Longevity Doctor: Truth About Hormones, Mast Cell & “Personalized Aging” l Sandra Kaufmann l Ep #434 Transcript

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Introduction to Personalized Longevity

Welcome back to the show, folks. I'm Natalie Nidam, your host. Question for you. What if the biggest mistake in longevity is trying to age like somebody else?

Today, I sit down with returning guest Dr. Sandra Kaufman to talk about personalized aging strategies, why healthy lab numbers don't always tell the full story, and how stress, hormones and inflammation may be colliding behind the scenes.

Plus, Sandra shares why retirement might be one of the least interesting ideas she's ever heard. Now, this episode is brought to you by Troscriptions, Trozee, Ultimate GI Repair by Level Up, and Mito Pure Gummies by Timeline Nutrition, all with special offers just for you.

For anyone wanting to work with Dr. Kaufman, you can reach her through her website, which is kaufmanlongevity.com. And Kaufmann is K-A-U-F-M-N-E dot com.

You can also follow her on Instagram, same name, kalfmanlenongevity at kofmanlongeivity. Check out the show notes below for details and enjoy the. Dr.

Sandra Kaufman is back. Welcome back, Sandy. It is such a pleasure to have you here today. Oh, it is always fun. I love talking to you. Yeah. Well, you can tell because we have a few podcasts together.

So you guys, for the listeners, if you want to hear more about the beginnings, the theory of aging, You got to head on over to the show notes after you've listened to this episode, because We've got the links to previous episodes in there.

But to kick this one off, let's just talk about what point did, and I've probably asked you this before, but it's a good place to start anyway for the people who haven't listened to this, your previous episodes is at what pointed longevity, stop being an intellectual hobby, like this kind of little side hustle that you had going on and become something that felt responsible to build into a protocol, into profession, really.

Oh gosh, that is a really actually good question. Longevity started out as a pipe dream about, gosh I used to say 10 years and now it's longer than that, about 12 years ago.

And it was just an intellectual curiosity, something that I wanted to figure out. Of course, I built the Kauffman Protocol, which was why we age from a cellular basis.

Then it just sort of grew and grew, and I really had no intention of seeing patients, but they started pounding on my doors. Right? Like, can you come see me now?

I don't really have an office, but so now I have a office. And then I started seeing patients online because they're like, well, now we're in Europe. Anyway, whatever.

So there was no actual moment. But now it's gotten to the point that I do see patients in Miami. I see patience in Las Vegas. just because it's what people want.

And I have lots of different things available. I had a deal where people can just call and ask me anything they want for half an hour, or I can do full on consults, sort of whatever people wants I'm available for.

It's one of those cases where An interest grows into a passion and because it's the right thing at the time with the people being you, it just takes on a life of its own.

I feel like in your case it organically blossomed because its just what people needed and your take on it is so unique. that people gravitate towards it.

It's actually one of the most amazing things. Like you didn't sit there and go, because you had already like a great career, like you. Had a big giant job and you loved your job in your big career.

But this, this was like attractor beam that almost drew you in. You had no power to resist kind of. No, it's funny you should say that, but that's exactly what it felt like.

And in fact, I still sort of work two jobs because I do like all of my jobs. I really do. Say goodbye to anesthesia or leadership. Uh, and I love longevity.

Yeah. You know, people talk about we get to our age retirement and that the idea is baffling to me, right? Because I am so obsessed with unraveling longevity and sharing that information that I think that i will be doing it as as long as I possibly can.

Yeah no it's a funny thing you bring up retirement because when people tell talk to me and you know i'm getting close to the age where people are retiring and I kind of look at them funny because I'm like but what do you do all day like how do You stay engaged and i mean look some people they volunteer they sit on boards they stay I don't know.

Things get smaller. Their life gets smaller, their expectations get small and I feel like you start to kind of turn in a little bit. Look, retirement can look very different for different people, and maybe it can be, I'm sure it could be very rewarding, but I do think that being intentional around retirement has a lot to do with your longevity and health span.

Well, no, it's a mindset, right? Yeah. And what's humor? So I am single, in the middle of an ugly divorce. I'm hoping that I am single. So it's really interesting.

People my age, and I meet a lot of new people my ages, now one of my things I never thought I had to put in my dating ask was vision for the future. Mm-hmm.

It's so important, right? It is a match. When you sit there and the guy goes, I want to go play golf all day, yeah, this is not going to work out for me.

But with the longevity world and with us planning to be 100, 110, 120, When you hit theoretically 60, and I'm not quite there yet, but as soon as I am, that's halfway.

We have so much more time and so many exciting things to do that it's just a different mindset. You're also building on a foundation. You have all this experience, all the time you've put in.

In many ways, this is the kind of time to take it to the next level. Let's talk a little bit about the moment that you realized that most longevity conversations were actually missing the point because they just aren't personalized enough.

because everybody's talking about longevity right now. I don't know what the next big buzzword is gonna be. Currently, it's all about Longevity and all the people that wanna be fancy say, and healthspan, of course, because we just don' wanna live longer, blah blah, but you got to a point in your work where you're like, you know, what?

People are missing the mark. This is not about a protocol for 50-year-olds, or 50 year old men, 50 years old women. No, no, you're absolutely spot on.

So what I started life for those people that don't know me as a cell biologist. And so I love cellular function.

Why Longevity Became a Practice

If you look at cells, cells are clearly why we age, cell failure, because everything that we are, our cell are cell products, and then throw in some water.

And cells fail for very, very particular reasons, which was the basis of the Kauffman Protocol. And the cell doesn't hit 50 and go, oh, I'm done now. It slowly unwinds and different things fail at different times for different reasons and under different conditions for people.

The whole point of unraveling this was taking it apart bit by bit, trying to figure out what failed first and for whom, right under what conditions, which meant the personalization of longevity is crucial.

Crucial. So I have 35-year-olds that are on a variety of things just based on who they are, what their family history is. I had 45- year-old's on some stuff, and that's maybe year olds on stuff.

Everyone is different and you're absolutely right, I sit there and I personalize every longevity protocol for that person. Yeah, and it makes so much sense, right?

Like your life experience, your lifestyle, the gaps in your system, which are gonna be different than the gap in the other system. Like it still blows me away the generalizations that still get made every single day, everywhere you turn about this is good and that is bad.

Right? Even when it comes to, like I just read an article in some, magazine about cholesterol, right? And this guy was like there's no such thing as good cholesterol.

Like really? I don't know. I mean, he admits that it's a component of cell membranes. He admits it. It's part of the brain. But at the end of days, like there's no such thing as good cholesterol.

And I'm like, that is such an oversimplification that lacks so much nuance and is so misleading. This was like a mainstream magazine. So the people reading this are running to the doctor saying, where's my statin?

He's like statins is the biggest gift you can give to yourself on your 50th birthday. Wow. And that, you're right, that's absolutely scary, right? Because, yeah, cholesterol is necessarily, it's a component of every cell.

And of course you need it. Your LDLs and your HDL are simply mechanisms for which you travel. Carriers. Yeah, just carry stuff around the body, and if you can't carry it around your body then you will die.

So you absolutely do need to have it, the question is not if your cholesterol or if it is good or bad, I would argue that it just shouldn't be oxidized.

Yeah. Right. So that's my big push. Everyone needs to get their oxidized lipid levels measured. And then we put people on, I put, people, on astaxanthin and squalane to try to prevent that.

But that sort of not the conversation. The point is, you're absolutely right. Cholesterol is not good or bad. It just is. We have to deal with it. Statins are not bad or good.

They just are, depending again on who you are. I personally don't like statins because if you dont have cholesterol, you won't have a whole lot of things that are sort of important downstream.

On the other hand, when it comes to lipids, rather than decreasing the creation of cholesterol I like to increase utilization with the with other drugs.

So like, gosh, my brain, the plenofibroids as an example. You utilize them instead of making less and it makes a

hell of a lot more sense, right? What does phenofibroid do?

It's a PARP alpha activator, so you're going to burn off lipids preferentially versus glucose. Oh, that sounds like a cool thing to do. Yeah. All right.

So, and you're not shutting down, because that is the thing with, I mean, didn't even mean to go to cholesterol at all today, but part of it is, you know, this whole argument of, well, your body makes what you need.

Sometimes your buddy makes too much. The whole arguments against dietary cholesterol. And I, so with the phenofibroid, is it possible to say, what we want to do is burn off the excess.

We don't just want burn of all the cholesterol, like basically a dosing issue. Absolutely. And one of the interesting things that changes as you age is your selection of fuel choice, right?

Because you're basically, the three choices are glucose, lipids, or proteins. Depending on availability and then depending on age, your body chooses one.

Right. As you get older, you are less likely to use lipid, so they accumulate. So if you sort of force your to body to them, then you better off. Yeah.

The other side is going to say, well, then you're going have hyperglycemia. And the answer is we can fix that. That's easy. It's far easier to fix hyper glycemias than high cholesterol, I would argue.

If you're using a sauna and you are not following a specific protocol around it, you ARE sweating, but you may not actually be supporting detoxification properly.

And that's a problem, because the difference between a session that just makes you hot and one that genuinely moves the needle on your health comes down to a few key steps that most people are NOT putting into practice.

So I put together my complete sauna protocol, the exact pre, during and post-session routine I follow myself, and I'm giving it away completely free. Now, this is not a generic guide.

This is what I actually do. So, of course, you always want to do what's best for your body. But if you want see what i do and to download it now for free, just head on over to natnidam.com forward slash sauna.

That's n-a-t-n-i-d-e-m dot com forward-slash sauna and check it out for yourself. And I think what you just said is really interesting. There's something in there that's really important, I thing, for people to understand is, not only is personalization to the individual important.

But it's understanding that there's even personalization at different times of your life for you. Like the needles are going to move, the need to address different issues, your fuel utilization.

I mean, ask any woman who's gone through menopause. Everything went sideways. And it is not that it went side ways. It's just that things changed and nobody got the memo.

Oh, no, without a doubt. In fact, this is really interesting since I'm on an estrogen kick at the moment. I did not appreciate, even young people, when you are going through your menstrual cycle, your cholesterol is so tuned in to your estrogen levels that depending on when your draw your levels, you're cholesterol panel changes through you estrous cycle.

Oh, really? It's truly, truly amazing. Which I did not realize. And it's an adaptation, right? Of course it is. It is an adaptive response. This is not a flaw.

No, absolutely not. It's designed so that if you're going to have a baby, you will have more cholesterol available. That makes a lot of sense. You're right.

When you have menopausal, it all sort of goes wonky. So I'm a big proponent of hormones. The question is, which ones, when, how much, whatever, and I am in the middle of sorting all of that out.

And I think it's not as straightforward as people sort. At the moment, they have one size fits all. I don't want to spew out one-size-fits-all because I haven't gotten there yet.

No, and I think if you listen to people in the hormone space, the ones that are really kind of doing the work clinically and reading the data, The message I'm hearing is exactly that.

The same delivery system doesn't necessarily work for two different people. And so there's an issue on delivery systems. Which one is your body going to accept better?

What's going work better for you? And even dosing is kind, it's all over the map. And I think where it gets complicated, well, where its simple for me and where I thing the danger signs should lie for people listening is when you find these people that make blanket statements and plant a flag on a hill and are ready to die on that hill come hell or high water, I would take a breath and pause because You know, they may have written a book.

It just, it becomes a line, right?

Personalization Over One-Size-Fits-All Protocols

And I do think that, you know what's, and then we can talk about the Kauffman Protocol, about this system a little bit in this, because it comes back down to this where your Kaoffman protocol system allows people, like it's a numerical system and you get to prioritize things depending on where you're at.

And I think with hormones, you'll probably develop a similar system, right? Where it's going to be if you blah, blah blah or whatever the case may be and it is going become a matrix.

And a Matrix is very different than a system. So maybe speak a little bit about the Kauffman Protocol because what it does, it explains why we age to your point when you said earlier about cells.

What was broken about existing frameworks that you were saying basically? Yeah, yeah, so when I got into longevity, there were a few discussions about the hallmarks of aging, which was a laundry list.

I think at the time there was seven things and I don't know if there are now, 13, 12, 15, I sort of lose track. But it dawned on me that it was extremely disorganized, seemed like there categories and some categories, and there's no organization to it whatsoever.

So I started from scratch. And I said, well, that you age in seven categories from self-perspective. Category one is things that go wrong with your DNA.

So this would be epigenetics, telomere dysfunction, obviously usually getting shorter, but there are other issues to go on with you telomares, and then heterochromatin distribution in your nucleus.

Lots of things going on in you DNA, two is mitochondria, seven things roughly go Three is going to be pathways. This is gonna be AMP kinase, mTOR, your seven sirtuins, and then last year I threw in your circadian rhythms because that's an extremely complex pathway that gets sort of screwed up over time.

Let's see. Four would be quality control. So this is repair mechanisms. You have four DNA repair mechanism, you have your whole proteostasis system, an autophagy is in there because when you can't fix it, Let's see, five is your immune system that becomes your inflammasome over time, which you very well know.

That's how I got obsessed with masked cells because I think that's a big deal in that category. Six is individual cell requirements. So this is the idea that you need to take care of your stem cells, you to get rid of senescent cells.

Brain cell needs something different than a red cell is an example. And then seven is waste management. This is mostly glucose issues as well as accumulation of lipofusion.

So, if you accept the fact that those are mostly the reasons that you age, then what I did is I said, well, which categories represent which diseases?

And it's easy to say, for example, diabetes is going to be category seven, it is waste management. A lot of cancers are going be DNA repair mechanisms.

There's a lot mitochondrialopathies, that's obviously category two. So depending on who you are, what diseases you have, or what runs in your family, you would pick things that basically address those categories.

And then there was a rating system looking at, oh gosh, I think I'm up to 70 now, pharmaceuticals and supplements, rating them in those category on a zero to three scale.

So they all come with a seven digit barcode to tell you exactly what they do and how well they So you can individualize your supplement and your medication protocol based on data.

There you go. You know what I love about you? One of the many things I loved about is you dip your hand in both pools. Was there anything that you think you got wrong in your earliest thinking about aging before you built the current model that your using?

I think I was a little bit simplistic in that I that everything is cell-based because I need to create something that You know, like when you watch Star Trek, and here's a bizarre illusion, we play chess or checkers on one board and on Star Track there's like three boards.

Yeah, it's three dimensional. So I think what I have to do is add the extra planes. There are cells and then there are tissues and organs and I kind of ignored those and think it is time to add those back.

Yeah, just operating at the cellular level doesn't take into account the downstream effects that are going to happen. And you kind of have to follow it through to its natural end to see what the full effect is.

That totally makes sense to me. So you've said that there's no single optimal strategy for everyone, hence the personalization. Correct. What are the most common ways people harm themselves by copying somebody else's perfect stack?

Oh my gosh. Where do I begin? That's an unanswerable question. Oh, my God. I get 20 year olds coming in on massive doses of NAD. And I look at these people and I'm like, okay, no, let's start from the beginning.

They all want to be Brian Johnson and they don't understand that that's not the goal. The other really interesting thing is I get all of these people that come in and want be super, super thin.

Right? Like the newest pictures of Demi Moore, like anorectic out, you know? And that is just not longevity. That is not healthy. I'm sure she's gonna like have horrible osteoporosis issues.

She's clearly got sarcopenia. This is going to end well for her. So I think that things that people hear and see on social media is, just, not great when it comes to understanding longevity, Yeah, and I think the other side of that coin is also a bit of a pitfall, right?

Wanting to be fully muscle-bound into old age. Like, I there's a sweet spot as we age, because you can't be just pumping growth hormone from somewhere else or whatever it is, you want those great big juicy muscles that you had in your thirties that may not serve you, right?

There's the whole issue of mTOR and mK and that little balance. Well, even at the more basic level, the muscle you have, your heart has to work to supply blood flow to that muscle.

You do that for 60 years, you end up with a cardiomyopathy. So, again, there's the cellular level and then there is the organ level. So we do have to look at all of these things sort of in conjunction.

And you're right. I think a reasonably normal body habitus is a way to go. You want to be lean, you want have some muscle, but you don't want be on the crazy side of the bell-shaped curve.

Yeah, no, 100%. So if we're looking at the systems that drive aging. Do we have, you know, if we look at metabolic, immune, the vascular system, neurological, hormonal, detox clearance, is there one that really stands out on the aging?

Oh, gosh. I mean, they're all important, obviously. They're not asking you to pick a favorite child. Well, I don't pick my… Well the problem is that it depends on individual.

Yeah. Okay. Now I'm glad you said that. It really just does because some people walk into my office and, oh my God, there are a cardiovascular disaster.

Right. Other people, it's all immune. They look like the most inflamed humans I've ever seen. So it just, I think it is very individual based. That being said, there's a lot of things that we haven't even identified yet.

And not you know me, but I love going after the zebras. Yeah. Right? And coming up with the occasional unicorn. Well, exactly. Yeah, I think I'm on the unicorns right now.

But when I stood in front of everyone and said, you need to bleed yourself back in the Middle Ages, like I wasn't kidding. Iron overload is a huge deal.

Oh, yeah. Yeah. I interviewed somebody about that. Her husband almost died before anybody figured it out. And I thinks she was the anybody who wasn t even a doctor.

Yeah, well, even normal people, right? You are constantly bringing in iron. Your digestive tract, it's in your food. Every living thing has iron in it.

It's the most abundant atom in the universe, essentially, You're bringing it into your body and it sits in your intestinal wall and that intestina wall decides, that cell, the enterocyte, am I going to keep this or am going throw it away?

And if it doesn't want it, then the cell sloughs off and you poop it out, right? But most of the time, it gets taken into you body. And once it is there, there is no turning back, with the exception of menstruation.

Right. Women dump blood up until menopause and then we stop. Men never dump. Blood. There's no way to get rid of iron. Zippo zero. Right? So you're not even talking about haemochromatosis here.

You're talking. Normal. The bioaccumulation of Iron as a natural process. Yeah. As a normal, normal thing. And what's interesting is, is there's a great study and I do a presentation.

I think it came out in 22 and you can see iron accumulation in brains. That can't be enough. As you look at the years, you just see it accumulating. It accumulates in your heart muscle, it accumulate in you bone, accumulates everywhere and your body just keeps stashing it away because it doesn't know what else to do with it.

The problem is that iron, of course, donates electrons to oxygen. That's how we get radicals and it destroys you and triggers all sorts of terrible, terrible inflammatory reactions.

The oxidative stress from iron overload is ungodly. And the only way to get rid of it is to either take a chelator or to dump blood. Easier to dumb blood?

Of course it.

The Kauffman Protocol and Aging Categories

Way easier. Don't need blood, but again, you're going to have people running low for whatever reason. So again it's personalized, right? Yeah. But the other thing that's really interesting is when we measure iron levels in people, we check your blood Right?

As people go, I'm anemic, because that's what my blood shows. But what your blood doesn't show is what is stored around your body. And the only way to actually measure that is with a special type of MRI.

I think it's like a T2 weighted something something. People don't look for it because they dont think about it. Is it easy to get? If you ask the right people, it's like we're using perplexity.

Yeah. Ask the question. No, exactly. I mean, can I have an MRI? Sure. Right. Of what? My nose. You know, whatever. Um, you actually have to specifically ask your primary and they're going to tell you that you're lunatic looking for iron overload in your various organs and you can do it.

You can absolutely do it. But what's interesting is you take old people who they've stored all of this iron, then their blood looks a little funny. So they go, Ah, you're iron deficient.

And they give them IV or iron. Right? That makes no sense. What you have to do is chelate it to mobilize it so then you So then, just taking blood is not going to be enough.

Yeah, exactly. If their blood levels are low, you don't want to just bloodlet them because then they will be low. But if you chelate it, it'll slowly get it out of the tissues and then it will get into circulation.

And then once it normalizes, then you can dump it. All right, so when you assess someone, what are the first five questions you ask them that tells you which of those systems you're going to really focus on?

Are there specific questions that give you a hint that point you in a direction, or you just looking at labs and tests? So it's like taking a medical history.

I'm sure you've been to the doctor, everyone's been the the doctors, and the question is always, why are you here? Which should be right? Why are you here?

And if you go to a normal doctor? They're gonna say, you know, I my nose hurts my ear hurts, uh, You know whatever whatever whenever when you to go a longevity physician and I say why are You here they're going to tell me that their mother has Alzheimer's Mm-hmm.

They are going tell that they are concerned about colon cancer. Tell me they don't have as much energy as they used to have. And that's why they're there, and that is what we focus on.

Once we have that main goal, then I go from head to toe. Tell me about your hair growth, right? Because people's hair suffers over time. How's your brain?

How is your thinking? how's you're memory? You go literally head to toe. And a lot of these things are just absolutely coordinated. That's really interesting.

You know, I think you are only the second person on this podcast that's actually articulated that so clearly. This was someone who worked with patients who have ALS.

She said, if you spend enough time with somebody's health history, they know. where it started. They know when things shifted. And she said, sometimes I just have to go back and look at the notes if I get stuck, and usually I'll find the answer in the note.

It's really, it's such an interesting take and unfortunately in conventional medicine, not only are people not trained,

but the system disables them from being able to even do, even if they were inclined to do it, this system will punish them, literally.

Going back to the epigenetic tests, now more and more of them are developing these organ system clocks. What do you think about that? Because it seems to me that maybe, and I don't know how accurate they are, one thing that you said, dont be jumping around from one test to another.

Like if you are going to use one of these tests pick a team and stick with it because it's like a scale, right? Your scale at home could be flawed, doesn't matter relative to yesterday, are you heavier, lighter, whatever the case may be.

With these epigenetic tests, now with the organ system clocks, do you think that there's any value where, I mean, sometimes somebody will get told, look, these clocks are really good, but your brain and your immune system, that clock's looking a little wonky.

In terms of giving, pointing in a direction or dropping a breadcrumb to point you towards, maybe these are the systems you really want to pay attention to.

I mean, possibly. I have not found it completely useful. On the other hand, I think people that are sort of not in the know like them. If you were going to measure this from home and then something sort pops up, it may be the thing that brings you to the physician's office to try to figure it out.

So I'm sure it can be quite useful, but I but think the most important test, since we're talking about tests, is going So that's an interesting topic.

Let's talk about that, because there's a few of those tests around. There's been smoke and mirrors and noise and arguments and all the things. Yeah. And so the first one that came out was grail.

I've heard things that maybe it's accurate, maybe not, not so great. It is evolving very, very quickly. I think that's the thing to remember. Right now, it may not be the absolute answer, but give it five years.

It will be. The answer. I. Think it's going to be end of the colonoscopy and the boob squishing and all of these ridiculous things. That's what you're going get once a year.

And then if anything shows up on it, then you go in for some sort of actual further. Yeah, no, that makes sense. And look, we've all heard of people who have found things from these tests.

The problem is there's a lot of either false positives or such early results that the system's not equipped. to that kind of early detection where your doctor is going to say, ìYou got nothing, man.

Iím not seeing anything.î The problem is now as an individual, you may be left with this anxiety that says, well, the desk says thereís something really early going on.

My doctor says thatís nothing we can do. How do I sleep at night? And, and maybe that's the thing that should send you back to the basics and say, okay, what can I do to support my body so that if there's something there, it doesn't go to next level, which is where you come in?

Yeah, no, absolutely agree. Yeah. That's where You can kind of jump in. So where do you see people pushing the gas like, like more interventions when they actually just need the brakes?

I think this is such a crazy trend right now that people don't understand it. And I get what really drives me nuts. I am on social media, but I don t do that much myself.

But I sort of like watch it and what pains me to the nth degree is all of these things that say, be a longevity specialist, get training in three days and you will make a million dollars.

You see that? Oh my gosh, yes. Well, you know why? Because it's such a hot trend. And I just want to kill myself because you can't learn how to be a longevity physician in three days, let alone a year, right?

Like, it is impossible. It has taken me 12 years on top of my entire medical education to figure this stuff out. Right? You can't communicate it to someone in three days, right?

And longevity is not pushing hormones to make people like feel jacked up. That is all the time. In fact, I got on a podcast and I don't want to cite any names, but there was a gentleman that I highly respect and he invented or came up with a combination drug thing or a pharmacy, not pharmaceutical, like a supplement thing to help point being is I wanted to hear his lecture.

So I got on the podcast as just a regular viewer and the first thing out of like the guy's mouth, not the lecturer but the guys who's developing the product said, You know, if you sell our stuff, you're going to be a millionaire.

We're gonna give you such and such percentage of markup and this is the best scheme ever. So it was like a webinar or something. It was a Webinar to advertise to clinicians to sell this product so that they could get rich doing it.

And it pissed me off so badly. Like I am not in longevity to make a ton of money. I'm in Longevity to help people. Yeah. And I think that that is just the rationale that a lot of people are using to jump into a specialty that they don't know about and they Well, they're commercializing it.

What they are doing is they doing that thing called scaling. When you go into a program to build a business, how can you scale what you do? My next question is about the stack trap.

If you can build the stock that you pitch that says that anybody who takes this stack supposedly is going to positively impact their aging process and longevity, then you have the million-dollar idea.

So how do you handle the stack trap? And so there's two sides of the StackTrap. There's the pre-made stack, which we've already established 27 ways to Sunday.

Probably not a great idea. Maybe it'll help you a little bit, but it's not going to really do much. Versus the other Stack Trap where personalization becomes this endless optimization and starts to create more stress load than benefit.

How do You know, like you mentioned earlier, you're on a whole bunch of different meds and things. How do you know how to draw the line? Or are you cycling through different stacks at different times, which I think is probably the approach that makes sense to me, other than some foundations.

But let's talk about the stack trap. Well, I mean, there's a difference between what I do and what to do for other people. For sure. Yeah, no, you have capacity to to things that a lot of people wouldn't.

I've been to dinner with you.

Iron Overload and Hidden Aging Risks

Right, right. And I did take a while of things, but you're right, cycle them, take days off. One month I'll take this drug, the next month, I take that drug that do slightly similar things, but not the same.

Try to optimize, et cetera, what I do for other people is I tend to see them every three to four months and I want them to do the thing for three or four month and then we talk about it.

What are you feeling? Do you want to go down? You want go up? What do you think is causing you problems? Blah, blah, and we'll make adjustments. And because there's always going to be adjustments in longevity, you know, this is not something that we know everything about all the time.

So as we learn new things and as see new thing, things are going evolve and they're going change. And some people were like amazing changes with certain supplements and other people don't.

Other people say, You know what? I can't do this. My stomach hurts. Fantastic. Let's try something else. But I don't want people going in, out, in out and out like nuts.

So I do it on a three to four month schedule. Yeah. And that makes sense. It makes total sense and do you look at labs every three or four months at any to any degree?

Because obviously you're asking them, how do feel? Well, it depends on who they are. Right. Are we treating something or are we not treating? So for an example, if someone comes in with dyslipidemia, right, we decide how we're going to treat it.

And I usually start with non-pharmaceuticals because people prefer that, right? Yeah. You know, with black seed oil because it has thymogen and there are a couple other things you can use to reduce it or play with your PARP alphas and betas and gammas.

If that works, great, but the only way you're actually going know that is to check with labs. right? So we'll usually try that. And if it's working, we're going in the right way, and we stick with it, or we adjust the dose.

If it doesn't, then we go, okay, let's try a fibrate. That works great. Then we get to a statin. Statins come with all sorts of other things that we have to do.

So if I am looking for something specific, yes, will track labs. For example, I'll check a hemoglobin A1c, but I'm not going to check your Chem 7 because I don't care what your glucose is at a moment.

I care if it is over three months. Yeah, exactly. What's the trend? Okay, let's dive into one of your recent kind of pet projects. Mass cell. Mass cells and immune aging.

All right. So I had to give you some juice here. Obviously. When you look at aging through an immune lens, what changes first? Surveillance, tolerance, inflammatory tone, or recovery after insults?

Or it depends on the person. Oh my God, that is such a load of… I'd have to go with E, all of the above. Exactly. All of it above and it depends. It does.

So all the of above, right? Your immune system fails so that you get more infections. You can't fight things off. Things that are in remission come out, tuberculosis.

That's why people get shingles, you don't really respond well to vaccines anymore. Yeah. Right, yeah, now that makes total sense. Unfortunately, that's just the case of it.

Go ahead. Right. So, masked cells are really interesting because they go up, which means by default that they are the villains in our story. When you do skin biopsies, because it's easier to do your skin than anything else, you see a 40 to 50 to even 60% increase over time.

Really? Yes. In the presence of mast cells as we age? That's correct. Okay. All right. What do mast cell do? Mast cells are packed. They're called mastzalen as named by Paul Early in the 1800s because under a microscope they looked stuffed, they look well fed because they have all these granules in there.

Right? So there's a big nucleus and then a ton of granules. And when they degranulate, they sort of release these things and they go everywhere. It's these molecules that cause problems everywhere and could release like 200 or so different types of molecules, including but not limited to because there is a whole lot of them.

The one everyone recognizes is histamine. which causes all of our immune allergy type stuff, proteases, chymases MMPs, all your inner leukins, your tumor necrosis factor, again, a gazillion things, right?

It's a lot of inflammatory molecules as well. Tons of inflammations. And there's some stuff that's beneficial. Don't get me wrong. They're not all evil.

But in general, they're extremely inflammatory and they dissolve things. My real pet peeve here is the protease. So proteases by definition is dissolving of proteins.

Yeah. It sounds like a digestive thing. tryptases and they literally dissolve stuff. And they activate your MMPs and that dissolves collagen one and three.

So you are dissolving yourself as these mast cells degranulate. As you get older and you have more, they de-granulate more and more frequently. and as you areas of pathology they accumulate and de granulate and your literally dissolve yourself and this is one of the big reasons that so if you coronary disease They accumulate in areas of atheroma and you piss off your mast cells, poof, you just had a heart attack.

They aggregate in your intima of your abdominal wall. So if you have a AAA, an abdominal aneurysm, it causes it to rupture because it's dissolving your tissue.

That's amazing, so how do we stop that as we age? Because this is an aging problem. So this analogy problem, this an ageing problem… This is a non-dense image.

This person, that person… this isn't everybody problem! Okay. The only thing that you can actually do individually is to block histamine. And people are big on that, right?

Taking H1 or H2 blockers. Or what I like to do is stabilize the entire mast cell. And what I have done is I went through, so mast cells degranulate, there's probably 20, 25-ish different receptors on a mast cell causing it to de-granate.

That's incredible. So depending on the receptor and the antigen, different types of things will get released, right? The two main receptors is the IgE, excuse me, and then the MRX.

And then there's a bunch of other ones, too. For example, there is a receptor for corticotropin-releasing hormone, so you can actually be allergic to stress.

Well, you know what? That's so interesting you say that, because lately, if I get super stressed, I mean, If I get really, really stressed, I've noticed that I can get itchy.

Yeah. And I'm like, OK, that's ridiculous that you're being hyper hypochondriac. But that now is starting to make sense. It's destabilizing those cells.

Your your your CRH is going to a receptor. You have receptor one and two on your mast cell. And it causes it to degranulate. So you're releasing histamine and other inflammatory products and it's causing you to quote-unquote be allergic to stress So that is absolutely not not crazy.

That's not a good longevity strategy No, it is not. You can respond to other things too like changes in temperature can get off math cells, right? Yeah Oxidized LDLs can do it All sorts of medications can do it.

The number of things that can set off your mast cells is astronomical. So as a consequence of that, how do we defeat this? I'm big now into mast cell stabilization.

Makes sense. So there's probably a list. I'm about to release an e-book on Amazon. My graphic designer is beautifying it for me at the moment. Beautiful.

Yeah. We want it to be pretty. It's really beautiful. Right now it's pretty ugly. And it has probably about 30 over-the-counter agents that are mast cell stabilizers, and it tells you exactly which receptors it stabilizes and how well it does it.

Took me a very long time to figure that out. So if you want natural agents, those are in there. And it's stuff like PUFAs and butyrate and PEA and a whole lot of other things.

Quercetin, of course, is in their, but it is not as strong as people think that it. Is. Yeah. How do people know? How can people figure out which one they need to?

Well, so the question is going to be right is if. You have standard allergies, you're going. To look for things that say IGE. If you don't have standard allergies and you still get that pseudo histamine itch, like for example, a lot of white women, I have it, had it.

Micrography, if you scratch yourself and light up in red, it looks like it has attached to you. Yeah. That's not an IgE, that's an MRX. Right. So you're going to use a different stabilizer for that than you would for the Ig?

Yeah, or you could use combos. Honestly, all of mine are stabilized. There's even a cannabinoid receptor. PEA isn't actually a cannabis, but it It acts sort of as a cannabinoid because it prevents a true cannibinoids from being metabolized.

Anyway, so it affects your cannobinoidal receptors. So PEA is a stabilizer and I love that one because also it does other things like it's a… It's a PARP alpha agonist.

It does a whole lot of other things. So one of my new favorite things is PEA. Yeah, it's darling molecule that gets talked it comes up a lot. And it does figuring out where it like it seems to fit a Yeah, it's pretty useful.

Mast Cells, Stress, and Immune Aging

It's considered like a stress molecule as well. So when you are stressed, your body makes more of it as a sort of self-protectant, which is kind of cool.

If you take it is a supplement, the bioavailability is terrible, so it has to be micronized, just as side note. Pro tip, people. In terms of medications, Cromolin, of course, is the most famous mast cell stabilizer.

We use that as an inhaler for asthma. But for longevity, the problem is the half-life is very short and it doesn't really get systemically activated. So, if you just have breathing problems, Kremlin's fine.

But, for a longevity purposes, you needed something that's oral. There are a variety that you can theoretically get, but since the blockade and all the taxes and stuff, ya can't.

The only real one that ya get at the moment is ketophan. You mentioned that to me recently. Yeah. Um, and mass cell stabilizer, um, it will make you sleepy.

Um… It's a nighttime. It also, It is a leukotriene, uh, agonist. So it also prevents a whole lot of other things and it's phosphodiesterase inhibitors.

You get increased blood supply. And it helps you sleep. Some people think it makes you too, too groggy. Uh, so I take a, you know, a standard dose. If you have like a mass-celled true diagnosed problem is two milligrams a day, one milligram twice a Talk to your doctor before you can run out and buy it.

I just need to say this. Yeah, I know. For longevity purposes, a half a milligram at night is quite nice. Let's talk about where hormones fit into all this because we're seeing this, right?

I think we are seeing as women go through perimenopause and menopausal, they're getting these symptoms and all of a sudden somebody is saying to them, you have a mast cell issue and they are like, what are you talking about?

I've never had a mast cell issue, but it seems that the hormonal shifts really kind of pulls back the curtain and

brings out the reactivity. Well, I think that what we don't realize, because there's so many things to think about in terms of longevity, is that estrogen receptors are everywhere.

Everywhere. We think about the standard nuclear alpha and beta receptors, right? But there's membrane receptors. There's misreceptors. They're everywhere.

they're on every cell type that we have, and your mitochondria, they are everywhere and so as soon as your estrogen goes down and you give more E1 than E2, which happens after menopause, it fails.

So we're looking at so many problems, right? So then the question is, is how do you fix all of those problems? I am trying at the moment, we started talking about this, try to dissect which receptor types are where, what they do and what do we use to fix it.

Right? Right now we use the old like throw estrogen on everything maneuver, estrogen being usually like an E2 variety, right? Some people use E3. I'm beginning to think that E4, which is a placental created version, so you only ever make it when you are pregnant, but it has a lot of the fantastic, it's orally available.

The bioavailability or the half life is like 30 some hours, apparently has a neutral effect on breast cancer issues, so that's out the table. On the other hand, it doesn't really change your cholesterol patterns.

So there's going to be pros and cons to every type of selection. Anyway, I'm working through that at the moment. There will be a very detailed algorithm or graph or box or something I Think people do have made this connection but it's part of the reason why if we want to live a longer healthier life and particularly as women if our estrogen is going to fall off, is gonna disappear on us, we're gonna have to figure out a way to somehow restore that level to some level so that the whole system doesn't fall apart behind it.

Like it's not, and you know, when we are talking about estrogen going away, were talking your sleep tanks, your brain fog increases, you're anxiety goes through the roof, disintegrates and you get more flares, you might become intolerant to exercise.

And part of it is, I guess in your world, it's how do I take this apart and figure out what's due to estrogen, what drew to something else, are the mast cells being driven to the loss of estrogen?

It sounds insanely complex and yet you seem to be able to develop these roadmaps that give you these big mind maps like if yes then this and if no then oh, we're going to go in that direction, which I guess is part of the genius.

But then you turn it into a book somehow. Well, we'll get there. Estrogen is not in the book right now. The estrogen is… Well now it's your pet project after…

It is in fact my pet product and it will be a book and I am working on it. But because it is really interesting how one thing does lead to another, right?

Because there are estrogen receptors on mast cells as well as 20 other receptors. And what leads what do you need to replace, what you do not replace?

How do minimize risk? I am retrospectively very upset about the study in 2002, the WHI that said breast cancer. goes up and everyone stopped taking hormones.

Well, what they failed to tell you, of course, is that they started it when these women were in their late 60s and 70s. And smoking. A thousand of other variables.

Of course they had issues, right? So now an entire generation of women has sort of hosed because they didn't store hormones on time. Well, that's ridiculous.

Luckily, I didn't know about that. I just started my own hormone replacement when I felt like it. So I sort of lucked

into it, but the question is, what is right?

What is wrong? The other thing that no one talks about is cycling of hormones. That's going to be important. We need to match a normal physiologic cycle because anything that has a receptor gets up and down regulated over time with stimulation, right?

Interesting. So I'm wondering, and I just hypothesizing here, so some experts can be like, she's full of shit, the answer is I might be full as shit. I don't know.

But it's possible that long-term estrogen causing problems may have to do with chronic upregulation of receptors. And if we cycle it and that doesn't happen, we may alleviate some of the badness.

Do you know Dr. Felice Gersh? I do not. OK, well, you'll want to talk to her because I think she's on that train. She's she is on the cycling train, so she'd be someone to to it.

And she she talks about that quite a lot. So when you suspect mass cell involvement, which it sounds like you're going to suspect it a lot. What's the first thing you change?

You help people to change. Is it the environment and exposures? Is that food triggers? is it stress physiology? I don't know. Supplements, sleep timing.

I mean, sleeping timing is not necessarily going be a thing for no. So it's going unless you sleep deprived. Well, it depends on what symptoms they're having.

Yeah. Allergies or asthma. That's one thing, right? If you've got a triple A, that's a whole nother ball of wax. If you've got IBD, you can sort of change things.

Let me rephrase. If there are things that are surface oriented, You can change what you're near. Because mast cells traditionally are on your airways, your gut, and your skin, because it's with the environment.

And if you change some of those triggers, then fantastic. The triggers don't reach the organ systems, so you have to just go to pharmaceuticals. Right, because you talked about mast cells being involved in cardiovascular disease.

Right. So now there's nothing you can do to alleviate that, right, other than stabilizing your mast cell. OK, that makes total sense. You mentioned curcetin earlier and said it's not all that.

But it is widely thought of as a mast-cell stabilizer. A, what do you mean by it not that? And second, how do think about it in the broader aging context?

Like, where does it miss the mark? So of course it is sort of interesting. It does a lot of really good things, right? It's a fantastic catalytic and people do use it as a mast cell stabilizer.

When I looked into it, I thought there would be just like a tremendous amount of amazing information. And there kind of isn't. Like it blocks the IgE receptor, it block the MX2 and it upregulates something called SHP1.

But I found 17 other agents that did exactly the same thing. Okay, so not so special. So I'm like, eh. There's also a sexual dimorphism with quercetin because men tend to do pretty well with it in terms of allergies and women don't.

Okay, well that's interesting. Nobody really talks about that. There is our first branch of personalization, right? Yeah. And so I dont put women on it.

I will go through the list of what are they already on and what potential things are we already blocking and then what else do we need to block? What have we not done yet?

Because a lot of the over-the-counter stuff already does do a decent job of blocking it. One of my favorites is aloe

emotin. It also blocks the IgMx2.

And it's fantastic for your gut. So that's a super, super easy one. Women do incredibly well with it, and they like it because it is good for their skin.

Sorry, what is it? Can you say it again? Aloe emotine. What is that? Is that a pharmaceutical? No, no, so it part of aloo. Like the alo plant? Yeah, but you have to get the emotene part in there.

Sometimes they separate it out. Okay. And you can find that? Yeah. Well, I mean, if you're Sandy Kaufman, you could find it. You can't find anything. I have learned that.

Okay, are we done on the Aloe Moton? Because I've got more questions. Yeah, think we're good. Keep going. OK, good, OK. So let's define what a superager is in your world, because I think that's a term that is coming up, right?

And I it's interesting that the superagers we are seeing now, like the people living to 120, 110 or what have you, Honestly, none of them set out to do that.

They just kind of did, right? Whereas now you've got a whole crop of people, many of the banging down your door going, I want to be that person. Also, i'd like to keep more of my teeth than they did and I wanna be more mobile than the were.

Right? So, but, in general, the super-agers, like, what do they keep that most people lose? Is it the strength, cognition, immune tolerance, recovery speed, joy, social drive?

And I just want to say in there, I'm going to interject in here, that I read recently that Jean Calumet, which is the woman in France who lived 120 something, she took up fencing at the age of 80. Which I thought was really interesting.

So where, where do you think in that whole soup of stuff? You know, it's kind of a combination of both. Not both, but all of it, right? Yeah, yeah, purpose, community.

Yeah. It just has to be. Like, when I wrote book one, I was trying to figure out exactly what the answer to that question was. And I discovered that sense of humor was very prevalent in these old folk.

You know, because some of them drink, some smoke, and some are 300 pounds. That's not true, but they're heavy. Well, they are not slim and fabulous necessarily.

No, no, absolutely not. And on the other hand, you know my favorite lady is the 85 year old or something, the gymnastics lady.

Hormones, Estrogen, and Menopause

Oh my God, she's Joan? I don't know what her name is, but I love watching her on YouTube. She's so inspirational. And then there's the guy that's like 112 who keeps running like it's a 100-yard dash or something.

Every year on his birthday, he sets a new record because no one's ever done it. Because nobody else has done. Right. It kind of amazes me. But I know necessarily if they're doing anything particular because they are just so very different.

I think that the next breed of us that reach that will have done intentionally. And we will have learned a whole lot of lessons between then and now. Certainly, maybe we're doing a ton of things that make no difference whatsoever.

I don't know. Because no one will know until we get there. Yeah. And I also think the world we're evolving in is so different, right? I mean, if you look at the people today or in the last 20 years who lived to 120 or 110, most of their lives were spent in a very different environment than the environment we are all evolving and right now.

So I think part of our recipe is going to have to be mitigating some of the negatives that we were being exposed to that they never had to do. Maybe one of those things might be reconsidering your approach to food and actually eating real food.

The funny thing about that is the whole RLK thing. What is his name? Kennedy. Oh, RRFK. Yeah, yeah, sorry. My brain. I'm having a moment. That's okay.

He's so ridiculously crazy about the vaccine stuff. But then he says, oh, we shouldn't eat processed foods. And in fact, unfortunately, it's the first normal thing that he has said, and I fear that no one will believe him because nothing else that has come out of his mouth has been real.

Yeah, well, it's definitely one of the many things that is polarizing people right now to the nth degree. All right, let's leave the political animal off to side there because I don't want to go there.

I'm a Canadian. So what are the three to five non-negotiables that you see in Superagers that are not supplement related? If you had to say, there's three threads that I see and these people.

And obviously, they're not supplements, because frankly, I don't think any of them take supplements. No. I think it's straightforward. And it's not necessarily going to the gym.

It's just staying physically busy all day, right? And I use my dad as an example. My dad is 85. He's been an endocrinologist his whole life. And he thinks that my longevity stuff, he's now becoming slightly interested now that he is at 85, but he lives with his girlfriend on her horse farm and he a stable boy.

He's busy. He is working, feeding these horses. he's taken to the pasture in and out every day. It is he. And then I called him on his 85th birthday and he didn't answer.

So he called me back. She was playing tennis and has this team of dudes he has been playing with for 40 years. Yeah. and He says that he stays after now cause he was running laps around the court because he doesn't feel like he is getting enough exercise with these old gummers.

Right. So I think the physical activity is just absolutely mandatory. Right? I Think that eating reasonably healthy is extremely important. These guys are not eating Cheetos.

They're eating normal stuff. And emotional state, you have to be either funny, social, positive, whatever your mental state is, I I think those are the three keys.

You know, as you're saying that, I there's also this mental state piece of not allowing your age to define you, right? Because I mean, they're not playing tennis, but if you saw them walking down the street from the back, you would not guess that that's an 89 and an 87 year old.

Like, it's the way they hold themselves, the they walk. And frankly, every time I suggest to them that maybe they should sell their condo and go live in a community where there's other people, they're like, well, why would we want to go with old people?

You know, by some people's measures, you might be considered old, but they literally don't see themselves that way. Right. It's not that they don't want to, it's just that the literally dont.

And I think your dad is similar. He's saying, Oh, well, I've played tennis, and Ive done enough. I don´t want push myself. Bye-bye. He is sitting there going, man, but I barely broke a sweat.

Like I need a couple of laps here. That's a mindset. It is an attitude that I do not know if we can cultivate it but it is worth thinking about. Can you cultivate a mind set that doesn't match your age?

Yeah. No, that's true. But I think that's how you survive. Although on the other hand, I want to kill him because it

was freezing out there these last few months.

Full therapy. And I bought him a rab coat because I was worried about him. 85-year-old guy falls down, right? He's going to freeze and die. But he decided that it too nice of a coat and he would only wear it on nice occasions.

This is where your plan's backfired, isn't it? I forgot. You are old. There is that part of you that has that sensibility. Let's move on to controversies.

What's the biggest misconception about anti-aging medicine that you wish would just die already? Like what's, what the thing that every time you hear it, you're like, are you kidding me right now?

Make it go away. Rappamycin. Thank you. Yeah. Why? Because rapamycin makes mice look really nice in cages. Which is great if you're a mouse. It's fantastic.

Rapamycine, as you know, is an mTOR inhibitor. Therefore, it causes, or it blocks you to be able to make tissue. it's going to cause hippocampal atrophy.

It's gonna cause your intestinal wall not to be able to turn over, so you're gonna end up with GI problems, because your GI junctions are gonna be terrible.

So I think that this whole wrap-up life thing is a disaster. And people are like, oh, but I only take a smidge every other week. Well, I think until we get like rapa logs that are specific to, you know, either one or two, the receptors, or we really figure it out, I Yeah.

All right. Rapamycin, off you go. Off stage left. Let's talk about the novelties, the peptides, exosomes, and the stacks, while ignoring the boring fundamentals that really move the needle.

And I mean, we see this, right? Because it's kind of like you can throw money at the problem. I'm just going to go get an exasome infusion. You're in the exaso.

Well, I was going No, and I'm not saying they're bad. I am just saying like the peptides, the exosomes, all the fancy supplements. And especially to people who are well resourced, they are like, well, I just going to buy my way out of the problem.

And what do you say to that? Well, I think that we create longevity pyramids for people. And I that, like any pyramid, the base has to be strong, right?

And the basis is things that you do every day. I always say, it's diet, exercise, your supplements, medications, if you're going to do light therapy, blah blah.

It's just stuff that do everyday. Then there's going be stuff you on top of that. So, for example, you get a massage once a week. But the reason I say that, it's good for your brain.

It's relaxing. Most people, I think, find it relaxing, but it also increases blood flow to your muscle, increases the bloodflow to you skin, and they stretch you out a little bit.

So it is a bit of joint flexibility. If you can afford it, then it would be a fantastic thing to do. Nice. Right. I think exosomes should be done after the age of 50 or with any comorbidities every month to quarterly.

Why? Because as Steve likes to say, it's like carpet bombing. Anything that we've missed with everything else sort of gets taken care of with exasomes.

They're not going to do everything, but they're going fill in the blanks and they really do make you feel better. You can see and feel the difference.

Yeah, I think that's just a wonderful addition. Yeah. I Think peptides are a bit like spot welding. Yep I, think they're the opposite of exosomes. Like if you have a specific immune problem that everything else hasn't hit, there's a peptide for it.

And you're, of course, a queen of peptids. If you want a little extra muscle, There's peptid for everything. But you don't build a longevity stack on peptoids, i think you use it as a secondary source to fill in the blanks.

It's garnish, you know, or it's not even garnish. It is the highlighter that gets laid on top of, I've lost count of the number of people who reach out to me and say, well, as a matter of fact, somebody reached out recently said asking for a friend, they want to feel better and they wanna build more muscle and lose weight.

So they asked about a growth hormone secretagogue and I'm like, all right, how old are they? I'm like, get lost. Like, go away. Are they sleeping? Are the exercising?

How do they eat? And it was a man. And I was like did they get their IGF-1 levels tested? Even though it's not perfect, at 28 years old, just like you shouldn't need NAD, you should not need a growth hormone secretagogue.

You can change your lifestyle. Your body will make your growth hormones for you. Adding a peptide to it is only begging for trouble.

Superagers, Fundamentals, and Longevity Myths

Agreed. Yeah. And I think that that's where it's the danger of peptides right now and it is kids. It's a bit astounding. Okay, well, that's the novelties.

So you talked about rapamycin being not so great. Is there anything else, any other intervention that seemed to look really good in the short term, but create long-term trade-offs that you worry about?

So, you've talked the rapomycin, is there another one out there? Well, hyperbarics is my big… Interesting. Hyperbaric, oxygen is fantastic if you have pathology.

If you need to get oxygen to parts of your body where your vasculature is not great, it's fine. If have a problem, yeah, I love that. Right, if you have pathology, so if are a diabetic, you're having neuropathy, have traumatic brain disease where you get a capillary disease or microcapillary problem and you are not getting oxygen into your brain tissue, hyperbarics can be very, very useful, right?

However, If are normal human at a normal age, and you give yourself extra oxygen, you're destroying your stem cells and your creating a plethora of free radicals unnecessarily.

So it's sexy. People love sitting in their little oxygen chambers. And I think that it will kill them in the end. But I just love the nuance you put in there, right?

Therapeutically, yes, or elderly people who've got like really old people. There was that study that was done that showed it did beautiful things for them.

Now we've a bunch of 40 year olds running to hyperbaric centers thinking they need to do it every day. I love that. Okay. All right. Just a few more and I will release you in five to 10 years.

What will we personalize that we can't really personalise well today? What do you, what's your vision or what your hope? Good question. I think we're just starting to understand genetics, and you can get your genetics tested, which will tell you maybe this, maybe that sort of thing.

I've read all of the methylation reports and all that. Yeah. I actually also think that we'll have real testing for longevity questions. For example, I would love to know what sirtuin levels we have.

We don't have any stuff for that yet. I'd love know like my sartuin 1, 3, and 6 level. Is it actually working? I love what my intracellular level of NAD is.

I would love to know that, but we just don't. We're just guessing right now. Absolutely guessing. I think that sort of thing is going to get a lot better.

And I also think what's going happen is our supplements are going be more refined. We have a few of them that are doing incredibly well. For example, I love RevGenetics and I have no connection with them.

I never met them, but I loved their products. They took curcumin and turned it into meta-curcumen by putting it in a nanomycele. The bioavailability is astronomically fantastic.

We need to do that sort of thing with lots of the other supplements such that we don't have to take as much. Yeah, because it actually gets into the cell.

Yeah. Exactly. We are so overloading our bodies to get some small quantity into our cells. What that's doing to our microbiome is really hard to say. I'm sure my microbiomes is the healthiest microbiom in the world because I always say that your microbioma are like your children, right?

They eat first and you get the remnants. If you could design the ideal super age or clinic from scratch, maybe you will, what would that patient journey look like?

Oh my goodness. Let's see. I think that everything would have to be under one roof, get all of your labs checked, see your physician. You know, I don't know if the gym needs to there or not, but all the toys would be there, which would really be quite nice.

And it's not going to a zillion dollars. That's the key. People are building these things and they're just far too expensive. I love that mindset of yours to make it, to keep it affordable.

I mean, some of the costs in some other stuff right now, the clinics and the physicians are so stratospheric. It's hard to get your head around it. When it starts to hit the six figures, you're like, really?

There's just no reason for it, there really isn't. And people come to me all the time with these great schemes to use my brain to make money and I'm like I am not doing it Yeah, good for you.

All right, what do you want your work to change about how medicine thinks about aging other than everything? Everything, everything. No, I mean, so I think you've heard me say this before.

I'd think about it in three tiers. Tier one medicine is what we do now. We wait for diseases to occur and we treat them. Tier two is more functional stuff, right?

We test, are you carrying molds or do you have too much lead in your blood? Blah, blah, blah. It's a lot of testing and we treat that sort of thing, which is fantastic.

Removal of the bad stuff. Yes. A lot toxin. Fantastic. Um, longevity medicine, however, is none of those things. Longevity medicine is knowing what is coming down the pike and it's in a complete change of mindset and Western medicine does not have that.

They think prophylaxis is, you know, very simple. Don't smoke, exercise and eat well. And to a certain degree, that's true, but it has to be far more advanced than that Yeah.

Yeah, well, I mean, and really, it requires the whole model to be addressed. And I think it's gonna be a while before that anybody's even open to it. I Think it people like you kind of operating outside the system that are going to start to change things.

This is really interesting, just as an aside. So I work in a plastic surgery office. Um, and so I recently has plastic surgery, as you know, And, uh, I did get a little fabulous, but I didn't bruise and I had my, developed my own perisurgical strategy.

Of course you did. What supplements was I going to take? When was it going stop them? What was going restart them when I was gonna do the exosomes? And I walked back into the office two weeks after surgery and it was like it had never happened.

And so I'm now working with the plastic surgery, the surgeon to figure out if we can protocolize this for all of his patients. A hundred percent. I mean, it doesn't seem crazy, but it seems like something we needed to do a long time ago and just no one did.

So I think the future is coming quickly. And people are more open to it. mean I have a membership community and Just the other day a woman was going into surgery saying, What do I need to think about?

What can I do before, during, and after? And for surgical applications, this is something that someone like you can 100% troubleshoot, right? I mean, yes, you've got to address the bleeding issues.

You don't want to do anything that's going to liquefy the blood or promote clotting at the wrong time. But these are, for the most part, solvable problems.

And then when you add that personalization in there based on the person's tendencies, you get better healing and faster healing. It seems so obvious. Right?

It does seem obvious, right? I really actually think that some of the people in this office kind of go, yeah, longevity medicine, you know, poo, pooh, ha ha laughing me behind my back.

And then when I had surgery, all of a sudden it wasn't funny anymore. No. All of sudden they're like, wait, what? What the hell did she do? Maybe we can utilize this.

Yeah, no kidding. Alright, we have last two for the person who was listening to this and is like. Okay, this was super awesome. I don't know what to do.

What do I do? What are the first three actions you'd give them this week to identify their dominant aging system? Oh my gosh, the dominant ageing system.

Yeah. Like what are three things or questions they could ask themselves or? Dominant aging systems. That's a really good question. I think the question is, is what bothers people when they're going to sleep or when their waking up?

There you go. When you're waking and you need to get out of bed, what's in your head? right? Is it I'm stressed about work? is it my back hurts? Right?

Where are my glasses? Because that means you need eyedrops. I mean, I guess when you're when your mind is quiet, and it's just starting to wake up, what is there first?

And that's what we can fix. I love that. That's really good because it could even be those heart palpitations really bug me because that's a condition they recently developed or whatever the case may be.

So you may not have an answer to this, but what's the one question you wish I would ask you that almost nobody does? I should have sent that to you ahead of time.

Gosh, I don't know. I think I get asked everything. Yeah, well, people want to pepper you with questions endlessly. I don't know. I guess the one thing I do, it's not really a question per se, is I get asked when the next book is coming out.

And the answer is it is going to come out in pieces. This is what we can put out there. It takes so long to write books individually that I'm going start putting out each chapters.

Yeah. And the first one is going to be due out as soon as my beautifier beautifies it, my graphic designer. So I'm hoping within a week or two. Nice. It's not going come out.

The first ones will be Massell, and then the second one will the estrogen algorithm that I am working on. Then I'll probably put out something on iron overload.

Yeah So these will coming out but in drips and drabs rather than waiting five years and doing it all at one time. Well, and I remember you saying this to me recently.

And one of the other reasons you said is because, Nat, if I wait five years to publish the work that I dug into now, it's going to be obsolete or there'll be new information and they'll never put out the book.

I think that's brilliant. Not to mention the fact it is easier for people to absorb the information. Then maybe at some point you're going knit it all together.

But I mean, that is brilliant! All right, Dr. Kaufman, where do people find you? Because they're gonna want to find So the website is going to be KaufmanLongevity.com and all my information is on there.

I'm seeing patients, as I said earlier, in Florida and in Vegas or online. Or you can come see me at Club Exisome. We do it quarterly. In Vegas, I think next in the middle of March.

Nice. Um, easy to get a hold of. All right. I love it. Dr. Kaufman, thank you so much for your time today. As always, it's a pleasure and I can't wait to see the books and to