Introduction and prevention philosophy

Welcome again to the Sleep Deep Summit. I'm your host, Dr. Audrey Wells. And our next speaker is something that I have a few things in common with. It's Dr. Joel Kahn.

We both went to the University of Michigan Medical School. We are both triple boarded physicians, and we both care about prevention. Dr. Kahn, welcome to you.

Thanks so much. It's going to be a great session. I agree. And I wonder if we can kick off by describing your method for preventing cardiovascular disease through prevention.

Yeah, two answers. Try and be brief. One, sometimes officially in the academic literature, there's something called primordial. That's a big word prevention.

That means really, starting from childhood on eating well, exercising well, sleeping well well, managing weight, managing stress and never getting heart disease.

And maybe ending up in your seventies, eighties and even nineties without any kind of cardiovascular disease. Challenging. Hard to do. It does happen.

I do have patients in their eighties that come to see me for a checkup and we can't detect anything. And sometimes it's obvious why just, you know, great lifestyles from early in their life.

The earlier, the better. That's real prevention. Never develop high blood pressure, never develop atherosclerosis, never develop type two diabetes. And manager cholesterol in a reasonable range.

You know, genetics can impact that. Genetics can sometimes even overcome a long period of good health choices, but they're going to become less important.

The second prevention is really early detection, kind of like mammography, colonoscopy, prostate cancer screening that there's years and years before a heart attack and, you know, maybe decades and years and years to decades before a bypass surgery, before a stroke, before you get your heart stat and, you know, it's sort of prevention slash early detection find the disease at a stage that it's so early that you can head off, you know, a crisis ten years down the road.

And that's going to take some widely available, inexpensive imaging, a few blood tests. And, you know, for example, I wrote a book called Dead Execs Don't Get Bonuses, kind of describing, you know, not a humorous title, but a title intended to catch you off guard.

You know, how to get tested. And we'll talk about that today, I'm sure. So you do detect the heart diseases early as possible or maybe if I know you don't have any, don't wait for heart attack.

Don't wait for an emergency room and don't wait for a sudden death. Thousand people a day in the United States drop dead suddenly. Seems like a few more than usual lately in the news all the time died suddenly died suddenly was in the news today again.

You know very often young people, athletes, you know, people you would never expect to died suddenly. So don't wait for that, you know, be proactive and I emphasize again, we share in common beyond just our routes.

Sleep, sleep, sleep. You know, it is such a critical factor in primordial prevention and then that other form of kind of slowing down and reversing disease that's already present.

Absolutely. And I I want to point out that the American Heart Association just this year added sleep to their Life's Essential 8 Plan for addressing and even preventing cardiovascular disease.

What did you think of that? About time the simple seven becomes the essential 8 and the ingredient beyond the obvious, like manage your weight and your cholesterol and your diabetes and your smoking and your fitness and your family history and the rest.

Sleep as a core part of cardiovascular prevention

But adding quality of sleep and sleep diseases as to the topic to focus on was a wonderful edition. I've had a poster in my office for years that actually said sleep was the number one topic.

We're going to talk about during this visit. Number one, people think of me as a nutritional cardiologist, a plant based cardiologist, a fitness advocate.

And I am for many reasons, but I think sleep is actually number one. So, yeah, the lights essentially was. Now any time we can educate the public and try and keep it simple and manageable, it's a good thing we can't get too esoteric with public messaging.

These will be lost in the noise that's everywhere. Agree. And I really underscore the the idea that sleep is essential. It's one of the ways that we can not only prevent heart disease, but metabolic disorders, problems with neurologic conditions like dementia.

So that essential word beside it, besides being cute with the e use there I think is really important right now with heart disease being the number one killer for both men and women in the United States and for most racial and ethnic groups, what sort of testing modalities and when would you recommend, say, even starting in middle age?

Yeah. So let's say you've had that wonderful lifestyle. Maybe you were lucky enough to grow up in a family that emphasized that maybe you adopted it. I adopted just to give a shout out when I went to University of Michigan many years before you.

But at age 18, I got accepted into a program you might have heard of called InterFlex, where you do undergrad, med school, combined, age 18. I became plant based.

I actually hated the dorm food. I liked the salad bar. I wasn't thinking about anything else. They didn't know anything else. And I have not eaten animal food since age 18.

That turned out to be a rather good choice. Other people grow up in a family where there's, you know, either a religious or an ethical or health reason that they just have a very family history.

So that's one group of people. The other group people didn't have any rules. And Taco Bell was their favorite, you know, stopping place for years and years.

Both those groups, those should be checked. You know, you don't say, I've been so healthy, I won't get a mammogram. I've been so healthy, I'll skip my goal and ask could be I won't get a digital rectal exam.

You get your health screenings. Well, we don't teach that for cardiology. And it turns out by age 40 to 45 and maybe you should probably have lab work before you're 40, that goes a little beyond the average.

Doesn't have to be a lot you know is your vitamin D obscenely low, which is so common. And particularly with the pandemic, we know how important it is to have an adequate vitamin D level, but there's a relationship to high blood pressure and cardiovascular disease.

I like a blood test for Omega 3 Nobody teaches people. You can't make omega 3. Your brain needs it, your heart needs it, your cholesterol profile needs it.

You have to eat it.

Recommended blood tests and coronary calcium screening

And either you're eating salmon and sardine or walnut or leafy greens or flaxseed or chia seeds are taking vegan or fish oils or you're just low in omega 3 in your brain's going to shrink in a way, get a blood test called an omega 3 index.

That's a little esoteric, but I like it because it's so common to be deficient. Get your cholesterol panel, get your blood sugar, maybe a little more than that.

Get your what's called hemoglobin A1C3 month blood sugar. I like a couple others once in your life. Get a homocysteine blood test. You might have inherited the inability to process your B vitamins and end up with extremely high level that could damage your arteries during life.

It's an inexpensive one. Don't just get a one time cholesterol called lipoprotein a, you could be 2025 and get it 30. Find out if you inherited from your parents the ability to make a second cholesterol that can really damage your arteries.

Over the years, we're challenged how to manage it. The pharmaceutical industries coming up with solutions in the next few years. The clinical trials are underway.

But you may say, man, I left my answer to stone. My numbers were good. If you don't know your homocysteine, if you don't know your vitamin D, your omega three index, if you don't know your lipoproteins little AA, you might have missed the boat and so might have been your practitioner.

These are not actually exotic quest Lab LabCorp Hospitals Insurance plans will cover these if they're appropriately ordered and coded. And maybe one more.

The inflammation test called high sense activity. C-reactive protein, you know, is your lifestyle working for you? Are you going to the dentist enough?

Do you have hidden gum disease? Is your weight triggering inflammation? Do you have an altered gut microbiome from some food allergy you're not aware of, to dairy, to gluten, to nuts and seeds?

You know, it's causing inflammation at the gut level, so it's just a simple blood test. Then maybe I'm almost done when you're about 40 to 45, but definitely by 50 go for a simple heart CT scan.

You know, again, by age 45, a women's hearing about mammogram. Men and women are hearing about call and ask could be, guys are hearing about prostate screening.

Women are hearing about, you know, cervical cancer screening. Nobody hears about hard screening. But since 1990, there's a CT scan called a coronary artery, calcium CT scan.

I think your background is in pulmonary. That's right. Yeah. Of course, there is something called a low dose CT scan for lung cancer screening and former or active smokers.

But basically the exact same test, a low dose CT scan with just a little modification of the software analysis can tell you in about 5 seconds. I have no detectable coronary artery disease.

I get great news like a clean call and ask a, B, go do that again in five or ten years and be joyful. Or it may tell you you have silent corner disease.

I have people all the time in their late thirties. Early forties are clearly and objectively developing silent coronary disease. They're 10 to 15 years away from their bypass, their stent or their death.

And we're going to obviously implement a plan, including sleep medicine, to lower their risk, maybe reverse their disease. It's about a 75 to $100 CT scan.

You will not get insurance coverage unless you live in the state of Texas. Go to Texas, contact, and they just have a better program where everybody can get this test at age 50.

But some people shouldn't wait at age 50. I ordered this test and a 37 year old in the office yesterday because of just tremendous risk factors. And when it comes back zero, you can be fairly joyful and confident, comes back anything above zero.

You're just starting to develop the process and should be built in. It's unbelievably frustrating. Their primary care doctors, internists, gynecologists and just specialists aren't ordering this test routinely, aren't having it themselves.

A doctor who hasn't had a coronary artery calcium scan by about age 50. And you know, if you're a premenopausal woman and you're unbelievably healthy, maybe you wait to age 55, but get the test.

Coronary artery, calcium scan. You usually need a prescription if you happen to live in Cleveland, just walk into the university hospital. They do it for free as a public service.

And I don't think you need a prescription. You know, don't go send a 17 year old for it. It's not the right test for a 17 year old, but it's a great test for a 47 year old, for sure.

And that's all you need to do. You know, Cybex, Star Labs, one extra test. We could quickly, you know, characterize triage people, as we say in the E. R., high risk, very low risk.

And apply a lot of attention to the high risk group years before they run into trouble. Yeah, I think I want to get into that and also add that because sleep is so critical and sleep apnea can be so insidious.

I'm an advocate for preemptively testing one's sleep before symptoms come up, or oftentimes it's when symptoms are recognized. So in the absence of a bed partner, in the absence of significant daytime fatigue or not functioning as well as somebody thinks that they could, a person's sleep apnea may be going undiagnosed for years.

I couldn't agree more. You're probably familiar, I'm sure, with a device called the watch. That. Yeah, it's a disposable, crazy disposable watch that you wear that, you know, does a pretty good job of screening at home for sleep pathology.

It may not be perfect, but it's reasonably low cost and available. And I'm sure you know some other options that just one we use. And, you know, it has become almost routine.

You know, obviously, if you're indicating your sleep partners, indicating that you're snoring and restless and stop breathing and you're tired and all the other typical signs.

But even if you don't and if you have unexplained high blood pressure, unexplained atrial fibrillation, an unexplained coronary disease, and that's it again, you know, you should just you know, even if you pay out of pocket, some insurance plans will pay for these home sleep studies.

But it's a few hundred dollars. You get a home sleep study, you've enhanced your health. I did one on myself and I actually mouth day just because I'm a mouth breather and that cured my mouth breathing.

But the sleep study came out fine and now it's become really an inherent program in my office to do one sleep study for optimal health, you know, evaluation.

I think people are missing the boat. I couldn't agree more. Yeah, totally. And, you know, over the years, I've shared a number of patients with cardiologists and I noticed sort of more referrals to sleep medicine with conditions like atrial fibrillation.

And people would show up and say, I don't know what I why I'm here, doc. I really sleep well. I feel fine during the day. And it was not rare for me to discover that they had moderate or even severe obstructive sleep apnea, which makes a big difference when they were going for cardiac ablation and or cardioversion, because if you have untreated sleep apnea, you're more likely to revert or have an unsuccessful treatment of your atrial fibrillation.

Right. 100%. And it you know, doctors adopt new approaches slowly. We all know that sometimes that's a good thing. Sometimes that's just too conservative a viewpoint.

But not testing for sleep apnea is harming people. I'll just give a shout out. You may have seen these, but just in the recent medical literature presented at a European meeting, a sleep meeting, but not yet published fully, where two papers that just rock the boat one was about 4000 people with diagnosed sleep apnea, prescribed CPAP, and three quarters of them were adherent, compliant and wore their CPAP regularly.

But a quarter gave up. It just either was too difficult to bother or whatever. And over the course of eight years, there was a 40% increased death rate by stopping your CPAP therapy and we hadn't really had clear cut.

We had hints, but clear cut data that untreated ignored sleep apnea might be lethal. And there you go. Nice study, not a randomized study, but just, you know, human nature and not everybody follows through.

The other study was just a provocative pilot study of about 50 patients that had a c t of their heart arteries, a little bit more advanced kind, got on their CPAP for their sleep apnea and went back for a second CT scan about eight months later.

And there actually was shrinking of their heart black by being compliant and wearing their CPAP at night. We never had that data before that. We talk about reversing heart disease, shrinking heart disease, diminishing plaque through diet, through exercise, through medications or vitamins.

The Dr. Dean Ornish program and others. But the fact that CPAP therapy for moderate to severe sleep apnea is now on the list, at least in a preliminary way.

You it's a you can't treat it if you don't test for it. So get tested. Agree for sure. And one of my missions is to help people improve their compliance or adherence with CPAP therapy because there are different levels of adherence.

So historically, the four hour mark was held as kind of the the okay, if you got your CPAP past 4 hours, then you were considered adherent to treatment.

But newer studies are showing that wearing the CPAP throughout the entire sleep period, in other words, the whole night has even more benefit and each hour more that you go beyond 4 hours confers improvement in high blood pressure can help your heart shrink down if it's enlarged.

Sleep apnea testing and treatment

And I really think that this is one area that is not well-supported from sleep medicine so far, just helping people acclimate to therapy and use their treatment through the entire night.

Yeah, I think if you can teach people to do that, you're doing a good job. I still you know, I talk about sleep all the time, but I struggle getting them to comply.

And the last thing I'd mention where we overlap and I always bring it up in my clinic, is this tremendous rise in overweight and obesity and that just that cycle that, you know, I gained £50 and I developed sleep apnea and then there are hormones there.

So stress, they're doing a thousand things to lose weight, maybe including were Gobi and Moon Gyro and they're not losing weight because nobody's checked for untreated and undiagnosed sleep pathology.

And until you know that excessive stress and hormonal disruption is dealt with, then all of a sudden they're better capable of losing weight with, you know, either natural or pharmacologic therapies.

So if you just simply say, well, we'll just test this 75% of overweight and obese adults in America for, you know, undiagnosed sleep apnea. You'd be you'd be unable to go home.

You'd be working 24 hours a day. That's right. You know, it's funny, because the overall stats for obstructive sleep apnea suggests that, you know, maybe 30 million to 50 million people, adults have obstructive sleep apnea.

But if you sort of stratify that into people who have a body mass index 40 and above, some studies report, one out of two people have obstructive sleep apnea.

Some studies report 98% have obstructive sleep apnea. So it's it's really common. And being carrying extra weight, being overweight or in the obesity range is definitely problematic.

I wonder if you can describe what exactly you're recommending to people who have heart disease or want to prevent heart disease. What do you recommend for their sleep specifically?

Well, number one, get tested, of course. And should they not have sleep apnea? That's a path we don't need to go down. If they have moderate sleep apnea, I do refer them to a board certified sleep doctor in the Detroit area.

And occasionally, if it's mild to moderate, I'll refer to a dentist who specializes in sleep apnea, and they may qualify to have a custom made device you're familiar with?

I'm familiar with. Obviously, I'm going to try and help them lose weight, if that's a major factor, if they're, you know, alcohol intake is an issue, I'm going to try and help them with that.

At least educate them about the overlap between late night alcohol intake and sleep allergy without a doubt. You know, I'm not going to be the primary treater of severe sleep apnea.

We're going to work as a team. I'll be there to coach them, encourage them, and try and reinforce compliance. And so many of my patients are asleep. Doctor One says ten years later, they've never been back, they never been retested, they've never had adjustments, they don't have updated equipment, you know, and encourage them to go there if they don't have sleep.

Pathology of the official diagnosis of obstructive sleep apnea, I just will help them with sleep, you know, and we'll talk about sleep hygiene, you know, and everybody's familiar.

The dark room, the cold room, the quiet room, white noise. You got to wear an eye mask. I just mention there's this little trend, not the most scientific trend that if you're a mouth breather and you keep your mouth shut a night, you might find a little more peaceful sleep.

You might be less at night. A lot of people are tormented by getting up four or five times a night to pee. And if you can drop that down to once or twice, you know, it's a dramatic improvement.

I like a lot of herbal supplemental sleep aids. I take them myself. I think, you know, I never I personally never prescribe prescription sleep aids. I think there's too much concern and too much data emerging about possible future brain and memory issues.

But whether it's low dose, medium dose melatonin and a whole range of herbs from valerian and lemon balm and magnesium and stone herb, it's mineral. I'm all for CBD at night and if my patients find that edible, THC works for them at low dose.

Go for it. It's legal in my state legalized states, so not something I use or encourage them. But if that's what you know, whatever it takes to get a better night's sleep, a lot of them wear woo bands.

Apple watches are rings. You can get a little obsessive with it. I have those devices. I don't use them all the time. I'll pull them out now and then and just check how things are going.

But usually you can tell obviously it's good or bad pretty much by your own clinical feel, but there are a lot of wearables. Yeah, that's pretty much the magic.

There's a couple interesting ones out there. Glycine is an amino acid that's very safe and may have some benefits to health in general. It may help with sleep.

And I just learned about epigenome, which polyphenol that comes from parsley and celery. So eat your parsley and celery and may help with sleep. It's a capsule, it's inexpensive.

And a lot of people are doing a dark tart cherry juice because of melatonin, you know, rise natural melatonin, I mean, anything. And even if you have to take three or four in combination, a little melatonin or a little magnesium with a little lemon balm, I think there's there's not always great science, but there's pretty great safety.

And, you know, you got to be a bit of an experimenter and find what works for you. Yeah, we rotate a little bit. I love frankly, it's kind of a weird thing.

I'll go on Amazon and order one or two new herbal sleep combos and throw them in the bathroom drawer where my wife and I go, you know, I don't know if it helps to just put a fresh new product in now and then or, you know, I like to have an idea of what's out there that's fair.

You know, what you're describing is kind of making your own personalized cocktail of sleep aids, and I'm much more in favor of that compared to the cocktail in the strictest sense of the word, meaning an alcoholic beverage.

Since you brought up alcohol before, I want to ask you about this idea that a certain amount of alcohol is okay for your heart or red wine is better. You know, my stance is pretty clear about how alcohol is negative for sleep quality, for sure.

What do you tell people? Yeah, it's it's a tough topic because it's one of those classic topics. Why are there food wars? Why are there literally nonstop debates, online medical meetings, medical journals?

You know, proponents of a range of diets from Whole Foods plant based the Mediterranean to Quito to Paleo to Carnivore, I mean, and there's no agreement. And everybody has got an M. D.

or D. O. or a Ph. D. after their name, you know, because it's hard to do nutrition science, it's easier to do pharmaceutical studies. And I think there's pretty good agreement.

What is the best diet family from Mediterranean towards plant based. But God knows that's going to rankle a lot of fathers by some people listening that aren't in that camp.

Alcohol, exercise, and daily habits

And I participate in those food wars. I think alcohol is the same range. They are difficult studies. The government was actually planning a prospective randomized, no drink, two drinks a day, kind of randomized trial.

A follow up, of course, couldn't be double blind and they bailed out. It's got to be too difficult. So all you got are these observational studies and basic biochemistry and case reports and, you know, centenarian studies. Dr.

Valter Longo, University of Southern California, nutrition world expert, Ph. D., talks about five pillars of longevity nutrition research that it's so hard you have to study a whole range of types of research to come to some conclusion.

What's the most reasonable nutrition pattern? And I think that applies to alcohol. You have to look at do old people

drink in the in the communities like Sardinia?

You know, Sardinia is one classic pocket longevity. You know, there is a there is a classic wine they drink called Cana now. And they live a long, healthy life on average, not every example.

They don't seem to have a lot of alcoholism in Sardinia and the pockets of longevity. So you look at that, you look at some observational studies that certainly cardiovascular disease goes down with a glass or to a red wine, that there are actually studies of brain health rates are better in.

People have one or two glass of red wine a day. I don't think sugar, you know, alcoholic drinks like margaritas and rum and coke are ever in the discussion because they're just another way to poison yourself by, you know, a glass of a classic dry red wine.

You know, the trend in medicine has gone the other way, that these may promote certain cancers like breast cancer that are so prone to abuse and accidents and driving an addiction, which they clearly do and they clearly do kill people.

They clearly destroy people's lives and marriages and and work and and shorten people's lives. My neighbor, 65 years old, just died recently of alcoholic liver disease.

And, you know, I was in his house and I talked to him and it was an addiction. You know, my conversation with him wasn't enough. And he wasn't willing to seek, you know, a 12 step program or serious counseling.

So it's a tough go, but I still think there's room from the Mediterranean diet, from the blue zones experience. And if you can handle a glass of red wine in a social setting four or five times a week, you're not committing, you know, health suicide, but do it early, you know, have a glass or about five or six happy hour and cut it off, because otherwise you're clearly going to start impacting your sleep quality, at least for many people.

Definitely. I think that's really good information because there have been some mixed messages coming out. And so for people who want to ask themselves that question, it's nice to know that they wouldn't be doing themselves a disservice if they keep their alcohol consumption in moderation.

And oftentimes that's the key. I want to talk now about exercise and exercise leverage to improve your heart health, potentially even reverse some conditions.

You know, from a sleep perspective, exercise is amazing. It increases your the depth of your sleep, reduces arousal, and also just provides a nice contrast between night and day.

As a cardiologist, what do you recommend for exercise? I'm the crazy guy. I actually just came through my office. I have a treadmill desk and I see patients 8 hours a day or more and I walk all day long.

I'm like Forrest Gump, and they laugh and they come over, What do you do? And they're pretty inspired by it. And I don't do it just to be an inspiration.

I do it for my own health. So I obviously I walk the walk, not just talk the talk literally. Plus, that's not my only exercise. I'll sneak in yoga and weights and other cardio exercises at home and I'll yeah, it's a critical part.

You know, we've built in so much sedentary lifestyle now with modern life, you have to fight back with crazy things like treadmill desk and standing desk.

And I call it, you know, exercise snacks, just two, 3 minutes of marching up and down the stairs in your office, you know, the old fashioned park your car farther away and walk an extra 5 minutes.

Your office building. You know, so many people working from home and sitting at their kitchen table all day long, it's been probably a negative factor.

And, you know, when the gyms closed during the pandemic, that was an insane negative factor. But fortunately, we're past that and things are reopened.

But a lot of people didn't go back. They lost that habit. Some built home gyms and that's great and some just lost exercise habit. Absolutely critical, maybe. Yeah.

I still think that a good night's sleep may be the number one health habit of all health habits. But number two, right there, you know, tied with nutrition is quality and nutrition is a regular exercise habit from short hit exercise.

When your time is limited to, you know, longer periods, you don't have to do a lot. You don't have to train for triathlons and marathons. There are some downsides in for cardiac health that may come from repeated long endurance exercise.

But, you know, hitting the American Heart Association recommendation of 150 minutes a week, five times a week for 30 minutes, moderate exercise, even 15 minutes, five times a week of vigorous exercise, like a typical high intensity interval training, real hot, fast yoga program.

And, you know, make sure you're hitting at least that. And, you know, you want to do more. Do more. Yeah. I read some new data recently. I always advise people I like to exercise in the morning and I rarely exercise, you know, later in the day.

But some late exercise I've read lately. Research lately is that a later afternoon, early evening exercise may actually help your sleep, you know, maybe not an hour before your sleep, but you're going to be hotter and still be metabolizing and repairing, you know, any break down that occurred during a vigorous exercise session, but exercising at five, six, maybe up to 7 p.m.

if you didn't get it done in the morning is not an excuse. Don't say it's going to disrupt my sleep, you know, get it done. That's right. I totally agree.

And to your point, all we have to do really as humans is eat, sleep and move. And we if we can optimize that, then we'll really be in good shape. I'm curious to know, if you measure your step count every day with, you know, I've.

Got the handy phone, but the phone sits on the desk and it's now I haven't actually put a pedometer on or an old fashioned thing. I mean, it's got to be 15 to 18000 steps a day, but I haven't calculated it.

I probably just should leave my phone in my pocket and do it during the day. But I know it's a lot and my legs are absolutely tired by the end of the day.

In fact, I had a throw a pair of gym shoes out today. I couldn't believe how worn the solo was actually literally holes in it. So I think I did a good job, burned through a bare gym jus in 12 months.

That sounds great. I have dogs so they keep me out and walking and. Same thing and we have three at home and it's a lot of walking when I can participate, which is great.

I mean some data that people with dogs have less cardiac disease. Maybe it's getting your face licked regularly and maybe it's walking about.

Closing resources and final advice

As we close here, I want to list again the lab studies that you mentioned, because I think this is really helpful information aside from the normal screening labs that a person would get at their primary care office.

You mentioned omega 3 index the lipoprotein a assay homocysteine C, the high sensitivity CRP and then the test which is the coronary artery calcium scan, the CAT scan.

Anything else you want to add as we close down? That's not going to be expensive and it's not going to be risky and it's not going to be painful. That's a CT scan.

Nothing is injected in your body. It is a C, D, but it's a low dose, about the same radiation exposure as a mammogram. And most women don't, you know, run away from a mammogram as a unhealthy recommendation if you have that opinion.

But mostly, I just don't live life, you know, blind that there's no possibility of this, number one threat to your health, which has such a long, silent phase until that day that you end up in an emergency room.

I just don't risk it, you know, just be proactive and still have resistance from the internal medicine, family medicine, primary care world to write that script.

But just be insistent, you know, go, go search the topic. Coronary artery, calcium screen. If you really of your listeners after listening to your entire sleep summit, be sure you listen to entire sleep some in person.

There is a documentary online called the Widowmaker movie a few years back, and it's free and it documents how this heart test got developed, why there's resistance.

It's so inexpensive, nobody makes money from it. And unfortunately, that's one of the reasons you don't see it on billboards and hospital ads. It's not a big moneymaker, but, you know, it saves lives.

So forget that. Just do it for the right reason. That sounds great. And in fact, that's going on my health list because I'm approaching 50 now. So it's a good time to at least get a baseline.

Where can people find you to work with you or to benefit from the resources you have? Yeah, I'm in Michigan, but I am actually licensed all over the place, including the great state of Minnesota.

So I do a lot. I do real medicine in my office and telemedicine, which is real medicine, you know, all over the place. But central website would be drjoelkahn.com drjoelkahn.com, goes my clinic goes my podcast goes to blogs, books, all kinds of stuff.

Busy guy. Yeah. You've been very prolific with putting good information about cardiovascular disease out there, so thank you from me and thanks for being on this interview today.

Pleasure to speak to you. You bet. Thank you for what you do.