

Welcome to the Cutting Edge Health Podcast with Jane Rogers, where we discuss science to help prevent cognitive decline.

[00:00:00] Jane Rogers: Welcome to the Cutting Edge Health: Preventing Cognitive Decline podcast, where we're making 90 the new 40. I'm Jane Rogers. Buckle up for interviews with the world's brightest minds to help you live longer, better. Before we get to this week's guest, if you're short on time and who isn't these days, I wanted to share that I have a quicker way to learn how to get more energy, a mind so fast it startles you, plus your personal questions answered in a weekly Q&A with me and a longevity focused MD. Find out more at mycuttingedgehealth.com.

Dr. Jeffrey Galvin is the founder of Vitality Medical Wellness Institute in Charlotte, North Carolina. He is well versed in the various components of enhancing your health span and slowing the aging process. By slowing down or even reversing the aging process, you can decrease your chances of developing age-related diseases and maintain a sharp mind for a longer period. Moreover, with these lifestyle modifications, you can feel as though you're 40 when you reach 90. Dr. Galvin, thank you for coming on the show today. I'm very excited about this.

[00:01:10] Jeffrey Galvin: It's my great pleasure to be here. I'm excited.

[00:01:12] Jane: You have a whole practice that in a nutshell, helps people live longer, helps people slow aging, helps people prevent the diseases of aging, like cognitive decline, cancer, heart disease. Do I have that right?

[00:01:24] Jeffrey: That's right. I think the other big thing is we reverse chronic disease because you can't really optimize until you get rid of all the underlying problems. A lot of people come to us with diabetes or other issues that we've got to fix first before we can really set them on the pathway to really optimizing longevity and everything else in performance. Performance is a really big thing for us.

[00:01:45] Jane: If you had everything perfectly, what age would you like that person to walk into your office for their first visit?

[00:01:53] Jeffrey: Oh, if we had everything perfectly, we would start when they're kids. We would start-- we would train their parents to do the right things at the very beginning. I always make this comment like, how do we build vibrant, healthy 90-year-olds? We start with 30 and 40-year-olds, maybe 50-year-olds. Not that we can't build them out of 60-year-olds as well, but I think the sweet spot probably is if you can get started your thirties, forties, fifties, those are the time. Probably age 50, a lot of people come to me around that age because they start noticing a decline.

Now, we don't see that in our patients that started in their 40s, we avoid that. We have great success in really producing. I always tell people we want you to be younger next year. I'm 56. I feel like I perform significantly better now than I did when I was 40, but I'm much healthier for sure. That's the goal. To really keep that up for as long as possible. I think the idea is you want to stay healthy and really performing really well for a long time. Then precipitously decline and die. Hopefully, that's in our 90s.

[00:02:58] Jane: You're avoiding hopefully the years of disability. When you've got that last 5, 7, 10 years and you're in an assisted care situation.

[00:03:05] Jeffrey: Exactly. What we do in medicine now is we really manage people's decline. That's not really the model I expound. I think we should optimize performance, whether it be metabolic, brain, physical, neurocognitive, whatever, optimize that and keep optimizing that for as long as possible. You know, we can't live forever. The idea would be to really have a pretty precipitous decline in a year or two. My wife has a grandmother that passed away at 108 and she was pretty darn good until 106.

I'll take 106 good years and two bad. That's how we do, we start at 50 and we basically have this like slow decline and you have two people that are going to end up passing away at the same age. What do you want to do? Did you want your performance to be this and that or do you want to be this and have decades of decline? We really strive against that decades of decline model.

[00:04:00] Jane: I was reading recently, speaking of kids, you said, "I'd love to get the kids and their parents in really early." I was reading that a baby has already been born that will live to be 120, 130 years old. Have you been reading that too?

[00:04:12] Jeffrey: Yes. I think there's a little bit of controversy about whether or not we're really capable of doing that naturally, probably not. I always tell our patients there are technologies that are on the near horizon that are going to radically extend lifespan. They might be available in five years, they might be available in 10 or 15 years, but I can guarantee you this: if you are not pretty healthy when they become available, you're not going to be eligible for them.

If you're riddled with diabetes and neurocognitive disease and metabolic disease and heart disease, you're probably not going to be a great candidate for that. If you're 75 and you're in top shape, then you're going to absolutely be eligible for those therapies. That's the idea -- let's make people as healthy as possible, understanding that we're going to keep a close eye on all these technologies and when they become available, we'll take advantage of them, and you'll be ready for 'em.

[00:05:02] Jane: You'll be ready for it. Let's start out. I see a couple of different areas. If you're really thinking about wanting to take advantage of these technologies and being

healthy enough to do it and being able to not have a slow decline but maybe a quick decline, live longer in health, you have the health component, things you need to be healthy, like we just talked about.

You need to really look at the anti-aging science, longevity science, what of that to incorporate. There are devices that help you out and then there's also testing. Can we break this big animal down and, say, let's talk about health first? What are some of the health things that are really important for someone to focus on if they want to live well longer?

[00:05:43] Jeffrey: If we are going to play the Deadpool and guess that how people are going to die, I would always bet cardiovascular disease because it's the number one killer of men and women. Really, we want to do everything we can to minimize that risk. When I say cardiovascular disease, I don't only mean heart attacks, but I'm talking about heart attacks and strokes and similar. We know that dementia, Alzheimer's, and its like are rapidly increasing. We think in the next decades, the numbers are going to skyrocket.

Cancer is another thing. We really need to be aware of and set the stage for avoiding that. A lot of cancer is stemmed innate metabolic disease. I think if you're diabetic, your risk of developing cancer is six times higher than if you're not. I think the first stage and what we typically do with our patients is we do a very big evaluation and we want to look at all this baseline stuff and find out where people are.

[00:06:35] Jeffrey: You've got to really measure initially, and I think that health piece is, do you have heart disease? Do you have insulin resistance? Do you have evidence of excessive inflammation? Are you at risk of a slew of medical problems that might be related to your family history? Taking a deep dive into your own personal history and your family history is important. Getting an advanced set of labs where we're looking at markers for a lot of these things is important.

Doing cardiac CTs and neurocognitive testing and fitness evaluations are important because we really want to know where are we starting. You can't really decide where we're going until we know where we are. It really is important to do this testing and looking at people's baseline health. What we find is that, and I think we were talking about this earlier, is that medicine is really not interested in you being healthy.

[00:07:22] Jeffrey: They're just interested in managing your decline really. Your doctor is not going to say, "Hey, listen, we're going to do these things to make you live longer." Whereas, they're going to come in and you're going to spend your 5 or 10, if you're lucky, maybe 15 minutes with your doctor on a yearly basis. They're going to say, "Your labs look good. Oh, your blood pressure's high, here's a medicine, here's a prescription." Then they're gone.

Nobody ever says, why is your blood pressure high? Why are you pre-diabetic? If we don't address this now five years from now, we're going to be dealing with this other problem. Why don't we fix it now while it's easy? That's not really the way the system is designed. I oftentimes have patients that come in and we discover different things during their evaluations and they get mad at their primary care doc.

[00:08:05] Jeffrey: I never hate on the primary care doctors because what they would really love to do, and they're not trained to do it, they don't have the time to do it. They're so beaten down by the system, they're stuck in this squirrel wheel of clicking boxes and trying to get as many people in a day as possible. There's no way you can do well by it. It's not your doctor's or your nurse practitioner or your PA's fault. They're not doing what they would love to do.

They're doing what they're being forced to do. We are outside the system. I get to do what I feel is right. I have this benefit that other people don't. I'm not a better doctor than those other doctors. I don't have the shackles on that they do. We do it because it's the right thing to do. Not because I've got to click these certain boxes and I've got to fit this number of people in my schedule or whatever else. It's a system problem.

[00:08:52] Jane: That's a really good point. We've talked about the different health things that you need to pay attention to.

[00:08:57] Jeffrey: We always look at nutrition, fitness, sleep, stress, hormones, metabolic health, and try to paint a picture of giving people certainty, clarity, and direction that I think we mentioned before. Certainly do the testing, figure out what's going on. Clarity, sit down and look at it through a lens of optimization, performance enhancement and longevity. Then direction is to do the things we need to do to fix problems, optimize things that may be normal but aren't optimal. Then after we get people dialed in, then really look at the biohacking, longevity aspect of things.

[00:09:31] Jane: You've got the ideal job.

[00:09:33] Jeffrey: Oh, yes. Definitely.

[00:09:35] Jane: Because you have motivated clients.

[00:09:37] Jeffrey: Yes, very motivated. My training is in emergency medicine and trauma and it's rewarding because we can fix stuff but generally, it's your fault or somebody's fault that you're there. You don't generally end up in the emergency department. It's usually something happened. Either it's a chronic disease that you haven't taken care of or it's a traumatic thing that you didn't have any control over.

[00:09:56] Jane: We've talked about the health side. That's something that we really need to pay attention to starting as early as possible. How about the longevity science? How do you bring all the anti-aging research that is really exciting right now into your practice?

[00:10:11] Jeffrey: I think we try to be pragmatic about it because longevity research is difficult because it requires studying people over great periods of time. It's hard to do a longevity study in five years. A lot of what we are using is extrapolations of studies that may not be ideal. Rapamycin is a great example. We use rapamycin in our practice because there are animal studies that really show it enhances longevity.

There are studies being done on rapamycin, but we won't have those results for decades. We've got to look at best-case scenarios in rapamycin. There's a number of things, but it tends to enhance apoptosis where we kind of go in and clean out old degraded cells and make way for new cells. It showed significant longevity improvements in mice and other animal models. The nice thing is there's very little downside.

The way we dose it is really safe and it's not used all the time, it's used usually, typically on a weekly basis for a series of weeks and then with a little holiday taken and we get good results with that. Metformin, other things that we use are based on extrapolations of studies, usually animal model studies, but technology's evolving in such a way that we can model some of these studies now with AI and other things.

There are rapid advances, stem cell therapies, other things that we're learning and learning and learning. My job is stay very well-versed on the literature on the science, and then make treatment recommendations based on my best judgment of what's safe and efficacious for our patients. Then we always measure. We use epigenetics, for example, to measure pace of aging. We know that when we get people optimized in terms of their nutrition and fitness and their hormones and fix their metabolic disease, we roll back their pace of aging. We lengthen their telomeres. Their extrinsic epigenetic age lowers.

We're able to measure those things. You never want to test without and implement without measuring. I mean, that's the whole scientific method. You have a hypothesis, you implement it, and then you test it and you see if you were right or wrong. We've got 15 years now of data of our patients and significant improvements in health span and all of those people by doing these things.

[00:12:28] Jane: It's hard to average out all your patients over that 15-year period. Since you've been keeping all those records, how long does it take before you start seeing a reversal in your epigenetic age, your biologic age? Then what are some of the cases you're most excited about? I reduced this guy's biological age by 15 years, 10 years, 5 years?

[00:12:47] Jeffrey: What we do is we are typically repeating epigenetics at six months, and we're seeing pretty significant improvements. I've got a gentleman who actually the testing company contacted me about because they're doing this thing called the Epigenetic Olympics, where they're essentially looking at people who have had the biggest changes in their epigenetics.

They were getting ready to roll this out, and they called me up, and they said, "Dr. Galvin, one of your patients is top 10 in the country." This is a guy who, I think when he started with us, his epigenetic age, his extrinsic, which is a measure of your immune system, which actually does correlate to longevity. He's a guy in his late 40s, maybe 50, 51, I can't remember exactly. Epigenetically, he was 70, almost 70, maybe 69, 70 years old, and six months later, he was 38.

[00:13:41] Jane: No, really?

[00:13:41] Jeffrey: Yes. A huge change. At the same time, we reversed his diabetes or his early diabetes, he changed his body composition radically. He lost like 30 pounds of body fat, had gained like 12 pounds of muscle, and dropped from a body fat percentage in the mid to low 30s down to like, I think, 20%. We think for most men in their 50s, like 18 to 22 on the dex is a sweet spot that we try to hit. That's a body fat percentage that you can achieve pretty easily and maintain pretty effortlessly because, "Could I get you to 15%?" Yes, but you're going to hate it because the amount of effort required becomes logarithmic. To get to a certain point, to go down 1% body fat, you've got to triple the effort. We're really, like I said, I'm a pragmatist. We want our patients to be happy and healthy. I might be able to tell you that, "Hey, I'm going to give you this diet of sticks and rocks and you're going to be as healthy as possible, but you're not going to be happy." You're not going to do it.

We try to figure out a way. I'm a big believer in the 80/20 rule, get people dialed in and once they get there, do what you're supposed to do 80% of the time and 20% of the time if you want, do whatever you want. If you want to go out for beer and pizza on a Friday night with your family, go ahead. Don't worry about it, but the rest of the month try to be good, and if we do that, we've found we've had patients that have maintained their gains for 10-plus years now and are not doing anything extreme.

I know this is health-centered, probably the audience is more savvy than most, and you're going to have people that are like absolutists and you must do this all the time. It's not realistic like, we can't be perfect. Let's embrace that and say, "Okay, if we can't be perfect, what is the best analog?" I think that 80/20 rule is good. I always use the example of chocolate chip cookies with my patients. I said, "Listen, if your favorite food is your mom's chocolate chip cookies," and I come in and I say, "Listen, you can be perfectly healthy, but you can never have those again." What's the chance of that being successful?

It's not going to be successful, but if I say, "Listen, in the short term, we're going to put Mom's chocolate chip cookies on the no list. Once we get you dialed in, if you want to do that once in a while, knock yourself out and enjoy them and bring some for me." That's the idea of that kind of happiness. I'm not an absolutist and I don't really believe that there's like one way to eat or one way to train.

Everybody's a little bit different, and people ask me all the time, what's the best exercise? I'm a CrossFitter. Do I tell everybody to do CrossFit? Absolutely not. The best exercise is the one that you'll do. The one that you're willing to do. If it's just walking, fine. As long as we're doing something, we know that exercise is the best anti-aging medicine there is. By and far, the best anti-aging drug is exercise. I don't care what form that takes, just as long as we're doing it.

[00:16:29] Jane: Are you telling your patients how often should they get their heart rate up into their target zone and really sweat a bit every week, three times a week, four?

[00:16:37] Jeffrey: I think it depends on the patient. I've got patients that have chronic injuries that really can't do that, that have other problems. I generally think three to four days a week of some kind of training with three of those being significant. We have a lot of patients that we just have do Zone 2 training, which is like Zone 2 for me is literally walking in a treadmill. It's the most boring thing in the world, I can't stand it being a CrossFitter.

I'm a little ADD about exercise and I wanted to be doing stuff, but I always try to do it. I preach to people and I did a Zone 2 protocol getting ready for Murph, which is a big CrossFit workout that we do every Memorial Day. It's a mile run, 100 pullups, 200 pushups, 300 air squats, and another mile. I have been trying for a number of years to get my Murph time below 45 minutes. I typically am doing it at 53 minutes. I'm not a great runner and I hate to run. I'm decent with the pullups and the pushups would run for a couple of months before Murph and never seemed to have much of an effect.

About two years ago, I did Zone 2 for two months. Zone 2 training, which is a heart rate of basically 180 minus your age. For me, I couldn't run, I would get too high, didn't to it to be allowed 125 being an old guy. I finally joined this meathead gym near my house where they had treadmills and I would just basically put the treadmill at a certain angle and I'd walk at like three miles an hour. I'd get sweaty, but you got to do it for typically about 150 minutes a week. I'd do 350-minute sessions and the entire time I'd be watching that thing going 49 minutes, 48 minutes, like just hating it, just hated it. Did it for three months, went and ran Murph, and did it in 42 minutes.

[00:18:19] Jane: Congratulations.

[00:18:20] Jeffrey: Blew my old time away. Zone 2 training doesn't really require big heart rate. I think it's individualized in terms of really do precision medicine. We do these big evaluations and then we make recommendations based on the individual. I mean generally, I think three good days of working out a week with a fourth or fifth of hiking or some other activity thrown in is really optimal.

[00:18:44] Jane: What I'm seeing is that the young people, I say young 30s, even some in their lower 40s, they seem to be all over this, what you are offering, precision medicine, making sure everything's optimized. I'm seeing people who I thought originally would be so into this, people in their 60s, 70s, 80s, because they can just see their mortality out there. They would be the ones who would be banging on your door saying, "I want all of this because I want to live healthy longer," but they're not, at least what I'm seeing. Are you seeing the same thing?

[00:19:16] Jeffrey: We actually do see a lot. I think the majority of our patients are between 30 and mid-60s. I think we see a lot of people that I think are feeling immortality. They're starting to see their parents get older, they're seeing friends have medical problems or pass away. We do seem to engage a lot of people in their 50s and late 40s. It does seem like that is an age where people start feeling their mortality a little bit and I think they start noticing their own performance dropping.

Remember that I've got a bit of a skewed population. I've got people that want to be doing this stuff, they're high performers anyway. I think they're more tuned in when their performance starts dropping. They're more tuned into it, and also, I think they're more apt to do something about it. An average person that doesn't know this is out there may just think, "Oh, I'm just getting older. It's not that big a deal," whatever, there's bias because of the people that come to see me are not probably your average-- my average ER patient would not come to see me, they just want a pill.

We've fostered that in the medical system, unfortunately, that desire to just get a pill and not have to do any real work and, "I'm just going to defer to my doctor. They've got my best interest at heart." They don't. I'm not saying that it's a sinister thing, but the system is not set up for you to be healthy. The medical system, we're not really interested in making people healthier, we're just interested in managing their decline, like I said before.

[00:20:44] Jane: You mentioned your ER patients, "Just give me a pill. Maybe my insurance will cover it," or the state will cover it, or something. I know coming to someone like yourself, a precision medicine expert can be pricey for some people. I know it runs closer to \$20,000 for one of these comprehensive visits that someone has when they come into your office. Can you recommend a path for someone who maybe can't afford that but really cares and wants to do it?

[00:21:12] Jeffrey: Yes. If you want to come and do the full two-day thing where people fly-- You're right, it could be \$15,000 to \$20,000, but we have a lot of people that we treat, what's called a health optimization program, which is just, in a nutshell, fixing metabolic disease and optimizing hormones, which is much, much less. I think you've got to know. There are a few things you need to know. You need to know if you're insulin resistant or not. You need to know if you've got metabolic syndrome or not. You need to know what your own risk is. You need to know, do you have heart disease?

Stress test, I laugh because we were just talking about this the other day. I don't know,,in my career, I've probably taken care of in excess of a thousand heart attacks probably. I cannot tell you how many times when that person comes in having that heart attack, they tell me, "I just had a stress test a month ago," or a week ago, or yesterday.

The fact of the matter is that the majority of heart disease is caused from plaque rupture, not occluded arteries, not blocked arteries. That plaque, it's in the wall of the vessel, and the first time you have a symptom from that is when you have your heart attack or your stroke. Unfortunately, in a significant number, 40% or more heart attacks, the initial presentation is death. There are better tests, cardiac CT scans, for example, or your calcium scans that can give you an indication that you've got heart disease that is asymptomatic. We like everybody to get screened for that.

We want to do your APOE status, whether or not you've got the gene that's going to predispose you to Alzheimer's. In a really dumbed-down version, you've got this gene called APOE. Back in the day when we were evolving, it was a very beneficial gene but now it's not. It increases our risk for not only Alzheimer's but also cardiovascular and metabolic disease. You've got, basically, a couple different forms.

If you've got this normal form, APOE-e3, we've got two copies of every gene. If you've got two APOE-e3 copies, that's best-case scenario, and your risk of developing Alzheimer is about 30%. If you've got one APOE-e3 and one APOE-e4, then your risk goes up to about 50%. If you've got two APOE-e4s, it's 70%. Probably a good thing to know, especially if you've got a history of Alzheimer's in the family.

It's not 100%, this idea that it's not a death sentence, but if you follow our standard medical recommendations and you develop insulin resistance and obesity and you don't exercise, you're more than likely to fall into the 70% pool than if you keep yourself really healthy and dialed in and being in the 30% of that group that does not develop Alzheimer's.

I've got a great story of a patient that we took care of years ago-- we've always prided ourselves on being way, way ahead of this curve, and we've been checking people for APOE for over 10 years now. I had a patient that came in for an evaluation from England and his concern was Alzheimer's. He had this incredibly sad family history of Alzheimer's. His parents both died young of Alzheimer's. He was about 65, I think, when he came to

see us. He had a sister who was 10 years younger that had already had severe Alzheimer's, had a brother that had Alzheimer's, all these uncles.

We did his testing, sure enough, APOE-e4. Then we did the full slew of neurocognitive testing, and what did we find? Not a shred of any evidence of any cognitive decline. His brain was working amazingly well. He asked me, he said, "Well, what's the deal?" He goes, "Everybody in my family has this. I've got the gene. Why is it that they all have this disease, and I don't have any sign of it?"

Well, this is a guy who's ticking incredibly, he's an executive, he's been fit, he's been an athlete his entire life. He's been really careful about his weight and managing his body composition. He's taking great care of himself. He made sure it never happened. If he was like his sister, who was obese and had diabetes and all these other problems, never exercised, then he would certainly have Alzheimer's, but he made the difference. We just tested. We didn't do anything for him. He made the difference. That's very easy to avoid. If you can discover your status when you're 30, then you might make different choices for the next 30 or 40 years than you might otherwise, and so that's very important.

[00:25:24] Jane: I am so glad you said that because my parents both passed with Alzheimer's, and I started showing signs of cognitive decline about seven, eight years ago, at same age as my dad. I tested for APOE-e4. I've got a 4 and a 3, so I have a 50% increased risk. That's why I started this podcast, as a way to give back, to tell people exactly what you said, "This can be prevented. We can do it, guys. We just have to be smart."

[00:25:50] Jeffrey: Reverse. Yes, we reverse cognitive decline all the time. It's interesting. There's a great book by Dale Bredesen called *The End of Alzheimer's*. I don't know if you've read it, but it's great.

[00:25:58] Jane: He's been on the show.

[00:25:59] Jeffrey: Has he?

[00:26:00] Jane: Yes.

[00:26:00] Jeffrey: Dale's awesome. I learned about that book because a fellow physician came to me, he's like, "Dude, you got to read this book." He goes, "This guy is fixing Alzheimer's." He goes, "The crazy thing is he's using your protocol." I'm like, "What do you mean?" Sure enough, those are the things we've been doing for a decade or more; nutrition, fitness, sleep, stress, optimizing all those hormones, and we've reversed cognitive decline in many, many patients. The key thing is, you got to find it early. We've actually had patients who have got parents in nursing homes and in Alzheimer's units and find out what they're eating.

[00:26:32] Jane: It's horrible.

[00:26:33] Jeffrey: I actually had a patient that was in a nursing home recently, and his son was really concerned because he was declining rapidly. We did his labs, and they had given him diabetes feeding him such junk.

[00:26:45] Jane: It's a real problem.

[00:26:46] Jeffrey: The son started having to bring in food for him. About two months later, all of a sudden, he's having conversations again. He would sneak him out. They would only let him out of the place if he could come to a doctor's office, so we would give him a doctor's note. We'd set up a little table and chairs outside and they would have lunch outside of our office in the sun and have a great afternoon together. The son had to really take control.

We got his hormones right. This is now three, four years ago, and cognitively he's much, much better. He's not 100% better-- he still seeks ice cream, they still don't feed him great over there, but he's much, much better than he was. I'm sure that had we not done anything four years ago, he probably would either be dead or be completely lost at this point.

[00:27:29] Jane: That's an impressive son, who cares that much to step in and say, "I'm going to take the bull by the horns and change the trajectory for my father."

[00:27:36] Jeffrey: Yes. He came and asked me to help with the jailbreaks. I'm like, "Yes, we're in."

[00:27:39] Jane: "We'll help you." [chuckles]

[00:27:41] Jeffrey: "We'll be part of the conspiracy."

[00:27:42] Jane: We've talked about health and how important that is. We've talked about longevity and the anti-aging science. Let's talk about technology and how technology can help us achieve a lot of these goals that we have. What's some technology you use?

[00:27:59] Jeffrey: Technology? Well, we use a lot of tech in our office. We have wearables that we use, things like the WHOOP band, or Garmins, or Apple watches, or Fitbits to track general activity. We use continuous glucose monitors with almost all of our patients. I started using those probably four, five years ago, was when it first started becoming available. I wanted a tool where I could figure out what was happening to our patient's blood sugars because we're really interested in getting insulin levels low. I don't have a way of measuring insulin, but glucose is a good analog. If glucose goes high, you know it's going to be followed by an insulin spike.

I thought it would be helpful for me if I could see what was happening, and so we started using these. Very quickly, we found that it was a game changer for our patients because they could see in real-time what was happening, and it would change behavior. All of a sudden, our patients started doing really, really well. The old ones you had to scan all the time. If they weren't doing well, we'd see these big gaps in the data and we're like, "What's going on?" Well, the new ones are continuous, and it feeds back to me. I have a whole dashboard of all my patients, and I can look. Every once in a while, I'll send some of our concierge patients a message like--

[00:29:09] Jane: "What are you doing?"

[00:29:10] Jeffrey: "Had a good time this weekend, huh?" Like, "I'm glad you guys had fun." We joke about it. Interestingly, we typically, before we implement anything, we oftentimes put one on a patient for a week or so, and then we do their evaluation, we give them recommendations. It's very interesting because we'll see a week's worth of data where the numbers are like this, and then all of a sudden, on Monday, we implement what we call functional nutrition, which is really a personalized nutrition protocol for the individual. They'll do that, and all of a sudden it does this.

[00:29:40] Jane: Good.

[00:29:41] Jeffrey: It's striking, and the patients are like, "Oh my gosh." It really is a great tool because anything you can give to empower your patients, that's a really great tool. That one we use quite a bit. In the clinic itself, we have tons of technology. We use a DEXA scanner, which is the gold standard for body composition and bone density. We are able to use that. We have BIA devices, similar in bodies, we use a company called Tanida, but basically uses impedance to measure.

[00:30:06] Jane: BIA stands for?

[00:30:08] Jeffrey: Bioimpedance Assessment. Only notice that the sales pitch is always like, it's as accurate as DEXA, and I have DEXA and I know it's not as accurate because we compare everything. They're usable tools if they're used correctly. You have to understand the technologies are different, you have to understand what you're looking at, and it's a useful thing. If we can normalize conditions, those impedance measurements are really affected by hydration and lots of-- we'll put our staff members when they come on board, we'll measure them three different times during the day. Sometimes you're getting a 5% or 6% body fat percentage change during the day.

[00:30:43] Jane: Really?

[00:30:44] Jeffrey: Yes. They're very inaccurate, unfortunately. If you normalize the conditions, we talk to patients, come first thing in the morning, don't work out beforehand,

pee right before you get a machine. If you can minimize the differences, it becomes more accurate. I always look at those measurements with a bit of a grain of salt. We do VO2 max testing where we're actually measuring ventilated oxygen, ventilated CO2, see what people's aerobic conditioning is. We can use that same device to do a resting metabolic rate test, which I think you did.

[00:31:11] Jane: That's how we met.

[00:31:13] Jeffrey: Now, you sit reading through that machine, we can then tell you how many calories you're burning at rest and also where those calories are coming from. Are they coming from fat? Are they coming from carbohydrates? What percentage? We have a really complicated and advanced computer system to do neurocognitive testing. That is very good for screening for early cognitive decline and loss of executive function, but also ADD and depression. We have tools to screen for anxiety and sleep apnea, and other things.

[00:31:40] Jane: Do you use a Smart scale? Like a Withings scale?

[00:31:42] Jeffrey: A Withings scale is basically the same. It's a BIA device, it's an impedance-based device. The only thing that is smart about it is it will connect to the internet. Those consumer-level ones you get for \$100 or so, we have a medical-grade device. That is a two-channel one. Just like the Withings or Fitbit or whatever. Probably \$3,500. And then we have a four-channel one, where it measures basically impedance between the legs, but also the legs and the arms.

Those are about \$10,000 or \$15,000 and the DEXA scan, which is about \$50,000 to \$70,000. We have all three devices, and we use the basic ones on a weekly basis. We use the more advanced ones monthly and then we do DEXA's quarterly. We have all this data to compare it. If you do it right, if you have a 3% body fat drop on the BIA devices, a lot of times, approximately, it's about 3% on the DEXA as well. You might measure out 15% on the BIA device and in reality, you're 24 on the DEXA. They're not really comparable to each other.

[00:32:43] Jane: Thank you for explaining it.

[00:32:44] Jeffrey: We also do ultrasound. Tell you we're looking at carotids for risk stratification where we can use an ultrasound for a lot of different things. We do EKGs. We have a lot of tech that's in the clinic itself, it's part of the evaluation. We're always on the cutting edge. As new things come out, we have devices that look at heart rate variability, for example.

We still have some standalone devices, but now we have devices like the Whoop or Garmin's or things like that. You can get heart rate variability measurements. That's a

great way of looking at recovery. We're very interested in resting heart rate measurements because the lower your heart rate is fitter you are and healthier you are. I got a doctor friend that says you're born with a certain amount of heartbeats.

[00:33:22] Jane: That's what I hear.

[00:33:23] Jeffrey: If your resting heart rate is lower, you're going to live long. It's overly simplified, but there's probably some merit to that because if your fitter, you're going to live longer. We talked about anti-aging and exercise.

[00:33:32] Jane: I struggle with my resting heart rate, and I'm pretty fit, but my husband's is like, it's 47 or 48. Mine's like 68 or 70 and I just wish I could get it though. I've tried so hard. There's some genetics involved in that as well and everybody's-- some people have a hyperdynamic heart rate. For example, I have a low resting heart rate, but two minutes into my warm-up, like no matter what it is, my heart rate is like 130. Like that.

[00:33:58] Jane: Really?

[00:33:59] Jeffrey: Yes. When I'm working, it'll get very high. Typically, very high heart rates, but that's just me.

[00:34:03] Jane: Interesting. I could talk with you all afternoon because I'm fascinated by this topic. Is there anything else you would like to add? I'm interested in what you're doing personally, are you doing anything right now that's new, that you are excited that you're trying out on yourself?

[00:34:18] Jeffrey: Anything new? Rapamycin is something that we use a lot of our patients that I do use and we're looking at the epigenetic effects of that. I'm going to probably do another Zone 2 as much as I-- gosh, I hate it. I'm going to probably do another Zone 2 trial to look at combining that with strength protocol, sort of look at our baselining and see how do we do it the simplest way possible. That's what I'm here. I've got to make things simple.

If our patients are busy. I could easily say, work out. If you just get 10 hours a week of fitness, that'd be great. It's not going to happen. One of the things I'm looking at is like, are there ways that we can maximize the efficiency of both the aerobic training and strength training and minimize the amount of time. We're getting ready to do a little protocol with accommodation Zone 2 with strength training and see how can we maybe get it down to three, 60-minute sessions in a week or multiple 30-minute sessions and looking at body composition changes and things like that.

Other than that, I'm not really doing anything brand-new that, I'm super excited about, I've just got the Whoop a couple months ago. I'm starting to get a better sense of how we

might use that to modify things with our patients. I'm always interested in what we can do to make our patients do better in a simpler way. I've got her patients, I really want to geek out and everything, but I've got a fair number of people that just want to feel good and be healthy and don't really want to get into the weeds like some of our other patients do.

[00:35:43] Jane: Dr. Galvin, thank you for your time. This has been just delightful. Thank you.

[00:35:47] Jeffrey: It was my pleasure. Pleasure, thank you for having me. You have a great day.

[00:35:50] Jane: You too.

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