Introduction to the Metabolic Code

Much like if you think about, circadian timing of how you release all your hormones and neurotransmitters, all of your organ systems are communicating with each other to maintain homeostasis.

And I'm a big believer that we age our best when our body's not burning too rich. And it's not underachieving. When we maintain this process of homeostasis, where all the organ systems are balanced, and then and then functioning together, and then how do we support those organ systems so that they can keep on maintaining as we're aging?

Because as we know, when you age, these systems tend to wear down. So how am I going to bolster those up and maintain homeostasis. So that was the initial vision.

And I would say today the only thing that's changed is that more and more literature is being published. That allows us to see these interconnections.

That's one. Two more labs are available that help us to show, you know, what organ systems aging too quick. Welcome to Doctor Talks, the podcast where every episode leads to a healthier you.

Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease. In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors.

If you are seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place. Get ready to unlock the secrets of lifelong health and vitality.

This is Doctor Talks, real talk from real doctors. The issues that matter to you most. Hi everybody. Welcome to today's show as I am truly honored to have with us James Lavelle.

He is the trailblazer in integrative health and longevity medicine, sharing over 38 years of excellence as an internationally recognized clinical pharmacist and board Certified Clinical Nutritionist.

He is an accomplished author and educator, and he is also the visionary behind the Metabolic Code. It's a revolutionary AI technology platform that is providing personalized health solutions to transform patient care.

Jim was recently appointed as the Chief Science Officer over at Lifetime Fitness, and he's leading the charge as they're developing the groundbreaking longevity and performance program called Mirror Now.

I'm super excited to personally Jim as a friend. He's a mentor. He's an amazing human and we are going to pull back the curtain today. We're going to deep dive into metabolic.

We're going to unpack it as it can help us better find our own path, our own code to super longevity so that we really can look better, feel better, and live our longest, healthiest, and most vital life.

Jim, welcome. Great to have you here. It's great to be here. I'm worried about us having enough time whenever we get together. It's, you know, there's smoke coming out of my ears.

There's fire coming off my shoes. You know, we just run hard, so I'm excited. I have to, so get ready. Hold on tight, everybody. And just enjoy. Be flies on the walls and, you know, participate and take notes and let us know how you're enjoying this conversation because, yeah, Jim and I love to go deep into this beautiful conversation.

And, you know, I kind of want to dive right in.

Origins of a Whole-Body Health Vision

You have you've been an OG an early adopter to this conversation, really, about the importance of metabolic health. And you've been doing it now for almost four decades.

And he truly is on brand, you guys. Because if you're happy and if you happen to watch the video of this, you're going to see how phenomenal this amazing human looks.

So he continues to age in reverse, which is why we want to know all of his, you know, how do we do it too? So we're excited for that. So you've been here.

You've been looking at it all. You've been an early adopter, an early educator. Right. So tell me about your vision. Like how would you say your vision kind of where you started and where you're at has maybe evolved over this time as it pertains to really considering life extension and just optimizing health and longevity?

Know. That's a great question. You know, you know, when I first talked about the metabolic code, my son was actually going through all my old PowerPoints, even the physical copies, the binders right from 1997.

And he found the very first presentation that I gave on the metabolic code. And that was 1997. And honestly, the vision hasn't changed. I would say the depth of the research that supports kind of what my thesis was that back in 1997, I was talking about whole body metabolism, meaning that all your body's talking with each other.

You're only as strong as your weakest organ. So, you know, if all your other organs are great, but your kidneys are filtering it, you know, a GFR, a filtration rate of 40, your kidneys are taking you down.

Right. And so what it's important to understand is that your body is a system of systems that each system is communicating first of all within itself and then within the greater organization of all the other networks in your body.

Much like if you think about, circadian timing of how you release all your hormones and neurotransmitters, all of your organ systems are communicating with each other to maintain homeostasis.

And I'm a big believer that we age our best when our body's not burning too rich. And it's not underachieving. When we maintain this process of homeostasis, where all the organ systems are balanced and in and in functioning together, and then how do we support those organ systems so that they can keep on maintaining as we're aging?

Because as we know, when you age, these systems tend to wear down. So how am I going to bolster those up and maintain homeostasis. So that was the initial vision.

And I would say today the only thing that's changed is that more and more literature is being published. That allows us to see these interconnections.

That's one. Two more labs are available that help us to show, you know, what organ systems aging too quick. Where is the status of our mitochondria? Are we making too much of the inflammatory neurochemicals that's damaging the brain, damaging our kidneys, damaging our pancreas, etc.?

And I think that's it. And I'll tell you what's remain the same. What's remain the same is we've got to make the complex simple. Because it's easy to make the complex complex.

I can take a bunch of cool labs and show people 384 markers. But the reality is, is I've got to take all that data and I gotta move it into a plan. What do you do to move a person in the right direction?

And I've been fortunate to have, you know, if not the biggest one of the biggest clinics, actually institutes in the country for a long time. I ran that in Cincinnati, Ohio, and of course, now transferring to Mejora with lifetime, 2.5 million members putting out longevity, programs there.

I think it's going to be pretty darn meaningful, you know, that we're going to be able to prove what we're doing, changes the equation. So anyway, short answer is huge.

So okay. So let's so you've had the opportunity again bird's eye view to look over these trends over the research over the data and specifically from your own system.

Working with health practitioners, working with large brands like lifetime. And of course I'm hearing you, it's growing and you're going to have more and more numbers and data sets coming in.

But just from what you've seen over your years in clinical practice, what percentage of individuals are coming in with metabolic breakdown and or dysfunction that is accelerating that rate and pace of biological aging?

Oh. I would say now I've got two populations of people. I've got super athletes. Yeah. And then in addition to super athletes, I've got everyday sick people.

Right. And so I would say that the, including the super athletes, 90% or more. Yeah. Thank you. Okay. So I was baiting him on that you guys because I'd say it's probably almost closer to 100%, meaning that we begin to the process of aging is a metabolic process.

It begins the moment we are conceived. And it continues until the moment that we transition from this physical form.

Metabolic Breakdown and Aging

And of course, today we are exploring on the show how do we extend life radically as long as possible? Because, hey, if we're having fun and we're loving it, like, why do we have to go, right?

So are there things we can be doing better now? And you and I have discussed for so long, Jim, the fact that, okay, it's very clear we're missing the mark overall, like most of us are not.

We're just not even getting close to homeostasis. And so I love that you've created you've made the complex simple. The metabolic code helps to look at a systems approach to say what's the weakest link, what's system is the weakest link.

So what I'm hearing from you, where where do you find. Obviously people will dive into how they get access to learning through more of a precision lens with what you do.

Again, looking at global trends, where do most people where could most people benefit in helping themselves in bolstering their systems? Or maybe knowing where to support their body the most?

To again, to take a a proactive metabolic stance to, to keep themselves aging as slowly as possible and even reverse aging to really extend that healthspan and that lifespan.

Yeah. So, I mean, there's some big levers that people need just to pull down and just have to do it. There's no way to get around it. So the first step is, is, people need to move.

They definitely need to move. Do you have to over exercise? Do you have to run a Tough Mudder or do a Spartan Race? No you don't, but you do have to move on a regular basis.

Then in addition to moving on a regular basis, people have to make smarter choices about what they're eating and how they're approaching their diet, how many calories you're taking in, what kind of calories you're taking into, what are the right foods for me?

Am I intolerant for certain foods? There's there's two things that people need to do every day. They have to move. And the more structurally decompensated you are, the harder it is to move you.

Increased risk of fall. These are really important aspects to it. And then you have to eat every day. You don't have to eat the Tibetan goji berries that have been filtered by a lemur and picked by a monk.

That that doesn't have to happen. They're cool. Right? All the cool stuff. They're cool. There's a lot of cool ingredients out there, but those are the top two things.

But then why are you doing that? First of all, it's, you know, when you look at why we age, it all starts moving through this process of metabolic inflammation or meta formation.

And meta formation means my body can't turn the inflammation off that it turned on in order to try to repair. Instead, I keep stacking up the blocks of inflammation chemistry.

I've got these. I'm building a wall between me and my wellness because I have so much inflammation chemistry that may not be showing up as a joint issue.

It could show up is cognitive, it could show up as GI, it could show up is, you know, circulation lacking of your arteries. It could be any number of things.

So metabolic inflammation which is driven by look, I mean in the end, you know, it's environmental burden being exposed to things like water damaged buildings.

It's eating the wrong foods. It's being on medications that alter your microbiome or deplete nutrients from you. It's not getting enough sleep, right.

So let's assume we understand the buckets that cause us not to be well, where the crossroads hit. Like, where is that crossroad one is that you get gut permeability changes and gut permeability changes have far reaching issues.

Right? So it's not just that your gut gets permeable. And now I don't absorb things. Well, you know, your microbiome home shifts, your microbiome breaks down.

You make more lipopolysaccharide because the bacteria is breaking up. And that's a component of the bacteria. And that lipopolysaccharide has to be filtered through the lymph and the liver.

And we used to think the lymph was just a bunch of filters. But it turns out it can send out inflammatory signals as well. So the lymphatic system is much more active.

And then we realized that in addition to the gut breaking down, we have to start thinking about, well, what's happening from the brain down. Because when that gut's breaking down, there's that nervous system that connects it called the enteric nervous system to the brain and the immune signals that when we're building that big wall and we're creating those inflammatory cytokines, it triggers neuroinflammation, which then starts to alter all of the signaling in our brain.

So the big areas where people need to start to think about is one, I have to manage that whole process of gut, immune, brain. And we should also realize that when you don't sleep and you don't exercise, the lymphatic system of the glial cells of the brain known as the Glenn Fat system, then I get rid of the waste proteins and byproducts of metabolism of your brain.

And now we create more inflammatory response in the brain. And so there's that network. So take care of your gut. The other one is managing stress. And the reason for the management of stress is it's that aspect of sympathetic dominance.

So when people have resting heart rates that are in the 70s, when their two minute heart rate recovery time from an exercise, it's less than 24 beats.

Now, when you're in sympathetic dominance, you're stressing the immune system to a pro-inflammatory stance. I

happen to think most people, almost all people, are sitting in that sympathetic dominance.

White Tiger is chasing me. And you have to be careful because, you know, if you stack your day up with all your anti-aging strategies and that's stressing you out because you're not in your work, done well, it's no longer an anti-aging strategy, right?

No, it's it's oh my God, I'm not getting enough done what I need to get done. And so where the rubber hits the road and all of it. So the, the real intersection is insulin resistance.

And people start when as soon as you start making inflammatory chemistry, you shift your ability of your cell to make energy from 30 plus packets of energy to two packets of energy.

And now you're an insulin resistant person who's storing white fat but can't get access. The visceral fat that's being stored is creating a bunch of a dip of kinds, meaning inflammatory compounds coming from your fat.

And because you're making more lipopolysaccharide, because when your glucose goes up and your gut is leaky, you trigger more of a compound in your brain called galectin three.

And galectin three is what triggers tau protein phosphorylation and amyloid plaque formation. So I have to worry about memory. God, and insulin resistance.

And if I can get my hands wrapped around that, the lipids will take care of themselves. And yeah, you may have to detoxify the liver and kidney because you got some LED or arsenic or mercury or glyphosate.

You got to clean that stuff up. But what people I've got people that come to me with Excel spreadsheets, four pages long of things, they're four pages.

Yeah. Here's my website page. Here's my nutrient page.

Core Levers for Better Health

Here's my drug page. Right. You know, here's my regenerative therapies page that I do. And I look at their lab values and I go, but you get a 96 blood sugar and an eight insulin and your kidney filtration is low.

You're you're still accelerating your aging because you have not grass foundational aspects. And the last thing I would say, obviously hormonal health sex hormones, which are the tail wagging the dog.

Right, right. I mean, they should stay pretty vital as we age. But now we've got a 25 year old male, the 160 testosterone and women. And we're going into early menopause. Right.

Because all these things I just talked about shut down your hormones. So I think I just gave you the longevity Revolution is about more than just searching online for a few hacks, or any one of us moving our biomarkers in the right direction.

It's about coming together to learn, share, to connect and create the unlimited future we want. That's why you need to be at Rad Fest 2025, in Las Vegas from July 10th to the 13th Rad Fest, the Revolution Against Aging and Death is proud to be partnering for the first time with Doctor Aubrey de Gray and Longevity Escape Velocity Foundation.

The form the single most comprehensive advanced, informative and inspiring event on age reversal for a general audience. Meet the people you want to make forever with Rad Fest 2025.

Take advantage of lower advance pricing now at Man fest.com. Okay, and I just gave us a lot. So to that was the beginning question. I just thought we were like warned you all at the beginning.

Okay. We warned you. So so here's a few things. It's really interesting at first of all that was a masterclass. So for

those of you, you know what's beautiful about this show?

We have experts and enthusiasts alike that are really wanting to jump in to know how to truly be proactive. And I think that one thing that we all kind of we, we bump up against, if you will, is this fact, like, okay, we want to be proactive.

We want to learn all the things. But when you take a ten minute, you I mean, you succinctly said it in five minutes, a five minute masterclass. You just gave such deep clinical knowledge in just a few moments.

But you really summed up the fact that it is complex. It can be overwhelming. It can be incredibly confusing. You know, I was talking with Doctor Gonzalez and I'm like, if we look at the way we live, it's almost as if the deck is stacked against us.

Right? So we are well intentioned to get up, to go out and say, I live this long, amazing, vital life. And it's like we take two steps forward and then there are all these things kind of coming at us, keeping us in a sympathetic state that can easily take us three steps backwards.

So on the one hand, it's as if we are getting stuck in this base state where dysregulation dysfunction is, you know, is in an overdrive. And the things that we all want more of more aliveness, more joy, more purpose, more energy, more love and passion and just, you know, creativity and all the beautiful things that really make life worth living.

It's like, yeah, I want that. But I'm spending so much time over here trying to figure this stuff out on my four page spreadsheet. What the heck do I do? So like, you nailed that.

Back to it. I didn't really shoot. We're really trying to inspire you all on the show. You may not know that yet, but we are going to deliver it. Promise us.

Yes. Yeah, I honestly think it's not that I don't. I personally don't think it's that hard. Yeah, I it's work. I bet it's worth it that people should think about thriving as they age.

To me, yes, we all want to hit the escape velocity and live the 120. I want people to live the 85 right now, fully engaged in their life, doing whatever they want.

And if they make it past that, they make it to 90. If they make it to 95, we should be celebrating, right? Because that because the reality is people die at 77 in the US right now.

Today. Yeah. 77. And usually that's preceded by ten years of some co-morbidities. Correct. So my time people interesting. And I'm not saying that to be depressed because I'll tell you right now I believe you can start at 75 and you can get 15 good years out of yourself if you take care of yourself.

I really believe that. But it's that sort of people want to take and look. I just wrote my second edition of the peptide book. I'm a big believer in peptides.

My new metabolic code book is coming out, which will foster the next, I hope, 20 years of thought, just like the first one did. Yeah, I'm a huge believer and I love I love extractions and peptides and signaling molecules.

But it all starts with you making decisions about I'm going to get better sleep. I'm going, I'm going to turn this thing off at night. I'm going to I'm going to learn how to breathe.

I'm going to become mindful about where I am. It all really starts with that because then you start making better decisions about what is it you value more?

Do you value joy more, or do you value another order or nachos more? Yeah, and I, I agree, Jim, I mean, I do believe and I say it often here on the show, you know, we have to begin within the moment right now.

And it's it's not about judgment and blame and shame. It's simply getting curious within self to say, yeah, what what do I actually want more of? Am I happy with how I'm expressing how I'm experiencing my life right now?

And if I am, than a big heck yes, let's keep doing more of it. And if it's like, well, this is good. And also it could be even better than great, let's let's continue to look at what do we want to do more of anything?

Would we like to experience less because we just know that it's a drain on the system. So if we keep it super simple, and I and I do want us to go from, there's a part of this and it is deeply rooted in science, you all this is not just like general wellness.

We forget again, we are living natural organisms, in sync, in rhythm, in time with nature. There are signals and cues from the outer world to the inner world that talk to our brain, to our body, to our very DNA.

That literally will help us to express or repress our our longevity potential. So we do need to not forget the basics. We do exactly as you're saying, like, what is it that gets us up out of bed right?

Is it a big enough reason to get out of bed? First of all, if not, like, maybe we need to spend a few extra minutes in gratitude. Like, listen, maybe we start there first, and then we get up and then we move.

And then we we eat the good things, and we think the good things, and we engage in the good things. And, and I'm not dismissing that because I'm a huge proponent of it.

And we're going to come back to that when we round this conversation. But you just opened up another part that I want to just kind of hypothesize with the best information you have, because, again, you're out in front of it and you've got these data sets.

So as we look at the regenerative elements coming to market, more and more, the things that could potentially be big needle movers in giving us that net net positive gain of biological age reversal compared to chronological age progression, where we really be hitting longevity escape velocity.

And we're thinking things like exosomes and stem cells, any of the, you know, kind of regenerative, molecules and of course, peptides. So what from what you see now, what do you genuinely believe your best educated, scientific guess of what these molecules can do?

How far can they move the needle and is that enough to override maybe bad lifestyles and things like that? Where do they fit in this equation of super longevity?

So I think small molecules and peptides are the next horizon. And I think they'll have a decade to life, in individuals if they're done right. I mean, I really do.

I'm all I got to do is look at, say, GLP one for example, and the GLP one peptide.

Inflammation, Gut Health, and Insulin Resistance

So as people have heard of them, Mozambique or Munjal or ready to try or a brand name or that, you know the the chemical name of semaglutide for appetite.

Right. And and other GLP ones coming out on the market here shortly. You know, just that peptide alone. Yeah. Is honestly will save millions of lives if done correctly.

Right. Yeah. Meaning that, you know, everybody thinks that you lose muscle on those while you lose muscle if your appetite suppress and you choose not to eat protein.

Because we know that if you eat 1.6g/kg of protein with your GLP one treatment per day, you're going to reduce the amount of lean mass loss and actually eat GLP ones that actually signal the regaining of skeletal muscle, which

has been published.

And it isn't. It doesn't make you lose muscle. But the most important thing, and I guess if I said to you, because this is what I came up with when I first was at life time when we were talking about GLP one.

And it was controversial because a lot of people in the fitness world think you should be able to exercise and diet, and your body will become optimal no matter what, right?

I mean, it's like it's like that and we had to go through this thought process of if I told people, you're not allowed to do your insulin anymore. Right.

Insulin is a peptide for the pancreas that helps the whole body. People would look at me like I was crazy. It's like, what do you mean? You're gonna get your insulin or die quickly?

Like you. They die quick, right? They can go diabetic coma, big problems happen. I can get ketoacidosis, stick. We didn't think that GLP ones. When you don't have enough increase in hormones, it kills you slowly.

It's not like insulin. That's acute. It's a slow march towards plaque burden, kidney disease, enlarging of the lower ventricle, the heart. Right. Glial cell activation in your brain.

There's all these things that it's more of a peptide that manages your chronic march towards aging. Because people with insulin resistance and diabetes do age quicker.

They do die younger, period. I mean, if you're diabetic by age 30, type two diabetic, not type one or type two diabetic by 30, you will have 13 years less.

And that's a study that just came out. I mean it's it's so my point being is that's just one peptide. Yeah. If I think of mitochondrial peptides that help to restore how your cells make energy.

Now I'm not saying stay on them all the time, but in a program where you're rejuvenating mitochondrial function, that's another one that could be life extending because we where down.

Right. All chronic illness points back towards mitochondrial failure. So and then you look at immune function. Yes. As we age our thymus gland shrinks.

And when our famous gland shrinks we can't make as many thymic peptides. And thymic peptides help regulate immune modulation. Our ability to understand self and non-self and not to attack self.

Right. And so as we age that also occurs. Right. Top five causes of death in the elderly. Colds and flus, their immune systems worn out. It can identify the virus.

And so yeah go ahead and take my lungs over my dead. My god I mean that's so so when when you ask where are these small molecules in peptides I can go through and identify how these compounds are literally going to help us, as I said in the beginning of my talk.

And it probably because I was I realize that I was talking really slow. So if people sped up what I was saying, they probably hear it. And, what I said was that our job is to keep us structurally integrated and that these promising compounds, like peptides, like small molecules, white botanicals, like bio identical hormones.

As we're coming across time, we're keeping the integrity of what these organs and tissues were supposed to do. Yes. Yeah. And that's that is what is the magic I mean, one of my favorite right now, I mean, so one I mean, oh, so one is right.

It's not one of the most just exciting new small molecules that I have seen in the last decade. I mean, because nothing else does what it does and it is it's transformational what it's doing at the cellular level.

So I think that it's incredibly important that we look at these compounds and we learn how to apply them, and we learn how to apply them as they're needed, not take them because, oh, I'm going to support my thymus.

I'm going to support my mitochondria, I support my brain. I'm going to take everything three times a day. I'm going to be one big pincushion. Right? Or, you know, swap four pages of pills a day.

It's the nuance of give your body what it needs. Allow your body to flourish. Are you ready to redefine aging and unlock your full potential as a longevity leader?

At the Human Longevity Institute, our world class certification programs train doctors, coaches, and wellness professionals how to deliver cutting edge, integrative longevity health solutions so people can live better today for longer, healthier, and more vibrant tomorrows.

If you're ready to join the Longevity Revolution, visit Human Longevity institute.com to enroll and become a practitioner today. Yeah, absolutely. And again, that's where we come back, folks, that you know, what's interesting is that the way conventional medicine has kind of indoctrinated all of us is this idea that we take a pill for an ill and it's like you're on it and you're on it every day on going, there's no time coming off.

And so we think it's the same way for any type of supplement, any type of any type of molecule. We're going to take something, we get on it, we don't go off.

And that's not actually how the body works. You know, it's always for what reason. What why are these things coming in? When do we need them and how do they work innately and naturally in the body.

And so yes, as we chronologically age, there is a decrease in the strength, the quality of the signaling. You know, I'm going to make a general blanketed statement right now.

And so a lot of times we're saying, okay, well we need to enhance that signal. Right. So a lot of times we're taking things in to say, well, we need some more of that to bump it up so that we can get a hyper physiological response.

So it can kind of reactivate it and have it do its thing. The body's used to doing it. And what's great really, about longevity medicine, and where we're continuing to evolve is in this very precise way.

It's not one size fits most. And just take a whole 150 supplements a day, and you're going to live forever. That's not what it's about. It is understanding.

Things work in pulsatile functions, just like the sun rises and sets. We don't need the same things every single day. There's seasons of the year. The body moves through phases and stages, and I think we have an opportunity that we're going to get more sophisticated with that.

And I want to clear t that idea back to you, Jim, just even with the metabolic code. So the fact that again, you you looked at AI integration early on.

So let's talk for a minute about the tools that are available. So molecules supplements, hormones aside how can we look at things like AI and technology to help us better understand how our body is metabolically responding to the way we're living?

And what, if anything, could that do in supporting super longevity by way of of looking at this information? Well, I mean, this is an area that, you know, I've dreamed about a long time and, I think AI is good when I have something to look at that's worthwhile and AI is misleading.

And I'm going to give you bad information if it's looking in the wrong pond of information. And so I think the first step to understand is how good is my dataset and my information that I'm extracting from.

Peptides and Regenerative Longevity Tools

And I think that what's going to what I will do for us as it's going to uncover new relationships that we work on, that it's got see the, you know, these common threads.

I can tell you we applied AI to a study. We just did this study 40 women ages 25 to 58. So menstruating to non menstruating and they were all overweight and it was a weight loss program.

So there was a defined diet that they did. They had a workout that include velocities and breathwork and exercise but not too much of anything. And all they did was give two basic supplements.

I mean, very honestly basic. All right. All the women lost between 8 and 24 pounds. Now here's where it got interesting. When we applied our engine against it, we found out that while all the women lost between 8 and 24 pounds, those with the biggest weight loss.

Yeah, had the biggest changes in their global score of symptoms and labs, meaning that the more you corrected all of it. Yep. Better their chemistry, the better they reported their symptoms and the better that they lost weight, meaning that their metabolism got back on track and this is no use of GLP one.

This is no use of chromium and bitter melon. And you know all the things, right? None of that. But the other neat thing was what? And this totally shocked me.

All right. So this this blue literally shifted my brain a lot. And it takes a lot to do that. I mean, honestly, as does I'm excited. Bring it. So here I know I'm teasing you. I'm teasing.

You know I love it. I'm like, I'm excited. I see. So the first thing is here, here are the factors that mattered in women. Testosterone mattered. Progesterone mattered.

Evening. Cortisol mattered. Glucose mattered. Secretary IGA mattered. These were all the things that had a, a relevance coefficient of one, which means that all of these things and some of those women contributed to weight loss.

But all those things didn't contribute to all everyone's weight loss, right? So the point being is, when you start to correct diet, you start to exercise the areas that are weaker.

The more that you adapt, your body adapts to what you said. That's circadian. I'm back on track. All the circuits on the circuit board and flipped on.

The more we see a return to that autonomy or that homeostasis. Now here's the one that did not matter at all. It did not come out whatsoever. In fact, in many cases it got worse.

You're not going to believe it. Oh thyroid hormone. Interesting. Because you know how we all focus on oh my God, you've got to get your thyroid right. Yeah.

We got to the degree your TSH has to be here in order to get well. It's got to do this. It's got to do that. Well, it had no correlation. None. And in fact it in many cases.

And maybe if we did the study past 90 days, we'd see that TSH come back into an ideal range. I would imagine that if we tracked people longer, that would have.

But clearly, clearly it was about stress hormones. The gut. Sex hormones. Yeah. Right. That was what was playing out in these individuals. And the fact that when those hormones are out people have a lot of symptoms.

Yeah. So and, and so you know it was mind boggling. I thought for sure we're going to see some great thyroid hormone changes because that's what everybody talks about.

Oh yeah. Yeah. And and look this was an open label study. This wasn't double blind randomized placebo

controlled. This was an open label study. But it was well done.

And and I'm, I'm so it's that thought that I was going to help us figure out what really matters. And maybe certain lab values we thought mattered a lot.

Right. Is that right? So when we hear about T4 to T3 conversions off, well, maybe that's because something else is going on and it's giving thyroid hormone.

It's about the fact that I'm sympathetic. Dominant. Yeah. The fact that my cortisol is creating problems with my thyroid, not that it's actually a thyroid problem.

And that for me, I don't know, I was how did these women lose 8 to 24 pounds. And bad pictures in three months. They looked great. They had a big shift.

Mood changes, symptom changes everything right. Yeah. And yet thyroid meant nothing. So here's what's really beautiful about this. And so kind of bringing it together is that you know I always think of metabolic really being the upstream engine that drives the downstream aging process.

And so, you know, when you talk about just something as it's as significant yet as simple from a concept of insulin resistance. Well, what what precedes that is really what's happening with glucose.

So when we think about what you learned from the study, and I'm going to extrapolate this for our listeners, whether, again, you're an expert or an enthusiast, blood sugar really tells us a lot as as it pertains, not just what's on the end of our fork.

It's letting us know about our stress, our stress response. So glucose and cortisol are, you know, one is is driving another or stress. We're not dumping cortisol.

We're raising glucose and leading to again, insulin resistance. It's not just about what we're eating that is a part of it 100% for sure. And so I love that. It makes total sense to me.

What you're sharing with me makes total sense. And the thing that I want our audience to understand, if they don't, is that these upstream metabolic hormones, cortisol, that's tied to this stress response, we're going to come back to that.

We're going to really kind of round out our conversation today about the importance of the stress factor. So stay with me for a moment. But what's happening upstream has this downstream effect on our sex hormones.

Because again, fight or flight, if I got to stay alive, I'm not worried about making a baby. So, like, it's just that blunt, right? Like, and so it's shunts are production.

It's going to naturally decrease our production. Plus of course there's all the endocrine disruptors. There's all the things from the outside world. But if we keep it super simple, common sense okay.

And I appreciate you today Jim. Yes. We want to talk about these radical ideas. And sometimes we are missing the mark with some of the most basic things, because we can have the most grandiose visions.

And I believe they're completely possible. You know, we we will never make the impossible possible if we do not first conceive it to be even just an idea, a dream, a seed that we can plant.

So I want everybody to keep dreaming. Quantum leap bigger than you've ever dreamt before. There is no crazy impossible dream.

AI, Biomarkers, and Personalized Longevity

And yet as we, as we plant that seed and we tend to it and we water it, we nourish it. Let us come back into this moment right here and say, what is the single most important thing I could be doing?

And that's going to bring to you, Jim. So if we understand these dynamics of metabolic and one of the key areas that it is so dysregulated is by way of that sympathetic dominance in that stress response.

And we live in a sympathetic dominant world. What is your best super longevity, stress busting hack piece of advice that you can give us to give us all that little edge?

Drink a martini every day? No, it's not that. Okay. Wait. Whoa, whoa, wait. Let's just take a bit to give a little love to my. I just realized for real last week in Vegas that I love martinis.

I I'm not a gin drinker, but last week, it became my thing. So cheers to a good martinis. I got it, I got it. So a couple things. One is the, the most simple thing you can do is make sure you do your glucose, do a and do a fingerstick glucose or get advanced puncture.

If you're using a CGM, realize that's the interstitial glucose. That is not accurate. It's 20% off your your the sugar in your in your vein puncture. So it's it's good for understanding glucose oscillation meaning hey I ate this I drank this wine, I didn't sleep as much.

And I saw this big shift in my glucose. But it is not an accurate reflection of what a blood glucose is. And so that's the first step. And you nailed it.

Glucose is like a ground zero of why we age right. That's it. So if stress is one of the big things that causes it and the biggest thing it will help release cortisol postprandial hypoglycemia when you eat and your sugar goes up a lot, you release cortisol.

And then when you get stressed out because of emails and texts and the fact that your car just got hit with something on the road today on the on the drive out and you just had the car repainted and done.

You know, it's just stuff like that that hits, you know, but your cortisol is going to hit. And I'm a big believer I did, breathing work. So I did qigong for 15 years and now I just have learned when I feel myself feeling that sympathetic dominance coming in, breathe through it, let it go.

I mean, and I'm Italian, it's hard. I mean, I'm just telling you genetically, I was around a bunch of really loud Italians growing up. And basically for me, it's it's why I'm so loud when I'm lecturing, right?

I mean, I got a big voice. But but it really was important for me. Like, I look like right now I am super jacked up. My heart rate's at 61 because I'm super excited.

I mean, yesterday, I'm running around at 55, and I work really hard at finding joy. I work hard at, not working on it. Like maybe when I was younger. I worked really long hours.

And I know people look at my schedule and they see me posting and they go, wow, that guy's insane. But I actually take the time. I make sure I power down when I'm lecturing all day.

I have a power down circuit that I go, okay, it's time for me to power down and I move slower. I move more quiet. I and you know, I've become more of a tortoise than a hare, and I understand that I need to do that in order to regulate my nervous system.

So the big hack for me is, learn the management of your nervous system, whether you need to use an app. I mean, let's face it, this telling you it's time to breathe is a sign that culturally, we're in trouble.

Therefore, we need to be reminded to breathe. All right? So breath incredibly important. And, and, you know, once again, you don't have to kill yourself in the gym zone to walk, do whatever.

I mean, you know, garden move, do something. Take. But but you've got to move to help exercise your nervous system. The harder you train, the more you put your body into sympathetic duress.

So when people are being paid as professional athletes, that's they're getting paid billions of dollars. What they they need to push their body and stress themselves like that.

You know, and I have learned this. I mean, my, you know, like, I'm in my seventh decade, right? I'm going. I'm in my mid 60s. Right. I'm going to 70. Not too quick though.

All right. But the point being, you become more vital every time I see you. So you truly are the pinnacle of age reversal. So yes, continue with your I appreciate that so but I just think it's important that people actually make a conscious effort.

Yeah. To regulate their nervous system. That it is. It's the circuit breaker box in your home that you do not want the switches getting overwhelmed with too much electricity and then flipping that circuit breaker off.

That's called allostatic load. That's when your body starts breaking down. So work the nervous system and then learn about your blood sugar. You said it beautifully.

My cortisol goes up, glucose goes up, insulin goes up. Because your body is going to try and keep that glucose in your bloodstream to fight that white tiger.

And you're thinking about fight or flight, not thinking about procreating. And that starts making you catabolic. You break down muscle. Not only do you shut down your sex hormones down, you shut down your growth hormone.

You start to lose bone. You know, there's just things that start to happen. And that's my hack. I had simple find a way to be mindful. Breathe deep. If it's getting in a sauna and breathe in deep, do that and it's doing tai chi.

Do that. If it's reading a book, do that, but have that active thought. Like I said, I go from a hare to a tortoise. I know when it's time I need to shut down.

It's my personal time. It's my me time. It's my time to rejuvenate and, and and do that thing. And it's made a huge difference in my life. I'm going to tell you, I did it all. I ran hard.

I mean, I've written 27 books now, and, number 28, 29 and 30 will be out this year. And so I run very hard. But what what's so funny about that? If I'm not right, I love it.

You're insatiable, and I just love it. I mean, again, you know, this is why you are here. This is why you are leading the charge, and you continue to with so much just vitality and aliveness, because everybody needs to see that.

Stress Regulation and Nervous System Recovery

Listen, as you said, you're in your mid 60s and to me, age is just doesn't even matter yet. Like if we think about that through a traditional lens right now of how the masses might look at a number, you're already defying my expectations.

You are living by example to say I filled with just purpose and and things that get me up that just like, get my blood going, get my heart pumping, get me just filled, get my brain going.

I'm learning, I'm creating, I'm collaborating, I'm living big. And I'm also I'm chilling and chilling and I. Yeah, but that's you, Jim. I mean, like, really I'm reflecting you right now because it is who you are.

And I feel like more people need to know that this is this is this is living like this is really there is no wrong way to live, but to be able to live in such a vital state.

I think that that's what this listening audience is about. So to me, I believe you're you know, you are a true, just inspiration to everybody that's watching and listening.

So thank you. Oh thank you. I mean, it's interesting, like I lectured 19 hours this weekend at a forum. So at the American Academy of Anti-Aging medicine, of course, I'm the co-chair.

There are the International Peptide Society and but on stage 19 hours, people go, oh my God, how do you do it? Right? I mean, what do you mean, how do I do it?

It is amazing to be given the chance to engage that much with health care professionals that are hungry to help other people. So engagement, vitality, service, all of that is what brings joy.

Yes, wake up every day excited about the next day. I mean, I, I think of what are the next ten things I can do to make a difference. Great. Because you know what?

You know, long, long after I'm gone, I'm hoping that people are standing on my shoulders and said, you know what? I learned a lot from that guy. But then I built on it.

Yeah, I built on what he taught me. And I'm getting new revolution, revelations, creating a revolution, creating that that capacity for us to reach for thriving and striving.

Right. And that's what super longevity really is about, because it is this continual progress, this evolution forward into greater and greater states of human flourishing, going beyond where we thought the limits once existed.

And that's what happens when we when we inspire one another, we collaborate, we build, we co-create it. It does bring about this exponential right expression of what it means to be human.

So I love it. We're rounding out we're going to do a few rapid fire questions. Then I'm going to let you go because we're so grateful for all your time today.

Okay. I actually really love this question. Let me ask you your most memorable life lesson. I didn't have to be the smartest person in the room. Wow. I think we all, we can, we all can appreciate.

I want to go back and tell my younger self that. Thank you. Oh my gosh. Okay. In ten years, what do you think will be the most important tool for longevity that doesn't exist yet?

I think it will be 3D printing. The true personalization of your biochemical needs on a daily basis. Yep. So as we look at our chemistry, we we can I right now I can already get 600 points of contact on my face and read it.

And that can tell me eight different future cardiovascular diseases, eight different neurologic diseases. I can look at facial asymmetry. I can look at resting heart rate, blood pressure, everything off my camera.

So I can I can find the daily guidance and personalization that's easy, easy to implement. That's what I think is going to be the next big horizon. I agree, I am so with you.

You and I talked about that even a couple of years ago, that I'm right there. I think that's super exciting. And we will see that coming. All right. And last but not least, share with us your longevity living vision.

Rapid Fire Reflections and Closing Thoughts

Take us out. You know, because I know you've said 80s. I want to see the. I want to know what, 100. And I want to know what 120, 130 gym level is looking like.

Is he still living large? Take us there. What are some things to your vision with that? I'm climbing up the steps in Sardinia, collecting my fresh food, sitting down and enjoying the company of my friends, and sharing my life

experience that I've lived, through all those years so that if I had to think about the, I don't know, 20 year Jim.

Well, that's, that's what I would hope for. Yeah, that feels good. That feels good. I love it, doctor Jim Laval, thank you. Thank you for your time. Thank you for your wisdom, your expertise.

Where can people find out more about you? Which, of course, we will have in the show notes. Right. Obviously the real general Val on Instagram. Apparently, my son does a tremendous job with doing that up in the generator.

You know, I, I don't know what to do, but. But he certainly has lit that fire, and I'm super excited about him being with me. Metabolic procom, gimbal.

Volcom. Real easy burn tastic. Fantastic. All right. Thank you, dear friend. Again, always an honor and a pleasure. And to each and every one of you. Thank you, as always, for tuning in.

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