Introduction to the Podcast and Guest

But what's happening is inside the cell, there's some damage. So the DNA repair machinery isn't working, right. It starts to excrete some cytokine and some chemokines.

Basically, these chemical messengers that are making more reactive oxygen species. And it's going down this lactate cycle rather than the pyruvate cycle, which is resulting in this depletion of NAD, which is a big source of energy, especially for the mitochondria.

So the mitochondria are getting more damaged. That cell is is not functioning properly. And it's greedy. It's like, hey, I need more nad I got to take my easiest pathway to do that.

And so it continues down this pathway. So it gets out of kind of the phase of yeah. And it's wasting all that energy, it's wasting all that energy. And then it essentially starts to poison the cells around it.

Welcome to Doctor Talks the podcast where every episode leads to a healthier you. Join us as we navigate the world of optimal health, uncovering groundwork and strategies to conquer chronic disease.

In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors. If you're seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place.

Get ready to unlock the secrets of lifelong health and vitality. This is Doctor Talks, real talk from real doctors on the issues that matter to you most.

Hi and start Kent Holter for another episode of the Peptide Summit. And today we'll be interviewing Doctor Amy Dirksen. And she'll be talking about peptide therapies for the immune driven conditions, including autism, Lyme and that hypersensitive patient.

So that the patient that everyone hates, it has the hardest time treating. But, doctor Amy, thank you so much for being on the summit. I appreciate you taking the time and looking forward to hearing, you know, all your your tricks and, and then how you approach these very difficult patients, but, just, just a little bit of background, doctor Amy Dirksen, she's, former competitive athlete and naturopathic physician.

She did, hurdles. For what? College for Western Washington. Western Washington. Very impressive. But I also did, studies in biochemistry and or medical postgraduate training with doctor clean heart.

As most, people know, well known, Lyme physician. Really cutting edge for over two years. She's one of the original doctors with them specialize in working with both autism.

Your pans pandas, patients, chronically ill.

How Low-Dose Antigen Therapy Helped Her Practice

She's been involved in teaching various topics with Doctor Clean Heart since 2004. She looks much younger, so whatever she's doing is very good. She's been all speaker at autism one.

County of Comprehensive Integrative medicine, American Academy of Restorative Medicine. With, Scott Forest Green, the forum for Integrative Medicine, I think to film, and hope to heal Lyme conferences.

So she's just really, spoken and, and goes to so many conferences. She's one of the first down the paddock

physicians to become a fellow with, medical Academy of Pediatric Special Needs.

Wow. That's that's really nice. And is board certified in integrative pediatrics from the American Association of, Integrative Medicine, which is typically limited to dogs and MDS.

Congratulations. She's also a member of the International Peptide Society. And AK yeah. So environmental. She's kind of basically a nerd that's, been everywhere.

So name it. She's done it. She's working on really those most difficult patients that are sensitive. The toxic patients that react to everything. We're going to get into that.

Our typical patients tend to be those that seek by multiple doctors and specialists. And I think, you may agree more and more like we did our study 15 or 16 years ago.

We published our, our data. People saw, on average, 7.2 physicians before seeing us. Now it's like 15. Yeah. And it's everyone just goes through the, you know, basically specialist.

Everyone looks at one little part and is they don't get better. Basically, her greatest passion is working with pandas. Pandas patients. And those are very tough.

And you have the parents and the, the kids, but I imagine getting them better is feels so good. She feels that the more we can understand about our kids, the more we'll understand everyone's health.

I totally agree with that. And my heart goes out to you and the parents of these, you know, autistic kids. And, this the stress that they, they have to go through and, and even the, the, the courage to go find a doctor like yourself because they're told, oh, there's nothing you can do.

Yeah. And and how, doctors treating autism are maligned like quackery. And it's like, well, here's 400 studies showing you this, you know, but anyways, I'm going on, welcome.

Thank you so much for taking the time. And she's very good friends with, Scott, fourth grade and the better health guy, who's awesome and sounds like she was instrumental in getting, Scott better.

So I think that's great. So, Yeah. What, we can talk about, you know, how you got involved in this so-called integrative or alternative space, but what what when did you find peptides and and how did that happen?

Yeah. So I would go back a little bit, but back in 2014, I started working with, low dose antigen therapy. So a little bit about me is I, have Hashimoto's, a lot of mold sensitivity, pretty sensitive keto.

But yet I was a competitive athlete, and I feel pretty hardy. And so I don't like it's these two dichotomies, right? I'm like, okay, I'm more sensitive than I want to believe.

And so, you know, I think with any of our patients, it's all about the cup is full and it's what's that tipping point that tips them over, whether it's autism or someone who's exposed to Lyme disease?

And so I started working with low dose antigen therapy through the Am Academy. Okay. To describe that. Yeah. So low dose antigen therapy essentially the whole thought of that and I'll get into that a little bit later too.

But it is all about retraining the lymphocytes to become more tolerant to the environment and to whatever you expose them to. So it's done as, just a little intradermal injection, usually every seven weeks.

And as time goes on, you can spread those out further apart. The nice thing is you don't have to do like in the office. You don't have to do as much testing.

You don't have to keep as many antigens there because like the food mixes, 300 things mixed together. The

environmental mix has, you know, molds and pollens and animal dander and all that same thing, about 300 things together there.

So in one little injection, you can do all the foods and all the environmental factors. You know, it hurts for like a second, but it's amazing. And for me, it was one of those things.

I had a goiter for over a year. It was hard and enlarged. I kind of ignored it. You know, I didn't ask other stuff. Yeah, I'll figure this out. It's got to be wheat or it's got to be heavy metals or something.

And but it wasn't changing. And my thyroid dose was really inconsistent. And I did my first injection of that, not thinking anything, thinking, okay, this is another thing.

I'm excited. But you know, I haven't seen it work and I'm kind of scared of it. My goiter got soft and it shrank within 20 minutes. It was remarkable.

And it hasn't come back since then and so I'll no, it's actually my wow brag a little bit if I now at this point sometimes go to 3 or 4 months in between doses just because I get dizzy and I forget, sinuses cleared up right away.

It was interesting. I almost felt like I had cold air rushing through my sinuses because that's been always my area, right? Oh, you're like, wait a minute, I can breathe now.

I was like, oh my God, that's what it feels like to get air in your sinuses. You know, I got a wind that will make a big difference to do you think it's more of the foods or the inhalant?

You know, it's interesting. I think it's the inhalants. But the foods for me, uncovered a gluten sensitivity that I had suspected because I had seen the connection with Hashimoto's and all the literature, but it was always just like it wasn't sure that I was really reacting.

Discovering Peptides Through a Complex Patient Case

And the whole when you first you, you're, you're exposed to your antigens and there's an enzyme in your system, you can be a little more sensitive for a couple days.

And I, I actually ate some gluten and it made me throw up and like, holy moly. Right. And so it was really telling for me. And at that point, it's become pretty clear.

I also suspect I have a little reaction to potato now over time, that it just wasn't so clear before, but going off that it just really stabilized everything for me.

And I think that's such a great treatment. And so safe and and we it I don't know, you may find this too, especially of practices that you with other doctors like kind of great treatment, but they kind of get away from it for a while, you know, and, and it's just something you use on almost everyone and almost everyone.

So, you know, we're all exposed to foods we're all supposed to the environment. You can do a chemical mix strap is amazing, especially for kids on the spectrum.

Like whenever they get agitated or start picking at their lips until they're bleeding or like, fighting it themselves. The strap or cluster idea can be great.

And then I've gotten into the LDA, the low dose immunotherapy, which is more for you know, some of the bugs. And you can look at Ty Vincent and the work that he's doing with that.

So he's really gone in a great direction with that. And so, you know, that's a huge part of my entire practice. I have three other work with me. Christopher Wakely will be another speaker for this.

So he's in my practice as well. And he does a ton of LDA LVI. And so, you know what's what's interesting with LDA, I it's love doctor. So I like one people love it or say it doesn't work.

I don't know if it's like how they're using it. I've been trying to figure I figure it out or if there have enough patients, you know, but it's probably how they're using it.

And are they using enzyme or are they not. What sort of education are they giving people? What are they watching for? Are they what kind of doses? Because that's the thing is there's a wide variety, especially when you get into.

Yeah. In the Lyme organisms, you know, there's a wide variety. Complexity is so much more LDA you give it and you know. Right. Yeah. But when you get into LDA and you know, I've seen some wows with it, some of my Lyme patients, you know, especially like the Bartonella, the burning gut kind of stuff has been great autologous to school, school autologous stool can be really great for the chronic gut issues.

And for me. So, you know, learning that then it just hit home like what an immune component is going on with so many of these infections. Until then I was pretty heavy.

Antimicrobials. Yeah. Whether it was prescribed and or herbal. And so that really shifted my practice, just seeing how it played out in myself and then trying it with a few of my regular patients was like, oh my gosh, this is where you have to start, calm down the immune system response and then see what's left.

All right. So you're diving deep into peptides and longevity on this podcast and we're right there with you. Integrative peptide stands out trusted by over 10,000 doctors to deliver real results for their patients.

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Again, integrative peptides.com. Use the code pod life for 10% off. It's time to elevate your journey starting now. Yeah. And I think that's you know what happened with myself and and see with patients is that.

Yeah I was in the, you know massive antibiotics I'm not giving enough and doing, you know, five seven at a time. And this bigger dose of help fix the immune system first I also noticed is that like when I do peptides or any treatment when I was sick, I would get huge flares which look like know allergic reaction.

And then but if I wasn't, there was no problem. Right. You know so it shows that that and the problem is the sickest patients, the ones that react negatively, you know, the ones that need it are the ones that react negatively, which which makes it tough.

Yeah. Yeah. It shows us all the immune system screwed up. Yeah, yeah. So we integrated that into our practice and then, all of last year and kind of late 2018, I was called in, like probably 25 of us from around the country were called in to work on one case in particular, so someone that could afford this.

But that was very sick, a young man who, his symptoms were escalating to the point that he was bedbound, blindfolded earmuffs like being in a bed. And so he called all these doctors in to start to brainstorm about that.

And I was fortunate enough to end up being his managing physician. But there was a group I was co managing him along with a neurologist who is fantastic.

And that's an oxymoron actually. That's usually an oxymoron and I know I know right. So I mean it was so fun. I was it was like my, my nerdy dream job.

So that's nice. Well, you said 25 physicians, so there were 25 of us. And then it was narrowed down that not that we were with the airborne group, the I forget the name, whatever it was, the guy gave a donation that put all the doctors together.

Was that was that that group or the same, a separate group. And I can't disclose, actually, because it was for a private patient. Oh, okay. Great. Well, that's great doctors involved.

And I think that was nice. And so doctors from all kind of genres talking about this thing. But then it came down to there were six of us that were really meeting regularly to talk about this case.

And, you know, we had done all the things we knew. You know, you treat the infections, you look at the labs and oh, my gosh, this virus is a problem. What is it?

And then one of the doctors proposed peptides, and I had never heard of peptides. And he laid out a few things and what they could do and how it fit with the labs.

And I got so excited and the International Peptide Society happened to be having their conference, you know, two weeks later. So I got myself on a plane.

I got so excited about it and how they started working in this patient who was so sensitive, you know, I mean, the thought of just doing injections and some of these things, well, nothing was working.

So I was getting 25 doctors together. Usually it's a battle, you know? So. Oh, gosh. Well, right. And, you know, you're afraid to do something like LDI because, well, it's, you know, it's tough.

You know, you're doing a little bit of a dance. But we started the peptides and we saw some things, you know, and we discovered some other things going on with the patient.

But it really helped to clarify. And just the fact that we noticed something was so exciting and a patient like him who was so, immune activated. Right. Or you can't do anything.

And this allowed you to at least try something. It allowed us to develop and calm down enough to. That's awesome. We saw some changes, and then, the other three doctors in my practice also got on board, and I'm really spoiled.

I have a group. There's four of us. I trust all of them. We all bring a little bit something different to the table and we meet every week. So we've gone to a bunch of conferences, but we meet every week and we get to talk about, you know, especially as we were just getting into this, you know, what were we seeing with our patients?

What are we trying on a dose? What's working? What it backfired on us like, oops, okay, this is what it looks like when you do too much. You know, I put myself, you know, I don't like to think of myself as an autoimmune patient.

I put myself on five peptides at once as injections just to start with because again, and, you know, flare the heck out of myself. Yeah, yeah, yeah, I've.

It was kind of fun, right? Because I, I love that what you like, you know, it's that collective brain and yeah, you know and people see this and, and, you know, doctors that can extrapolate which I have found.

Immune Modulation, Mast Cells, and Gut Repair

And you probably hiring doctors, so many doctors coming out, they don't understand concepts. They memorize. They can memorize anything. Yeah, but, hey, I saw this.

Maybe that means this is going on, you know? But meeting with the doctors, that's like an exponential brain. An experience. That's right. That's amazing.

And medicines and art and we, you know, we deal with pretty sensitive patients. So majority of our practice. So I'm up in the Seattle area. But most people fly in to see us.

And so, you know we're not a first stop I don't have that coming. Oh yeah. Coming in I don't have a brand new

diagnosed case of autism. We have people who've, you know, been through it and they want something.

And so it's it's fun to have that, you know, and just to have people you trust because this is not easy medicine to do. Right. And it's exciting when it works and it's, you know, when you question everything when it doesn't.

So yeah. Or it's I love we talked about, going to love one of the lectures had everything works for somebody or you know and and it is it's like and and patients go online, they and you can see they're just almost paralyzed and they have a, some basically testimonial this year about this patient better and other people say don't do it.

It's, it's tough with all these, you know, complex patients and and then they go to their doctor says, oh it's yeah, it's quackery. And you know, so it's it's you can always believe in what you do.

Practice with integrity, do your best to help people. Yeah, right. And I think explaining to the patient and I tell the doctors, I think first you have to convince the patient in the right spot and let them understand why you're doing this and why their doctor may say, oh, that doesn't make sense, because they don't use that model.

But what what are some of your favorite treatments say not not peptide wise. So I love so LDA, LDI I like low dose naltrexone. I think it's fantastic.

Just if you're looking at something to kind of calm things down. Yeah. Get immune, you know? Yeah, it's kind of like, yeah, try that very safe and say if you could do it as a cream.

So if it's a child, you can put it on topically. If you want one less pill or things you have to mix. And so that's been great. I do a lot of focus on the histamine mast cell piece.

So really looking at the variety I love to Todd often I do use some Crumlin, but just looking at the variety of the H1, H2 blockers and kind of seeing if you can calm things down and also using some of the natural treatment, some of the during the bio Flavia like, VI setting, I was looking at a, study, you know, like all the mast cell guys, like mast cell mastermind guys.

Yeah. Alfred. Oh, my God, that he must do nothing else but but answer those questions. But my gosh, you know, they're kind of stuck on direct mast cell inhibition where I'm like, look upstream, you know?

Yeah. And and modulate the immune system. And once they looked at, you know they all have Crumlin. It doesn't absorb well. It's pretty weak. And just like, if I Saturn or if you pronounce it differently the biofilm avoid but much more potent you know.

Right. And so it's a mast cells are huge but it goes along with that whole immune dysfunction. It goes with the whole immune thing. And I think, everyone needs to be looking at the gut, you know, so, so much.

I mean, they know so much now about the gut brain barrier, but, you know, 80% of our neurotransmitters come from the gut. And think of all the stuff that goes in there and the food qualities that have gone down.

I've just seen the changes in stool testing over the last 15 plus years. You know, I'm seeing dysregulation of IGA levels now. I'm seeing a lot of you sniffles.

You're seeing things that I would rarely see before. You're running food allergy panels, and it lights up like a Christmas tree. So you're seeing people that are just over activated there where they have, like, every food, right?

Every food. And it's not you know, that solution is not taking away every food. It could be. Let's start some LDA and let's try and heal that gut. And you know, peptides can be great for that.

The BPC I'll talk about that a little bit. But that's amazing for helping to heal that up. But a lot of times, you know, we're having to do some parasite treatments or some herbal anti-microbial, something broad.

Rifaximin prescription is is helpful. It's not the end all be all, but it can be a really nice end, to your treatments and and try to explore like, I like this for based probiotics.

I think they can be good. I'm not a huge probiotic fan in general, just because a lot of them can be triggering. But I think there are some newer products coming out that are, yeah.

And I think that's, you know, we're trying to say the microbiome, but when you start looking at the viral, you know, and I was looking at some studies where, it's basically you didn't get these, you know, good bacteria where they're making butyrate, which is good. Right? Yeah.

But if that beta level gets too high, it, it activates a bacteriophage, which is a virus that starts killing that, that basically bacteria that's making the beta. Right.

So the beta rate level doesn't get too high. It's a computer program. You know, it's it's not. So wait until we get into the virus and everything. But yeah, gut got is is huge.

But the thing that's been interesting and I mean I you know, none of us have it figured out yet. But you know, so many of my colleagues and no, no bashing of them.

But as a natural path, you know, we're always like, oh, you do some acidophilus and bifida and you do some food stuff and you know, that doesn't always work.

And you can give, you know, all the fancy probiotics in the world and all this other stuff. And you run a stool test and it still looks terrible. But I've got to say, either doing like oral immunoglobulins, like a product that has IGA in there, I love doing something like BPC.

I have seen some things really significantly change where we're repeating stool tests, but also just looking at symptoms more than anything that things are stabilizing.

People are able to eat more food. The other thing to think of is, you know, that the mental emotional level and that neural programing. So something like DNA and hoppers work can be amazing.

And I've had people when they're ready to do it, it's a hard sell. You know, people want a pill more than a time thing at least. Right. Oh that that's very true.

And and that's why would you talk about the gut brain access. But I think people forget they, they, you know, talk about how the gut influences the brain, but the brain also influences the gut.

Right. And so that's why a lot of studies you have the you give all these probiotics. But as soon as you start like it goes right back, right. Because you know, the brain, which is kind of like why I like BPC and, you know, tb4 frag where it's affecting both sides and you can kind of get general a little more long term, changes.

But and stress, you know, stress is, is a killer. And how it affects, you know, that sympathetic nervous system and causes immune modulation and, all that people kind of think, oh, you're stressed.

You just, you know, stressed out woman. No, it, you know, physically. And it's tough because once you've been ill, your ability to actually make cortisol and handle the stress is less and less and less.

And then there's also the internal stress of the the microbes or the toxins themselves that are stressing you. And it just really, you know, toxic. Yeah. Because everything's a vicious cycle.

Right. And and I think if people aren't stressed, they I think some people have Lyme, but you know, whatever you call Lyme can be a lot of things. But, if they're not stressed or have these other things, they're probably never going to have symptoms.

You know, the body just suppresses it. But as soon as you get layering of all these other things, which often, you know, I'm sure you've seen this, it's like death in the family.

Divorce or some trauma sets everything off. And then all of a sudden everything just goes haywire. Well, that's what I've seen. I've been in practice now long enough to know that people that we treated for Lyme before and not to say there's there's never a bug load because a lot of times there is, but we've gotten them better.

And then some sort of family trauma happens. A parent dies, you know, a child is sick. Something, a divorce. All of a sudden all those old symptoms come back.

Or what I see with my autistic children is maybe we dealt with heavy metals and all these things, and they were stable when they were younger. They're coming back to me now that they're going through puberty and all the hormones, and now they're feeling different.

And like a lot of those old symptoms tend to come out of the woodwork again. Yeah, I totally agree. And what, what I, I was thinking like, what kind of testing you like to do and.

Yeah, we, we like to do, a lot of tests. And I've noticed that, you know, especially in the immune sense, like the Lyme patients have chronic fatigue syndrome and the autistic kids, their lab work looks very, very similar.

You know, it's it's like, damn. Okay. There's like a very similar underlying issue going on here, right? Yeah. So the artistic the autistic child or the pandas kid or the post Lyme syndrome patient or your chronic fatigue fibromyalgia patients, they're all pretty similar.

So a lot of the labs look good, like pretty darn normal. But if you really look at it, you're seeing a lot of similarities there. I think a simple thing to look at with the CBC is that maybe so you add up the monocytes, eosinophilic basa filles if it's over ten, and especially if it's over 15, you know, the immune system is overactive and screaming at you.

But everything's normal. Everything's normal. Gonna be normal. But, man, give me someone's chem panel and CBC, and you can learn quite a bit from that.

Yeah. It's just. Yeah. Looking a little deeper and and but wait a minute. Your CBC, your compound, your cholesterol or your cholesterol level high. That's your problem, right?

Yeah. But the thing that's tough with a lot of this too, is, you know, you may have a lot of elevated viral antibodies, which are also normal because it just means you were exposed before.

But what what is normal and what what when does that tell you that that's actually something they're still dealing with. It has to be. Yeah. Or killed versus it's a healthy immune response.

And that's where, you know, kind of the the art of medicine comes in. Yeah. It's like, you know, where and I don't you know what mean bar or antigen or HSV six, they have like 0 to 10 is normal.

Everyone's abnormal but normal or or there's degrees of that. You know it's yeah. How high are their life times. Normal. Yeah. But it's strange how how or with hormones like some of the, levels are like estrogen zero to something.

Yeah I know right. So so you're like, okay, I'm 0.1, but the normal range goes up to 60. And so I'm normal, you know. Yeah. Oh you're normal. Yeah. Yeah I know no it's crazy.

I do find like an organic acid test or a urine organic acid test is really telling. It gives you a lot of information about glutathione on your urea cycle and ammonia pathway is all your B vitamins, gut health.

So yeast, bacterial markers, serotonin, dopamine. Really helpful just in a single, you know, morning urine sample. I also do a lot of stool testing. I do find it gives me quite a bit of information which would still test you like.

By the way, I like the GI map, but I also like the Genova GI effects. I find they like they have their strengths and weaknesses. Yeah. And what do you like assuming?

I mean, you probably see the same thing. Well, it depends somebody who's been to every doctor, they have tons and tons of labs, but a lot have the same labs over and over and over.

With let's say you have a typical person that. Okay, what test? They can't afford every test.

Testing, Lab Interpretation, and Clinical Priorities

But what do you kind of not insist on but really encourage? What do you think are some of your key tests? Yeah. So especially if it's an adult and drawing blood is not traumatic.

There's a lot we can get. That would be covered by insurance if they have insurance. So, you know, your CBC, your chem, a homocysteine, a histamine level.

You can look at some hormones, you can look at a TGF beta one, which will give you an idea. Is there a mold exposure or is there some sort of acute inflammatory response happening.

You can run your viral titers. You can look at some vitamin status. So and red blood cell zinc a red blood cell magnesium. Those are so helpful because that's looking at what's inside the red blood cell.

Average lifespan of that is 3 to 4 months. So that's giving you a nice average. That's not just, you know, a supplement that they're taking in. A lot of times those two minerals are really low and really impacts a lot of other things.

A methyl moment acid is really helpful to know that intracellular B12 level, you know, if you run a serum B12, everyone's going to be high. If they've ever taken a B12 supplement.

But the methyl Milana acid can tell you a lot. And I think what else we put in there put all kinds of stuff. I do quantitative immunoglobulin, so I do G, I g a gm ig to know to person.

Right. Because some people are low and some people are sky high. And the way that you're going to approach treatments for those patients is going to be a little different.

Yeah. And that's what you know, I think our average panel for a sick patient, you know, was like 35 like quest tests, you know, or the, phlebotomist at the at the draw station.

We used to draw at our office but didn't think it was us, but, they go crazy. And I went in to get my blood draw, like, oh, this is that doctor that is all about, like, it's all these tubes.

Yeah. And I'm like, hey, I heard he's awesome. I've heard he's really good looking, too. Yeah, but, but it's it's, it's funny. And they screw up some of the tests you really well.

And that's a PowerShell function. He was just very well factor beta C for A they tend to screw it up. But yeah. And then I think they're even better, like now that like, you know class they're doing the immuno blot instead of the western blot, picking up a lot more.

But they'll tend to be more like, you know, negative. But they got a band that is only in 0.1% of normal people, like hello. And so that's the thing is, you have to learn how to really read those labs.

It's actually something that the doctors that I work with, and I have been wanting to go back to Best Year to teach graduating students of. Yeah. How do you navigate all these all these labs?

Right. What can you learn from it? I presented in other lectures. And one thing that I'm, going to upload kind of after

this is just a PowerPoint on some of this stuff. And I can also put those in there too.

Oh, awesome offer that, for everyone. Yeah. And I plan on recording it too. So if you're a visual person, you'll have the slides. That's great, because it is.

It's like that within this range, you know, and and I think you get such a good picture when, when this is high. But they can all be normal. But you're like one glance, you're like hello, you're screwed up.

You know, you see that? It's messed up. So the other thing is, you know, I do autonomic response testing. So I trained with Doctor Clean Heart. And that's a skill that he's developed.

And I've taught for him gosh for a long time now. And so it's it's another it's a second opinion. You know, what is the body having to say. How do you navigate through all this stuff.

When someone is sitting in front of you and everything's normal? But they still feel really horrible, you know, what's the priority? Where do you start?

It can be a great way to know if, especially if someone's really sensitive. What can they tolerate? So it helps us. The other thing is we also look at environment.

So if there's suspected mold exposure especially you know we'll do a detailed intake. And I think taking a patient history is the number one. Yeah. You know, there's so much there.

And learn from the mistakes of the past. Learn from what helped them in the past, what made them worse. There's so many clues there. And, you know, don't assume someone else has already figured that all out.

You know, they've come to you. You need to look at it with another fresh set of eyes. Yeah, yeah. And I think, you know, after the history is that I do a lot of tests and I pretty much know what it's going to look like, but I feel I have to show the patient right that look because everyone else said you're normal.

But, you know, people go, what if you don't find anything? Well, it hasn't happened yet, but, yeah, where you can paint a picture, you know, and then decide together what you know, what direction to go.

Yeah. And it's also how you present it to. So get excited with someone when you find some abnormals rather than. Oh, no, you know, it's all about how you frame it.

So. Right. We found some things here. We have some explanations for why you're feeling so bad. This. We can work on this easy. What we're dealing. Say, I got good news.

I got bad news. The right. Like, the, bad news is you're hyper going about. Good news is you're hyper huggable, you know? Right. Good news is we can treat that. Yeah.

The other thing is, you have to make sure. I mean, it's not a lab, but do ask your patient if they're pooping every day. It is not uncommon that. Gosh, I was working with a family last month, and I asked about their daughter, and they're like, oh, she's the best Cooper in the family. She goes every three days.

And I thought, oh my goodness. Like, I don't know what to do. And so it's not uncommon, you know, a lot of that sort of bowel laxity and the lack of peristalsis happening because you're stuck in that fight or flight mode.

Yeah. These illnesses that you're dealing with and you're not in that nice parasympathetic mode. Yeah. So and and it is I've never seen so many people happy when you tell them they have Lyme.

Yeah. That's like thank God you know because it just they want some diagnosis something to work on you know. But the other thing I would say too, because I know this is going out to other doctors, is even if you don't know Lyme, if someone comes to you saying there are Lyme patient, it doesn't mean you can't help them.

It's just, you know, the Lyme organisms, Lyme and all the co-infections are very inflammatory, so they may need someone to help, kind of know the way things to treat that.

But you still know the foundation. And how can you work on drainage and detox support, and how can you deal with immune modulation and all these things that's going to help them tolerate those treatments?

Absolutely. Because it doesn't mean we you know, we used to be okay, you got this. Let's just go after it now. Like they're like, why aren't you giving antibiotics now or or not.

We're going to get these other things first. What? And you know, to get from I think A to B, we'll get there much faster by not doing that first by not doing.

Absolutely. You know, if it's an acute, you know, exposure of course you're going to jump to antibiotics. Yeah. Yeah. It's not it's not our first thing out of the gate.

So I'm glad to hear that you're in the same camp. Yeah I mean it is acute a very aggressive within. Right. And they say well that's overkill. I said if it was me because I know how horrible the freaking illness is, I wouldn't wish it on my worst enemy that if I can prevent that.

But once you have it, there's better ways of going about it to get to that final. But some people need to reduce that load. And that's where I. Yeah. And then they have their place.

Everything has its place. Right. Yeah. And let's see what what are your favorite peptides. Well what what do you like. We're going to jump down there. All right.

So favorite peptides I'm going to scroll down. Sorry I have notes in front of me. It's been a long day. So favorite peptides thymus and alpha one. Love it.

Tb4. And the T before or just any of those aspects of thymus. Now for one, you know, it's a, big, you know, key one booster boost, natural killer cell function.

It's approved in 30 countries. Cervical cancer to auto, to infections, approved as an orphan drug in the US also for melanoma. But, yeah, it's it it's one of the immune the thymic peptides.

All similar but a little different. Yeah. Yeah. So I can talk a little. I have some notes here if you want on that thymus an alpha one. So you know usually it's an injection.

It's a subcutaneous injection. Tiny little needle. Really no documented side effects or negative side effects with the thymus and alpha one. And I would say it's probably your first go to in your chronic patients, or the patient who shows up and is saying, oh, I don't tolerate anything.

I can't do that supplement because of that ingredient. I can't eat this food. I can't do anything for more than a couple days. Thymus and Alpha one can be fantastic.

And I would also say that it's one of the only treatments where more sometimes is better. In that patient. You know, usually that's the patient that we want to be really careful with.

But I actually find it right off the gate. You actually go a relatively high dose. So even up to a half a CC per injection every day for a total of two weeks before you back off, you know, see if you can get things to calm down.

And that may be something that you revisit later in treatments, too. Whenever they're flared, you can go back to that high daily dose there for a couple of weeks and it can be really helpful.

Yeah. And and I think with, with that comment is because things with the immune system, we're kind of a teeter totter. So if you raise that t it's when you're lowering that inflammation.

Yeah. And but as if you asked a chef how to bake a cake. And yet, you know, that's five chefs in six different answers. Right? I mean, in general, I mean, there's so many ways to do anything like, well, what you see is BPC what they said first kind of comment down and then add the dimensions.

But there's no right or wrong. It's yeah, it's whatever works. Yeah.

Thymosin Alpha-1 and TB4 for Sensitive Patients

So the thymus now for one the other thing I would say is this has been great in that pans pandas patients when they're flaring. You know you're not going to inject for the very first time in the middle of a raging flare.

But it is something when they're more calm. I am a huge believer of talking to my patients, even if they can't communicate that well, to explain, hey, we're going to do this, the shot with you.

And here's why. You know, this is why I want to do this. This is why I think it's going to help you. And why don't we don't have a better option and like, hey, I'm going to teach mom right now how to do the shot.

She's going to do it on me. Do you? Oh, so tiny. Do I say so tiny? And it really doesn't hurt. A lot of kids are actually preferring to have it in their upper arm just to do a little pinch and subcutaneous.

So you can just do a little pinch there. Belly, the bottom. Actually, I have you tried tiny Dannielynn I have not, yeah. So I look at in some of your patients use where you like to use the time is not for one try time meal.

And it's, much more, immunosuppressant, lowering inflammation. Okay. And, I'll shoot you some studies on it for. Yeah. With you. Is it a prescription or is it.

Yeah. It's the same thing. It's, Okay. Injectable. We're working for ways to get it orally, but, Yeah. Cool. Yeah. But yeah, I would, I would try it out to see what you think.

Yeah. And I guess you're just compounding pharmacies. And the new pharmacy I'm working with has. It is a nasal spray that I'm about to try for myself, so.

Yeah. So it's it's interesting, you know, people are throwing this stuff sublingual and nasally. Some are outliers. But we've spent a lot of money, like with, with some of the big pharma, CRMs, which and they actually have these programs that will tell you can this absorb and a lot of the ones that people are using the sublingual, oh, sublingual, it's going to work.

It's like 0%, you know. Right. And you know, you even look at, you know, like the GLP ones from Big Pharma, actually, they got absorption up to 1%. That's the big breakthrough.

So a lot of these things are very tough to get to absorb. Yeah. And but look for clinical outcomes. So I'm gonna try it with myself first. And yeah kiddos that are kind of tired of distractions and there's some that don't like the ad.

Well, it's pretty long, but yeah, it absorbs. We just, tested did, testing on some, touch peptides, some for amino acids, and got no absorption with just kind of, standard stuff.

So people just putting these things sublingual, is just based on. But. Yeah, but so that is tough. It's not cheap. We're not doing the tests. So it's, it's taking a little while and and and cost a lot, but so many things are tough to absorb, but anyways, that's a whole another topic I missed. Another one is good.

It helps with, senescence. I'll just put that in. Yeah, let's talk about that, because I think that's an important topic. Yeah. I'm going to go to my notes because it's a tough topic.

So I'm trying to simplify it because I've been to many conferences talking about this, and it sort of make sure head spin and my background was like, why don't want to kill the cells?

Yeah, yeah. So I'm going to simplify it in a way that makes okay, I don't think I'm oversimplifying it too much, but just that makes sense. Because I've always wondered, like, why is it that someone could get exposed to Lyme disease or a moldy environment and you've treated the infection, you got them out of that space, but yet they continue to be stuck in this sort of depleted state.

Right? The stamina is not there. They're still so tired. They're still not sleeping, you know, struggling to put on weight and some of those things and having so much mitochondrial, you know, deficiency going on.

It's like there's not enough gas to run the car. And the senescence piece really makes sense for me. I'm going to throw my glasses on so I can see this okay.

So cell senescence essentially there is it's a cell response to DNA damage. So which is typically oxidative stress. It could be infection. It could be a chemical exposure.

It could just be normal aging. So if that in the right environment sometimes these cells can go into an a senescent state. So basically the cell has lost its ability to divide.

And it's stuck in this state of arrest. And the problem with that is it has abnormal cell growth. There's a lack of that apoptosis. So the body can't clean it up and kill off that toxic cell.

And so just just define apoptosis. If it's not just like that preprogramed cell death. So it's not able to. So what you have is you have a damaged cell that's stuck.

So it's not dividing. It's not proliferating. And that's how our body is protecting us from like that. We're not making tumors with every little exposure that we have.

But what's happening is inside the cell there's some damage. So the DNA repair machinery isn't working, right. It starts to excrete some cytokines and some chemokines.

Basically, these chemical messengers that are making more reactive oxygen species. And it's going down this lactate cycle rather than the pyruvate cycle, which is resulting in this depletion of NAD, which is a big source of energy, especially for the mitochondria.

So the mitochondria are getting more damaged. That cell is is not functioning properly. And it's greedy. It's like, hey, I need more nad I got to take my easiest pathway to do that.

And so it continues down this pathway. So it gets out of kind of the phase of yeah. And it's wasting all that energy, it's wasting all that energy. And then it essentially starts to poison the cells around it.

So even in the absence of the infection, once that's been treated with the absence of the mold exposure or the chemical exposure, you have these toxic cells that are now, over time, poisoning the rest of them.

And making the cells around them now more damage, creating mitochondrial dysfunction. So you're depleting all that NAD, which is a lot of why a lot of our patients need the NAD and why they're so dependent on DNA, cell B12 and B12 shots and all this methylation support.

But yeah, you do the methylation support in a completely takes them. And so it explains to me how these kind of secondary mitochondrial issues are coming up.

And that's really the big thing. Once someone's been sick and they're sort of on their road to recovery, they're they're stuck, right. They want to exercise, but they're too tired to do it or it makes them feel worse.

And so you really have to start at the ground level. And that's where the senescence was kind of the cause of that. And one thing that's nice is like Tb4 and T1 are really good at the tier.

One will kind of move this camouflage from those cells so the body can start to clean that up. But both of those can help to repair those senescent cells.

Other things that can help with that would be fasting. So that's why intermittent fasting is actually such a great thing. If you can have someone fast for 14 to 16 hours of every day, really helps to reduce that senescence reduces aging, you know, helps you feel better.

Exercise is one thing that can reduce that. Not always a possibility for our sick patients, but for the rest of us. You know, exercise is fantastic. One reason why ozone works so well is it actually activates NAD inside those cells.

So the NAD that it's needing so much to function is actually getting activated by that, which is why that therapy is working so well. Yeah it is. It's like they got to either cells, got to, you know, heal or die, you know?

Right. You got to you got to get them out of there. And and you, you use some of the mitochondrial booster peptides. Yeah. You know, I've used a little bit I haven't played with that as much as I want to.

Yeah. And I've got to say probably that I'm ready to play more. It's tough. Some of the other doctors in my practice have used that. And other doctors I worked with, I have used that.

I find a lot of times people are depleted. So I use a lot of acetal carnitine, CoQ10, other antioxidants. NAD yeah, all those again, back to basics, you know.

Right. Yeah. And I find that they need that sometimes first or in addition to a lot of times I'm still dealing with people who are pretty flared. So I'm trying to calm that down first.

But yeah, I'm excited to try that. You know, my first peptide conference, probably the wisest words that came out of that were get to know a few peptides really well before you expand the peptides that you use.

Because, you know, peptides are are a big deal. They're expensive. So that's going to be one thing that you have to justify to yourself into your patient.

Yeah yeah. But they're reparative. So I always think of these of these are actually healing. So if you do three months of a peptide, it's not like you come off it and you haven't had any gains that you're going to continue on.

You know, I could do three months of curcumin and nothing against curcumin. But as soon as I go off curcumin or ibuprofen, I'm back to the same inflammatory state I was in before.

I just put a little Band-Aid on it. But the peptides are healing and reparative. Yeah, it's like the studies on, Italian, you know, basically they did it, you know, one time a year, once or twice a year, and they got great, you know, results in longevity, reduction in cardiovascular disease, mortality, morbidity, all these things.

So it really affects the genes that perpetuate. Yeah. Yeah. Should we maybe talk about TB for let's talk about TB for. Yeah. I, you know a lot more about TB for that.

I do. But I, I love TB for I actually love the integrated peptides TB for friend plus has been pretty awesome for a lot of my patients. It seems to be also really good with people who don't tolerate things.

Got wise. That one's been really helpful. And also for people where I, don't trust them to do injections on their own at home. Like, I don't know that they're going to do that in a enough of a sterile environment or it's just too much for them to kind of think of or it's too scary.

Yeah. For some people it's a big step for, best diet, but it training a doctor to, give a shot and then it's going to be. But, yeah, I mean, people think it's a much bigger deal to do a shot, you know, they don't realize it's so tiny, but it's so tiny.

So you see, especially the biggest men usually out the most. But yeah, it's I think very complimentary the BPC, you know, that that even for TB, for frag well heal the tight junctions.

And it's similar to times now for one, but maybe more rejuvenating, factors and can help with bone growth. So that's really good. Like in CCI patients or I have some patients with they're Stan.

Those TB can be really helpful there.

BPC-157, Healing, and Senescence

I've seen it. I don't know if I don't know if I should get into into that, but. Yeah, that's such an interesting, condition. Right. And, and I really think a lot of the people have the genetics of it, but because they all have Lyme.

Right, you know. Right. And then I think the immune dysfunction and infections actually epigenetic like activate those genes. That's my sense. Yeah. So then all those, you know, you have the genes and then there how are they phenotypically expressed.

And it's all based on environment and exposures for sure. Yeah. And and so it's it's like they're just, you know, a massive they get, you know, several spinal leaks and and yeah, I think it all is, the epigenetics of it, like, like go saying, like, why would those people be so prone to getting Lyme, you know, are they all hikers, you know, or something.

You know. But yeah, it's it's interesting stuff. And I think you probably find this. And the more you dig, the more you realize you don't know. And it just you go down the rabbit hole all of a sudden, you know, reading studies and it's the science coming up.

And I'm like, oh my God, I got to be in the office in an hour. So yeah, you probably go to the same spot you emailed me at 330 last night, so. Oh, did I? Yeah. Yeah.

Was. Oh, there. Really? Yeah. It's when usually I can catch people because they're getting up and I'm going to bed. But so yeah, the tb4, you know, works really nicely along with the 2 to 1.

Or you can use them in tandem, you know, to before you should. So the way that it's always been taught to me and what I've seen is that you should take a break from that where the tr one you can stay on long term but t before you should cycle.

Yeah. And I think is there's no great studies on that. And I think just out of abundance of caution, you might as well cycle it, you know. Yeah. And thymus and Alpha one has more studies.

It's, you know, been FDA approved now. But, yeah, most stuff, patients tend to cycle themselves anyways. Like, don't go off of it, go back on it. But yeah, yeah.

And you'll find if you're doing this yourself, like I noticed with K1I loved it, loved it, loved it. And then I was like, man, I don't I wasn't it was funny.

After about three months I just I had to take a break. I didn't I don't know why it wasn't that I was doing anything bad and it works a lot better when I went back on it. So yeah.

Or also like supplements, you know, I can give you a thousand supplements that are great and I take a ton. If you were too far to scan down, there's like whole desk is full of supplements, but it's just like I realized, let me just do my core ones and it's like 50, you know, you just get tired of it.

Yeah. So, it's it. Yeah. It's tough. Which I like peptides because they're they work in such small amounts. They work, you know. Yeah. Yeah. So I've seen the tb4 can be a little more triggering than the tier one.

So in a really reactive patient I go to one. TB have you found that with the full length TV for. So I found that with a full length TV for more so than with the frag.

Yeah. So the full length tb4 there's a domain is multiple domains on TV for. Yeah. And so the frag that we have out does not have the domain that stimulates mast cells.

Oh interesting. So yeah that makes sense. Yeah. So TB for overall it's going to be good for mast cells because the immune modulation. But there are some people go oh my god I just totally flare because it has a I'm trying to ease them ease them into it.

Yeah. That's so because I was using the TV for Frag more where one of the other doctors in my practice was using the injectable TV4, and she was having to be really careful with dosing, and I was just jumping into twice a day dosing and having some.

Yeah, yeah. So is eliminates that. And it also that I won't grow hair. There's a different frame that grows hair. So although you look at the TV for frag lots of studies on it, it has the same, immune marginal anti fibrotic, you know, anti-inflammatory effects as the full length, but eliminate some of those negatives.

Yeah. Okay. So if you want the hair growth help with it you have to use the full tb4. No, no there's separate fact because the problem is the TB for the 43 of you know it's not going to get it.

Okay. So the TV frag that yeah still help with the hair. We a separate different frag. We will that will should be available and two months. Okay. I'm excited.

Yeah. And then, do you like free license juice for bystander video server license. So. Yeah. So that I, I love I do it myself. I mean, I have in general because at lime I know since I was born like the worst memory of anyone I have ever met, unless it's a medical study, unless unless I can make connections, you know, or if I go to dinner with someone that I don't care too much about and someone ask for that, I'm like, I don't want to know.

So yeah, it's a little scary, but if it's medical, I can cite all this and that, you know, and have the, those connections. But, the problem is, yeah, you can't get TB.

This is terrible ice and injectable anymore, but it is bioavailable orally. So, the capsule, one capsule equal about two ccs. Okay. So that should have been out a month ago, but with Covid, I think two weeks.

So I'm excited about that. So a lot of the kiddos were doing really great, but yeah, for for the autistic kids. Oh my gosh, it was great. And you know, we have one, autistic kid.

And I'm just so excited about it because the mom gave a video of him playing basketball before he came in, which was him standing there, and the basketball just went by him.

And and he came in. We had to see him before office hours, you know, because it's F-bombs going and right. Couldn't touch I had to be now he comes in, he's actually sarcastic, joking.

Says, can I have a, he does his own injections. So it's it's, he's playing basketball. He's doing gymnastics. Just total. I mean, those are the things that are amazing, you know, and kids that aren't talking.

And then the next visit, they come in, they're like, hey, Doctor Amy. And they're reading off everything that they can see. And the parents like, can you get them to be quiet?

Can you be quiet and sorry, we can't turn it off once we've turned? That is so it is. And like, you could not get near him and he's like, can I have a hug?

Wow. You know, and just like, damn, you know, that's the thing. And you'll get these little glimpses even. And the really reactive kids are even in your, you know, any of your chronically ill adults.

They'll be these little windows where they feel normal and they act normal, I mean, for lack of a better word. And that's always a sign to me that, you know, there's not permanent damage that we have to deal with, all that we can work for to get there and stay there.

And I think it's key. And I, you know, trained doctors say, okay, really work to get them some improvement. It doesn't have to be permanent. So they have hope because they've been told all these things and nothing ever happens.

And and people say, well, that was probably placebo. Not with these patients. Everything's a nocebo. It's like they don't expect it to work. Right. You know.

And and so if you can get them feeling better, even just for a little bit a glimpse okay. We made it there. You know. And usually okay you're probably going to relapse a little bit.

But it's never as bad in the next time be shorter. You're going to feel better longer. And it just they just totally different mindset. Yeah. But also prepping that they can flare and how that can be a positive.

You know if you're doing antibiotics or you're starting LDA or LDI and you feel worse, I'm sorry you feel worse. But that's awesome because we found some organisms that are triggering all these reactions in you.

So we can work with that. Yeah. I mean, I'm sure I mean, yay. Okay. Yeah. You feel bad? Oh, great. You know, but I think less and less. We're kind of.

Yeah. Because we, you know, I as you, we've learned to mitigate that, you know, feeling horrible. But it's like when I did SRT therapy, I didn't do any of this stuff to mitigate, a flare because I want to see if it worked.

And then I'm like. And I thought I was pretty cured. And I'm like, damn, I'm getting this is a perks. I'm like, awesome. You know? Yeah. So, it's it's interesting and, and, I rather see a new treatment flare someone because, you know, it's doing something right.

You know, it's doing something right. Yeah. Because we have a lot of people with no reaction. Yeah. So, I don't I love speaking with you. I, I feel like we you just keep going on and know I didn't want PBC 157, which is one of my favorites.

Okay. So you know, and Integrative Peptides offers a great capsule option. That's a good price point for people. And but the main benefit it's available many other places I can't it's available many other places.

I have it compounded. I love the injections as well. Personal issue is I had a pretty severe Achilles tendonitis, so bad. So that I was having a hard time walking around the office.

I was meant to be doing this Ragnar relay race. That was eight miles. A lot of moms depending on me, you know? And it was, as in the Vikings. What? Ragnar's in the Vikings.

Oh, it's just that it's like a relay. Okay. Thanks for letting me go overnight. Yeah, yeah. And so it was two days away. I was having a hard time even walking around, and I didn't want to bail on this and took my PC, injected my own Achilles twice a day for two days.

Pain was gone. And yes, it flared after my, you know, I crossed the finish line. I was ready to be on that, but pretty amazing just to see firsthand something that like Achilles tendonitis, my shoe couldn't even touch it.

And it's a stubborn, you know, kind of fasciitis. Achilles tendonitis is a bad. Yeah. The other alternative. Okay. Do steroid injections put in a splint, right?

I mean, there's still other things to do with that, but just to see firsthand how it how healing it could be. And like, even after starting injections, I had an old snowboarding injury of a shoulder that I, you know, couldn't lift my arm.

I had done all kinds of stuff. After just doing subcu in my abdomen for a month, I realized I went to pay a like a parking meter and I was like, oh my God, my shoulder doesn't even.

And I hadn't even. It wasn't even on my radar that it could be working for that. And so it's, you know, it finds its way to wherever the distress. And that's what we find it.

And people say, well, I treat it like, wait a minute, now, I can do this, or I can, you know, tie my shoes or whatever. It may be so great for injury prevention, great for those.

Old injury is the other thing I'm really loving with the BPC, which, you know, I'm preaching to the choir here, but as for the gut repair, you know, that's been probably the biggest. Wow.

Because when I first learned about it, you know, that it was all like sports medicine sort of driven all the lectures on that. So I was really thinking the athletic sort of piece and the sort of feeling that are in your body.

But and it was sort of a side note that it could help the gut. And what I was seeing with so many people is after years of us being on this train of like, oh, you know, a couple times a year we're having to do some sort of parasite protocol or whatever, like the gut is healing up like it really is, which is also translating into them feeling better.

So I'm using it a lot now with my autistic kids. I'm using it definitely a lot with a lot of my adults and people who were sick before and aren't like 100% well, but are on their way and trying to get stronger.

I find the BPC is excellent for that. Yeah, yeah, I, I agree, it's kind of it's basically a core for us now. Yeah. That and the tb4 to be for frag. And you know, it is we do a lot of other things and, it's even like, you know, we love for I love hormones and thyroid, you know, there there are so, so many great things, but it's you start doing what most people get better with, you know, and is the safest.

Yeah. And then the car. Well, awesome. You're obviously doing so many great things with some of the sickest patients, and, you're, having to run a practice with other doctors, which might look good.

I'm lucky I haven't seen him. Yeah, we were, we are. It's a work in progress. Always. You know, luckily, the person I'm dating is actually a management coach, and so he's helped me through some big office transitions and things.

Just. And it is tough. I don't know, this is kind of off off topic for the thing. But you know we're doctors want to see patients but you end up managing and I don't know I'm I'm a bad manager.

I'm too nice. I, you know, and that's not what I want to do. And it's taking away time from seeing patients. But, yeah, it's like, you know, I see so many patients.

So you're branching out, you're teaching all these other doctors. And I love the fact how you guys are collaborating together. That's what medicine should be.

Yeah. It's fun. It's awesome. Yeah. So Christopher Wakely, he's one of the other doctors in my office. You interview him tomorrow. So have fun with that.

Oh, great. Great. Yeah. Looking forward to it. Really nice. Oh my gosh, he's super nice. And he is like if you ever need research he's your guy. Oh wait, I love you.

He's a fantastic clinician. But oh my gosh he's like always hitting the books and looking at the studies. Oh that's that's awesome. Yeah. That's like me.

I end up spending all night to find one little piece of information that I can maybe use, you know, but, that's awesome. I mean, you're you're just doing great work.

And, thank you for taking time. So. Yeah. I'm so glad I met you. I met so many great people doing this, this summit,

you know, and, which even have conferences.

You don't get it. You don't get to sit down and talk to people. You know? So, so thank you. Yeah. Yeah, it's a pleasure. Just the your passion just exudes.

So, so thank you so much. All right. Keep up the good work. You too. And I like thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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