Glycocalyx & Nitric Oxide: Keys To Heart Health Transcript

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Introduction to the Interview and Calroy Health

Well, everybody, welcome back to a really special interview, a special episode of Reversing Heart Disease Naturally Summit. And I think one you're going to learn a lot about and one that you probably haven't heard a lot about in all these different interviews that we've been doing with world experts so far.

This is one that you definitely want to chop up, get your notebook out, take some notes, because this is a good one. And I have with me Ed Hoyt, Ed and I have known each other.

Now it might be getting close to a decade. He hails currently from the Scottsdale area, but he is and I don't want to embarrass him if it's CEO founder, both of a wonderful company.

And we're going to talk about the science behind the company called Calroy Health. But why would your mother beam with pride if she said, what's your official title?

You got it right. She'd been with pride that you knew. Yeah. I'm co-founder and CEO of the company. I was putting that out of, you know, meeting you at a lot of scientific meetings.

So, you know, we're talking a lot about arteries and arteries and disease that and how to measure them by geography and how to reverse them through nutrition and supplements.

But we haven't really talked about that miracle. 50,000 some people say 60,000 miles that line the arteries called your endothelium. And I remember this statistic, I think from our mutual friend Mark Houston.

You know, you could probably fill six or seven tennis courts if you could take all that single paper thin lining and all these arteries from your brain to your toes and lay it out.

It'd be a whole bunch of tennis cards. So it's this massive organ in the body that keeps us healthy.

What the Endothelial Glycocalyx Is and Why It Matters

But tell me when your company, which is about how old now Calroy Health. Calroy was founded in. Officially founded as a company in 2014. Our research started before we founded the company to bring the product to market.

The research started in 1999. Excellent. So a long tradition and there is a lot of research and that's why we're talking. We love innovations that are backed by both basic science and human science, but you have focused and taught many doctors, you and your team, about a part of the arteries that most people haven't heard of.

Most people have heard that word endothelium, that single layer of cells that make the miracle molecule nitric oxide, Nobel Prize winning 1998. But not a lot of people have heard about the glycocalyx, and the hundreds, if not thousands of research studies.

So tell us what the glycocalyx, is. Why anybody listening, it wants to stay healthy, healthy brain, how they are in healthy sexual health, healthy legs, circulation, why they should care about the word like.

glycocalyx. Yeah, tough word. Definitely. I remember when I was first introduced to this concept, it took me a couple of months to figure out understand.

But you had mentioned this single cell layer called the endothelium. That's the little inner lining of all the veins and arteries and capillaries throughout the whole body.

What was not known until literally about 20, 25 years ago, roughly, was that there was actually another lining on top of that. It's a super thin, you know, you're talking about the one cell layer thick.

This is a super thin lining, very slippery. Has a funky name called the endothelial glycocalyx. It's like the slippery lining on top of that end of them.

And it performs a whole host of really super important functions. It it is it's I'm I'm excited to talk to your organization and your listeners about this today because it's fun to talk with people by some that they don't know.

I was really surprised and impressed, Dr. Kahn when I met you, you were one of maybe a dozen doctors that I met at that time that it actually heard at the end of the global chaos, because most health care professionals were never taught about it in school again, because the imaging technology wasn't there.

And so it was really fun. The very first time we met, we met at a big educational conference, and I'm pretty sure that's what it was. And and I started talking to you and you had actually heard about it.

And I thought, Yeah, right. Because a lot of docs frankly say that. And then you started telling me about it and it was really exciting to know that you were on the forefront like that.

So but but for your listeners, this little lining does so many different things that first thing, that that I think is so important, it is, as I said, a very, very slippery landing.

And that probably the most important thing that it does is it controls what elements, what what materials, what, what compounds what vitamins, minerals, what hormones, etc., actually get to go through the endothelial wall into the cells and nourish every cell of your body.

It's like I was talking to actually a neighbor down the street about this when I told him, I said, Imagine a doorman at a really fancy club or a really high end restaurant or, you know, maybe apartment complex, you know, a high end posh apartment complex.

What that doorman does, they greet people, figure out, are you supposed to be in here or not? Now you good for this place? Are you on the list of approved people to enter?

Well, that's exactly what the anything like like WikiLeaks is like. It actually is a physical layer, super thin. But one of its primary functions is it determines what gets to go inside and what you just like a doorman say, I'm sorry, you need to keep going this year.

You're not on the list. All right. So this is tell me if I'm describing right, it's a somewhat slimy substance like we call it mucopolysaccharides, and people that are listening, you don't have to worry about that.

But these gorgeous arteries in your body are covered in snot, basically. That is that unfair or that's. Not actually, that's a really great way to put I'm actually in a hurry may use that analogy that.

People understand they understand yeah yeah I can if I'm right because you have the scientific team. I mean, your ideal artery would have a healthy endothelium.

That makes a lot of things, but it makes a lot of nitric oxide. And your healthy artery would have that lining on top or this layer on top. So you'd have a healthy endothelium and a healthy glycocalyx and the glycocalyx is actually the first defense from things in the blood.

How Calroy Studied and Identified Glycocalyx Support

Things in the blood, like with particles from smoking cigarettes things in the blood, like maybe a rich dinner, poorly chosen or full of perhaps animal saturated fats that may damage your endothelium, which has been described by.

Is that fair? You'd like to have both the protective layer and then the actual endothelium as healthy as possible? Absolutely. Absolutely. You really cannot have wonderful cardiovascular health without both of these elements.

You need a healthy endothelium which a lot of people, a lot of your listeners have probably heard about, but you cannot have a healthy endothelium without a healthy endothelial glycocalyx I like to think of the endothelium as like the protector, but this is the protectors protector.

This layer actually protects the endothelium from damage. This layer helps the endothelium be able to perform its function correctly. So yeah, you absolutely have to have both.

And unfortunately it gets worn down through all sorts of different lifestyle choices, heredity factors, etc. but for example, you had mentioned smoking and smoking will wipe out that layer in literally hours and hours.

They can wipe that layer out. Now, your body does have the ability to naturally regenerate this layer, but it takes some time. It can take a couple of days, assuming there are no other insults to the layer.

For example, high sugar meals that'll wipe it out, you know, unregulated glucose, you know, having your blood sugar levels, varying people with diabetes have a difficult time with with regulating this layer.

And as I mentioned, smoking and environmental factors, etc.. So absolutely, the key is a healthy and the feeling this is the end of the aliens protector.

And this, like I said, is the doorman that gets to decide what particles come in. You know, if there's nasty particles coming down that you don't want getting inside your organs, it basically just makes them keep on flowing.

And that's part of that that slippery layer that you were talking about. And, you know, from my perspective, having practiced medicine, cardiology for over three decades, one of the reasons that patients don't hear a lot about nitric oxide production or endothelial health from their medical team is it's hard to measure and it's hard to measure endothelial health.

If you have clean arteries, maybe you've got an ultrasound, a calcium score, or the more advanced c.t angiogram. If you have good sexual health, if you're asymptomatic now, you can make an assumption.

You probably have healthy endothelium, but you know, you don't know for sure. And there are advanced machines. We have one in my clinic called the ENDOPATH, but they're not, you know, commonly available.

It's it's hard to measure nitric oxide production. You can use as little saliva on test strips. You can do a blood test called ADMA, but you don't actually measure nitric oxide in the blood. They can measure potassium.

And we certainly have trouble measuring the glycocalyx. So we have a ways to go in terms of, you know, testing that's widely available and functional.

There is, as you know, a machine you put under your tongue that may allow you to image the glycocalyx. But it's far from widely available. It's very expensive.

And there's a lot of, you know, drawbacks. But your research team and I've met your wonderful chief of science, Dr. Chen Chen, with a Ph. D. after you guys looked in nature to see what could bulk up this glycol, Calyx, and tell us, you know, how you did that and what you found.

Yeah, thanks. You know, Dr. Chen is an absolute marvel, and we are so, so lucky to have him. He's actually the one who was involved in the initial research trying to find compounds that would support the restructuring or the rebuilding of the NASA earthquake.

Okay. Looks one was compromised, and even if it's not compromised to help keep it from getting compromised. And you are right, there was no technology.

So many years were spent on trying to develop a technology that could actually measure it to to give an image for for your listeners, this layer is so thin that just to be the thickness of an average piece of paper would take about 1000 of these layers to be the thickness of one piece of paper.

So you can imagine how difficult it is to study. Well, in a in a joint venture with the Academy of Sciences, a a device was created called a microfluidic chip.

Arterosil and Supporting Artery Health

And this chip actually is a a lab device that where you can grow actual human endothelial, like, okay, looks, cells and it has all these different inputs and outputs and you can enter different subjects in or substances in to see what is moving the needle, either hurting the cocoa coax or helping the cocoa calyx.

And through that, we were able to affirm that this very interesting seaweed called Monastir Roman alum. And it was was the thing that was really, really moving the needle.

And in the beginning, we didn't really understand why. But later, research for the research it was that it was a special compound in this monastery emanated um seaweed called gram and sulfate.

Now that really matters just to understand that what what happened is we were able to to test all these different compounds and we still use this tool today.

And in fact, it ended up being patented. And other other people use the tool to to measure things against the glycol. Calyx. So it's we had to actually help help some other scientist, help us create the tools so that we could be sure that we had selected then the proper compound.

So a lot of people listening just said, what did he say? Because thank you, please interpret. We're actually talking about treating arteries in humans for a healthier like okay, legs with a special seaweed that your team identify.

Right. And some of the chemical contents of the seaweed ramin sulfate. But you know, not too many people who haven't studied your product line before probably ever thought that there's a potential for seaweed to be a therapy.

And in fact, there's a lot of research about different kinds of seaweed uses of brown seaweed. Am I right? This is a green seaweed. Okay, sorry. Thanks. Application. Yeah.

And then you. Because there is a product that you have had on the market. Now I'm going to guess five years. You can correct me by right. Yeah. Probably about about six and a half. Yeah. Okay.

And it has a variety of contents in a gorgeous vegan capsule, which I appreciate you doing. There was a time it wasn't a gorgeous vegan capsule, but it is now.

And in addition to the seaweed that provides a support for a healthy endothelial. Right. Okay, Alex, you've got some other goodies. What are some of the other goodies in there that, you know, help artery health.

So there's a very interesting blend, actually, 22 different fruit, fruits and vegetables in the hierarchy of order. You've got things like your grape seed extract near green tea.

Basically, it's a blend to provide the Polyphenol support for the arteries and veins, capillaries, etc. So it's supportive of the primary driver, which is this minus Drummond that Adam and I want to mention that our company was was able to actually, through the testing of this device, create a special patented extract of the most prominent alum.

It's called monitoring. RS That's just a brand name, a trade name of this extract. And this is the extract that's actually had the studies on the published studies, etc., that show that it actually helps rebuild and restore the human in the area of local Calyx.

This is that monitoring RS is what was actually used in the studies with be this crazy chip thing I was talking to you about. Yeah. And your website, to your credit, has some nice research attached.

I'm looking at an article that's hard to read. Ramin Sulfate sounds like something you might order in a Korean restaurant in a proprietary extract, a monastery monitored them.

Nitric Oxide, Vascanox, and Sustained Support

That's the green seaweed. But this is the key. Red generates a compromise and a feeling like chocolate shed caused by high glucose. So you've tested it and you were repairing the endothelium and the endothelial collects with this combination.

Just before we take a little break, tell us either anecdotally or a little bit of science, people are listening and saying, okay, now I got to another capsule this time green seaweed plus other plant based goodies.

Why would I do that? What can it do for my health? I just assume it's somebody with some carotid black and coronary disease. Atherosclerosis. Yeah, well, we have a lot of research and a lot of it's published research and our whole focus is on supporting cardiovascular health and so for people that are concerned about their cardiovascular health, this is foundational.

You know, you mentioned Dr. Mark Houston earlier. He is, you know, coauthor or excuse me, a companion of yours in this field. And he now feels that taking care of this quick, okay, looks layer is absolutely foundational.

It's one of the five foundational focuses that he has in his his practice because it protects the and that the I am and you can't have cardiovascular health without the interior it can have been ethereal health without the clinical conflicts, etc..

So it stacks on top of each other. Now, me personally, doctor, can cannot tell you why I take it and why I was attracted to this. I was introduced to Dr.

Chan probably 13 or 14 years ago and started learning about this research. I have very significant health, heart health challenges on both sides of my family tree.

I mean, my father had five or six enemies before he finally died, and his both of his parents had heart issues. My mother was one of the youngest open heart surgery patients in the country at the time that she had open heart surgery, both of her brothers and her sisters died of either heart attack or stroke.

I mean, just a lot of cardiovascular issues that follow straight down to me. So when I heard about this and I knew the cardiovascular disease was the number one killer in the world, gosh, even at the height of COVID, it was the number one killer.

So for me, I, I wanted it as a protectant. I was doing fairly okay with my different readings, but I wanted as a protector and that was very interesting for me was that, you know, I've been on the product for quite a while now.

Once I saw the research, I started getting on the product and I've had tremendous results for that. You know, obviously anybody else's results will will be different.

We just had a fascinating dove into endothelial global Calix seaweed and a pathway to heal your arteries using a nature based, plant based combination product called our our carousel.

But now we're going to shift a little because the other part of the arteries and the glycol, Calyx, is the endothelium and the endothelial capacity to make a lot of nitric oxide.

And, you know, if you want a good blood pressure, you want good nitric oxide production. If you want good sexual health, want good brain health, lung health, it's pretty much a body wide critical molecule, which is why it was

awarded the Nobel Prize in Medicine in 1998.

But I can tell you there is basically no pharmaceutical agent that's called your nitric oxide boosting agent, and that's why the supplement world has respond added.

There are options out there, but you have a product that's been around a couple of years called Bask and VCA and HB, probably high potency have had to guess what HP was for.

But you've got some new, unique data in September of 2023. We're talking after that. But tell us why, you know, compared to other options, people who are doing test strips and they're frustrated that their nitric oxide production looks low, or maybe they come to my clinic and they get a blood test called a D a, which can assess nitric oxide synthesis as a couple of dogs barking in the background.

Well, ignore. Tell us about why your product based on some new research is really exciting and different. Yeah. Thank you, Dr. Khan. I would imagine your listeners have heard a lot about nitric oxide and its benefits in the body.

You mentioned the primary ones better circulation, lower blood pressure, control, blood pressure and you know, sexual health, mental clarity, etc.. One of the challenges with with the thing that you got cited, products that were on the market, it was their short longevity.

You can actually measure some of the some of the precursors for the nitric oxide on these little strips you can put into your mouth. And and if they turn pink, you know, you're you're doing well and most of the products have a really short time where they're in the effective range, some of them as little as a couple of hours, some of them as long as four or five or 6 hours.

And Dr. Chan and his research team were looking, is is could there be a way to extend that? Can there be a way to to to have it be that you didn't have to like let's say you or we have one of our cardiologists who is also a customer who is a marathon runner.

And and he used to take these nitric oxide capsules just every few hours as he was doing his marathon. He was looking for something that he could have last a long, longer time.

And so what are new and actually patent pending product does is it stimulates another gas in the body and these two gases a long nitric oxide is a gas and it stimulates another companion gas that when the two work together, it lasts a really long time.

And so we knew that it was lasting a long time. We engaged in the Hypertension Institute to do a clinical study and they put patients on it and they measured them throughout the day and the next morning and throughout the day.

And it was a can remember a 30 day or 60 day test where they were measured numerous times throughout the day, blood pressure as well as as a measuring with the strips for their nitric oxide.

And it lasted over 24 hours. So it's the first product that keeps that store of available nitrates to be able to tap into it for the body to convert and make nitric oxide.

And so it's a real game changer if you've got patients or listeners that are taking nitric oxide products and they'd like to be able to know that they have a smoother ramp and they stay in that that area for a much longer period of time.

As I said, up to 24 hours. Then then this is something that they might want to take a look at. Very, very cool. So we're talking about assisting your own internal, usually artery based.

There is a pathway to make nitric oxide, but probably this is mainly artery based nitric oxide production and to sustain it longer than what we think we get out of other products and what is in it, what leads to these two gases and interact and give, you know, now clinically proven and published, sustained nitric oxide support.

Yeah, great question. So we have nitrite sources, including potassium nitrate, one of the real magic and this is a very special black garlic. It includes a special element called S. A. C..

And there is only two places in the world that we could get. The one that was standardize it to what we knew it would take for for this to work. And so that specialized black garlic, along with a cardio berry blend and the potassium nitrate is what's in the product.

Wow. And it's interesting. A lot of people are listening, have chosen a plant based diet, not everybody. And we include everybody in this conference, but this amazing power of your seaweed product called Artirosel.

And now we're talking Vascanox being, you know, going in nature and recruiting it, hey, know, and it'd be a little hard to eat this combination. So you've put them into a capsule that I think you take just to a day and it's another vegan wrap capsule.

Closing Remarks and Future Products

So we appreciate that. And that is again called Vascanox and, you know, people can just go online and buy these nitric oxide saliva test strips and they can test it themselves, buy a bottle and, you know, give it a give it a whirl and see if over the next 30 days or however many days you choose to do it, you can prove be our own scientists.

We try that kind of biohacking. But this is a little bit more, you know, proven already than just biohacking, like jumping in cold ice every day. Like, you know, so many people as biohacking do.

But I choose not to do that. I'd rather I'd rather take this buy garlic and bio berry blend and all the rest. So. Well, thank you so much for sharing all your knowledge, your experience, your company, Calroy.com.

Again, these are not pharmaceuticals. You don't need prescriptions. You can decide if you want to boost your own health and your own arterial wellness by some of the topics we talked about.

So thanks a lot. The future is bright, huh? Probably be another product coming down down the road, I bet. Yeah. We're kind of a skunkworks for really unique products.

We don't just create a big giant line, but yeah, we actually have three more in the pipeline that'll be coming over the next three years. Each one that is unique like this.

And if any of your listeners have any further questions, they can always go to Calroy.com/drtalks and we've got some special information for them there.

So thanks. Thanks for having me on Dr. Kahn. That's exciting and that's really nice you to set that up for everybody. All right, check it out and we'll talk soon and hope to bomb at the next meeting.

And it sounds great. Take care. Bye bye.