Introduction to Cardiac Evaluation

Welcome back to the Reversing Heart Disease Summit. I am super excited to be here today to interview Doctor Joel Kahn, the founder of this summit. And and I'm super excited to be a co-host on this with him.

And we are going to talk about one of my favorite topics and one that Doctor Kahn is oh so familiar with, and is brilliant at helping and opening up people's eyes about, which is the state of the art in cardiac evaluation.

So welcome. I'm so excited to be able to talk to you about this topic. Thank you so much. Really, really important because we want to be healthy and we don't talk enough about avoiding heart attacks and dropping dead.

And this is really key stuff. So thank you for, you know, asking these questions. Absolutely. And it's key for me and very personal for me because both of my parents died suddenly of heart disease, no forewarning.

And I had they been through the evaluations that we're going to be talking about today, I think they still could be they still could be alive now. They still could be alive because we we would have.

Oh, well, the hell would have had to do the work right to do the work that we're teaching here on this summit. Right? I agree, you know, there's a term and it sounds like your parents sadly fit in it called SCD sudden cardiac death.

You know, mom was good last night and I called her and she was fine. And, you know, mom's not there in the morning or dad's not. Their dad's found down about 350,000 people a year die that way, just in the United States.

There's no hugging. There's no writing out there. Testimonials. The beautiful picture of somebody maybe passed away from cancer. With all the family around.

There's no time for that. It's so traumatic. It's so sad. There's no goodbyes.

Why Heart Disease Can Be Silent

And we got to stop that and that there is a strategy to stop most of it, maybe even all of it. Awesome. That's what I want to hear. So, you know, the whole thing is you can walk out of the doctor's office and get a clean bill of health.

Everything's fine, and then die the next day or a week later. So tell us more about that. Yeah. You know, number one fact humans are prone to clogged arteries doesn't mean everybody gets it, but close to 50%, maybe more.

By the time we're adults, we get clogged arteries. There's a whole conversation in the medical literature that certain species are prone and some are not dogs.

Very difficult to make. Dogs get clogged arteries. Dogs don't have heart attacks. They're the way they breathe and way their guts oriented, the way their teeth are shaped.

They are different. But rabbits get clogged arteries all the time. If you give them a high fat, buttery diet. Humans are like rabbits. So teaching point number one, everybody has exposure to developing heart disease, which is why it's a number one killer of men and women in the United States.

Number two, pertinent to the tragic story you mentioned of your own parents is you can have years of heart disease and look good on the outside and actually feel good.

That's the surprising feature. But dockercon, I played pickleball, I get on my stationary bike, I take a walk, I garden,

I went on a trip, I just visited my internist and had a physical.

He, he or she pulled out a stethoscope, checked my blood pressure, ran an EKG. Nobody should fall into the feeling of security that that actually excluded that.

You're walking around with clean arteries as opposed to clogged arteries. This is a tricky, wicked disease. I have patients all the time. My clinic that we know from the testing have very advanced clogged arteries and they're active and they feel good.

I mean, I know how bad their arteries are because the heart can develop extra blood vessels and certain, modifications to the way blood flows. And, you can have this fragile balance for a while with no clue.

So you have to test, you know, in this country, we test for colon cancer. Would call and ask or the color guard stool test. We check for breast cancer.

We check for cervical cancer. We check for prostate cancer. And if you stop and think, why don't we routinely check for heart disease? And that's the biggest, biggest omission in the standard approach to a patient at their 45th birthday, 50th birthday, 55th birthday at their primary care doc.

So let's blow out of the water. How we can do better. Yes, yes.

Better Labs and Risk Markers

And you know, people go in there, they think that they're covered because the doctors run their total cholesterol, LDL, HDL, triglycerides. But what more what more should we be doing?

Yeah. Well, it really boils down this is what I do every day in my clinic. We need better labs, and we need imaging tests. So in the 1960s, a word was introduced called risk factors.

A famous study called the Framingham Study said, if you're 50 years old and you're a smoker, you're at higher risk of an early heart death. Or like everybody knows it, if you're diagnosed as a diabetic, if you're diagnosed with high blood pressure, if your doctor uses the simple, simple lipid panel, you mentioned cholesterol panel and you're told you got a high cholesterol.

And finally, like you, if mom, dad, brother sister had a tragic heart event, whether it be a heart attack, a bypass, or died, particularly at a young age, under 55 or so, you are at risk for five risk factor.

Well, forget about that. There's easily 25. Some people say 300. If we get into air pollution and exposure to mercury in our neck and, you know, things that get a little more exotic, microplastics, but just in what your doctor could be checking off on the lab panel.

So number one, you got to have better labs. You know, you have to look at inflammation. The most important test is the high sensitivity C-reactive protein.

But we do a panel of about six tests of inflammation, through the blood in patients routinely. There's a fancy word oxidative stress. It's always a tough one.

Think about metal rusting. But there's a simple urine test that can be done for something called ISO proteins. All my smokers are out of balance. Of course.

I wish I had no smokers in my clinic, but I do, and they're all out of balance because the constant chimney effect. Well, how about my favorite cholesterol particle?

Not really, but light bulb protein. Little a everybody needs a blood test. I'm just going to show that word because I want everybody to write it down.

Lipoprotein little a it's an awkward word. You need to go to your primary care doc and say, test this on me, please. Or maybe your brother, your sister, your parent did get tested and they found they were high.

They should tell you it's called cascade testing. I should tell all my relatives that I have direct contact with to get tested too, because it's genetic and it's silent, and it could be injuring heart valves and arteries throughout your body and maybe getting tested early in life.

In fact, encourage your kids to get it tested. And then we can go deeper than that into some genetic testing. Did you inherit ApoE e4? Did you inherit a boat?

We can't change it, but you can adjust your lifestyle if you have that knowledge of the results. Homocysteine just got to throw that one out there. That was an easy one.

Did you inherit good methylation or genetically challenging methylation? So a blood test maybe it's a $20 blood test. I'm sitting down with a nice young man of 30 tomorrow.

He was in the emergency room with some chest pain. I'm still not sure why, but it wasn't a heart attack. But I ran blood work on him and his homocysteine came back 50.

One of the highest I've ever seen. Oh, normal is less than ten. And I'm glad we picked it up at age 30. We got his whole life because that's an easy one to get down with certain vitamins and diet changes.

That's just another one to add. You're a big fan and I agree. Get that fasting insulin. Of course, that three month hemoglobin A1C get a vitamin D level okay.

We probably listed just now 15 blood test. Urine test. You know, get a blood pressure cuff at home. That's not a blood test, but can you check your blood pressure at home?

I did today, you know, it takes three minutes to do it, right? So that's step one. If you don't want to run the course of silently clogging your arteries and walk out of your primary care doctor's office and be at risk of a heart attack, ask them to do better labs.

But if you can't convince your primary care doc, you now can order these labs on your own. It will cost you some money. There's a company called My Life Force.

Dot com will allow you to order your own labs forever. A company called Life extension.com allege, order your own labs and pay for them. And finally there's one called function health.com, and there's probably others.

Imaging Tests for Plaque Detection

But more and more patients are bringing them. Me and my clinic extend live panels of labs that they paid for, and then our job is to sort through them.

So that's step one. And step two is imaging, a very famous European scientist said 40 years ago, if you want to predict the presence of clogged arteries, you got to look at arteries.

You can't do it on blood work alone. So that's where it gets a little more challenging. Everybody can ask for a heart calcium CT scan, also known as a coronary artery calcium CT scan.

I just learned in my hospital the price went up to $150. It used to be 99, but for a test like that, about a five second CT scan, no needle, no injection, no reaction like allergies.

You want to be a zero. And if you walk out of your internist, age 50 annual, and then you go get that seed and you come back zero, you really are at low risk for a tragic event for the next 5 to 10 years.

And you probably want to repeat it. And it's widely available. And sometimes you really got to put your finger in your healthcare providers face and say, I know you don't normally order it, but I can get it without a prescription.

I want that test. You know, my brother had it. It was high. My sister had it was abnormal. You know, I read about it, a test developed in 1990s. So even though we've gone 35 years, I'm guessing way less than 10% of people know their coronary artery calcium score in my clinic, 100%.

No, it, I require it, except for those that are already had a bypass or a heart attack. Because we know where they stand. They're in some trouble. And if you want to get more advanced, you can get a carotid ultrasound.

The ideal one is called the carotid into one medial thickness test, where I can tell you your 67 years old and your arteries are like a 49 year old. That'd be great news.

Or your 67 year old and your arteries like an 85 year old. That's not such good news. Now, that last word, the fanciest test that's come on board in the last four years with some people.

Are you? Everybody should have. I disagree is called a coronary C. T. angiogram a ccta. You have to get an I. D.. You have to be calm and have a low heart rate.

You get injected with iodine. A few people are allergic, and a few people have kidney disease where they shouldn't do this. And for the next 15 seconds, you feel hot.

They take your I. V. out and you go home. Quick. Outpatient procedure A lot of people are paying for this test. Maybe 500, $600 exam. Some people, their insurance company will pay for it, but not always.

You might choose to do it out of your own pocket, and all of a sudden you don't just have the calcium score report. You find out, oh my God, I got a 50% narrowing in the right artery, or I have a 25% narrowing in my circumflex heart artery.

Or what about all my patients? 70% narrowing and their widowmaker and tear artery. So many of them, and they're asymptomatic. There's no clue from the annual physical exam.

Why do I not use it as a routine test? Number one, it's a little more challenging technically. Low heart rate, really relaxed. Number two, and you often do take a dose of a medication an hour before called metoprolol to keep your heart rate down for those 15 seconds.

But it's important. Number two, some people have a iodine allergy. Some people have kidney disease. Number three, it can be with all the bells and whistles of 15 $1,600 self investment.

Some people have a scary enough profile. They want to do it or a scary enough family history. They want to do it. And you know in the big picture of life, if that is something that, is important, you can self-pay for it.

You just got to get a clinician that knows how to order it. But we now have this incredible ability to precisely, accurately measure plaque. And everybody had just to review at least some of the extra labs you either self-pay for, or convince your primary care doctor to do at least the coronary artery calcium score about $100.

Convince your health care team to order on you, and maybe read a bit about something called clearly Health Club ROI, health coronary CT and your grams a complete revolution with a massive ongoing research study that until the results are out, we can't prove that this is going to save lives.

But boy does it change. Therapy, dietary therapy, fitness therapy, stress management therapy, and supplement and prescription drug therapy. When you come back with a boatload of clogged arteries and it is reversible, there's always hope, like there's no opportunity unless we jump, you know, in early starting all of this about age 45, maybe.

Interpreting LDL Particle Testing

It's a great idea to start it early because like my son, like I said, my mom, 56 years old, nobody anticipated it, right? What could we have done? I don't know, but we would.

It would have been nice to know that this was going on so her doctors could have prescribed something, or that she could have been, you know, encouraged to stop smoking and all the other good stuff.

So, there were a couple of tests I wanted to just ask you, if you recommend, because I didn't hear you mention them, which is the particle sizes, the LDL particle sizes.

Yeah. So specifically jump in on that one. Probably for more than 15 years, your doctor could order the standard cholesterol panel, usually fasting, but that's the cholesterol, the HDL cholesterol, the LDL cholesterol and the triglycerides.

The secret there was that the LDL cholesterol has been the most important particle that cardiologists are using to judge high risk or medium risk or adequate control.

And it's actually a calculated number. It's not actually measured directly. It's like saying you look like you weigh about 135 pounds. You know, you might be right. You might not be so right.

It's estimated by checking one more box. And usually it's called the NMR light bulb profile. And you can get directly measured in the key one. You mentioned LDL particle number.

My LDL is 100. Not bad, but my particle number's high. You got some metabolic problems and we need to work on it. Or my LDL cholesterol is 100. But my LDL particle numbers nice and low.

You're in pretty good shape. Yeah, it's more accurate without a doubt. Easy to get and inexpensive. Great, great. And what about oxidized LDL? Yeah, that is a bit of, debate.

I had a good friend out at University of California, San Diego, Doctor Daniel Steinberg, and he was the king for 40, 50 years of research that not just is there a trend that the higher your LDL is, the higher your risk for plaque, because that is the data.

But if you measure a special kind of LDL called oxidized rusted LDL, you really pinpoint, there is science that agrees in their science, actually that disagrees.

So some of, my favorite teachers, because I am a student for life, have sort of Pooh poohed that oxidized LDL is as crucial as we thought it was 10 or 15 years ago.

I pretty much have stopped ordering it, but I want to know about oxidative stress. Simple little urine tests called ISO Preston's is what I order. And, gives me a little insight into what's going on there.

Reversing Risk with Lifestyle and Support

Great. So you've done all these tests on somebody. You see these people every day, right, in the cardiac office, and they come up at a high risk. How do you assure them that, you know, we there's stuff we can do to reverse this and get them healthy again.

Yeah. What did I basically do in the clinic is what we're doing in the summit. And I'm so glad you're the co-host is you know, first of all, we're stressing education and natural approaches.

So really. Yeah. I'll have people watch the interview with, giants like Doctor Esselstyn and Doctor Neil Barnard, people who've been active in the field of reversing chronic disease.

They need to read a book. Maybe it's undo It by Doctor Ornish or reversing heart disease. But I ask this, and I pound on them that they need to become students for life.

And actually, I tell them something that I find rather disappointing is you could have a cancer, I'd say a colorectal cancer, and go through a rather big surgery.

But there should be at the end of the rope a day when you're told you're cured. We don't have to worry about you anymore. That's never the message with heart disease.

If you have it, it's there for life. We can influence and make it less risky and start to reverse. We can influence it, unfortunately, and make it more aggressive and accelerate.

You're never going to be without it. So therefore putting a positive spin on it, you've got to develop some habits, listen to credible podcasts, listen to good books on tape or read them and, you know, stick with the expert, stick with the science.

So education, education, educating. Number two, some people benefit from what we call anti platelet drugs. That could be aspirin. That could be a natural compound called natto kinase that comes from natto beans.

That actually has a lot of science. People don't know about. It will depend on what we find. Number three, there are certain natural products that specifically help lower plaque.

According to the science studies in humans, I'm a big fan of aged garlic, usually a tablet. You can eat garlic, wonderful food. But these aged garlic tablets have been studied at UCLA.

One of my favorite secret approaches is a supplement called pick Not Journal. And there's supplements for heart patients that have been shown in randomized studies.

It's amazing what's actually in the science if you read it. Lately I've been reading some traditional Chinese medicine herbal preparations because there's huge studies coming out of China.

It's just some of these agents are a little hard to get your hands on. One's called red sage or den, and it's safe. It's available and it's science. Back for metabolic health, for cholesterol health and actually for agri health.

Now I skipped right by not really the issue of general lifestyle aids. You know, get your sleep, don't smoke, manage your weight, monitor your blood sugar and all the great ways you teach whole food, plant based diet.

That's the education piece I was talking about. And I was. And fitness. And, you know, whether that's, you know, you prefer strength training, cardio training, hit training like I do, I mix everything up, during the week and get a little flavor of everything, but, you know, make lifestyle your primary, you know, function of the week.

And even if it only takes an hour a day. Healthy cooking, healthy fitness, healthy stress management, you like heart math? I like heart math as a stress management reduction tool.

That's so easy. So yeah, but it's so much we can do. And you know, my message to every patient is, you know, we found heart disease. If you wake up in your chest is burning, please don't reach your mailbox.

You know, reach for 911 giving you the information that may be lifesaving in an emergency room. And I don't want to scare people, but, you know, it's a necessary message.

Yeah, well, thank you, thank you. This has been so enlightening. And it really brings home the, the importance of a thorough evaluation of the, the risk factors, the which you mentioned, the genetics.

Those are the risk factors, the lifestyle factors, smokers versus nonsmoker, family history, all that, but also looking to see what's the current state of your body reading into where are the inflammatory markers.

Is there oxidative stress and then where are your your numbers. And is there plaque in your body. So this is life changing, life saving information that everybody needs to be paying attention to.

So I thank you for all the great work you do. I refer people to you all the time when they're in situations where they've had, you know, family members or friends, right, where they've had an in an incident and, they want to take charge.

So thank you. I kind of been calling in lately. We need to have an attack on heart attacks, and attackers need to stop. And we need to actually get a high energy program.

So many issues in American medicine and even internationally. But, you know, when more people are dying of heart disease. Anything else? We have to put a priority.

And, you know, the goal should be preventing all heart attacks. I spend a lot of time identifying the disease that's already present and working to reverse it.

And that's kind of one notch below preventing it from ever happening. But we got to do it. We got to do it. And we can really, you know, shut it down completely.

But thank you for, you know, asking such great questions. Yes. And thank you for answering. And my goal is to actually put you as a cardiologist out of business going into preventive cardiology versus interventional cardiology.

And that's one of my biggest goals in life. So I thank you very much. Thank you.