The Clot Thickens: Addressing the Foundational Causes of Heart Disease
A Special Interview With Dr. Malcolm Kendrick
By Dr. Joseph Mercola

Dr. Joseph Mercola:

Welcome everyone, Dr. Mercola helping you take control of your health and today we have a repeat guest, but one who's not been on for quite some time, Dr. Malcolm Kendrick. He, like me, is a board-certified family physician, but unlike me he has chosen to commit good portion of his professional life to uncovering the mechanism is to exactly why the number one cause of death, at least historically the last century, has been heart disease and he's uncovering the causes. Now we could possibly make a pretty strong argument that the number one cause of death today is not heart disease, it is exposure to the jab.

Dr. Joseph Mercola:

So the statistics will probably support that in a not too distant future, but that's my speculation, but that's another area. Interestingly, heart disease is a side effect of the jab too and Dr. Kendrick has written a new book called "The Clot," C-L-O-T "Thickens." Really great title. The title is also reflective of the sense of humor, it traces throughout the entire book. I mean, it's a pleasure to read because he is just so entertaining when he's describing this important thing and I really process rather. I really believe it's a crucial bit of understanding to have, because it so counters the traditional lipid hypothesis of the cause of heart disease, and he's written several books before then you'll review those when we start talking.

Dr. Joseph Mercola:

But this is one of the best I think, because it really goes into great details and gives you some solid strategies as to how to lower your risk and have the necessary biological understanding of what the process is. So once you understand it, you can understand how interventions like SARS-CoV-2 or the jab can actually contribute to heart disease. So you're going to be excited with this one and I'm really happy to have you today, Dr. Kendrick. So we welcome you and thank you for joining us.

Dr. Malcolm Kendrick:

Thank you very much. Great pleasure, and I very much respect you at the moment. Can I call you Joe?

Dr. Joseph Mercola:

Sure. Sure. Absolutely.

Dr. Malcolm Kendrick:

For the very brave stance you've taken against some of the most egregious and scary kind of attacks that people have had to suffer. In my memory I can't remember anything like this and it's really quite scary to do.

Dr. Joseph Mercola:

No. I couldn't agree more and it's really quite easy for me. Just like falling up a lot, because this is what I've been doing for the last quarter century, it's really nothing different other than they've changed the game a little bit, but that's what the whole newsletter was based on. Fundamentally, initially, was started to educate people about the foundational causes of disease so they can address them. The simple strategies that weren't very expensive, usually involving lifestyle changes and maybe some supplements, but primarily diet and exercise and sleep, and by doing that they can avoid the needless pain and suffering by committing to the conventional medical paradigm, which invariably almost never, never addresses the fundamental cause of disease. You certainly go over shades of that in your book.

Dr. Joseph Mercola:

So yeah, it's fun. I love doing what I'm doing, I wouldn't do anything else. So I'm really grateful to have the opportunity to participate in this dialogue. But anyway, I really enjoyed your book, it was very, very good. As I said, I think it really provides the foundational understanding. So we're going to let you walk us through it because you've done such a magnificent if a job and I'm sure we're going to get loads of your humor in our dialogue. So why don't you go for it and maybe tell us why you decided to write it and then basically go over the specifics, and I have a few questions for you and we can dialogue about it as we go into it. But I really want you to lay the basis and the foundation for your work.

Dr. Malcolm Kendrick:

Well, thanks very much. I mean, when people say, "Why do you write the book? Why do you put this effort in?" And people say, "Why are you so interested in heart disease?" Well, I go back and say that when I was training as a student in medicine, Scotland had the highest rate of heart disease in the world. That's what everyone said and I think it may even be true because heart disease statistics are swines to get a hold of. Quite early on people were saying, "Well, why does Scotland have such a high rate of heart disease?" The answer was, “Oh, well it's because we have such a terrible diet and we eat deep-fried Mars bars and we eat rubbish food,” and this is why Scotland has such a high rate of heart disease.

Dr. Malcolm Kendrick:

So I thought, well, when you're at medical school and you're told stuff it all comes into your brain and you don't question it greatly because you've got so much stuff that's coming in. So many facts to remember, a billion facts a day. So you eat too much saturated fat, the saturated fat gets turned into cholesterol in your bloodstream, and then it’s just absorbed into arteries and it forms narrowings and thickenings, which all sounds sort of plausible if you don't think about it too hard. But I also happen to go to France quite a lot, and in fact I'm in France at the moment, managed to get there. What I noticed about France was they eat a lot of saturated fat and they eat more in fact than anyone else in Europe, and they certainly had more than they did in Scotland.

Dr. Malcolm Kendrick:

So the idea that diet do the simple – if you like diet heart hypothesis, you eat too much saturated fat your cholesterol level goes up and then you die of heart disease certainly didn't work for the French, and in fact the statistics on the French are that they have the highest saturated fat intake

in Europe and lowest rate of heart disease, and this has been the case for decades. If you looked at all the risk factors for Scotland and France, which I did in a lot of depth, was that things like smoking, the French smoked more, exercise, exercise was about the same cetera, et cetera. Blood pressure was the same, rate of diabetes was approximately the same.

Dr. Malcolm Kendrick:

So if you took all the risk factors for France and Scotland, then the French had slightly worse, and according to conventional thinking, you should have more heart disease than the Scots. In fact, they had a fifth, one-fifth aged sort of matched and especially in younger men. So I thought, "Well, okay, this is interesting. It doesn't make much sense according to what we're told." Then while I was at medical school, in fact, I have a tutor in cardiology and her name is [inaudible 00:07:12] Smith, and she said something to a small group tutorial, which was LDL cannot cross the endothelium. At the time I didn't know what LDL was nor did I know what the endothelium was, but it kind of sounded important.

Dr. Malcolm Kendrick:

In fact, that triggered thinking, which I wish I'd had a chance to speak to her more, but I didn't, she's now certainly dead, but she had been looking at heart disease as a different process for decades, and she wrote a great deal. In fact, when I was reading papers by E. Smith, I didn't actually make the connection initially. I thought who's this Edward Smith? Because at that time women didn't write scientific papers and they definitely weren't cardiologists, how the world changes.

Dr. Malcolm Kendrick:

So I was kind of on this pathway and I think that's really where I got started. Once you start questioning the problem is you end up questioning more and more and you start thinking, "Gosh, this is just nonsense. Isn't it? This whole hypothesis is just nonsense." So I started, if you like picking it apart and I've spent the last, I hate to tell you how long I've spent picking it apart, but I was never quite able to think, "Well, what is the alternative? It's not LDL, it's not cholesterol, if it's not saturated fat, if these are not the primary causes, what is it?" Boy, that's a long and complicated journey.

Dr. Joseph Mercola:

Yeah, and your book, "The Clot Thickens," is an attempt to resolve that question. I'm impressed with your curiosity, it's something that essentially gets squashed out of almost everyone who goes and starts medical school. By the time they finish, it's gone and they're just accepting the conventional dogma. So kudos to you for maintaining that curiosity and helping us understand some of the foundational causes of disease. So if it's not the saturated fat, cholesterol, what is it?

Dr. Malcolm Kendrick:

Well, the hypothesis has actually been around since 1852. A researcher in Vienna called Carl von Rokitansky and he called it the Encrustation Hypothesis. Other people talking about it now would call it the thrombogenic hypothesis. Thrombo is basically thrombosis, which basically means blood clots and genesis basically means, the genesis means the cause of or the start of. So the thrombogenic hypothesis is that blood clots are the basic pathology that causes all heart

disease. So essentially trying to make it as simple as possible in your arteries, if a blood clot forms on your artery wall, which can happen for a number of reasons, mostly it will be covered over, dissolved away and gone.

Dr. Malcolm Kendrick:

So this is a common process that's probably happening, I hate to say it, in most people's arteries, quite a lot of the time. But the problem you have is if you get a blood clot that forms and it is not got rid of fully or another blood clot forms at that point, you then have a focus for what they call the atherosclerotic plaque. So the atherosclerotic plaque is basically a buildup of blood clot, repair, blood clot, repair, blood clot, repair. If the blood-clotting process is faster than the repair process, you have a plaque that gradually grows and eventually thickens the artery wall till it narrows sufficiently that the final blood clot on top of the existing plaque is the thing that can cause heart attacks and strokes. Does that make sense like that? Is that straightforward?

Dr. Joseph Mercola:

No, it's perfect. Yeah. One of your gifts is to simplify things in a way that's easy to understand. So thank you.

Dr. Malcolm Kendrick:

Well, thank you. So people say, "Well, how can this possibly be and how could people not have known this and dah, dah, dah?" I say, "Well, if you look at heart disease now, the mainstream will agree entirely that the final event in heart cardiovascular disease or atherosclerotic plaques or what they now call atherosclerotic cardiovascular disease." Unfortunately the terminology runs and jumps around on you all the time. But basically what you have is you have an artery, and then in one part of the artery there's the thickening, and it doesn't actually act like a thickening. The total artery size goes, it remains as a sort of circular tube, but the thickenings sticks out on one side and then eventually causes the whole thing to contract down.

Dr. Malcolm Kendrick:

But conventional thinking is that yes, the final event in atherosclerotic cardiovascular disease, which I'll just call heart disease because otherwise it gets too much of a mouthful, plaque, a clot forms on that point, it blocks an artery completely and that's when you have a stroke or a heart attack. So everyone accepts that the blood clots cause the final event, and increasingly people will accept and you can find it's written in very many, and you can find hundreds of thousands of journal articles, the plaques, when they grow, they don't gradually grow. Plaques suddenly jump in size, which represents a blood clot forming on that point, which it's not large enough to fully block the artery. So you don't get a stroke or a heart attack, but then the repair process occurs where you're left with a thickening.

Dr. Malcolm Kendrick:

But they did research on people we've known to have plaques in their coronary arteries, and then they scanned them every, I think it was six months, but it might have been a year. What they found was that the plaques didn't gradually get bigger and bigger as one molecule of LDL got absorbed, and then another one in another one and whatever. What happened was they were that size, and then when they looked a year later, they were suddenly that size or they were that size.

They jumped in and what they call a phasic – jump, jump, jump. If you look at some of the plaques that people have and you cut through them and you look at them and almost like tree rings, when you can see there's been a clot, repair, clot, repair, clot, repair, clot, repair over years.

Dr. Malcolm Kendrick:

Well, the first part's accepted, the second part is widely accepted that blood clot forming on an existing plaque will cause the plaque to grow in size, you can find 10,000 papers saying that this is the case. But what the mainstream won't accept is that a blood clot on a healthy artery wall can initiate the whole process. So to an extent, all I'm saying to people is, "Well, we know blood clots caused the final event. We know blood clots caused plaques to grow, why won't you accept that blood clots are the thing that starts it in the first place, because then we have one process all the way through, and it makes sense because it fits with what you can see."

Dr. Malcolm Kendrick:

But now the mainstream says that what happens at the start is LDL gets into the artery wall, it initiates the plaque, and then what? Then it stops initiating the plaque. Then it stops working, and then the plaque grows through repeated clots. Once you start near drilling down into the cholesterol aka low-density and lipoprotein hypothesis, it immediately starts to disintegrate in front of your eyes, and no one talks about process from that side, they just say, "Well, this is what happens. This is what happens. This is what happens." Oh, well-

Dr. Joseph Mercola:

This was accepted fact and it's not.

Dr. Malcolm Kendrick:

Yeah. Well, it is now written out. The last thing I saw from the European Society of Cardiology was it's no longer a hypothesis, it is a fact, LDL causes heart disease. So there can't be any discussion in fact to discuss in fact-

Dr. Joseph Mercola:

Well, there can be but you'll be censored and banned, and eventually kicked off of social media because you violate the mainstream narrative.

Dr. Malcolm Kendrick:

Well, I'm afraid that you have some expertise in getting thrown off Wikipedia, which I had a few years ago and got put on-

Dr. Joseph Mercola:

Well, I've never thrown off now. I'm too important. That's not very humble, but I perceive that I'm too important from their perspective to kick me off of Wikipedia. They keep me there. Just use it as a means to discredit me. Anything that's true but can be twisted to make me look really bad.

Dr. Malcolm Kendrick:

Yeah. Yeah. Well, I'm on, is it RationalWiki or Rational that's called? Where they just twist out. As you know I am known to make an occasional joke.

Dr. Joseph Mercola:

Sure. Occasional.

Dr. Malcolm Kendrick:

Occasional. If you make a joke and then someone writes it down and says, "Dr. Kendrick's just did this." I think I said something like, "I have been known to be wrong, but I think it's happened once in 10 years," or something just a silly comment. They go, "Dr. Kendrick believes he had never been wrong except once in 10 years, this man is a complete idiot." You think, "Yeah well, okay. You'll find as you know yourself, they will twist and manipulate anything against you." Well, essentially they never attack you on facts, they just attacked you on, "This man is an idiot, he's dangerous. He's attacking a fact. He states this." And it's pathetic, but it still seems to work, doesn't it? You go for the man, not for the ball.

Dr. Joseph Mercola:

It's very successful and efficient in achieving their goals. So no question. So how have they attacked on this thrombogenic theory that you-

Dr. Malcolm Kendrick:

Well, I've been attacked. Well, in fact, I haven't been attacked on the thrombogenic theory at all, yet. As far as I am aware, it's still very much that they say, "Well, we know that LDL causes heart disease and therefore you're wrong." So they're not actually say, if they start going into the detail of, "Well, what's wrong with this hypothesis, where does it go wrong? What's wrong with it?" They go, "Well, what's wrong with it is the LDL causes heart disease. So you can't be right." But no, let's discuss process, let's discuss how things can happen.

Dr. Joseph Mercola:

Mechanism. Sure.

Dr. Malcolm Kendrick:

Mechanism. Let's go down to mechanisms because in the end, well, is everything about mechanism? Everything, you have to have a mechanism for something.

Dr. Joseph Mercola:

Well, it helps. It helps when you understand it because then you can put the pieces of the puzzle together. So why don't you start outlining your mechanism, it seems you're spot on. I mean, I've no disagreements with that mechanism at all. It's brilliant.

Dr. Malcolm Kendrick:

Well, I think the mechanism itself is, well, I was looking at a very, very bright man called Paul Roche, who's helped to set up the American Institute and suddenly died last year.

Dr. Joseph Mercola:

Oh, did? Yeah. I used to get his emails. Yeah.

Dr. Malcolm Kendrick:

Brilliant guy, and I was banging my head off the wall and he said, "Your trouble is you're looking for causes, and what you need to look at is process." I thought, "What's he talking about?" Then I realized he was quite right in that you had to look down and say, well, what's actually happening, that can explain what we see and it can explain why certain things are causing it.

Dr. Joseph Mercola:

Yeah, it's interesting, Paul's work was in stress and your theory accommodates how stress can cause heart disease, which is brilliant.

Dr. Malcolm Kendrick:

Well, I was a big stress man for a long time. I thought stress was the answer to everything, and then I kept finding things like smoking that caused disease and I thought, well, actually it doesn't really relate to stress or some weird conditions like sickle cell disease. I thought, well, I can't relate that to stress. I mean, unless you twisted and bent everything to match which is something you don't really want to do. It's what I've accused the LDL side of doing, is you twist and turn and manipulate. But I have said that stress is important. Paul Roche was looking at mechanisms. He told me, “Don't look at causes. Look at process.” And then I started looking at it, I thought, “Okay, so what is the process?”

Dr. Malcolm Kendrick:

Of course, I'm running through about several years of thinking and research, but essentially all of your blood vessels are aligned with a thing called endothelial cells a bit like towels on the wall. Of course, far more complicated than that. These cells are also, and if you ask most doctors they're not aware of this, is that these cells, all the endothelial cells are also covered themselves in a thing called glycocalyx. If you try to pick up a fish, it'll slip through your fingers, it's very slippery. The reason why it's slippery is because they're covered in glycocalyx and the glycocalyx is incredibly slippery. It's nature's Teflon.

Dr. Malcolm Kendrick:

So basically in our case, our glycocalyx doesn't stick out of our cells into the air, but it sticks inside into our blood vessels to allow the blood to travel through without it sticking, without damage occurring. So you have this kind of damage-repellent layer on top of your cells, your endothelial cells. Now, if that layer is damaged and then the endothelial cell itself underneath is damaged, then the only thing that all the body will do is it will immediately say, "Oh, we've got damage to a blood vessel, we must have a blood clot here because we could be about to bleed out."

Dr. Malcolm Kendrick:

So the blood clot forms on the area of damage, it immediately stops. The blood clot doesn't just immediately grow and grow and grow, otherwise we would die every time you have a blood clot. So as a blood clot forms, there's a whole lot of other processes going, stop, stop, stop. So the blood clot forms, it sticks, if you like, sticks to the wall and then, and this is the problem that Rokitansky had, because he said, "How can you find blood clots inside an artery wall because all arteries and all blood vessels are lined by this endothelium, and we see the plaque underneath the endothelium. So how can that possibly be?" He couldn't answer that question and that's why his-

Dr. Joseph Mercola:

But you can.

Dr. Malcolm Kendrick:

Well, the answer is very simple is because of course when the clot forms, the endothelial cells are not there, they've been stripped away, and within the bone marrow, new endothelial cells, what they call progenitor cells, because they're early stage cells, they're floating around in your bloodstream. If they see an area of damage on a blood vessel wall, they attach themselves to it and grow and form a new endothelial layer. It's just one cell thick, and then you now have a blood clot inside the artery wall and all the repair processes kick in on that.

Dr. Malcolm Kendrick:

So the first thing that you got to say is, “Well, what damages the endothelium? What can you find to damage endothelium? Well, how would you do that?” Well, we jumped slightly towards COVID and COVID-19, the COVID virus enters endothelial cells through the ACE2 receptor because it prefers endothelial cells because they've got ACE2 receptors on them. It gets into the endothelial cell start replicating, bursts out, damages the cell, bingo, you've got an area of damage. Of course added to this, when cells have viruses within them, they send out distress signals to the immune system saying, "I've been infected, come and kill me," and they send messages to other cells and so the immune system starts to really have a go at the endothelial cells, and this is why you can get a problem because the endothelial cells are being damaged and stripped off. Blood clotting occurs at the points of damage and hey, presto, you're having clotting, you're having problems, you're having strokes, you're having heart attacks. Which is the thing that people at first thought they couldn't understand and yet it's very clear what's happening is you've got damage to the endothelial cells.

Dr. Malcolm Kendrick:

So you're moving on from COVID, obviously you and I both know that if you have a vaccine injection that the cells are triggered to produce the spike protein and these cells are sending out distress messages at that point going, "I'm infected." So you have to be very careful if you want to stick something into cells that then says to the immune system, "Please come and destroy me," because that's what the immune system is going to do. But moving on from that, what other thing can cause endothelial damage or damage to the endothelial cell? The answer is things like smoking. Smoke particles, if you inhale smoke, very small nanoparticles get out of your lungs, they go into your blood vessels and they cause damage. Because they got healthy volunteers smoking one cigarette who are not normally smokers. You can measure the breakdown products of endothelial cells are called microparticles.

Dr. Malcolm Kendrick:

So you smoke one cigarette and a whole bunch of microparticles appear in your bloodstream, which means endothelial cells are dying and killing them off. Luckily as endothelial cells die another message is sent to the bone marrow saying, “We need more endothelial cells,” and it stimulates the endothelial progenitor cell production. So these endothelial progenitor cells rush around covering over the areas of damage. So along as again, in this case, so some smokers have got enough repair going on and when you're younger, it's okay. As you get older and your repair systems begin to fail a bit, cigarette smoking becomes more and more of a problem.

Dr. Malcolm Kendrick:

So there's other things that can obviously cause damage is diabetes, high blood sugar levels, because the glycocalyx is made of proteins and sugars. The glycoprotein layer is what it is. Little fronts, looks like a lawn or something of that sort under an electro-microscope. But high blood sugar level damages the glycoprotein layer, and you can see it. You can measure, can be measured. You can watch it shrinking. This of course exposes the endothelial cells to the bloodstream and all the potential damaging effects that can occur here, one of the primary ones being the glycocalyx stops blood clotting, it's an enormously potent anticoagulant layer and it contains-

Dr. Joseph Mercola:

So maybe you can explain what the glycocalyx is because I'm sure many people have heard it, but they don't know what it is. I think even in your book, you asked that question to a variety of physicians and no one knew what it was.

Dr. Malcolm Kendrick:

Well, I said, "No one yet." No doctor yet that I've spoken to has ever heard of it. It is like, hugely important thing. It's like hugely important thing no one's ever heard of. But if it's to say, you've seen bacteria that move themselves, little wiggly things and essentially they stick through the endothelial membrane and they're like I say, if you look at it under a microscope, it's like a lawn if you like. Just filaments and within this glycocalyx layer you have what you call nitric oxide synthesize, which is the thing that produces nitric oxide. You've got nitric oxide itself. You've got various anticoagulant proteins. It's an incredibly complicated layer. It's like a jungle full of things that say, "Don't stick to this, do not plot on this, stay away from this." Also, within it is incorporated with albumin, which is a very common protein that's produced by the liver, albumin contains the proteins that will help to repair the glycocalyx layer if it's damaged. So when you look at things like chondroitin sulfate, for instance, chondroitin, and what's the other one? These proteins are-

Dr. Joseph Mercola:

MSM (methylsulfonylmethane). MSM.

Dr. Malcolm Kendrick:

Yeah, absolutely. These are the proteins that help to keep the glycolic layer repaired. So in fact, interestingly, if you have a low albumin level in your blood, you're far more likely to die of heart disease. Now you try and explain that through the LDL mechanism and it just doesn't anywhere

work. If I say to people, they did discover that if you give chondroitin sulfate as a supplement, which you normally use for arthritis in your knees and stuff like that, that it reduces the risk of heart disease quite considerably. How do you explain that? Well, you can explain that because you're protecting your glycocalyx.

Dr. Malcolm Kendrick:

So these are the sort of things that make no sense, if you like looking at the conventional ideas of heart disease, but are immediately and easy to explain if you say, "Okay, so we have to keep our glycocalyx healthy and we have to keep our endothelial cells underneath them healthy," otherwise they will be damaged and stripped off, and then we will get a blood clot and then that blood clot, and if we keep getting blood clots at that point, we will end up with a plaque and eventually one of the blood clots that is on that plaque will kill you from a heart attack or a stroke.

Dr. Malcolm Kendrick:

So you then start looking and saying, "Well, what things damage the endothelium?" Lead poisoning damage to the endothelium, any heavy metal that you have in your body will damage the endothelium. Aluminum, for instance, anything that's toxic like that, high blood sugar levels. Obviously the blood pressure, the high blood pressure is putting extra stress onto your endothelium cells. Your blood is turbulent and it's crashing about in your veins, there's very little pressure and there's very little, if you like, what I call biomechanical stress on your arteries and you never get atherosclerosis in your veins, or in fact in the blood vessels in your lungs.

Dr. Malcolm Kendrick:

So to an extent you need a degree of blood pressure to trigger heart disease, and of course, in the heart itself, the arteries that supply the heart are probably under the greatest stress of any arteries in your body. The heart is contracting and expanding and the blood vessel. In fact, the blood does not flow through the heart, blood vessels of coronary arteries when it contracts, because the pressure's so high, it only goes through when it's relaxed, which gives you some idea of the constant pounding that the coronary artery is under, and someone said, it's like stomping on a garden hose, 60 times a minute.

Dr. Joseph Mercola:

If I could just stop you just expanded a little bit because of the reason, it is kind of surprising that you don't observe atherosclerosis in the pulmonary arteries or arterial vasculature, and that's primarily because the pressure's so much lower.

Dr. Malcolm Kendrick:

Well, I believe so. I mean, and if you do get the blood pressure up and you can get pulmonary hypertension, which is pulmonary, just means lungs and hypertension, high blood pressure. If you have a state of pulmonary hypertension, you can get plaques. There are conditions where you get holes in the heart if you like. They go from one side, the ventricles, then the blood pressure on left side of the heart can end up going into the right side of the heart and into the lungs. It's called Eisenmenger syndrome. Doesn't really matter what it's called. But you will develop plaques in these situations and the higher blood pressure, and you can have some people

who have ancillary blood vessels that come out the left side of the heart and go into the lungs and you will get atherosclerosis in these vessels because the higher blood pressure is doing it. There's no other reason for it.

Dr. Malcolm Kendrick:

As I say to people, "Well, if you don't think it's this well, you can, if you're having a coronary artery bypass. They take a vein out of your leg, which has no atherosclerosis in it. They put it into your heart and within a few years quite often, very rapidly, it will develop atherosclerotic plaques. So it's not that veins cannot develop atherosclerotic plaques or atherosclerosis, it's just that they never do unless the pressure is raised. So you have an answer, it's biomechanical stress if that's a correct term, I don't really know if it is or not. It's one that I use myself.

Dr. Joseph Mercola:

Makes sense. But there's also metabolic stress and I'm particularly intrigued with diabetes, that was one of the catalysts that got me thinking about what I was going to do after medical school. So obviously diabetes, Type 2 diabetes, adult onset typically, the blood sugar goes up and then secondarily of insulin resistance and the insulin resistance can cause the high blood pressure. But I'm wondering, in addition to the biomechanical stress you just mentioned, if there is a metabolic component from the high glucose. Are there any direct toxic impacts from running around with high glucose levels or is it the insulin causes it?

Dr. Malcolm Kendrick:

Well, I think the problem is that, I mean, insulin is, in higher levels, higher than normal physiological levels. It's quite a damaging substance to have in your body. There's no doubt about that, but you can show experiments where you make people have high sugar levels and you can analyze, you can look at the glycocalyx and you can watch it going from like this thick to this-

Dr. Joseph Mercola:

Really? So it shrinks the glycocalyx.

Dr. Malcolm Kendrick:

The glycocalyx would say be a thickness of 1, and when you raise up the blood sugar, it can go down to a thickness of 0.3, say.

Dr. Joseph Mercola:

Wow. Yeah, the units are irrelevant, whatever. It's a two-thirds reduction.

Dr. Malcolm Kendrick:

You can see it happening.

Dr. Joseph Mercola:

Wow.

Dr. Malcolm Kendrick:

Because the glycocalyx can be destroyed very quickly, it can also self-repair very quickly. I've watched white blood cells gain entry into blood vessels where they open up the blood vessels and squeeze through, which is a very complicated process. The glycocalyx is completely stripped off, one second later it's completely repaired.

Dr. Joseph Mercola:

Wow.

Dr. Malcolm Kendrick:

So you can see these things happening in real time. In fact, if you have sepsis, in sepsis the glycocalyx is severely damaged. In fact, if you monitor the glycocalyx thickness in sepsis, it really tells you whether the person is probably going to live or die because in sepsis, the exotoxins, which are external toxins released by the bacteria, the first thing that they do is they attack the endothelium and the glycocalyx and strip it down. They strip down the glycocalyx, the endothelial cells get damaged, and this is why you get widespread coagulation of sepsis. You get what's called disseminated intravascular coagulation.

Dr. Malcolm Kendrick:

In other words, blood clots occurring all around your body, DIC. This is the thing that kills you with sepsis, because it then blocks the blood supply in your organs and it blocks the blood supply to your periphery. So people who've had meningitis and they get the meningococcal toxins and the toxins they either lose their fingers because they lose all the circulation in their fingers. This is the same. It's a more acute, obviously far more acute process, it's happening with cardiovascular disease. But sepsis, you can see the glycocalyx being damaged, and as you treat people, you can see it getting healthier and thicker. So you must keep it thin, and this is the reason in diabetes why you don't just get large blood vessel disease, you also get the small blood vessel disease.

Dr. Joseph Mercola:

Blood vessels. Yeah. It's classic for diabetes.

Dr. Malcolm Kendrick:

The capillaries and the arterials, the smallest blood vessels, as wide as a red blood cell, 10 times as thin as a hair or whatever it is, they're covered in glycocalyx as well, and when they're damaged, of course, you can't get atherosclerosis. You can't get a plaque in a capillary. As I said, that's like a snake swallowing an elephant. There's just no room. It can't occur. So what happens instead is of course the capillaries are just destroyed to break down and you can see this. If people with diabetes or poor circulation, you can look at the capillaries under their tongue using a device, measures that. You can see that some people have like 60% or 70% reduction in the number of capillaries that they have.

Dr. Malcolm Kendrick:

Of course, this is a real significant problem in your kidneys because your kidneys have these incredibly complex blood vessels that make them work, and if they start getting knocked out you lose your nephron, if you like, there's the functional unit of the kidneys, and then you start losing your kidney function. Of course, when you get small blood vessel problems you get problems with the skin and the circulation in your lower legs, et cetera. So you're getting a sort of peripheral damage. So the peripheral damage means that the skin can break down and then you get ulcers, and also the damage happens to the neurons, the nerve cells are no longer supplied by these final capillaries, so they can start to die off. So you get peripheral neuropathy and also you get problems in your eyes and you can see the damage in the eyes.

Dr. Joseph Mercola:

It's a number one cause of blindness.

Dr. Malcolm Kendrick:

Yes. Well, basically the blood vessel-

Dr. Joseph Mercola:

I bet [crosstalk 00:35:47].

Dr. Malcolm Kendrick:

Yeah. That's it, isn't it? So the blood vessels start to get damaged and damaged and damaged. It's the same process, it's glycocalyic endothelial destruction. But of course in a small blood vessel that happens is the blood vessel's destroyed or it bursts, or you get an aneurysm or it blocks or whatever. So the same thing is happening just on a microscale and in diabetes, because, and I believe in, you can show this, that the glycocalyx is key here in all these blood vessels. So having a raised blood sugar is particularly damaging because you get the kidney damage, and with the peripheral circulation problems comes the high blood pressure, because obviously you're having to force the blood through less capillaries and less arterials, and you're going to have to get the blood pressure up in order to do that.

Dr. Malcolm Kendrick:

So that's why you can get this problem with the raised blood pressure as well, it's all interconnected, isn't it? Of course, if you damage the kidneys, the kidneys are the places that send the messages to the bone marrow to produce new endothelial cells, so there's less new endothelial cells. So when you get chronic kidney disease, you get a reduction in endothelial progenitor cell production, and then the damage accelerates, if you like. So all these things interconnect, which is why the diabetes situation is I think a triple-whammy problem for people with heart disease. It's attacking everything in all directions at the same time. So it's pretty nasty stuff.

Dr. Joseph Mercola:

Yeah. I interviewed Dr. Jason Fung a few times, and he's a nephrologist out of Canada and who would've thought a nephrologist would go, instead of treating kidney disease, he wound up refocusing this almost all of efforts to treating diabetes and doing that through fasting and derivatives of fasting to successfully prevent the damage in the first place, rather than going in

there after the fact. So it's really powerful. But as you were explaining that, it occurred to me, wouldn't it be nice if the body could produce a chemical or a hormone that might just serve as fertilizer or nutrients, so to speak, for the endothelium?

Dr. Malcolm Kendrick:

Yeah.

Dr. Joseph Mercola:

Maybe they call that vascular endothelial growth factor. Wouldn't that be nice to have? Wouldn't it be nice to engage in activities that would produce that in abundance?

Dr. Malcolm Kendrick:

Yes. Well, exactly. Vascular endothelial growth factor, which is what used to be called, and then they discovered that that factor was something no one believed could possibly exist in the human body. Nitric oxide. NO, as I like to call it. NO is a little-

Dr. Joseph Mercola:

Which is actually a free radical.

Dr. Malcolm Kendrick:

It's the freest. I mean, everyone says, "Oh, free radicals are terribly damaging and unhealthy." I go, "Well, you may wish to know that the chemical that is the single most important protective chemical in the body for the cardiovascular system is an incredibly free radical called nitric oxide." The reason why the workers at Nobel's factories, going back years when they were stirring nitroglycerine by hand on a single-legged stool, because they didn't want to fall asleep and stop stirring otherwise they'd be blown to smithereens. So stirring nitroglycerine very slowly and breathing into fumes, those that had angina, the angina went away from that point, they realized that nitroglycerine was a good way of opening up your blood vessels.

Dr. Malcolm Kendrick:

It's called glyceryl trinitrate, it's the same thing, and it turned into tablets and you stick them under your tongue, and that opens up the blood vessels, but nitric oxide goes far more than this as you obviously know, it's called vascular endothelial growth factor and it stimulates endothelial progenitor cells. It protects the endothelium. It is anticoagulant. It's the most potent anticoagulant we have in the body. But it is really the magic molecule for cardiovascular health, really, if it goes down. So as you'd expect, and I wrote about this in the book, there are medications used to block vascular endothelial growth factor which is actually a hormone.

Dr. Joseph Mercola:

[inaudible 00:40:00] anti-cancers. Yeah.

Dr. Malcolm Kendrick:

Yes, and they're anticancer drugs.

Dr. Joseph Mercola:

EGEF inhibitors.

Dr. Malcolm Kendrick:

EGEF inhibitors. So you would say, “Well, that's fine.” It will stop cancer cells. Well, not all cancers, but certain cancers. They need what they call angiogenesis the creation of new blood vessel to feed themselves with enough nutrients. So they create VEGF (vascular endothelial growth factor) but the main trigger end of VEGF is nitric oxide. Therefore, the tumor can grow and grow and grow and have enough nutrients. So if you can block VEGF, the tumor shrinks and it does, and it's quite effective. But of course you have this other problem, you're blocking VEGF, you're blocking nitric oxide, well, you'd think if what I'm saying is true, you're going to see a big increase in heart disease, potentially with these medications and in fact, you do, and it's quite significant.

Dr. Malcolm Kendrick:

So significant these drugs were almost removed from the market because despite their anticancer activity they were pro-cardiovascular disease to quite a scary degree. Of course, fascinatingly, if you are given bevacizumab or Avastin as an anticancer drug, they now give you angiotensin-converting enzyme inhibitors, which are ACE inhibitors, which are blood pressure-lowering tablets, and ACE inhibitors have a specific impact on the bradykinin, which increases nitric oxide synthesis.

Dr. Malcolm Kendrick:

So you use an ACE inhibitor to block the negative effects of the VEGF inhibitor, of course, and then you loop round into the ACE inhibitor, A2 COVID discussion. So it is fascinating to me how once you start looking at it-

Dr. Joseph Mercola:

It all comes together.

Dr. Malcolm Kendrick:

It all comes, and you think, “What a complicated – I mean, how did you know this machine, the human body, what a beast it is? I mean, it it's like you can lose yourself in-”

Dr. Joseph Mercola:

Yeah. The more you know the more you realize you don't know for sure. So I have a few questions. So just to follow up, I don't think I understood the connection between nitric oxide and VEGF. So the nitric oxide stimulates the production of VEGF. Is that your contention?

Dr. Malcolm Kendrick:

No. VEGF is a stimulator.

Dr. Joseph Mercola:

For NO?

Dr. Malcolm Kendrick:
Yeah, NO.

Dr. Joseph Mercola:
Okay, geez, I didn't know that.

Dr. Malcolm Kendrick:
So if you give people Avastin, you can measure the NO and it goes-

Dr. Joseph Mercola:
It'll decrease.

Dr. Malcolm Kendrick:
Like that. I mean, really, even if you give, it is actually used for macular degeneration. You stick it in the eye to do with reducing the amount of excess blood vessels that are created.

Dr. Joseph Mercola:
Sure.

Dr. Malcolm Kendrick:
You stick one injection in the eye, you can measure an enormously impressive decrease in nitric oxide synthesis in the whole of the rest of the body, just to give you some idea of how potent is at reducing nitric oxide.

Dr. Joseph Mercola:
Yeah, and there's several different enzymes to produce nitric oxide, but I suspect the one you're referring to is endothelial nitric oxide or ENOS.

Dr. Malcolm Kendrick:
Yes.

Dr. Joseph Mercola:
That's the good one because there are bad ones.

Dr. Malcolm Kendrick:
That's the good one.

Dr. Joseph Mercola:
There's eNOS and iNOS and anyway. So I want to go back to the another example that you discussed in the book that I'm really familiar with, and that is that then NSAIDs can also interfere with this process, and although they are commonly of course used for anti-inflammatories and arthritis, but there was one reprehensible drug that was launched in 2000 made by one of the most notorious companies in the world, Merck, who sold it, it was called

Vioxx at least in the United States. Believe it or not in 1999, my newsletter was around, and I wrote an article about that warning people. I believe it was the first public warning that this drug was going to cause cardiovascular deaths. Five years later, 2004, Merck pulled it off the market because they had killed 60,000 people. They moved it voluntarily.

Dr. Joseph Mercola:

The speculation at the time is that they would potentially go out of business from bankruptcy because of all the lawsuits. It was believed to be over $25 billion in lawsuits. They wound up settling for a billion. I think they just manipulated the system and got out of it. This criminal action, reprehensible criminal action. They knew this was going to cause the deaths, they did it anyway. So why don't you go on and explain how these NSAIDs interfere with that and how it all connects to the thrombogenic theory?

Dr. Malcolm Kendrick:

Well, it's all thrombogenic theory because as you know with NSAID, what they tried to do with the Vioxx was actually quite a clever idea, which was that if you give NSAIDs, they block a thing called cyclooxygenase which is an inflammatory cytokine, I think. Is it cytokine?

Dr. Joseph Mercola:

Yeah.

Dr. Malcolm Kendrick:

But the problem was that the-

Dr. Joseph Mercola:

It's a prostaglandin but the prostaglandins are [inaudible 00:45:04].

Dr. Malcolm Kendrick:

It also brought block production of COX-2 in the stomach, or was it COX-1? Are we going to get this wrong around? It blocked one of the COXs that cause the ulcers in your stomach. One of the side effects of NSAIDs is ulcers in your stomach, and there's two COXs and if you block one, it blocks the inflammation part, but it doesn't block the stomach acid production part. So you're protecting the stomach. The lining of the stomach, creates the lining of the stomach. What they didn't realize was of course that there's other things going on in the body, and if you start blocking COX-2, then this is a significant impact on what they call platelet aggregation as well. So the blood clotting system is more active, is increasingly activated. So what they didn't realize or what maybe they did realize, I don't know what if you gave-

Dr. Joseph Mercola:

The documentation internally showed that they did know.

Dr. Malcolm Kendrick:

They did well. I'm sure. It's so frustrating, these people are so clever and they look at these things and they must be going, somebody must have said, "Look, guys, this is going to cause blood clots and it's going to cause heart disease."

Dr. Joseph Mercola:

They knew. They saw it in the studies. Just never reported. No, you explained how they normally use a placebo compared to, but they compared it to another NSAID, which caused the problem and they said, "Oh, it causes is much less damage than this other." I forget, they twisted it around the placebo.

Dr. Malcolm Kendrick:

Well, they decided that Naproxen was protective against heart disease.

Dr. Joseph Mercola:

Yeah. Yeah.

Dr. Malcolm Kendrick:

Somebody had said this and then in fact, Naproxen causes heart disease, but then they said, "Oh, well, it's just as good, as safe as Naproxen. So therefore it's safe." I mean, it was, you all those people.

Dr. Joseph Mercola:

They do the same tricks. In fact, the same thing with stents, which you've written about before. They employ the same strategies with effectually conflating absolute and relative risk reduction, which we've discussed before, and they do it with the vaccines and they did the same darn things with the vaccines with this. They use a fake placebo.

Dr. Malcolm Kendrick:

Yes.

Dr. Joseph Mercola:

It gets even worse with, with the, with the jab, the studies, they just said, "Okay, after three months, we're going to eliminate the placebo too."

Dr. Malcolm Kendrick:

No one can have a placebo anymore because-

Dr. Joseph Mercola:

No. No one. You can't have a placebo. We're going to get rid because it's this damn jab is so good everyone needs it.

Dr. Malcolm Kendrick:

Well, I mean, I try and retain a sense of humor because you laugh and you cry. But I mean, my job, when you look at some of the stuff, I was just reading the Canadian concerned physicians, they call it.

Dr. Joseph Mercola:

Oh yeah, that was just beyond stupendous. A magnificent presentation you put together on that.

Dr. Malcolm Kendrick:

I know. You just look at that, I mean, I kind of knew, say [inaudible 00:48:08], but I've never bothered thinking them all through, but I just knew this was people say to me, you analyze the clinical paper. I was like, well, I knew what was going on with the vaccination stuff, very early doors. But you are up against an implacable force in this one, I think. However, but when it comes to Vioxx when it comes to-

Dr. Joseph Mercola:

But it's the same people, the same people driving that strategy are driving this, the same group. Same group.

Dr. Malcolm Kendrick:

Well, of course it is. To an extent words fail me, but you try and explain this to people and they just eventually just say, "Well, I know what works and I'm not going to listen to you." Kind of that's not-

Dr. Joseph Mercola:

Well, yeah. Because they're hypnotized.

Dr. Malcolm Kendrick:

But I mean the heart disease, I mean, people say, “Oh, well statins lower LDL and they prevent heart disease, so we know LDL causes heart disease.”

Dr. Joseph Mercola:

It's the same thing. Same thing.

Dr. Malcolm Kendrick:

Did you ever heard of the cetrapib drugs? Of which there were four, which they spent billions [in] research.

Dr. Joseph Mercola:

What's it? [inaudible 00:49:22]

Dr. Malcolm Kendrick:

Torcetrapib, evacetrapib, something else -cetrapib, I can't remember now, that's just a generic title and name. Before these drugs and they were designed to lower LDL and raise HDL. So the

final failure one, evacetrapib, raised HDL, the good cholesterol, the one that protects you by 130%. It lowered LDL by 37%, which is more than most even potent statins achieve. It had absolutely no impact whatsoever on the cardiovascular disease. In fact, the first of the first Torcetrapib was the first of these drugs and it raised the cardiovascular disease by 55%, relative risk increased.

Dr. Malcolm Kendrick:

So you have a whole series of drugs that were super designed to do extra, even better than LDL lowering and they all failed. You say, "Well, so you're telling me, we know statins work because they lower LDL, they prevent heart disease." I'm saying, "Well, here's a whole 'nother bunch of drugs that lower LDL by even more and had no impact on heart disease." So that's what you call a black swan.

Dr. Joseph Mercola:

It was a negative impact, they increased.

Dr. Malcolm Kendrick:

But it was overall, it's just be kind to them and say, "Nothing happened," and yet to me, that's the classic black swan. It's a classic [inaudible 00:50:40] black swan. You say lowering LDL prevents against heart disease, I say, look at these drugs and they go, "Oh yeah, well that doesn't count."

Dr. Joseph Mercola:

It's same thing for the jab. The jab marginally lowers your risk of developing severe illness, marginally, but they fail to mention that it radically increases your risk of dying, which is a more important – the recent statistics come out, 40% increase in death rate last year from a life insurance company out of Indiana. I think the independent companies are going to support this fact because the government is certainly isn't going to provide those statistics. But it's the same process, it's the same damn strategy that they're using.

Dr. Malcolm Kendrick:

Oh, well you've seen it. The other ones, the PCSK9 inhibitors.

Dr. Joseph Mercola:

PCSK9, yeah.

Dr. Malcolm Kendrick:

I can't remember what it stands for [inaudible 00:51:40] something like that. Anyway, they lower LDL even more, and the first one that came out, they were going about how wonderful it was and has two. It was a reduction in cardiovascular events by this and that. When you looked at it, the overall mortality was higher in the active drug group than the placebo. You go well, "Okay, so call me old-fashioned. I'm going to take a drug." Then the one primary thing I wanted to do is stop me dying and if it doesn't do that, you can basically-

Dr. Joseph Mercola:

But it is it better? You know why it's better?

Dr. Malcolm Kendrick:

Because it's more expensive.

Dr. Joseph Mercola:

Because it's more expensive, right. More profits. What is it? It's like thousands of dollars every month.

Dr. Malcolm Kendrick:

Well I calculated it, I remember in the United Kingdom took a PCSK9, whichever one it was, I think it's one that was [inaudible 00:52:27] when it was a study. It would cost the NHS 70% of its entire budget for everything. That would be it, that would be 70% of the entire budget of the National Health Service would be spent on one drug. I mean that is a fact. We've got another one that's coming out, it's called inclisiran, which is the latest one. They call it vaccine now, don't they? A vaccine against cholesterol. That's been launched despite all the studies they've done, they can find no impact on any cardiovascular outcome whatsoever. It's been launched purely on its ability to lower LDL, and it has no outcome data whatsoever and somehow they've managed to convince the NHS to prescribe this. That is a clever game, and it's billions, it's billions and billions and billions and everyone, all the economies in the world are struggling and these companies are coming out with drugs that have no benefit for anyone at anything, they cost billions.

Dr. Joseph Mercola:

Say two years ago, what was the number one selling drug in the world from a revenue perspective?

Dr. Malcolm Kendrick:

Two years ago?

Dr. Joseph Mercola:

Yeah. Two years ago.

Dr. Malcolm Kendrick:

I don't know. I don't know it.

Dr. Joseph Mercola:

Can you tell last year? Even last year.

Dr. Malcolm Kendrick:

Well, it was probably still Lipitor, wasn't it?

Dr. Joseph Mercola:

Yeah, it was, so statins, you're right. Collectively, the statins are trillion dollars' worth of sales, but what's eclipse that? Lipitor was by Pfizer those who don't know that was Pfizer drug. So that drug got displaced. You know what displaced it?

Dr. Malcolm Kendrick:

Probably rosuvastatin.

Dr. Joseph Mercola:

Nope. Nope. The Pfizer jab, $35 billion last year, 35 billion. It's literally two, three, four times more revenue than the drugs and the additional benefit, no liability. Anyway, we can go on back and forth.

Dr. Malcolm Kendrick:

It's a good business to be in, isn't it?

Dr. Joseph Mercola:

You can't make this stuff up. It's just like, yeah, right, sure. Then we're going to have the government force everyone to take it.

Dr. Malcolm Kendrick:

Yes.

Dr. Joseph Mercola:

Spend tens of billions of dollars advertising and trying to manipulate people and thinking how good it is, and you don't have to pay workers, the government's going to pay for it. But anyway, we can go on and on forever and ever, but I want to get into some of the, rather than continue to righteously disparage these companies, let's talk about things we can do because you do offer a lot of good strategies in there that really are focused on repairing, rebuilding and maintaining the endothelium, so that you radically minimize your risk for this thrombosis.

Dr. Malcolm Kendrick:

Yes.

Dr. Joseph Mercola:

Actually, before we start that, because one of the strategies you're going to recommend, I want to dialogue on but before I had that dialogue, I wanted to discuss one thing that really wasn't mentioned in your book and really the only flaw I could find in it because of its absence, not because you said something that disagreed with it, you just didn't include it, and I just don't think you may be aware of it, which is not surprising and you're a great example of someone who's absolutely committed to understanding the foundational causes of disease and yet this escaped you as it has escaped almost, I'd say 95% of the people who are like yourself, who are positions, who really have abandoned the conventional paradigm and seeking to understand the foundational truths.

Dr. Joseph Mercola:

What was missing from the book from my perspective, was the ability – not the ability – mentioning that omega-6 fats, specifically linoleic acid, that the excess consumption of these fats over the last 150 years in my view may be the single biggest reason why we're having these problems because they lead into all the other issues. The high blood pressure, the diabetes, the obesity. Actually, you did a good job in the book about obesity too, really annihilating that as a risk factor. But the insulin resistance, clearly it's this excess of linoleic acid, literally five, 10 times higher than we were ever designed to consume, and how does it do it? By generating, getting embedded first in the cell membranes. So it sticks around for years, seven years to get out of your system, unlike eating sugar, which you got it out that day it's gone, doesn't stick around except maybe in the form of fat if you metabolize it.

Dr. Joseph Mercola:

So when you have large amounts of this, it creates excess oxidative stress, which I believe, and this is what I wanted you to comment on and we can dialogue about it before you go into the other strategies, but is that this oxidative stress that's generated from metabolic byproducts, they call them OXLAMs, oxidative linoleic acid metabolites that go in there and radically cause increase of these free radicals, which I believe go in there and damage the endothelium. So that was my only negative comment on the book. Just, it didn't go into their details.

Dr. Malcolm Kendrick:

Well, if you only got one, that's great.

Dr. Joseph Mercola:

That's it. That was it.

Dr. Malcolm Kendrick:

No, no. I've looked at the omega-6s and omega-3s, I got myself so confused about what I was looking at and what data I was seeing. I mean, I do know that one of the very first experiments done on replace saturated fat with polyunsaturated fat, and that was primarily omega-6 with the Rose Study and there was the Sydney Heart Study.

Dr. Joseph Mercola:

[crosstalk 00:58:14] omega-6.

Dr. Malcolm Kendrick:

Then what they found was that the LDL level went down, didn't do LDL level at that time. Cholesterol level went down, but the heart disease rate and the mortality rate-

Dr. Joseph Mercola:

Went up.

Dr. Malcolm Kendrick:

Ancel Keys did a thing called the Minnesota coronary experiment. Well, he did precisely the same thing, but he did it on a lot more people, it was about 10,000 and they replaced saturated fats with omega-6, I think entirely was omega-6. What they found is that for every 1% drop in the LDL, that was cholesterol rather than LDL, every 1% drop in the cholesterol level resulted in a 2% increase in mortality. So yes, omega-6 is, and in fact, as you know, in Israel they called it the perfect experiment where a lot of people were told to take omega-6 and boy, it did them no good at all.

Dr. Malcolm Kendrick:

So yes, omega-6s are unhealthy things. I know this, I know the proportion of omega-6s to omega-3s is a highly important thing in how the body works and you are absolutely right that if you take the wrong type of fatty acids, as they call, which most people call fat, that they do become incorporated into the membranes of cells. Once you've got wonky cell membranes, then your entire body system is damaged. Because we know that, of course it is because-

Dr. Joseph Mercola:

For years.

Dr. Malcolm Kendrick:

Well, everything is about how the cell internally, what's call the internal environment of the cell is controlled. The things it lets in the things that lets out. All the mechanisms are dependent on activity or not all of the mechanisms, but you have a huge number independent on what happens at that cell membrane interface, and that's incredibly important. I mean, one of my things is like, well, cholesterol itself is very important in cell membrane structure and integrity and all sorts of functions. So if you lower the cholesterol levels too much, you can also cause problems. So I'm going to admit I looked at it and kind of backed off because I got a bit confused.

Dr. Joseph Mercola:

I'm going to send you some literature that will clear up the confusion because you're a smart guy, you know how to solve puzzles. You just never had the data, so I'm going to send that to you to understand. But I'll tell you why, it's going to help clear up with some of your other confusions too, because in the therapy section, which I want to go into now, you talked about and you're one of the few people who advocate this is, is recommending sunshine on a regular basis, and we'll talk about why. But then you address the issue of the many peoples, especially dermatologists concerned, the increased risk of skin cancers, and yes, it does increase the risk of skin cancers, not so much melanoma, but that it does basal and squamous cell carcinoma.

Dr. Joseph Mercola:

But here's, here's the missing link that you didn't understand, it increases it because of the higher ingestion of linoleic acid. It's only when you combine sun exposure and high linoleic acid content in the skin that it causes the cancer because you don't have the destructive damage. In fact, as a classic illustration of this, once you get your linoleic acid levels low, it becomes very, very difficult to ever get sun burnt, which is extraordinary. Because it's the damaged linoleic acid fatty acids that are in your skin that's causing the problem.

Dr. Malcolm Kendrick:

That's interesting. I mean, I have heard this, as you know yourself, there's so many things you can look at and you think “Gosh-”

Dr. Joseph Mercola:

Right. Right.

Dr. Malcolm Kendrick:

Have we got time?

Dr. Joseph Mercola:

This is huge. This is huge.

Dr. Malcolm Kendrick:

I mean, as a mechanism, sounds entirely plausible to me and I haven't looked at it in enough detail.

Dr. Joseph Mercola:

I know. Do you know what? Just there's much so things you can do and you just have to examine the literature, that's what I want to send to you. But you had mentioned that and many people think that sun exposure’s just vitamin D, but it's not, and why don't you go into and tell us how that old friend, nitric oxide comes back.

Dr. Malcolm Kendrick:

Well, it's our old friend nitric oxide. We have nitric stores I'm not quite sure how they stored in cells. The sun is-

Dr. Joseph Mercola:

I had the same question when I was writing my EMF book (electromagnetic fields). “Is this stored up in some vesicle?” I don't think it really is.

Dr. Malcolm Kendrick:

Well, it must be somewhere. Anyway, wherever it is or however it's stored is if you expose the skin to sun, you get nitro oxide produced and it lowers a blood pressure and it protects the endothelium, and it has all sorts of other beneficial effects because nitric oxide is terribly beneficial. So we look at vitamin D and vitamin D is of course important, a hugely important hormone. It's not really a vitamin, is it?

Dr. Joseph Mercola:

Well, technically.

Dr. Malcolm Kendrick:

They did a study in Demark or Sweden, when I wrote the book. I should know. I think it was Denmark, but it might be Sweden, where they looked at women who had low sun exposure rates and women who had high sun exposure rates basically went sun bathing, and they found that the decrease in life expectancy with not exposing yourself to the sun was equivalent to smoking 20 to 40 cigarettes a day. In other words, sun exposure decreased your risk by that equivalent, about years of extra life expectancy. Yet we're all told to stay out of the sun and you think, "God, this is just bonkers."

Dr. Malcolm Kendrick:

I mean, the dermatologists who've taken over the world when it comes to skin cancers, scream and yell and go blue in the face. The reality is malignant melanoma is not caused by excess sun exposure. Other as you say, as you rightly say, squamous cell, basal cell ulcers act on it, [inaudible 01:03:57]. These are sun exposure problems-

Dr. Joseph Mercola:

But you can reduce those if you have low linoleic acid.

Dr. Malcolm Kendrick:

Yes. Well, I didn't know that.

Dr. Joseph Mercola:

Yeah. Yeah. I can-

Dr. Malcolm Kendrick:

I think that's fascinating and I intend fully to look at-

Dr. Joseph Mercola:

Yeah. I'll send you a good starter. But it gets even better because in the book you put proper framework on strategies. Like, “Okay, can I take a statin? How many months or years am I going to get if I take a statin every day the rest of my life versus going in the sun?” So why don't you enlighten us with those stats?

Dr. Malcolm Kendrick:

Well, if I can remember them exactly. Well, the thing is that yes, in the end, what you want to do is increase your life expectancy and presumably that also helps increase your healthy life expectancy. What very few people do is, is put it in these terms of how much extra life expectancy will you get if you do X, Y, or Z? They'll talk about reduction in risk as a relative risk and whatever. The analysis – this is not my analysis – I did more myself, which I failed to get published of how much longer will you live if you take statin, that's assuming the clinical trials are all correct, we'll not go down that route, is for one year of taking a statin you'll gain 0.6 of a day of increased life expectancy at best.

Dr. Joseph Mercola:

That's a half of a day, we're talking 12 hours. Maybe 10.

Dr. Malcolm Kendrick:

We're talking 12 hours per year. So you can extend that if you want, if you take them for 40 years, you get 40 times 12 hours, which is whatever it is.

Dr. Joseph Mercola:

20 days.

Dr. Malcolm Kendrick:

Twenty days yeah. That's it. Those are the figures. These are not my figures. These are the figures from the clinical trials. So you think, so I take a statin for 40 years and I get 20 days of expectancy, like, big deal. If you explained that to most people, they go, "Well, I'm not taking that thing." Or some people might, who knows. But if you're sun bathing, for instance, rather than not sunbathing, you could get about four to six years of increased life expectancy. So we're talking about something that is hundreds, is it thousands?

Dr. Joseph Mercola:

Many orders of magnitude better.

Dr. Malcolm Kendrick:

Many just orders of magnitude, more important for your health. So yeah, when we're focusing in on things like lowering your blood pressure, yes, you get something like about twice the amount of benefit as you get from statins, obvious, super high blood pressure. Yes. Get it down. But the sort of blood pressure that most people have, we're talking rather disappointingly small benefits. I mean, we're talking, well, I think I was being over optimistic, but we say take maybe three months or something for 40 years. So these are the real figures. These are not, by the way, made-up figures. These are figures from the clinical trials. You just have to present them and frame them in a different way.

Dr. Malcolm Kendrick:

So when you're talking about things that could really make a difference and things that really harm you, I think you've got to look at it in this way, and so few people, well, I don't think I've ever seen it done before. Maybe I've seen people look at actual increase in life expectancy in days, weeks, or months or decreases in days, weeks, or months. But I've never seen anyone try and say, "Well, okay, so what happens if you lower the blood pressure? So what happens if you go in the sun? So what happens if you stop smoking? So what happens if you do this and that?" I was thinking a little man, basically shrinking him down and expanding him up to give a visual, but I couldn't really make it work, but it was really just to give people an idea. So the greatest decrease in life expectancy are from things like mental illnesses. We showed that the average life expectancy in schizophrenia is 48 years, and that is-

Dr. Joseph Mercola:

Forty-eight? Four, eight?

Dr. Malcolm Kendrick:

Half your life expectancy is basically gone, isn't it?

Dr. Joseph Mercola:

Wow.

Dr. Malcolm Kendrick:

I mean, they have all sorts of problems, but I mean, measure that against, how much life expectancy you're going to reduce if you have a high LDL level, the answer is it doesn't reduce it at all if you look at the figures. So we're panicking over things like raised blood pressure, raised cholesterol levels and obesity, which when you look at them, mate, I couldn't even find, if you look at the figures, you can't even find figures for obesity on life expectancy because they don't exist.

Dr. Joseph Mercola:

You reviewed some compelling data in the book too, about the BMI (body mass index), because we're all led to believe, oh, we got to get a BMI between 20 and 25, which is normal wage, and anything above is going to be problematic. But actually the data you reviewed showed that actually if you have the normal BMI, you're at a higher risk of death, you need a higher BMI from 25 to 30, you just don't need a grossly high BMI.

Dr. Malcolm Kendrick:

Well, they do this thing what I call, it's mismatched anyway. So they put people into different section like BMI, 18.5 or whatever it is to 20 or very low BMIs and 20 to 25, 25 to 30, and then they have 30 and above and they go, well, it is damaging, but that includes people who've got BMIs of like 70 and stuff. It's like what they do with drinking, they do this sort of zero drinks, zero to one drinks a week, one to two, and then they have two and above and you go drinking two and above is damaging. You go, well, if you include stunned alcoholics who drink three bottles of vodka a day, well, surprise, surprise. So if you look at BMI, basically the longest lived BMI and all the studies I've ever seen is between 25 and 30. I mean 20 to 25, 25 to 30, frankly, the differences are you're probably talking three days or 10 days, and 30 to 35 was actually longer life expectancy than 20 to 25.

Dr. Joseph Mercola:

Wow.

Dr. Malcolm Kendrick:

Once you get above 35, bang, if you've got other things going on. So we are terrified of things that really we shouldn't be getting terrified of. The BMI ones, when I get most flak from people going, "That just is not true." Well, here's all the data. You find some data to contradict and they can't, but they still don't believe it because they've been told.

Dr. Joseph Mercola:

For ideally optimally healthy people, we're talking professional fit athletes who ostensibly would be 50, 60 pounds overweight, but it's all muscle mass. It's not adipose tissue. It's a lean muscle mass.

Dr. Malcolm Kendrick:

You have American football, over here we have rugby and the players who play at the front, they call them the pack. They did an analysis of the England front eight in rugby, and every single one of them was a beast. Yet, if you look at them it's just muscle.

Dr. Joseph Mercola:

Yeah. Yeah. But BMI, they'll be over 30 for sure.

Dr. Malcolm Kendrick:

No, they will. Some of them are over 35. I mean, they're huge, these guys, you don't want to pick a fight with them.

Dr. Joseph Mercola:

It doesn't mean they're unhealthy. It's not really a great tool. I mean, body fat index. It's harder to calculate.

Dr. Malcolm Kendrick:

The tool is-

Dr. Joseph Mercola:
That' harder to calculate.

Dr. Malcolm Kendrick:

[crosstalk 01:11:01].

Dr. Joseph Mercola:

So now aside from the mental illness and mental health perspective, that's hard to tackle and it would be like, I mean, that's a whole book by itself, let alone wrapping it up at the end. But one of the best, simple interventions, I mean, far exceeding, stopping smoking would be getting regular sun exposure, and ideally, thankfully we have a simple tool that you can use that is a marker for if you're getting enough sun exposure, you know what that tool is?

Dr. Malcolm Kendrick:

Yes. Don't get burnt.

Dr. Joseph Mercola:

No, no, no. The tool to know that if you're getting enough sun exposure.

Dr. Malcolm Kendrick:

Oh, I don't know. What is it?

Dr. Joseph Mercola:

It's called vitamin D level.

Dr. Malcolm Kendrick:

Oh, well, oh yeah, of course.

Dr. Joseph Mercola:

So assuming you're not taking supplemental vitamin D, now I haven't taken vitamin D in 11, 12 years now and I just got my results back last week, and this is the middle of January, towards the end of January and it was 61 just by sun exposure. So you can do it without it. The point of that being is not just to brag or like to boast about that. The issue is that if you can optimize your vitamin D level into the biological healthy ranges of 60 to 80 nanograms per milliliter, 150 to 200 nanomoles per liter on your side of the pond, then you are getting pretty significant nitric oxide production from that exposure. No question about, you don't have to measure it and I don't even think you can measure it outside of a research,

Dr. Malcolm Kendrick:

No, you can't outside of a research.

Dr. Joseph Mercola:

Yeah. But you don't have to, you just do a simple blood test and it lasts a long time, so it doesn't have to be done like fasting or anything. It's just simple to do. So I would put that at number one. Number two, I would put as the linoleic acid reduction, and I'm pretty confident that you'll agree with me after you review the literature. But aside from that, what would you rank as number two as the best intervention?

Dr. Malcolm Kendrick:

Well, I think we've talked about the metabolic health thing, and I think if you have a problem with metabolic health, which more people have than they say they have.

Dr. Joseph Mercola:

Ninety percent. Ninety percent of the population.

Dr. Malcolm Kendrick:

Then what you need to do is lower your insulin levels and your blood sugar levels and that is in part while you've got to stop eating so many damn carbohydrates because carbohydrates stimulate insulin production.

Dr. Joseph Mercola:

They do. You know what? But with maybe more significance. This relates to the linoleic acid, because I am convinced yes, carbohydrates are not optimal and most people eat too many, but they're actually healthy. You need a certain basal level of carbohydrates and I probably have

between 100 and 150 and I'm metabolically fit on steroids I can tell you. The issue is if you don't get enough carbs is actually problematic, but in the interventional trip phase, if you're really gross overweight and you're insulin resistant, then you're going to want to reduce it, but it's the linoleic acid this far more profound an indicator of diabetes and insulin resistance than anything else.

Dr. Joseph Mercola:

So you've got to integrate that into the equation. You do that and you've got the best book out there. That's the only piece of the puzzle you were missing because it's so essential, but you're right. The key central point is lower your insulin resistance, optimize your blood sugar levels and insulin levels, and the best way to do that is lower linoleic acid, exercise and have healthy amounts of carbs and healthy carbs too.

Dr. Malcolm Kendrick:

Yes. Also, I think that I do suggest lifestyle relaxation, because stress is still in my opinion-

Dr. Joseph Mercola:

It raises pressure too, right? It raises the blood sugar.

Dr. Malcolm Kendrick:

Well, it raises blood sugar, makes your blood more easy to clot. It inhibits the repair systems. If it's a damage-versus-repair situation, if you're under stress or strain, your repair systems are just not working as well. So there's a whole series of things, in fact, cortisol, which is one of the key stress hormones, reduces endothelial cell production in the [inaudible 01:15:11], for example. So there's a whole also series there. So I think that trying to relax and enjoy your life and have good relationships with other people and avoid being bullied and oppressed, these sort of things are also important because I think the mental state is a critical part of our physical health, and I'm very strong on that I think. I'm obviously going to have to go and look up linoleic acid [crosstalk 01:15:43]. I'm going to read it and then I might write “The Clot Thickens 2.”

Dr. Joseph Mercola:

Yeah, well you just maybe, but I think it's a good place to end it on. I mean, we could go on for hours and hours, you're such a delight to connect with. But the key here is “The Clot Thickens” is the book. If you want more information, highly recommended it. If you're a health advocate and a health nut, and you really want a good library, this is one you really should have because it gets to the foundational piece and it helps you understand what the issues are so that even if new stuff comes in like COVID and SARS-CoV-2, you can understand how this fits into the picture and what is causing and how it's causing all these complications because cardiovascular health is really important and this is a profoundly useful book.

Dr. Joseph Mercola:

I so appreciate you, your commitment to finding the truth, your perpetual curiosity and seeking to find the foundational causes of disease and help us with understanding the solution. So really appreciate you and you keep up the good work you're doing such a good job.

Dr. Malcolm Kendrick:

Thank you very much, Joe. If I can call you that.

Dr. Joseph Mercola:

Yeah, certainly.

Dr. Malcolm Kendrick:

I appreciate it very much and yep, we need to contact again and if you could send me that stuff on linoleic acid, I promise, cross my heart, et cetera, I will read it, and I love new ideas, I love new thinking. I love to see it in a different perspective and that's fantastic when that happens, it's the best thing.

Dr. Joseph Mercola:

All right. Well, great.