Introduction to Dr. James Laval

Hi, everyone. I'm doctor Sanjeev Goyal, and today you're going to be listening to the advanced Anti-Aging and Technology Summit. And my first guest is Doctor James Laval.

James Laval is internationally recognized clinical pharmacist, author, board certified clinical nutritionist, an expert and educator, an integrative and precision health.

James is best known for his expertise in personalized integrative therapies, uncovering the metabolic issues that keep people from feeling healthy and vital.

He's a thought leader in drug and nutrient depletion issues, and he's published four books and three databases in this area alone. As such, he has over 35 years experience integrating natural integrative therapies into various medical and business models.

His latest research is in drug induced microbiome disruption. I hope you enjoyed the talk today. Hi everyone. I'd like to welcome Doctor Jim Lovell, who's going to be joining us for this for this hour.

I'm really excited to have you here, Jim. Thanks so much. That's great to be here. I was, honored to even ask me to talk with you. So this is great. So I've, I've heard you talk so many times that at a forum, and I it's such a been such a wealth of information.

I know your background is in pharmacy. Is that right? Like you first started as a as a pharmacist. Yeah. And I still consider myself I'm a clinical pharmacist.

I mean, all the other things I've studied from homeopathic medicine to clinical nutrition, you know, masters in theology, I mean, everything else I've studied, I think just adds on to my basic construct of everything we do, whether it's, meditation, we take a nutrient, we eat.

It's all information that affects our receptors. And I'm grateful that I went through pharmacy back in the stone ages. So, we actually have to do a lot of receptor confirmation work and really understand, you know, what's affecting our body, what's signaling things to happen.

And so that's that's, still a pharmacist at heart. Yeah. I think that's like the real pharmacist. I mean, we've think of pharmacies that, you know, at, to dispensing medications, but you really take it to another level of understanding how these compounds are working in the body, which they don't train, they don't teach us in medical school very well.

So I really I think yeah. Well, I'm glad you did that. Just, you know, I always try to get that across to folks. It's like, look, we're we're the guys, you know, want it back.

When I went through school, we had to go through every body system. So if it was neurology, we had to learn all the drugs, all the receptors related neurology, if it was cardiology, you know, nephrology, if it was, you know, anything related to the liver or, anything on the endocrine system, we had to basically had to learn how every one of the receptors and hormones are working and interfacing with the negative feedback loops are.

So how are our bodies really trying to maintain control? And that's really in the end.

Pharmacy Background and Integrative Medicine

Now, I was fortunate to go through the University of Cincinnati College of Pharmacy program in January. Lloyd,

was the founder of it. And so we had this rich botanical medicine history because he started Lloyd's specifics pharmaceuticals, which is a part of the eclectic medical movement, which another and the other word for the eclectic medical movement is the whatever works movement.

So, you know, we try to, you know, I try to honor that tradition. And, you know, we we studied pharma cognitively. I mean, I had classes in plant medicine and had to learn how to extract plants.

And, it was all part of my pharmacy training. So, you know, I'm just grateful I went through pharmacy school during that period of time. Yeah. I definitely want to make sure we talk about plant medicines because, I don't think we have any other speakers who can speak to that expertise like you can, but maybe just tell us a little bit about your thinking, how it's changed, because I think even over ten years, how you're, dressing like in, you know, anti-aging, you know, strategies has changed.

And our understanding has changed. And I think you're at the forefront of that. Yeah. You know, honestly, I started teaching at, the American Academy of Aging Medicine, I think 17 years ago.

At this point, really almost took the gestation of it. And I think if I had to think of the one concept that continues to evolve, and I think we get a deeper understanding is this process of metabolic inflammation.

You know, back when I wrote the book Cracking the Metabolic Code in 2002, it was kind of, you know, this notion of, you know what? Our whole body is working together and creating these signals that lead us either towards a path of being well, as we age.

And then, the other path is towards chronic disease. And so, you know, I really believe, you know, people deserve vitality at every stage in life. I don't care whether you're a six year old suffering from eczema or asthma, or you're an 80 year old that's suffering from poor kidney function.

You know, we should strive to kind of help people become their best version of themselves, no matter what their challenges. And so I think the biggest thing and I'm telling you, man, I wake up every morning and I've got the next three years planned out what I need to be looking at.

I mean, I, you know, one of the most exciting things for me is all the epigenetics in the omics revolution. And really understanding the impact of what really affects our DNA and the way we blueprint that next version of us in our in healthy cells.

And it turns out, you know, we're really starting to learn that. Yeah, diet and exercise really do matter. Just like you know that the notion of mind body medicine and trying to keep our nervous system intact.

So not allowing stress to overwhelm us. But I think that this new concept of testing for biologic age versus chronological age, and then what we can do about it, and I think that's where the next ten years is going to take us when we start to incorporate things like, you know, artifice or intelligence into looking at all these different, genes that are being turned on or genes that we're keeping turned off so that we promote a healthier body for a longer period of life.

And so that concept that's now in the literature called meta formation and in slam aging, I think that we had a notion of that, 15 years ago, ten years ago.

I think it's now becoming an incredibly refined concept so that people can really begin to grasp all when I'm doing things that turn on my inflammation chemistry that's actually causing me to age and I think that's the biggest concept, for me.

And then it's, well, what are the strategies? You know, whether you look at, you know, peptides or, or, you know, obviously there's popularity now with stem cells or really exciting things like, you know, plasmapheresis, which is really on the cutting edge, you know, all of these constructs are there to help us bring our body back into what I call whole body metabolism balance.

Right. How things are working together and being unified so that you can you know, I like it when people just come in and they're in my office and I say, how are you doing?

And they just say, I'm doing great. I like it when they're not having to think about, well, you know what? My knee, gee, I'm still reacting to this food.

Wow. I still have this allergy. You know, I love it when we get to a people that we're people just get to that concept of I feel well and now I can move forward.

And I think this concept of where we're moving is just continuing refining our strategies that allow us to really personalize what I call performance health.

I mean, that's yeah, that's what we're doing with the Pro Football Hall of Fame performance health centers is, you know, we're really looking at how do we get people, whether you're a teacher, an executive, a housewife, a stay at home dad, for that matter, whatever it is that doesn't just have to be an athlete, have performance, health.

So it's so this, inflammation thing. So just maybe for the viewers to understand exactly what exactly is happening there. Like I understand there's something called inflammasome.

There's these little pockets of the balls of inflammation. Maybe you could just kind of just teach us more about that. Yeah. Well the first thing is, is you have to understand what causes inflammation.

So I remember I laid a chart out back in 2005 that I, you probably have seen maybe 20 times or more in my, in my talks where I said, you know, the big drivers of inflammation are obviously we do have genetics.

They do play a role. We can't, you know, deny that that matters. And then there's well, what type of diet have I eaten through my life? What. So diet.

So for example, depending on your gene type you may not be able to tolerate saturated fat. So you know you're an AP you know 3444.

Metabolic Inflammation and Aging

It's called you may take in too much saturated fat and that could trigger your body to release inflammatory zones, and also inflammatory cytokines. And you can think of all of those things as forest fires that are getting out of control in your mind.

And basically your body is built and there's other things. So before I get to, you know, what your body does to defend against that. There's other things like environmental toxicity.

So whether you think of and this was in my 2005, you know, pictogram, things like toxic metals, organic pollutants, bio toxins, mold, you know, and all of those types of environmental burdens that we can be exposed to plastics, for example.

Any of that stuff can start to trigger inflammation. Stress can trigger inflammation. You could get an infection. You could be deficient in nutrients like omega three fatty acids, or one of my favorite magnesium, which could make your body be in a position where it can't turn the inflammation off because inflammation is actually good.

Your body is incredibly smart, and it made us so that was so that we're able to to create inflammation when we need it in order to repair. But here's the key.

When you get under chronic inflammation, your body doesn't turn off the inflammatory cycle when your body. So all those compounds like inflammasome, which by the way, the one of the big things that help with inflammasome is a process called autophagy.

And one of the best ways to help manage your inflammatory chemistry. Time restricted eating, fasting or I utilize and I make no bones about this. I'm on the advisory board, for al-Nusra there.

And Doctor Longo's just fantastic work on fasting, mimicry or using a fasting mimic diet where you're eating a certain prescribed amount of food that mimics the metabolic effect of fasting.

And so one of the biggest problems I see for people is, you know, they eat too much, they eat too often, they pick the wrong foods, they get stressed out, they don't move enough, and then they don't get enough sleep.

So once we start there, that starts to get the ball rolling on inflammation. Now, when you don't turn the inflammation off and get your body back into balance, there's a lot of things that start to happen.

You know, your insulin receptors don't function the way they should. So blood sugar start to go up and people become insulin resistant. 50% of the US population as adults are either insulin resistant or diabetic.

Today mean that's a big isn't everybody? Isn't everybody having chronic inflammation like this one basically sounds like to me that that nobody is doing it.

Nobody's doing a very few maybe like yourself, but very few people are able to maintain a low level of inflammation. Well, I have to admit, for me, at my age, at 60, I don't ache.

And even though I lifted a lot, I was a competitive bodybuilder and and was a, you know, and ath scholarship athlete. I think a lot of the tactics that I learned from when I started in practice in 1986.

So I actually started doing this work full time in 1986. I think those strategies have really paid off for me. And, and I took a test called the True Age Diagnostics test.

And, actually lectured for them, this last Sunday. And it was interesting because if you look at my genes, they're terrible. So you you know, you would look at my genes and go, you are not going to live long, my friend.

So, yeah. And but then when they did the true age test on me, you know, I still remember that when they were interpreting it and they said, you know what, you're at the 95th percentile of aging now.

You're aging incredibly well. And I think it's important for people to, to keep in mind that I agree with you. I think a lot of people are in that inflammatory aging process, especially here in the US.

And I think that we need to start to think of aging as a disease. Now that literally we, you know, if we can suspend this inflammatory chemistry that's going on as long as possible and help our body to repair and stay in that inflammation on repair, turn inflammation off if we can stay there.

Now, we had the opportunity to really have a health span and perform at our best late into our life. And it goes everywhere from cognitive function to energy to managing your weight, to reducing a lot of the chronic degenerative diseases that really affect us.

And I don't think it's so much, that, oh, I've got this magic peptide that everybody should take or I've got this magic nutri and that was picked by, you know, Tibetan monks and eaten by an African lemur.

And, you know, whatever, you know, I mean, there's none of that going on. I'm sorry. We can use all these tools, but we still have to empower ourselves to say, I want to age gracefully.

I'm going to take the steps to reduce that inflammatory process. And I think that's the important thing for people. Is that my message this next decade is going to be a message of empowerment for people.

I think I've done that. At least when I get up in lecture, I try to empower practitioners to help people, but I really want to get that message out in general that it's, you know, we have to we have to start to empower our patients and we

have to empower ourselves, and we have to start to look at aging differently so that, you know, we can say, hey, that's you know, I got this, I got this under control.

You know, I'm going to let you think what I can. What do you think that, like people who are listening to this and think, oh, you know, I've kind of abused my body for, like, 20 years, and, you know, it's too late.

Like, how reversible is this by let's say you're making these changes now, have you seen it like with people you're working with. And what can you tell them about that?

Well, it's first of all, I'm going to say it's never too late. I mean, I've worked on 80 year olds and changed your lives. I regularly work on 50 and 60 year olds that think that.

Oh, man, I'm not thinking clearly. I think I've got early, you know, dementia. Gee, I have energy problems. I can't lose weight. And and, you know, when I had my clinic in Ohio, we had the Laval Metabolic Institute, and we were averaging about 304 hundred patients a week that we were doing personalized health programs on.

And so I would say that, I've probably seen more patients than most, in this area of precision health, you know, personally overseeing them. And even now, I'm still in practice a couple of days a week.

And it's still never ceases to amaze me the power of creating a good plan, one that's organized and steps people through their rejuvenation process, and then watching them blossom back to the vitality that they deserve.

And it literally changes everything about them. It changes the way they view their relationships. It changes their work, and it changes their enthusiasm for, you know, the selections they're making about the foods that they're eating.

And and so, yes, I would say, I don't care if you've abused your body for 50 years, I think you can take that first step and you're going to see a difference, right?

So do you. So let's let maybe let's take in these categories. You kind of mentioned these categories of how we can attack, the aging process in us. So you mentioned diet and you mentioned fasting mimicking diet for prolong, which I just recommended to a client of mine.

So I'm quite familiar with it, but maybe just the sense of, how does fasting, make an impact on aging? I think you mentioned a little bit about that. And then your thoughts about keto versus paleo versus vegan.

I would love to hear a little bit of your thoughts on that. Sure. So first of all, with fasting, that the most important aspect of fasting, in my opinion, especially in this modern world, is it gives people digestive rest because people eat all day long, you know, they snack, they nibble, they never really create a rest phase for cells to repair.

They're always working. Every time you eat, you gotta release enzymes. Every time you eat and your blood sugar goes up, you have a cortisol response. And so it's important to understand that, you know, when we fast, we get the gist of rest.

That's one. Secondly, it turns off nutrients sensing. And why that's important is when you turn off nutrient sensing in your body, what happens is you turn on the process of autophagy.

Now autophagy is you can think of autophagy is just it's the vacuum cleaner for yourselves. You know, basically you're eating up waste proteins out of your cells that are actually either damaging your cells or creating misinformation.

And so turning on autophagy is really important because autophagy is actually the the signal that counters inflammasome activity. So if you read up on inflammasome, what it talks about is that when you're inducing in TOF AG, the inflammasome, activity goes down.

And when inflammasome activity goes down, you're turning off inflammatory signaling. So that's the first piece about, about fasting. That's so important.

I think the second one is, is that they showed that there's some stem cell renewal by about day three. With fasting you get stem cell removal. So you're getting these beautiful cells that are able to go out and repair and create new vital tissue, for, for you.

And so that's the second piece that's important. And you have to remember when I'm turning off inflammation, that means I'm going to create more efficiency and how my cells are working.

So a big one for that is how your insulin receptors work. So insulin receptors of course are responsible for taking glucose into your cell and either making glycogen and storing it in your muscle or utilizing it for energy.

And so those are the three key areas that I think, you know, fasting can help people. There are others. But that's I think the three, you know, big highlight top line of where it really has value.

So how, when does the autophagy begin. Like if someone doing intermittent fasting, does a autophagy begin after 12 hours or like what what what's your thoughts on that?

And that's a really good question. And I would say that I don't have a good answer for that yet. I've looked around in the literature. It's sparse. There's some notion that it might begin at 14 hours.

A lot of people are doing 16, eight, 16 hours of fasting, eight hours of eating. I have to be honest, the people doing 16, eight coming to me, 17 are doing it seven days a week.

They actually after a few months, they're not doing so well. Now. Their energy isn't as good. I start to see changes in their and their lipid profiles and their cortisol sometimes is going up because some people, if they don't have good, sympathetic and parasympathetic nervous system balance, they can go to using cortisol as a way to generate energy for them.

So I like 16 08A couple of days a week.

Fasting, Autophagy, and Diet Strategies

And then I'm more favorable towards a 12 to 14 hour, fasting window with 12 to 10 hours of eating on a on a day in, day out basis. So and this is once again, I'm not saying I'm the only all out authority on this.

I would just say that clinically because I see an awful lot of people. I actually also see, you know, athletes in all five major league sports, you know, plus tennis plus, you know, I mean, I, you know, a lot of athletes are trying to do those type of things.

It's not working for them as well. And so that's why I think it's important. Do you think that the meal that they should begin late, like, what's the evidence showing that they begin late, or is it that they, they should end early?

This is that because I think that really weight loss. Great question. So there's a there's a couple ways to view this. So fasting training for example, has been shown in the morning to induce growth hormone and improve three fatty acid metabolism.

So that means you get burn fat that basically okay. However, if you looked at the there are some studies coming out of Japan that were showing that a morning meal was actually very important for cardio metabolic health, that there was a reduced incidence of cardiovascular disease when people ate breakfast.

So to me, you know, I look back at tradition, I can't help it. You know, I come from an Italian family, you know, and my grandma would say to me, eat a good breakfast, eat a good lunch, sit around at dinner with your family at 530, finish your evening meal by six.

And maybe if you're a good little boy, Jimmy, we're going to give you a little snack around, maybe seven, if you're lucky. And that's going to be it for you.

And I kind of think that we've taken time restricted eating, and it's really just the traditional way that people have eaten food for generations, not overeating food, having a planned set of time between meals.

And in general, cultures would have that last meal relatively early. Maybe unless you're in France, right. Or Persian. You know, a lot of times I find when I'm working with I got a lot of Persian, clients, they like to eat their meal around 8 p.m..

But I would also say that a lot of Persians have diabetes, so I think it could be the rice. It could be eating away. It could be a combination of the two.

So I think it really maybe, what I try to get people to do is identify what makes you feel best. And then we mark that against their lab parameters. You know, how do your labs look at the way you're eating and what does it show?

Because that comes to the question of what you just asked me. Do you think ketogenic, do you think paleo? Do you think vegan? Do you think plant forward pescatarian?

We developed a diet plan. Gosh, I've been using the same diet plan since 1986, actually, which is what I call a modified, low carb, anti-inflammatory, low allergen diet, where we're looking at, the data that shows that, you know, helping people maintain their weight, at least here in North America, is on an average of about a 22% carbohydrate diet and not up to 40% now because everybody says eat a mediterranean diet, where I agree that eat a lot of plant, you know, eat more fish, I get that.

But we're not walking up and down 300 flights of steps and going and walking to get our fresh food each day and ending our day at 5 p.m. we're in a different culture, so we I think we have to look at diet as, as more prescriptive, you know, you know, what's going to work.

I think, look, I use ketogenic diet on people, if I've got, you know, cancer patients, the only thing I'd say I there is I try to get more fiber into them.

I get the cows dairy out on them. But at the same time, there are some people that do very well on a ketogenic diet, and there's some people that lipids their lipids go crazy, their triglycerides go crazy.

They don't do as well on a ketogenic diet. And I've always prescribe to that fact, that notion that maybe one way of eating isn't right for everyone. Let's understand that sliding scale of carbohydrates, fats, and proteins for an individual as a way to fuel them in a way to reduce systemic inflammation.

Here's the common theme whether it's paleo, whether it's, plant forward, whether it's vegan. And like a lot of vegan cultures have high rates of diabetes, too.

So I, you know, I'm not so, sure that, you know, eating an all plant diet when people are becoming very reactive to things like pea protein, because all of this Beyond Meat stuff is very rich and high in plant proteins.

And I'm finding when I test them for food allergies, even their immune complement, food allergies like C3, PD, they're getting reactive to things like peas and legumes because they're overdoing them.

And then the way we processed them right. They're powder rice now instead of being eaten as a whole foods. So now we grind them up. And the surface area when you drink them or you eat them is much greater when it if you know, is, is is being, presented to your small intestine.

So, you know, I wish I could give you the clear thing of, oh yes, everyone should be paleo, everyone should be keto. I, I honestly feel like, I have some people that do very well on an all plant based diet, and sometimes we do that for their first six months, and then we reintroduce protein and, and and, look, I track things like B-12 and iron

and carnitine and CoQ10 because when you go plant based, those are the nutrients that start to go south and when they go south, that's your mitochondrial energy that's being affected.

When koku ten and carnitine are being downregulated from your diet. Right. Okay. Wow. That's I have so many questions. But I'm going to try to move it a little forward.

Sorry about three. No not so good. It's so interesting. So now so it looks like we want to have the benefits stem cell renewal. We need to go more than two and a half days or something like that.

Is that correct? Like people should do these longer, longer, more intensive fasting periods. Yeah. You're good if you're going too fast. And I recommend people fast under supervision these days because of so many people are this guy seem like, if you're going to fast and you're going to look for stem cell renewal, you're looking for that in the third day, right?

Third, the fifth day is where you're really going to get the big benefit autophagy. Autophagy will start kicking in at the end of day two. Now if you're looking at, you know, fasting limit diet, fasting limit diet and we have to be very careful about claims being made on fasting limit diet.

But certainly there are improvements in your metabolism, when using the fasting mimic diet that we see, people have less hunger afterwards, that they feel more satisfied, they feel more in control.

They lose fat versus just losing lean muscle. A lot of people, when they do just calorie restricted diets, they don't realize that, 30% of their weight loss is lean mass.

And, you know, and lean mass is our currency of aging, right? I mean, we the the the more we hold on to our lean mass, the better we're going to age. We're going to be more stable.

So as we age, we have to worry about, you know, falls and, and, you know, so only the more mass we retain as we age, the healthier we're going to age.

So that's okay. That's very interesting. Maybe let's just move right into exercise because you're talking about lean mass. And so on. And so I did the true age and I had a couple of people I want to talk to Ryan's Ryan Smith about that.

Some athletes, people who are trained a lot and their their age was actually higher. And I want to get your thoughts about that. Like, so what you know, how much is too much exercise can that that's I sounds like that might be causing inflammation.

You know, how do you how do you what type of you're doing with all these athletes, what are you telling them and what can people do? Well, you look, athletes have a career.

You know, an athlete is being paid to perform and their penance, you know, their sacrifice is their body. Right? Because and I just talked with a tennis player, two days ago, I did my first interview with them.

Trains 5.5 hours a day. And, and so the reality is this. There's a lot of times people go into the gym and look, I developed the programs for Lifetime Fitness that they had affected a quarter of a million people.

So, I mean, I'm pretty familiar with it. And I work with a lot of, professional athletes and collegiate athletes and high school athletes, for that matter.

But it's not all we do. I mean, that's probably 20% of the practice. The others autoimmunity and metabolic syndrome and colitis and all that other good stuff.

But with athletes in particular, it's not about how much you train, it's how well you repair. And so being able to make sure they're getting a good sleep if they're using a wearable device, looking at their REM sleep, looking at their

deep sleep, understanding the impact of eating late, are they drinking alcohol?

You know, what are they doing? That impacts how they can repair. The second piece of that repair is nutrient replenishment. Everything from electrolytes to amino acids to to, you know, making sure that anti-inflammatory compounds are on board, that can help them to turn that inflammation switch off.

Because in general, the longer you train in the course of your day, the more inflammation you're going to trigger and the less your ability to turn that inflammation will be off.

I mean, you're not going to be able to get that to correct. And so I find a lot of people, they simply overtrain so they don't see the value in walking.

It's boring. Well, you know, it turns out if you look at walking, walking is, you know, it, it helps with interleukins or cytokines to become more in balance.

It helps with your neurochemicals. It's it's really efficient and help in balancing your nervous system. When I start to do things that excite me, I'm doing interval training, I'm doing high intensity training.

I'm doing interval high intensity training right. The harder we push, the more we trigger. Do I think it's bad? No, I mean, I'm, I, you know, I'm an avid exerciser.

I would say that as I've aged, how I trained when I am 20 is way different than how I trained today at age 60. You know, today at age 60, I'm doing more walking, some jogging, somersault bike.

I train with weights three days a week. I used to train a lot, you know, to the point I was competitive. Do I think I had benefit from that? Because when I was young, I put on a lean mass, and I've been able to retain a lot of that mass as I've aged.

So I do think there were benefits to that. But I think some athletes, even though they look healthy because they train a lot, they mirror the blood chemistries.

A lot of my metabolic syndrome folks, I mean, you see, some of these people looks like they burned out like they were super athletes. But then by the age of like 60, they're like, you know, lost like a lot of fitness and health.

So I'm just I tell them, bright stars burn fast. So you want to control you. It's really about using exercise is another strategy to maintain your longevity.

If you're not a professional athlete, you know there's no reason to train at high intensity all the time. Now, if you're passionate about, I want to do a marathon.

I want to compete as an Ironman. Well, that's that's kind of taking it to a different level.

Exercise, Recovery, and Longevity

You're committing to a event and you're committing to athleticism that isn't necessarily making you super fit. It is in the moment, but over a long period of time, it may not be.

And so what I always show is, you know, when you look at a lot of folks that have that, for example, done a lot of distance work over the years, that their skin almost takes on a little bit of a leathery and high oxidative stress.

Look, unfortunately, right there, they're lean, but I don't necessarily see vibrance in them. I see weariness, and I know I'll probably get attacked for saying this.

But I think, you know, I think the literature is on my side. And, I mean, I work with, you know, the head of the NHL Strength Coaches Association. I, you know, I've taught researchers that work on special forces, you know, troops,

and we're all looking at the state of readiness, resiliency.

So what we're really looking at today, these are the terms resiliency, durability, readiness. All right. Those are the those are the terms analysis is right.

The ability to handle a stress load and recover from it. And so if we start to think about it in terms of resiliency durability, our stasis, I think it starts to make more sense for us to think about as we're aging.

Hey, I'm still sore. Maybe I should kind of do something restorative today instead of getting after it again. It's really creating that balance. With your exercise.

Okay, so maybe let's pivot because we have, in the next, 20 minutes or 15 minutes. What about what your thoughts about, I mean, growth hormone, we get a, I get a lot of clients coming to me and saying they're taking growth hormone.

And and I want I want your thoughts about how does that contribute to aging or how much is a reversing aging. Because there was that study, I think, that showed these people paints were giving growth hormone.

They had an epigenetic age reduction of a couple of years. But then I'm picturing that ROE yeah, that's a good question. I mean, in that study they actually had they used metformin and DHEA to counterbalance the effect of growth hormones, impact on insulin resistance and increasing the risk of developing type two diabetes.

So I do and once again, metformin, I think while interesting, I don't think we should put it in our water yet. It's it's it's a growth hormone or I mean, metformin affects your, microbiome.

I mean, it's known I mean, affects the microbiome. And so there are some people that they look at genetically that metformin might not be the best thing for if you if you read into that study a little bit further, they also talked about these variances in the application.

Do I think growth hormone makes sense. Well, whether it makes sense or not very difficult to do. In, in the US, because, you know, it's hard to acquire and, and I think that's where peptides kind of shine.

I've had a lot of obviously, you know, was a, you know, help found the International Peptide Society. I'm not doing anything with them anymore. But that was one of my initial, you know, events and, and I think that's the next undiscovered country.

You know, country for us is I like the, the concept of peptides because it helps us to release our own growth hormone. We make plenty of growth hormone as we age.

We just don't release it as well. And so I kind of like the concept of trying to have endogenous growth hormone be released instead of being dependent on growth hormone, say, from the time you're 45, which a lot of people are getting on it in their mid 40s.

And I think, you know, it's just like testosterone replacement at an early age, why not try to get your body to make it if possible? And so I'm always in favor of endogenous, concepts and thought processes for, for hormones before we resort to the exogenous or, you know, external sources of them.

Do I think there's probably a role for growth hormone? I, you know, I think, you know, you know, Fahy, you know, work and Sinclair's work on aging. You know, I think that it's you know, it should be noted that, hey look it did reverse the epigenetic clock.

And we have to continue to investigate its application. You know, I think one of the big things that we missed, you know, when I developed, for example, the algorithms for the metabolic code platform, you know, it's really looking at all of the interactions of how you feel, what your blood tests show, what your wearable data is, is telling us what your biometrics are.

So, you know, where is your heart rate? If your resting heart rate is above 62, your sympathetic dominant, it's that simple. If your blood pressure is going up, you're 130 over 90 or you're 130 over, 89, you're trending towards sympathetic dominance.

And, and and when you have sympathetic dominance, you're going to make more inflammatory cytokines. So I think that as we as we look at this concept of, hey, growth hormone or not, growth hormone will not erase or eradicate, you know, ignoring things like blood pressure, heart rate, proper diet.

Where are my blood chemistries at? How am I feeling? What type of sleep am I getting? And sure, well, probably placate some of it. Right. You'll, you know, you'll look, you know, look leaner.

And I always say to people pretty on the outside doesn't mean pretty on the inside. Right. So you know what could contribute to aging? Like it could contribute to aging because it's, you know, constant stimulation of IGF one and and, you know, I'm just I'm just concerned about that.

And people are maybe even taking big doses. I, I think your point is well taken. And I kind of agree with you. I'm not a big advocate at this time for for growth hormone, because I think there is some thought that excessive IGF one, you know, especially, you know, back in the early 2000, I wrote a book, a chapter in a book called Diabetes and Cancer Epidemiologic Links and Molecular Evidence.

And it was the outlining of how people go from being insulin resistant and diabetic to developing cancer at the cellular level. I mean, it was I mean, you read a page of this thing and you fall asleep.

I mean, it's that was it was the, it was top research. And they asked me to do the, the simple chapter, but this is that. And what was interesting is excessive IGF one signaling combined with insulin resistance, that is the fire of cancer cells.

And so it's not just, oh hey, I'm going to raise my IGF one. Where's your blood sugar at. Where's your fasting insulin at. Where's your postprandial insulin at now.

Are you really managing those aspects of it. Because as I said, if you just add growth hormone in and think that's it, you could be causing problems. And I, I totally agree with you on that.

And so just, let's talk about the peptides like CJ's seen in Maryland such these like the studies. Are they how how much of an increase of growth hormone are we seeing?

Like, let's say if you were to compare, let's say getting a deep night's sleep, exercising, you know, and taking a C? JC how comparable are these. Because, you know, do people have like as dramatic an effect, let's say from taking growth hormone like these peptides.

What are they. Actually I can I can only give you clinical my clinical experience because as you know the human trials on most peptides, unless you're looking at some of the peptides that are on the market as drugs like insulin or, you know, liraglutide or, you know, thymus and alpha one, you know, and so certainly there's a fair amount of research on those.

But the research is is good. It's there, it's evolving. But I would say that as you get older, you can exercise and eat, right. And you still might night and get a good night's sleep, and you still might not release enough growth hormone.

And what I've seen with people that have utilized, Apple, Maryland or Tessa, Maryland or Summerlin or any of, the peptides that are geared at, growth hormone release is that they do improve their quality of sleep.

So they report, hey, I'm sleeping deeper and better. They eat less. They, it varies. And I'm not going to say this across the board because I've seen this vary.

Some people get a dramatic fat loss where they improve their lean mass and reduce their fat. Some people, not so

much. But I would say that that that's the area where it warrants study because I think that at least clinically, what I've seen and, and I've interviewed a lot of people that have taken, peptides and, and, I, I've seen that in general, people are pretty happy with the results of them and, and want to continue to be on them.

Growth Hormone, Peptides, and Supplements

So, you know, and once again, this is an area of I would say, you know, it's an undiscovered country because, you know, we've got, you know, the FDA, wanting to be responsible and regulate things appropriately.

Right. We always have to keep that in mind. And then we have a lot of these peptides that are being sold not for human use, that people are taking, which may not actually be safe.

You know, there was one study that showed that up to 88% of those compounds, either, were not at label claim or had adulterated materials in them. So it yeah.

So it's it's, you know, I think, you know, I think it's going to be interesting to see how the, you know, the government legislates peptides over the next decade.

And, and I do think they're important therapeutic compounds. And of course, they're you got almost 200, peptides in drug trials right now. So obviously big Pharma thinks they're important.

They've been approved in certain applications. So I think we're going to see I'm hoping we see, the people are able to utilize these types of things to support their innate release of growth hormone because, everything I've seen says, hey, there.

They they think it works. So what's exciting? Like, you must have a supplement regimen. So what are the things that you think are kind of the mainstays of what people should be thinking about if they're going to supplement with, you know, herb, plant medicines or other nutraceuticals like what would be on the top list?

Well, you know, I think, you know, first of all, thinking of the adaptive genes are incredibly important. Whatever culture you look at, over the last 5000 years of written history on, botanical medicine, culturally, adaptogens are the most important herb in every culture.

So whether it's ginseng or cordyceps or ashwagandha, Xandra, all of these agents are incredibly important. And the reason they're important is they help our body adapt to stress.

That's why they're called adaptogens. And so, since the beginning of medicine, we've identified that managing stress is incredibly important. And in the modern world, of course, people wait until they, are incredibly anxious.

And Xanax and Prozac have become our new adaptogens. And and I think that's tragic because I would rather people be resilient and stay resilient than frazzled their nervous system to the point of anxiety, panic, and depression.

And so adaptogens. Ashwagandha a biggie. I love cordyceps. So Cordyceps sinensis, which is in the Chinese medicine materia medica, helps to oxygenate tissues, helps protect the kidneys, helps to to, the liver to detoxify you know, so it's really, I think, an important adaptogen.

Then you can get into something like curcumin. You know, the big thing on curcumin is what does it absorb? So a lot of pills people take me not absorb.

But I'm working on a project, with a German company, actually, a German drug company that has figured out how to sanitize their curcumin to the point where it's superior to IV curcumin.

It has a longer half life and superior bioavailability. So I think that as we apply modern pharmaceutics, there I go with my pharmacy background again.

We apply delivery, we apply. I know how we can get that that plant medicine to absorb. I think that we're going to see exciting evolution and the application of plant medicine.

So things like green tea, why is green tea and curcumin and quercetin so important? Because they help us to regulate something called the sirtuins. And why.

So two things are important is they help our body to keep our mitochondria within the cells firing and keeping them healthy. So it's mitochondria get ragged and they break down.

You hear about you know you know you know my toxicity, my autophagy is right. The mitochondria break down. And and what we really want to do is promote our mitochondria, staying renewed and being able to generate energy so that our cells can perform all their functions.

So when you look at green tea and quercetin, you know, curcumin, decreasing inflammation up, regulating the signals that help our mitochondria stay strong.

I think that's important. I'll tell you another one I think is important is nicotinamide ribose ribosome. As we age we lose the ability, to generate NAD and our cells because we're not efficient with niacin or niacinamide anymore.

And nicotinamide Riverside goes through something called the salvage pathway of your cell. And that that triggers up regulating NAD. And why is any D important?

Because it helps our body go through our transport cycle for making energy. And so I think nicotinamide riverside's a biggie just as CoQ10 is important.

And then it starts to get into well what's your issue. Right. Because if we if we read about an herb and say, wow, I could use that, I could use that, I could use that.

I mean, you're in end up taking 50 things. And I've kind of gotten away from that. I mean, I try to get people to eat, right, try to get them to exercise, try to get them to sleep, do a little bit of deep breathing to reset their nervous system.

And then and then I want them to take targeted nutrients. Where is your metabolism? Broke. And that was the whole why we developed the metabolic platform was to try to get people to say, here is where you're the most broke.

You know, you need to use berberine because your tight junctions in your gut or broken down and you've got gut permeability problems. So we need to repair that.

So berberine is really good. Cat's claw is really good. Are you having issues with hormones? I've had great results using you know standardized fenugreek extract.

And your a coma to stimulate testosterone, for men and women without having to resort to, to replace ret in many cases. So I, you know, I think once we get past the adaptogens and a lot of the plant foods like curcumin, like medicinal mushrooms that have what I call a playa trophic effect on your body, right?

They're working in multiple good ways to help your body stay in balance, keep your immune system attacking, keep your thymus gland functioning so you're making good T killer cells to go out there and fight the good fight.

I mean, I think, you know, once we get past those, I mean, everybody should be on magnesium. I can tell you right now, I know it's boring. At the same time, I find very few people who have enough magnesium in their body.

And I measure the red blood cell, magnesium and usually it's, you know, it's under, you know, 5.6. It's usually in the fours, and you're just not going to operate as efficiently when you don't have essential vitamins, minerals and amino acids in your body.

I think this this is very interesting the way you're saying this because I've always thought and I think people come to say, look I take all these supplements, but I don't even know if they make, they're making a difference.

But we're really moving to precision medicine is what you're doing with with the metabolic code. And I think that's that's the key message, I think for the viewers to understand that we can now kind of more do more targeted, you know, recommendations about how to like how what's best for them, I mean, through them through blood tests and other testing that that's exactly it.

Like, like that's why I like the epigenetic test or the or is what I'm doing because, you know, like you said, you saw these athletes. I'm sure they were doing things, but yet they had accelerated aging.

So, you know, where am I broke? Let's fix that before we worry about how I enhance myself. It's no different than rebuilding a classic car or an old home.

Start at the foundation. Work your way up. Where is the foundation? Where it's different? And everyone, some people, their foundation is, the gut immune brain axis, where, you know, they've got food allergies and they're reactive and they're making a lot of histamine, and your brain's foggy and they're not thinking clearly.

And some people, it's in their energy where it's the relationship between adrenals, thyroid and pancreas. So blood glucose, cortisol and thyroid hormones.

And you know, because when that's out of balance, you gain weight and you feel sluggish. So, you know, I really think it's important for people, and I know it's been my passion.

You know, as I watched this last, you know, 35 plus years of practice, is trying to get them to understand what do you need to fix? And then what are the nutrients that are right for you?

And then let's let's and let's verify. Verify by is your blood pressure down? Is your heart rate better? Are your symptoms scores better? And lastly, what are your labs look like?

And now what's your epigenetics look like? And the promise of omics and really showing that we're turning off activated genes that should be turned off.

I like to look at it as this, this process that we should be putting people through to show them. And we also have to remember everybody isn't ready to grasp it all at once.

Sometimes we have to start simple with folks, you know, I'm the type of person and I'm sure you are too. If you gave me eight things to do and you said, you know, jam, I just worked you up.

And these are the eight things I need you to do in order to get better. I don't want you to tell me. Just start with the first two. I'm going to say, give me all the details on all eight, and I'm going to do all eight.

And I'm going to ask you about the next two. And, but that's but everybody's not there. Everybody doesn't have that Spartan kind of, you know, mentality.

And we have to we really have to be careful about precision, medicine and precision health, in my opinion, because if we hand people a big basket of tasks and what they're really used to is a sedentary lifestyle and kind of eating whatever they want and not getting enough sleep.

And, you know, we're not doing them a service by saying, hey, this is your plan and you need to do it. We have to meet them halfway. And I think for people, it's incredibly important as practitioners that we understand even with precision medicine and precision health.

And it's fantastic targeting that we're going to be able to do that. The best program is the program that a person can follow. Yeah. Wow. That's really powerful.

How would you I this last question, what how do you describe now this whole version of medicine you said mentioned precision medicine. I, I'm kind of leaning towards that.

But like, what's your thoughts about what is this new medicine. How. Well how can people understand. It's not it's not antique. It's not necessarily always anti-aging.

It's not, you know, integrative. Like what exactly is it? This new paradigm of precision health, and precision medicine. And it's a term in medicine. Precision medicine is a bona fide term, right.

It's really about I, you know, identifying an individual's the, the, the actions that are needed to repair and renew their chemistry. And so whether that action is I need you to do some deep breathing.

I need you to eat better. We're going to do these tests. You need this MRI in order to find out what's wrong. It's it's identifying the proper tests, the proper procedures, the proper diet, lifestyle and and really creating a, an approach that is solely focused on solving the problems at hand.

First and then you target. How do I stay?

Precision Health and Closing Remarks

Well after I deal with those problems at hand. And that's how I view precision medicine. It's not just about, oh, I want to do things in order to live longer.

Right away it's targeting the areas that you need for your repair. And and that means good traditional medicine. That means the application of anti-aging strategies, the application of diet theory, the application of exercise theory, behavior modification.

Right. All of these things kind of are our tools in that toolkit that allow a person to start to get a sense of where they're broke. And honestly, that's how I talk to people.

I always try to get, in sync with them. On understanding, here's where you're broke and what it will take to fix it. Let's talk about what you're able to do now.

Perfect. Thank you so much. I think this is a great, great, hour for for our listeners. I really appreciate it. And I, I know what I want to talk to you about some other stuff offline, but there's so many more questions.

But I really appreciate the time, Jim. Good. Oh, that was great. Thanks for having me. This was a blast. I I'm so appreciative of of you really working on a brand, bringing awareness of this type of health out to people.

It's it's fantastic. Yeah. And what should people go if they want to learn more about you and the work you're doing and, and metabolic code, where should they go so they can go to Jimbo Volcom if they want to, you know, kind of see all the books I've written them, have written 22 books and, you know, 18 e-books and two more books coming out this year.

And then they can go to Metabolic Code Comm if they're interested. And, you know, looking at, you know, kind of what I think is, a very advanced way of being able to evaluate a person and at the same time, make it fairly simple for them to understand where they need to start.

Awesome. Okay, great. Have a great day. All right. You ready? Right. Thank you. Get up soon. Okay.