes certain types of skin cancers. Basal cell skin cancer, squamous cell, [inaudible 00:02:32] ulcers, blah, blah, blah. These are

local ones that can be removed. So they do exist, but when you're talking malignant melanoma, the association is small to nonexistent to reverse.

Malcolm Kendrick:

I'm quoting, there was a study done in the British Journal of Dermatology where a bunch of dermatologists look at the evidence and they said we have to rethink this. Has it been rethought? No, it just carries on. It's just a fact. If you expose your son to the sun, you'll get melanoma and die.

Ron Barshop:

I'm getting the sense that you don't put on sunscreen when you go out.

Malcolm Kendrick:

No. Well, sunscreen, let's not get ahead. There's another one. Sunscreen causes skin cancer. But let's move on to the other fact, which is that sunshine... One of the most important things in your heart health is a molecule called nitric oxide, which was discovered to exist in about 1995. No one thought it could exist in a human body because it's a really reactive substance. It's in free radicals. The freest of free radicals. It's the freest of free radicals because it was discovered essentially to be the thing that makes nitroglycerine explode.

Malcolm Kendrick:

If you take nitroglycerine as a tablet, it's called glyceryl trinitrate. It causes the release of nitric oxide in your blood vessels. It causes them to widen and open, get rid of angina, and it's fantastically important for your overall health of your blood vessels, because also it's an enormously potent anticoagulant. Stops blood clotting. So it's got a huge number of benefits.

Malcolm Kendrick:

It was discovered about eight, nine years ago by researchers that if you go into the sun and you expose your skin to the sun, you synthesize nitric oxide in your skin and it hangs around for a bit. It lowers your blood pressure by more than... Well, definitely more than salt increases it. It lowers it by more than most blood pressure lowering agents, but it has all sorts of other effects that are all beneficial.

Malcolm Kendrick:

Sunlight is gigantically beneficial for health. It's [pos 00:04:37]. Is it the number one? I don't know. It's up there in the top two or three things that you can do to remain healthy. You know, people say, "Oh, I go into the sun and I feel good. Then says, "Oh, but you can't go into the sun because you're killing yourself." It's like, oh.

Malcolm Kendrick:

I started reading books about it. Before antibiotics existed, they used sunlight as a way of killing bacteria. So people with TB went into solariums, they sat in the sun and the benefits were huge. We've kind of got rid of sunlight as a cure of anything nowadays because we're terrified of the damn thing. So what everyone's heard of is obviously the one that sunlight increases the synthesis of vitamin D in your skin.

Ron Barshop:

Yes.

Malcolm Kendrick:

And vitamin D has all sorts of benefits all over the place. It's an anti-cancer... Well, it's an anti-cancer vitamin. It's not really a vitamin at all. It stimulates your immune response. One of the things that you find is that people who have got higher vitamin D levels are more likely to fight off COVID, et cetera, et cetera. It's just a wonder substance in your body. Ironically of course, it's synthesized from cholesterol. That's the basic molecule from which vitamin D is synthesized.

Ron Barshop:

Okay. So the first head scratcher that everybody now has understood is salt is medicine.

Malcolm Kendrick:

Yeah.

Ron Barshop:

Iodized salt is actually fine because iodine, many of us are iodine-deficient. That's what causes thyroid issues with women when they get older, lack of iodine. But even mineral salts, the Himalayans and the Dead Sea salts, those are all good too because they've got other minerals in them, maybe less iodine. And then sun is medicine. For sure sun is medicine, but you also brought up a third one that was just kind of shocking. I've never read anywhere, heard anywhere. It's not in any literature. It's breathe through your nose for more nitric oxide. Breathe through your nose. Wow.

Malcolm Kendrick:

Yeah. Yeah. Well, I heard this one and I thought this sounds like rubbish. Just breathe through your nose to get more nitric oxide. I mean, where does that come from? And then I started reading about it and you know what? If you breathe through your nose, the nasal cavity synthesizes nitric oxide that you then breathe into your lungs, and they act in many different ways. Some of that goes into your bloodstream and has good effects on your cardiovascular system. It's also a really potent antibacterial and antiviral substance.

Malcolm Kendrick:

One of your key parts of your immune system I think called macrophages, which are white blood cells, amazing little beast things, flying around all over the place. They kill bacteria and viruses by firing nitric oxide bursts at them to destroy them. So nitric oxide is enormously effective at getting rid of viruses and bacteria. If you breathe through your nose and you produce more nitric oxide, your lungs are now bathed with nitric oxide and you get less infections and you get less heart disease, and you're just generally so much better off.

Malcolm Kendrick:

It sounds like utter rubbish. It sounds like hippy chanting, wear daisies in your hair rubbish, but it's actually, go and look it up, guys. I didn't make this up. I thought this was rubbish. Then I looked it up. I thought this isn't rubbish, this is absolutely true. It seems unbelievable, but it's true.

Ron Barshop:

Yeah. You have some sad prescriptions in there. One of them is high intensity, 10-minute intervals with three to four times a week is just as good as pretty much any other kind of exercise because it depletes the glucose stores. Now you mentioned in your book, and this was fascinating, that a thousand of the leucogen storage, of calories are stored in our livers, and the 500 is in the rest of us which is mostly in our brain, but it's throughout our blood system too. So what you're saying is deplete the glucose with these high-intensity burpees or these interval trainings, what I do around tracks, and that's really going to give this optimal heart health as well. Correct?

Malcolm Kendrick:

Well, that's right. I mean, your body... Well, slightly [inaudible 00:08:45] around there. The liver can store about five, 600 kilocalories, or what we really call calories, of glycogen which is basically glucose. It's just like glucose molecules stuck end to end are called glycogen. You can store about a thousand calories of that in your muscles and some elsewhere. When those stores are full, then obviously there's nowhere for glucose to go and the insulin has to start driving it harder and harder and transforming glucose into fat, which then is sent out from the liver to your body. This is why you get fatty liver. If you have insulin resistance and too much carbohydrates.

Malcolm Kendrick:

If you do high-intensity exercise... Your low-intensity exercise like going for a jog or a walk, that's good. I'm not knocking it in any way, shape or form, but it uses up fatty acids. Fat, because that's the most efficient energy storage. But if you do high-intensity exercise, you go to anaerobic energy. You get about one 16th of the amount of energy out of an anaerobically metabolized glucose molecule, as you do out of one fatty acid. So, you are actually burning up energy pretty quickly. I mean, some of it's reconstructed, but basically we are

not very good at... We're very good at exercising at low intensity because our metabolic system deals with that. High intensity, we move into anaerobic world where we're burning up glucose directly. All of your stores get emptied out and then you're in a situation where your insulin resistance, which drives a lot of the metabolic problems, is flattened. It's knocked on the head.

Malcolm Kendrick:

So the high-intensity exercise, quite short-term, high-intensity exercise, if you have problems with your blood sugar level, that's the way to go. Do not go out for a walk. Well, go out for walks as well. But you need to do this burst energy stuff in order to basically clear the stores and glucose and glycogen out of your system. Then they're empty and then there's a chance they can be filled up again. So you just burst energy at them again, and they're gone. This is how to do it from an exercise perspective.

Ron Barshop:

That's not bad news and happy news, but the next one I'm sad to say is. I've been intermittent fasting now for four or five months and it's worked beautifully to lose 20 pounds more, but I've also learned that I've been sabotaging myself by drinking alcohol. Talk about the alcohol sabotage effect on intermittent fasting.

Malcolm Kendrick:

No, I hate to say it. Yeah. A scotch whisky in the evening, but the body has a sort of hierarchy of usage. Alcohol is obviously made from sugar. That's what fermentation is. Glucose turns into alcohol molecules. Our body wants to get rid of the alcohol first and uses it as an energy store first. So if you have alcohol on board, then the body will be using that and it will not be using any of the sugar stores, and it will definitely not be using any of the fatty acid stores which is like your deep energy store. Like a hybrid car. You've got the electric bit and you've got the petrol bit. If you never come off the electric, then the petrol's never going to be used up. But if you never come off the alcohol, and that can take hours to be broken down and used for energy, you're not even going to get into your glucose stores. If you don't get into your glucose stores, you're definitely not going to be getting into your fat stores. So losing weight, losing fat becomes virtually impossible, unfortunately.

Ron Barshop:

Heartbreaking, but good. There's one thing you left out of your book. I think you talked about it, but it's just touched on, Dr. Kendrick. I feel like I'm standing in the spot on Mount Rushmore's nose. It's not a big deal because it is important, but I looked at blood moving, heavily hydrated versus not hydrated under a microscope, and I saw that it moves like sludge without hydration, but when it's properly hydrated or optimally hydrated, the blood looks beautiful. It's

smooth like a river of Mississippi. You don't talk about hydration much in your books. Can you address that now, the importance of that?

Malcolm Kendrick:

Well, I had to decide how long the book was going to be and how important the thing was. Nowadays everyone's still hydrate. You go to the gym, it's like a queue of 50 people to fill up their water bottles. I'll look at them and think, how much water can you possibly be sweating out? Anyway. But yes, hydration is important. If you are dehydrated, your blood is more likely to clot.

Ron Barshop:

Well, 75% of Americans apparently are chronically dehydrated in that-

Malcolm Kendrick:

[crosstalk 00:13:05]. Well, I hold my hands up.

Ron Barshop:

Yeah.

Malcolm Kendrick:

Well, you're right. Hydration. Correct hydration. Having enough fluid and your blood flows better. I agree entirely. We know that if you become dehydrated on an airline, which happens, and people drink alcohol in airline which means they become more dehydrated and then the lower oxygen pressure means that you lose more fluid, people are becoming dehydrated and then they develop blood clots, not in their arteries but in their veins.

Ron Barshop:

Yes.

Malcolm Kendrick:

These are the deep vein thrombosis ones that can then break off and go into your lungs. So you are absolutely right.

Ron Barshop:

Okay.

Malcolm Kendrick:

That correct hydration is very important.

Ron Barshop:

Tell that to my girlfriend. [crosstalk 00:13:53]. Tell my girlfriend to say those words often.

Ron Barshop:

Okay, this one's an important one. We all want to know what kind of diet, because there's a thousand diets out there and it's terribly confusing, but forget the word diet and let's tend towards low-carb food intake. Gosh, your book showed that undoubtedly, diabetes drops 93% and insulin use drops 46% in the low-carb studies most recent, which is backed up by Virta Health is doing... On one of our recent shows we had Frank Dumont, their Medical Director, and he said the same thing. They're just using evidence to get the carbs down and they're reducing and eliminating diabetes and insulin in over 90% of their patients over a five-year studies that they're coming out with in a couple of weeks here. But it works. Low-carb works.

Malcolm Kendrick:

Well, of course it works because it fits the physiologic. The human physiology says it works. It has to work. Once you understand that, it's like, yeah. I mean, some people could eat. My son struggles to put on weight. He's 28, he's a little swine and he struggles to eat enough and he stuffs himself with carbohydrate. I keep saying to him, "Just wait until you're my age. It will reverse, you little swine."

Malcolm Kendrick:

At the moment he can deal with it. Some people can deal with them fine, there's no problem. A lot of people cannot and they start to run into this problem of filling themselves up with carbohydrates, filling up their glucose and glycogen stores. Then the metabolic system starts to struggle to deal with it. Your insulin goes up, your blood sugar goes up. The whole thing goes kiboshed. And if you are one of those people and there's probably, I don't know, 40%, it's quite a large proportion of people. Really, they'll go diabetic and they'll go high blood sugar if they eat too many carbohydrates and they don't do anything else. If they go out and run a marathon three times a week or do heavy work in the gym, they're probably all right, again. So it's not an absolute that this happens.

Ron Barshop:

To add to the confusion, the guidance for older folks seems to be, "Don't take those baby aspirin anymore. Stop it." But you say that the baby aspirin stop the platelet stickiness, especially as we age, and stickiness is sort of a progenitor for the thrombogenesis hypothesis.

Malcolm Kendrick:

Yeah. Well, the evidence here waffles back and forth. It's not a huge advantage taking aspirin or baby aspirin. I would say that there are certain conditions that if you've got it's definitely worth thinking about. There's a condition called antiphospholipid syndrome, a huge syndrome where your blood is much more likely to clot, and these people are told, they're advised to take aspirin to prevent this happening.

Malcolm Kendrick:

For the average person, aspirin also causes increased risk of bleeding. It has downsides. So you're balancing things all the time. I would say if you do other healthy things, if you take your exercise, you go in the sun, blah, blah, blah, you don't need to take it probably. If you previously had blockages and clottages and you've been found to have blood clotting issues, then I would take it.

Ron Barshop:

Okay. My favorite recommendation by far in your book, like the book starts singing the Hallelujah chorus when I turn to this page, is to replace statins with Viagra. It's five to six times more effective than the statins.

Malcolm Kendrick:

Yeah. Well, of course the irony is that statins... You speak to most doctors, are completely unaware of this. Statins actually increase nitric oxide synthesis in the endothelium. Through a complex mechanism, but they do it. My belief is that any benefit they have on cardiovascular disease, and they do have some benefit, although it's less than people like to say it is, is due to this nitric oxide synthesis benefit.

Malcolm Kendrick:

Of course, Viagra, sildenafil, was designed to increase nitric oxide synthesis and it started life as an angina drug, as a cardiovascular drug. It was only when the volunteers of the trials refused to hand it back that then they said, "Why are you keeping all of it? No one ever keeps all of the drugs in the clinical trial." And they did, and they said, "Oh, right." And then they found out that it causes erections because it increases nitric oxide synthesis specifically in the penis. Or more specifically in the penis. Obviously does it elsewhere as well. That was how it happened.

Malcolm Kendrick:

Then there are studies that were done in Manchester, very close to [inaudible 00:18:26] where they looked at people who had had heart attacks and had diabetes who took Viagra versus those who had the heart attacks and diabetes, but not taking Viagra. The benefit on their future heart attacks was quite astonishingly huge. I mean, there was a big confounder there because probably the people who were still having sex maybe were the people who were still a bit, gotten a bit healthier in the first place. A bit friskier to start with.

Ron Barshop:

I'm going to take a little bit of a break from the recommendations so I can tell you a conversation I had with a cardiologist yesterday morning. This is a teacher of cardiology here in San Antonio, Texas, and he got nervous when I asked him two questions. None of them were in your book, but I said, "Tell me, what is the risk factor where we need to start taking statins?" He says if you're a

risk factor of 7.5% or higher over 10 years, take a statin. I said, "Tell me the risk factors," and he listed them all out for me, which are all in your book.

Ron Barshop:

When he listed them, I said with my next two questions, this where he got nervous, I said, "So let me ask you. None of your risk factors have anything to do with what I eat, what I hydrate with, how I exercise, how I sleep, or how I handle stress. None of those are in your risk factors." That's when he kind of shut down and gave me a different answer to that question. It just blew my mind that none of the risk factors have anything to do with those obvious health inducers. Correct?

Malcolm Kendrick:

No, absolutely right. This thing, I did write about it in the previous book, is the risk calculator that says, "What's your risk of having a heart, a cardiovascular event in the next 10 years? And if it's greater than... In America it's 7.5%, then you should start on a statin. Which means that if you're a man and you're age 50 or above, even if you have no other risk factors, you should start on a statin. Completely bonkers.

Malcolm Kendrick:

In the United Kingdom the risk has been set at 10%, which is slightly higher. It just means that when you're 56, you have to start a statin. Which is by far the strongest, most potent risk factor for heart disease in the risk [inaudible 00:20:29] that they have is age. Basically, you're just saying as you get older you're more at risk of dying heart disease, so you should take a statin. Yeah, but why are you more at risk as you get older? We have no idea. We have no idea, we just know that you do, so take a statin anyway.

Ron Barshop:

The second question he got nervous at, Dr. Kendrick, is when I said 100 people need statins and for one person to get a five-year benefit, that's what I read in the literature. I said, so if 100 people need to take statins for one person to get a five-year prolonged life... And he gave me some nervous laughter and a non-answer basically, and he changed the subject. I didn't even go into what's in your book. Your book is so deep and so wide. It goes into the history. In other words, you're not alone in this hypothesis. You're in a nice scout group with a lot of other brilliant doctors.

Malcolm Kendrick:

I'm in a gang of all the intelligent people. I'm just [crosstalk 00:21:20].

Ron Barshop:

The reasonable people.

Malcolm Kendrick:

The reasonable people. We are the reasonable ones. Yeah. I use another statistic, and this is not my work, although I did do it separately. If you take a statin, using the evidence from the clinical trials, if you have no preexisting heart disease, when you take a statin for five years, your average increase in life expectancy is 3.1 days.

Ron Barshop:

Wow.

Malcolm Kendrick:

Which is 0.6 of a day per year of taking a statin. Now, whether you believe that's the statistic or not, and I'm not entirely sure I do, but that is the totality of the benefit. You can present benefits and all sorts of different points. You say, well, if 100 people have to take it and 99 will get no benefit and one might, but I think the question there is, when we look at other drugs like in cancer, you don't say 99 people will get no benefit from this cancer drug but one might. What we say is the average increase in survival time is six months if you take it for two years. We don't know which person's going to get that benefit. It's a complicated thing.

Ron Barshop:

Well, and you wrote a whole book about statistics and the lying of statistics and the clinical trial games that are played with relative risk and absolute risk. I mean, that's a whole other interview for another time.

Malcolm Kendrick:

Well, it is. It's a real page turner. Is your life not boring enough yet? I'll tell you about-

Ron Barshop:

I'll tell you all, if you all want to get into why he said three days, the book goes into the actuarial reasons why that adds three days to your life, if you are a certain age.

Malcolm Kendrick:

Yeah.

Ron Barshop:

Let's shift subjects and talk for a minute about women's heart health. It's no different from men. They just died 10 years later it seems, but it also seems that they're dying of a different type of cardiovascular disease.

Malcolm Kendrick:

Yeah, it is interesting. The difference between men and women with cardiovascular disease is a fascinating subject all of itself. I didn't really get into that, you see in the book, because boy, it opens up. It's just huge.

Malcolm Kendrick:

One of the things is, of course, if a woman has a myocardial infarction heart attack, she doesn't tend to get the same symptoms as a man. Men tend to get more pain. Women just don't seem to get so much of that pain, which is why they're less diagnosed as having had a heart attack if you want, and it's missed. And yet women are more likely to get a thing called Takotsubo syndrome, broken heart syndrome, which is increased stress causes the heart to start malfunctioning, and ends up in the shape of an octopus pot, i.e., a Takotsubo which is why it's called that. It's a Japanese word. And that's different.

Malcolm Kendrick:

The underlying disease is kind of the same, but the way it presents and the way it operates is kind of different. My own belief on this is that women respond differently to stressors than men and the way that they react to stress is different. Men are hunter-gatherers and they have this very primeval kind of response of fight or flight, which really triggers off. Also, one of the things that does is raises your LDL level if you stress people. But women don't have quite that same response. That's cultural as well. These are not necessarily physiological differences. So it's a complicated area. I am not yet capable of saying I can fully explain to you why men and women have very different rates of cardiovascular disease at the same age. Yes, and you're right, women lag behind men, but the way that they present and the conditions that they've got are slightly different as well.

Ron Barshop:

Yeah. It's funny. All the statin research early was done on that reason for the beginning of the massive sale of this was based on men, not on women, who again, present a different way. But let's not go there since you said that's a giant chasm.

Ron Barshop:

Back to the what we should eat. There's four or five more I want to talk about that are in your book. Again, we've last talked about Viagra, yes. Statins, not necessarily. High-potassium foods like banana, spinach and broccoli and folic acid, B6, B12 are just great for brain health and also for the cardiovascular system. Can you explain those?

Malcolm Kendrick:

Absolutely. Yeah. Well, the potassium one is interesting. If you look at, apparently hunter-gatherers have a ratio of, I can't remember off the top of my head, it's like six to one potassium to sodium intake, and that's almost, it's

completely different. Potassium has heart protection benefits which are complicated to get into, but essentially you have to have the correct balance between sodium and potassium, and what we should not be doing is reducing sodium. What we should be doing is increasing potassium.

Malcolm Kendrick:

Potassium intake is really important for heart health. Things like arrhythmias of course, but also how the whole function of the body works. Your whole body works because sodium and potassium are pumped in and out of cells. If you get that ratio wrong, it stops working. It's just vitally important. We're ignoring this.

Malcolm Kendrick:

There are studies done and you can see, and now I mentioned them in the book right there, the people who are given more potassium, their blood pressure drops more than people who reduce their sodium. Even if you believe that factor is huge. And yet even given that, they go, "Oh no, we must reduce sodium." But if you reduce sodium, you cause all sorts of problems downstream in the body that you don't want to have happen. So yes, potassium, good stuff.

Ron Barshop:

Okay. You want to get a good boost of energy, go get yourself a B12 shot, but better, take regular folic acid, B6, B12 [crosstalk 00:27:10] not only brain health but overall health.

Malcolm Kendrick:

I had it in the book and took it out just because it was yet another area that I'd need to spend about 30 pages discussing. The study done in Cambridge in the UK where they found people at early stages of Alzheimer's disease and they gave them high doses of... I keep forgetting which of the B vitamins it was. I have to go and look it up. I think it was 12. No, it was nine. No, and it was nine, three and six, I think. What they found was this prevented brain shrinkage over the next two years I think, and actually their cognitive capacity improved. Then along came a big meta analysis from my favorite people in Oxford that said, "We have looked at this and we found there was no benefit to B vitamins." Now, that meta analysis was just, I ripped it to shreds and I will rip it to shreds again in the near future. It was just the most ridiculous thing I've ever read.

Malcolm Kendrick:

The problem is that that sort of thing then tends to stop research dead in its tracks. The reality is that we need these vitamins for our brain health, as much as our heart health as well. Thiamine's important for both. Unfortunately, on one side we have a huge pharmaceutical industry that wants people to have nothing to do with vitamin supplementation and they squash it and attack it and

denigrate it and call people who believe in vitamins woo-woo whatever they are, as if we don't understand science. This is just nonsense.

Malcolm Kendrick:

Yes. If you have a really good, healthy, natural diet full of all sorts of things that fall from the trees and animals that run around and whatever, you probably don't need any of these things, but increasingly in our environment, a lot of people come to lack these vitamins. In the book I talk about magnesium. Nobody needs magnesium. Well, in Israel, they use desalination plants for most of the water supply.

Ron Barshop:

Takes all the magnesium out of the water.

Malcolm Kendrick:

So they took it out of the water.

Ron Barshop:

Yeah.

Malcolm Kendrick:

Their estimate was 5,000 people a year were dying due to magnesium deficiency, from cardiovascular disease in Israel. And that's a population of, I think it's eight million. Well, that would be the equivalent of 150,000 people die in the States every year. So this is not a minor problem, and yet no one talks about it. It's an absolutely essential mineral. Is that a mineral or [crosstalk 00:29:42]?

Ron Barshop:

Yeah, close enough.

Malcolm Kendrick:

It's just dismissed. They had to put it back into the water in Israel because people were dying.

Ron Barshop:

When I was running marathons 20 years ago, glucosamine chondroitin were the two go-tos to reduce joint pain, but they didn't work for that. I had read in your book that they lower CVD risk by 15%.

Malcolm Kendrick:

Well, they can well do. When you're talking about arterial damage, you're talking about endothelial cells and endothelial cells are protected by a framework filament layer called glycocalyx, which doctors have never heard of.

Ask your cardiologist, he probably doesn't even know what it is. This is hugely important for the health of the underlying endothelial cells and it's made up of various amino acid and proteins, one of which is chondroitin and another which is [hyaluron 00:30:30]. There's others in there but they're the two main ones. There's evidence that if you provide these proteins, they are then put into albumin, which is a protein complex that's made in the liver which floats around. There's tons of it in your bloodstream. It sticks in the glycocalyx layer and nurtures and feeds the glycocalyx.

Malcolm Kendrick:

This is absolute basic science, and yet cardiologists, doctors you can speak to, they've never heard of any of these things. So when someone says, "Chondroitin, how the hell can that prevent or protect against heart disease?" You go, "Well, you don't even understand what you're talking about. You've never even heard of the glycocalyx, so how can you have a discussion with me?"

Ron Barshop:

I think on the glycocalyx, after reading your book, as the fur coat inside the endothelial layer. So it's the-

Malcolm Kendrick:

[crosstalk 00:31:22] inside, yeah. Why not? Yes.

Ron Barshop:

Yeah. Why not?

Malcolm Kendrick:

[crosstalk 00:31:29] and it protects your endothelium. I've never yet spoken to a doctor that's even heard of it. And then they're trying to tell me they understand cardiovascular disease.

Ron Barshop:

Okay. So you talked about CoQ10. Let's talk about also L-Citrulline and L-Arginine as supplements, which I'd never heard of before this book.

Malcolm Kendrick:

No. Well, L-Arginine, that came from the guy who first discovered and invented... Didn't invent it. The man discovered that your arteries were full of nitric oxide and how beneficial it was, then realized that the [co 00:32:01], it's actually made from a thing called nitric oxide synthase, and it needs arginine, which is an amino acid. It needs that in order to co-factor and it makes nitric oxide from it and it circles around. L-Arginine is then converted to L-Citrulline. L-Citrulline is then converted back to L-Arginine and this drives the nitric oxide synthesis, which also happens in the glycocalyx, by the way.

Malcolm Kendrick:

If you increase arginine intake then, you get more nitric oxide synthesis. I mean, you can get more nitric oxide synthesis if you eat beetroot as well because that's got nitrates in it. So you need a nitrate and you need the arginine. You need the nitric oxide synthesis and then you've got lots of nitric oxide.

Malcolm Kendrick:

Nitric oxide is the single most important chemical for your cardiovascular health. So L-Arginine, if you have lots of L-Arginine and then you take L-Citrulline, L-Citrulline stops the L-Arginine from being deposited out of the system because the L-Citrulline can then be reconverted back into L-Arginine. This is just basic biochemistry that again, I've never ever met a doctor that's ever even heard of it.

Ron Barshop:

Well, I'm going to start eating more dark chocolate, drink a little bit more red wine.

Malcolm Kendrick:

Yes.

Ron Barshop:

Eat more beets and garlic and fresh greens like broccoli and kale, because apparently they're all rich in those two substances.

Malcolm Kendrick:

Well, they are rich in, and then you increase your nitric oxide synthesis. You know, it's not rocket science, this. It's just basic stuff, but doctors aren't taught this. Medics are not taught nutrition. They're not taught any of these things. I had to go and find out all this stuff for myself, which is very tedious because I don't know where to find it usually.

Ron Barshop:

Okay. We're going to shift gears and talk about COVID and then we'll say thank you for your time.

Malcolm Kendrick:

Okay.

Ron Barshop:

Which you've been very generous with. COVID is a blood disease and is all about clots. Can you talk about... It's not a lung disease as much as it is a blood disease. Can you talk about how it-

Malcolm Kendrick:

It's both, but it's more of a cardiovascular disease. COVID, as we found, although SARS-CoV-2 virus, it needs to link to, I think, called an ACE2 receptor in order to get into a cell. If you have no ACE2 receptors, the virus can't get in. So cells that have this ACE2 receptor are infectable. The lungs are actually... Well, what's an ACE2 receptor? It's to do with, called the angiotensin system, which is also called the renin–angiotensin–aldosterone system, which is what controls your blood pressure and it's all very complicated. It's to do with hormones release in your kidneys and renin and blah, blah, blah. But just remember that the cardiovascular system, this is a really key part of it. So it's not surprising when the ACE2 receptors are spread around, the cardiovascular system is spread into your kidneys, and they're in the lungs because the conversion of what's called angiotensin one to angiotensin two happens in your lungs. I have no idea why but that's where it happens. Seems a strange place for it to happen, but it does.

Malcolm Kendrick:

So your lungs are infectable. When people get infected with COVID, the first thing that gets hit is your lungs. But then it gets out of the lungs and it goes into the blood vessels and the endothelial cells all have lots of ACE2 receptors, so the virus can get into your endothelial cells. The virus gets into your endothelial cells and it replicates in there and then the cells send out a thing saying, "I've been infected," to the immune system. "Please come and kill me." The immune system goes, "Yep, no problem," arrives, and this is when you get a cytokine storm. Cytokines are things, released chemical messengers into the bloodstream saying, "I'm infected." In this case, "Come and kill me." So the immune system revs itself up, starts killing off endothelial cells. Well, surprise, surprise. This causes blood clotting.

Ron Barshop:

You mentioned also the Ebola is the extreme example of that. You get bloodshot eyes, you start bleeding in your gums, and then eventually everything falls apart with Ebola.

Malcolm Kendrick:

It's all the same, right. It's not quite exactly, these things are all subtly different.

Ron Barshop:

Okay.

Malcolm Kendrick:

Obviously my concern... I was writing about vasculitis and Kawasaki's disease when SARS-CoV-2 arrived. Everyone's going, "How could it cause blood clots?" and I'm going, "Well, it has to cause blood clots, because this is what it does."

Anyway. Of course the problem... I then saw, well, if we've got the vaccine which is mRNA vaccine, which is then designed to go into cells and make them make spike proteins which the immune system's going to say, "I must attack and kill this," that there was always potential that those cells, the mRNA would not stay in the muscle, which of course it doesn't. It would get around the body. It would get into endothelial cells and into heart cells, which express an awful lot of ACE2 receptors, and that the immune system would start attacking the body, around the whole body in the vascular system. That was always an issue that I thought we have to be very careful about.

Malcolm Kendrick:

Everyone said, "Oh, we can't do this. Can't do this, can't do this." It's definitely worse having the infection [inaudible 00:37:08] causing blood clots.

Ron Barshop:

Yeah. Let's talk about the vaccine because there's some scary and disappointing news coming out in the last 90 days about embalmers and funeral homes. You're nodding your head. I guess you've heard this already, that these gigantic long earthworm-looking blood clots are forming in the legs, in the arteries after the booster shot. What the heck is going on there? They've never seen it before. People who have been doing embalming 10, 20, 30 years are saying 40 to 90% of their young patients are dying of these blood clots.

Malcolm Kendrick:

Well, despite protein is pro-coagulant, it triggers the immune system. If you go back in history to when we were just little double cell, whatever we were, the immune system and the clotting system were the same thing. It was the same. It was the same thing, the mechanism. So what happened was that the blood clotting system sort of sealed off the infective agents and of course over a billion years, they became different. But when you trigger the immune system, you trigger the blood clotting system at the same time. This is known. So if you start firing at the immune system too high, this is always what we used to say years ago. If you have a cold, don't exercise because you can have a heart attack. This actually happens to be true.

Malcolm Kendrick:

If your immune system is fired up for whatever reason, the blood clotting system is fired up as well. These two systems operate together. So therefore, yes, if you're getting an excess immune response to a vaccine or a virus or anything gets into your body, you're more likely to see the development of blood clots. Again, this is just basic science. I'll give you the building blocks of the answer and they're all inarguable, and yet people argue the answer.

Ron Barshop:

So [inaudible 00:39:07], myocarditis for athletes that are collapsing on the field, same thing?

Malcolm Kendrick:

I think it's happening. I predicted it'd happen in mid-2020, that this could be a adverse effect of it. I was of course fact checked and told I was talking rubbish. Is it a major, major, major problem? I have to say I don't know. There is no doubt that there is a very strong move to ensure that no one must criticize vaccines in any way. I would say, well, sure you want these things to be as beneficial with as few adverse effects as possible, so you have to look at these things and you have to be honest about these things. And if there is a problem being created here, then we have to know if it's true. We can't just have people saying, "Oh, don't worry. It's worse if you get COVID. Actually, we can't tell whether it's associated with vaccination and blah, blah, blah."

Malcolm Kendrick:

Of course you can't tell for sure in any individual case, but believe in the Journal of the American Medical Association. I wrote an article showing that myocarditis was increased considerably post-vaccination in younger people. Factors of 53-fold, I think, off the top of my head. That moves beyond just a one-off thing. That's a thing that's happening. You could predict that that may happen from understanding what's going on.

Malcolm Kendrick:

I'm not an anti... The trouble is the moment you criticize anything it seems you're an anti vaxxer. The moment you raise your finger and say, "But shouldn't we be looking at this?" you get your finger cut off. So it is a very difficult subject to discuss, but that makes it more important that it is discussed. I'm not an expert in this area. I just happen to be looking at infectious diseases causing blood clotting at the same time as the COVID pandemic arrived. So I was already switched onto the whole clotting, immune system, proteins, cytokine stuff. I felt a bit like a one-eyed man in the land of the blind at that time. To me it was bloody obvious what was going on.

Ron Barshop:

Dr. Kendrick, this has been amazing and fascinating. To respect your time, I'm going to let us sign off with a couple final questions we have here, but what a deep and wide and fascinating subject. This book, The Clot Thickens, my favorite book of the last 12 months, for sure. Not just because it's deep and scientific and well cited and it goes into every kind of medicine study that you could think of, but it also is a funny... It's a hoot and it's because Dr. Kendrick has got just that sensibility. He takes you through it very nicely.

Ron Barshop:

My final two questions are, how do people find you if they want to find you or your book or your blog? What's the best way to reach out to you?

Malcolm Kendrick:

Well, if you're from the pharmaceutical industry, I live in Taiwan.

Malcolm Kendrick:

I do a blog obviously called DrMalcolmKendrick.org. Obviously I've written the various books. If you go into the blog, you can find the books. I prefer people bought the books from there because then the publisher gets, it's a larger percentage than they do if it's sold through a company that sounds like a larger river in South America. That's kind of it. If you go on to the internet and type me in, there's various times where I've appeared on various interviews and spoken and talked about this stuff. I just try and get the message out and I hope that we can have a good debate about this. I'd like a good debate. I don't just like people running away and saying, "That man's an idiot," but there we are.

Ron Barshop:

If you could fly a banner over the world with one single message, what Dr. Kendrick would that message be?

Malcolm Kendrick:

Question everything.

Ron Barshop:

Got it. It's a very good one. Thank you again. I just can't tell you how much I've been looking forward to this and have enjoyed this so much. I'm sure our listeners are going to get a lot of benefits from this.

Malcolm Kendrick:

Well, thank you very much. Appreciate it.