Introduction and Summit Welcome

Hello. It's Dr. Jen. Welcome back to the Heal Your Thyroid and Reverse Hashimoto's summit. I'm really excited for this interview. Dr. Kent Holtorf is an M. D., is a director of the whole term medical group and he has a lot of amazing businesses.

He'll tell you about and he does amazing things. And I remember when I was pregnant with my three year old, I heard him lecture at islands about peptides and how they changed his life.

And ever since then I've been such a good fan fan and I just love listening to his interviews. He is an expert in peptides, so Dr. Holtorf, welcome and thank you so much for spending your time and your expertize with us today.

Oh, thanks so much. No, it's really nice because, you know, my first passion was thyroid and now we have the National Academy of Hypothyroidism, a nonprofit that we've had for a number of years, to educate doctors and patients about how the diagnosis and treatment of hypothyroidism and low thyroid the country is wrong.

You know, it's just missing so many people that can be can benefit that's at any hypothyroidism DOT or National Getty of hypothyroidism. But a lot of studies and things on there.

But yeah, no, it's nice because I can combine my two passions and I'm trying to develop a new thyroid assay that's I know we place the test age, but we keep getting about 90% of the way up and trying to do about 15 years.

But the technology is advanced that we're we're close at that. So yeah again my first love they are straight t three say saved me the first round and from being bedbound and and then peptides came along and saved me for the second round with the chronic lyme obese.

Thyroid Medicine and the National Academy of Hypothyroidism

Yeah. Bartonella and heart failure and all that. So yeah, these two therapies are near and dear to my heart. And this is not something that you go to your regular GP general practitioner and ask about because this is not stuff we learn in medical school, which brings up the fact that doctors should keep thriving for information and new treatments that that is studied.

I mean, this is not snake oil. There's a lot of research around what we're going to talk about today. Oh, yeah. And that's why I especially first gave these talks.

It was people were like, wait a minute, why haven't I heard of this? You've got hundreds of references, you know, and and the thing is, like, I used to get mad at doctors.

Did you, I'm sure seen this when you have a patient. He's been sick for ten years seeing this doctor. They love their doctor, but they haven't gotten better.

And you send them back better. You think the doctor is going to be happy? No, they're mad. They'll say you're no longer my patient. If you keep seeing that quack person that cured you or helped you, it's very interesting.

But because know the problem is or even very rarely, we'll have a doctor call and say, hey, what do you do to help that person? And then if you call and you tell them, like, let's say it's, hey, we use these peptides or thyroid and and they go, Oh, I can't do that, you know, or I remember with the thyroid they go, Oh, that will take 20 minutes.

Like I can't do that. And so it's, you know, the doctors, the doctor feeling trapped and standard medicine, they are they are miserable, but they don't know how to get out.

So they're stuck in this system where, you know, like I know Kaiser will basically judge the lowest 20% of people who have the least cost effectiveness, which means don't do any labs, just get patients out very quickly.

Just see volume. You ever went to any press and you know and and don't cost a lot unless there's some procedures that they make money on and so there's this big incentive to do nothing and don't look into anything.

And we have a lot of diagnosis now. Everyone's, you know, with chronic multi-system illness syndrome, fibromyalgia, PTSD, all these things. And those doctors don't want to see that's going to clog up their, you know, waiting room.

They don't have like we'll spend 3 hours on the patient if we need to. We've been seeing a lot of, you know, with our veterans program. They take take a long time, but they don't have that option.

And they're like, oh, my gosh, I'm going to look bad. And then, you know, comes the end of the year, my bonus is going to go away for not doing anything and we can get them off.

Oftentimes to do a few labs where the patient meals are covered through Kaiser No, go against me, you know. So it's a very different model and it's it's scary depending on, you know, some doctors are willing let patients just get away with no work and go you'll be you'll be okay here's okay then they get it, you know, both for having statins and and things.

So it's it's kind of crazy out there. It is. It's like the Wild West. And I think, though, for those listening, you're taking control, watching this summit and watching other summits.

So just know that you are on the right track. Keep fighting for your health. But I agree with you about like I just had a patient today that she stopped taking her Ritalin and she took some supplements instead and her psychiatrist was like, Oh, okay, that's cool.

Keep doing that. But didn't ask like what it was or you know. And I told her, I'm like, give her give her my office number. I'll, I'll teach her. I'll talk to her.

So there's there's better things out there. But at the same time, there's this lack of drive for for doctors because of the medical model. They're not rewarded, like, oh, you fix them, good job.

So I don't know my goal is to get patients into my practice, teach them how to get better. And then I. I don't really want to see them again. I want them to live healthy.

Yeah, I think it's a lofty goal and it's just and I was really big in health care reform, was on a lot of the media tour doing that. And I put together, spent a lot of time with this depth.

The health care reform proposal I was trying to get it to someone in Congress ended up being I watch them speaker of the House where Republican like I said like now a will it will come to me but anyway so I just sign a thing saying I won't quote him and then he, you know, after several months, sends back a thing saying this is very interesting.

Can you have it's well thought out, but you must realize that this will go nowhere. Do you know how many people are slurping off the trough of health care?

Why Standard Thyroid Testing Misses Hashimoto's

Yeah. Yeah. So and that's the funny. I just think more and more it's just so money, money, money, you know, and they've got the covered stuff and which I won't go into. But yeah, getting the word out is so important and you have the, the any hypothyroidism doc.

Com the National Academy of hypothyroidism. So could you go into detail a little bit why you think this you know,

standard endocrine model regarding Hashimoto's like why it's not true.

Yeah and and so to tittering. So when I was in medical school, Renzi has started just getting sick and growing up. Like one eye on pupil is always bigger than the other.

Half my body be sweating, the other half like freezing my arm would just stop working out. Gets bigger out. All turned out like the whole family was infected with Lyme Babesia Bartonella and my mom.

They just called it the sweating machine from the here. But you know, you have a good immune system and you're still functioning. But then as you get older and stress or running stress is a killer to your immune system, people think, Oh, it lowers your immune system, but it doesn't.

What it does is it mod isolates it in an aging way, in a sickness way. And if you think of two different sides, your immunity th1 and two. It's oversimplification, but it's a good way to look at it.

She took a step inside the cell tissues outside cell. Now as you're famous in balloons early on we about nine and starts starts basically just shrinking up that that controls that kind of balance. So as you get older I just starts going like this where the th1 drops down.

Now you can't fight intracellular infections, the th2 goes up. Now you have all this autoimmunity inflammation which can cause, you know, cardiovascular disease, all the signs of aging, all those age associated diseases and so a key we found is to snap that back.

We've become really an immune monitoring clinic. Like, there's a lot of there's been a lot of hype about the hit trial work where they reinvigorated the thymus with growth hormone and they gave DHEA and metformin to kind of counteract the side effects.

But it it kind of plumped up the thymus like, oh, my gosh, the people lost, like, you know, a year worth of age and a couple of years. But it's like dude's like, just give him a peptide, you know, and modulate that.

So really any stress toxin, everyone's so full of toxins, chronic infection, you know, EMFs, any inflammation, you know so many things social with aging are going to just drive the immune system like this.

And then all of a sudden now you get it's a kind of vicious cycle. You get hypothalamic pituitary pineal, hypothalamic pituitary hormone dysfunction. So you have like low thyroid.

But the TSA looks normal because it's like central hypothyroidism, low growth hormone. You get hypothalamic pituitary adrenal axis dysfunction. I did a article on chronic fatigue 75 around you found 90% of them had low adrenal function even though their standard tests that normal all the review articles on mass gave hypothyroidism show that a standard blood test is misses 80% of people.

You know the only reason where the TSA is accurate is if a person is totally healthy, young, no toxins, no stress, no chronic illness. You know, find me that person.

And other than that, it is the TSA is just leading doctors astray. But it there's a lot of pushback because doctors have been doing certain things certain way. And it's easy.

And, you know, patients say, well, here's 50 studies. You know, there's actually a 502 studies review article. So a thousand study here's a thousand studies showing the way we're doing it is wrong.

No, my patients are fine. And there's been a lot of articles and even a New York Times Annals of Internal Medicine like what doctors know. And they found that most doctors are practicing 10 to 20 years behind what's available in the medical literature.

They say, well, why is that? Well, one, they don't read medical literature. They don't they say they do. But the

biggest that's not even the biggest issue.

The biggest issue is if you give them 50, studies show, you know, hey, this is here's a new proven way that is better than what you're doing. Nothing. And my patients are fine.

I don't believe those 50 studies, you know. So it's that doctors aren't following the science. They're not evidence based. In fact, again, that's a covered thing. But and so it's what we think is evidence based is not and that's you know, I was ingrained in me in medical school don't do anything alternative, anything outside of the university because there's no evidence.

And when I started getting sicker and sicker, I'm like, I don't know if I can continue. And I went to anesthesia because talking to a patient was so fatiguing that while they're asleep or maybe I can do this and it was a was my only specialty ever.

But no, the anesthesiologist. But and then I snuck off to an alternative college and I want to tell me one. I'm like, oh, my gosh, this is more evidence based than what they're teaching me in residency, you know?

And and that's where I really got into T3, the thyroid replacement, especially thyroid hormone optimization, and then moved into as found out that I had chronic Lyme and those things and so you like stress so I was functioning with the thyroid just made a huge difference some immune modulators but your thyroid and growth hormone and testosterone and adrenal support mitochondria support, a lot of things.

I'm like, oh my gosh, I'm a new person. And so from anesthesia one family practice and then I went through a very nasty divorce and now she hired Gloria Allred.

It has been so, but it was. And and then it just put me in bed, bedbound and night sweats. I had a Dania where restless legs went into heart failure and I could not walk up the stairs.

It took me like two or 3 hours walking a flight of stairs. I couldn't stand upright. And then I got the cardiologist and he's like, Your air hurts. Fibrosis.

And then didn't know that. Then I know why. Because I had a super high THG, which if you look at human growth factor beta, it causes fibrosis. And he said maybe in ten years you get 10% better.

And so my but I was going I would not live like that. It was just terrible. So I was going to off myself some way. And the next year I was playing Halloween for whatever reason, but I said I'll give it a shot and went around the world looking for therapies and a lot of things work well.

I was on stem cells. A lot of things helped, but nothing was kind of the magic bullet. And Belgium I did peptides. I didn't think they were going to do anything.

And three or four days later my bill would say, where am I going to go? And I walked up. I just walked up the stairs, up right, like what the heck happened?

And so I went backwards and brought a bunch home. I couldn't use them on patients. Yeah, but then that opened up and it just opened up a new talk about a new tool kit for patients.

And that's where we, you know, been doing ever since. It's made everything from you know, the patient just wants to be healthy or lose weight to the sickest.

They were treating a veterans program. What we're treating is special forces and they are they kind of quintessential canary in the coal mine. And they're looking just like all our chronic Lyme patients.

They have tons of infection, signs of immune dysfunction. Every single bat we've tested thus far went to toxins, you know, and with the vaccines that they're getting, their immune systems are just shot.

And they all have. And we've tested thus far antibodies against their brain, against receptors in their brain. Wonder why all these treatments for PTSD and depression and, you know, the special forces that like, you know, puts a gun in his mouth and kills himself like, you know, every minute or so.

And it's it's crazy. But we've made such great a basically turnaround on these guys that someone heard about a director and they want to do a four part docu series.

And I got funding and distribution on like Hulu and Amazon and Netflix and all that.

Peptides as Immune and Healing Modulators

So we've been filming that. It's been kind of crazy, but it's these guys are so great. They're just so humble and what they've been through. And, and the problem is they also don't seek treatment because they're like, Oh, I can take it.

And their lives just crumbling around them. So where was I know. That's so amazing. What important work you're doing, especially with the vets and the fact that a lot of these that they're put on all these meds and antidepressants and things for, but that's not what they need.

That's not the root cause of what's going on. And you talked a little bit about antibodies in the brain. Can you mention anti pituitary antibodies that can also be found in Hashimoto's patients?

Yeah. Yeah. So and that's what, you know with Hashimoto's, we, we think about, oh it's just, you know, the body's just making antibodies to the thyroid, you wait till it destroys enough and you get thyroid.

It is so much more complex than that. They have multiple high incidence of antibodies to the pituitary to diagnose type two to mitochondria. Number of sites showed every hashes patient has mitochondria significant mitochondrial dysfunction and most passes patients don't have antibodies to the thyroid.

So it's, you know, people say, oh, we have Hashimoto's or if someone has Hashimoto's that's your thyroid. Yeah, well your thyroid is low enough that because they're TSC to suppress because of like the anti pituitary antibody which can suppress PSA and other other hormones.

It also an antibody to diagnose type two, which they have a high incidence of, but it actually stimulates an escape to in again this form is inappropriate try to go through all that but the that what that does is increase T4 T3 conversion in the pituitary.

So now pituitary sees more thyroid but not the rest of the body and the TSA goes down further. So all these Hashimoto's patients are low thyroid. It doesn't matter if their TSA age is is normal that and also studies show that giving thyroid I mean especially T3 which goes along with be transported into the cell because mitochondrial dysfunction and D 43 doesn't just diffuse into the cells it's actually actually transporter the T four transporter is more needs more energy.

So Hashimoto's patients are are low mitochondria. They go into anaerobic metabolism very quickly. So poor endurance, a lot of brain fog, depression, muscle aches and gut issues.

One study showing 40 was at 40% of possible patients have SIBO versus 1.5% of the normal population. But so they have all these antibodies that these can't be tested in a in a clinical lab has to be a research lab, but it's causing all these other problems that you don't know about and another doctor doesn't know about.

Oh, well, why do those tests look normal? You know? Well, they're they're just normal or low. Normal. Well, another study out of JAMA general's internal medicine show they looked at the risk for heart disease with someone who had just low, normal thyroid.

You know, you're fine. You're just low normal. There's a higher risk for heart disease than if you have high blood pressure, high cholesterol, you smoke or have diabetes.

So just treating not as going to get the Hashimoto's better, it's it's going to reduce all your risk for heart disease and in chronic illness and and and finding with that and also a lot of these patients don't have moderate antibodies but they have Hashimoto's one study the Lancet top five international journal the thyroid biopsy.

Just people who are chronically fatigued and they analyze that they found 40% of patients and lymphocytic thyroiditis and but only 40% of those would be detected on antibody testing and found that they all benefited from treatment regardless of their thyroid function tests.

So, you know, and there's all this, oh, giving thyroid to normal DSH levels and it's with it's appropriate it's you know to not is that malpractise in so many cases and especially in look at the case I'm talking of pediatric obesity which is just rampant study in the journal of an encouraging metabolism.

I could tell you a joke how do you hide something from it? No problem. Just put in their journal. But anyways, I'm just kidding me. It's all in good taste.

The real I have a bunch of and beds are endocrinologists as well. They found that 60% to 60% of obese children had Hashimoto's versus 1 to 2% controls.

And so they found that the the Hashimoto's was caused by the excessive fat which caused immune dysfunction which then caused the Hashimoto's. Now they're right a number of studies show that if you if you're able to get that child to lose the weight, the Hashimoto's is better than the theory.

It's better it doesn't go back to normal. But so they don't like to treat and I've seen pediatric endocrinologists like, you know, DSH of ten the kids got A. D. D.

and OCD fatigue or obesity and they won't treat and they won't test in general, even for Hashimoto's, even though here the study and in major medical journals are 60% because they don't think you can do anything about it, but you can do a lot about it.

And like I was saying, that giving thyroid, especially T3, which maybe we'll get into but is is totally appropriate and you're not going to get these kids to lose weight because their basal metabolic rate is so low because they have mitochondrial dysfunction.

You have low thyroid on top of that which which burns and you know, the amount of energy. So we'll check that and everyone that comes through their basal metabolic rate, how many calories they're burning per day and they're all like 25% low on average.

You know, there's all the difference. But and so that's like 500 calories a day, you know, oh, they got to eat that, much less just to stay even. And if you problem is if you diet studies show like three rounds of dieting now it lowers your thyroid, the body goes haywire, starving goes in the starvation mode and lowers the test age, lowers the basal metabolic rate, raises your appetite, tells the body to store fat instead of burning fat.

So it's it's a vicious cycle, but the only way you can keep these kids from becoming an obese child is going to be an obese adult. With all the co-morbidities, even just from the obesity, from a strictly clinical medical standpoint, not even mentioning all the bullying, you know, self-esteem issues.

And so it's it's a big battle. And we find all these kids with A. D. D., OCD, they respond great to thyroid, one of our doctor's children, very high achieving with that major university cheerleader.

But she's kept pulling out all her eyebrows. I just stress and that's what we're finding with so many kids. And we gave her some thyroid, some T three and five amino one MQ, which is a mitochondrial booster and in two days stop pulling out her eyebrows.

Amazing I love me some five amino on I'm Q it's a good yeah it's in my bag 24 seven case but I don't always use it I don't know I don't usually need it but yeah so that's a that's amazing.

And the problem though that you I don't think it's going to change and you couldn't even get it through the House committees because, you know, these obese kids are going to turn into obese adults that are going to get heart disease, that are going to be on statins and Plavix and Eliquis.

And, you know, I just it's it's like we're running in circles, unfortunately. But everyone's so not yet now. And it's like, you know, when I go to parties have to bring lab slips and it's like, oh, I'm sick, we're gonna sick my husband, my, you know, and it's, it's terrible.

And you're like, What? I mean, what treatment are you getting? And interesting, you know, they'll say you'll mention some things. Oh, my doctor says it's not it.

I'm like, How's that working for you? You know? Right. You're feeling like crap. Maybe you should change something. Yeah. And then we'll get to the body.

Or what if you don't find anything? Well, you know, you go to the doctor and they do a CBC chem panel. Maybe it's a chore. Maybe some thyroid test, but.

And they go, Oh, you're fine. Oh, your cholesterol's a little high e to take a statin like a which is malpractise. I mean, so, I mean, so many studies show double blind placebo controlled meta analysis which does combine all the data show that high cholesterol is protective against heart disease and especially all cause mortality because you get increased, you know, dementia, you get increased diabetes on statins.

It just it it's one of those things that doctors just keep doing. And and I'm like, you don't like read the literature.

Thymic Peptides and Immune Balance

You don't care about the literature. You're I don't know. But this person with. The statins, it's just it doesn't really make sense. And then if you put men on statins and drive their cholesterol so low, they're not going to make their testosterone down.

Yeah, this is like my my, yeah. So many issues. And they cause mitochondrial dysfunction and you're looking at we're treating, you know, Alzheimer's with these minor new mitochondrial boosters and, you know, all these diseases of aging, a major component is they're a disease of energy production.

And people can't make enough energy, especially for the immune system. And so you get reactivating infections, like with Alzheimer's, you get and then now the HSV one, which so many people have, it goes, hey, I'm gonna go up the olfactory nerve and into the brain, you know, and studied by McDonnell, who ran the Harvard Brain Bank, did biopsies in all these Alzheimer's patients, found the majority had chronic Lyme.

They wouldn't let them publish because they said it will you know basically cause panic like, okay, that's good medicine. But it's it's crazy. It really is crazy.

So would you mind just giving up, like a brief explanation for the audience on what is a peptide? And let's dove in a little bit because some people have never heard of this.

And I always have to explain this in my office, you know, basically every day. Yeah. Yeah. So and it was well, I when I was a pepper but yeah. So peptide is simply a chain of amino acids.

The government decide if it's under 50 or four. It depends who you ask. It's a peptide. If it's over that length, it's a protein. But what they have found is that these small molecular weight peptides that they didn't think did anything actually are profoundly effective.

And that we think of, okay, what kind of controls your body? Well, you know, maybe hormones and, you know, and and so you have all these different hormones doing these things.

And but there's a layer above that with peptides. They're kind of fine tuned everything and they're smart in that. They're kind of like smart meds, for instance.

bc1 57 probably the most used peptide because, you know, it's considered a gut peptide, lowers inflammation, rejuvenate some things, protects the body from so many things, whether it's in the gut or systemically, orally, will work systemically.

One study they did for celiac and mice, and then it worked for both, you name it, like it will cause nerves to regenerate if you don't give it a while.

Peripheral nerves works for central nervous disorders. It will protect the liver reverse. Nash I mean, there's just so many things that that that it does.

But let's say you have high blood pressure. It lowers it. If you have a low blood pressure, it raises it. If you're hyper coagulation, which so many people are now from COVID and the vaccine and chronic infections, that it will actually become fibroid clinic, it will break down that fibrin gunk that's laying down and causing lack of oxygen you get in the cells and a lack of nutrients and a lack of waste products getting out.

But if you but if you bleed if you have a problem with quite glacial till you get an overdose of heparin, it will actually keep you from bleeding. So and so many peptides are like that.

They're, they're smart in that they're modulators, you know, they're kind of like, you know, a number of, of the supplements, adaptogens and things like that, but much more potent, much more powerful, but overwhelming majority of peptides, they can't find a toxic dose.

So they give people, you know, a thousand 10,000 times the dose Ivy. And they're like, no toxic effects, you know, try that with milk or water, you know, you know, overdose, dry with any medication, of course.

But so the nice thing is they're very, very safe and and can make all the difference. And for instance, like when I had this chronic Lyme and it was kind of, you know, with that time the, the treatment is massive antibiotics.

So I was like seven, eight, nine different antibiotics at a time, highest dose I give myself five times the max, those trying to get rid of this thing, nothing.

And like I'm in the ICU and the nurse like, oh, this is that AIDS patient. I keep turning up negative for HIV. I had no natural killer cell phones, which is at T, H, one, and B, so you can't take enough antibiotics to kill anything in your body has to respond and take over.

And so that's where it was so powerful with our clinic. We found that our patients have chronic Lyme and Sears and another e-book for you to hand out on the peptide protocol for the rapid treatment of Sears that you can give out as a gift for anyone on.

But so so really you know doing these these peptides erasing that th1 just makes all the difference and lowering page. Now you have all that reduction in inflammation, but now you can fight those infections as you look at like chronic fatigue syndrome, fibromyalgia, chronic Lyme, we see chronic Lyme with, you know, with airports because of Lyme, A, B, C, bartonella reactivating infections and well, what's the problem?

Did they catch all these things? Same with the chronic fatigue syndrome patients. Alzheimer's patients are affected all over. No, the body can't suppress it.

So once you fix that, now if you have a dog antibiotics, they'll work. And oftentimes you don't need to. So you're lowering all that inflammation, which is kind of reversing that vicious cycle of the pituitary and causing low hormones, mitochondrial dysfunction, which makes everything makes everything worse.

The immune activation of coagulation, you know, so you're virtually all that we found. It's like a way to cheat on

these patients, actually. And, you know, not have to give to three years of antibiotics.

And you look at, for instance, with Lyme, the if you were give a 10 to 14 days of antibiotics for a sinus infection because Lyme replicates so slow. So because antibiotics generally work when replicating, you have to give antibiotics equivalent to 10 to 14 days is 2 to 3 years.

So just right off the bat on there, so and they have so many different problems and stuff, so we will use them but very, very short, small doses if we need them.

Yeah. And one thing during COVID thought was really interesting because I would just re every night that's what I would do is read about COVID and COVID studies because I felt so helpless.

I was still working in the E. R., but you kind of feel hopeless. And I would just dove into the research. And they were using thymus and Alpha One, which is a thymic peptide in China, like pretty routinely.

And you know, I used it on patients that that I needed to in the States but this is this is a peptide that the FDA banned it and turned it into a biological pharmaceutical.

So thank goodness we have other thymic peptides that will work, which I would love for you to talk about. But it's, it's, it was so frustrating to me that we had a way to balance that immune system, you know, balance out the th1, help people recover faster from COVID.

And we're not being used in the U. S. and we had such a high death rate. So could you talk a little about these Thymic peptides? Yeah. So the the thymus basically is in your breastbone and it start and it basically directs this kind of th1 to balance and but it adrenaline nine it starts in ballooning and starts dropping and a number of things will cause that to happen faster obesity, toxins, a number of different hormones.

And so as we get older, we get this age phenotype. I mean, your your base, your system's aging, the immune system's aging. This th1 basically can't fight interstellar infections or age two, all this inflammation starts.

And so the lowest point is right around age for most people, right around 40, 45.

Mitochondrial Peptides and Cellular Energy

Okay. And when do all these diseases of aging start occurring? You know, about five years after that. And and and so, again, I mentioned the one study where they rejuvenated the famous and we're all excited.

But you can just give timing peptides and the the they and so they're easy they're safe and famous and alpha one made the mistake of doing a study on COVID and it was safe and effective.

So if they would allowed it to stay on the market, they could not have brought the vaccines out as emergency care because there is now a treatment effective saving, effective treatment for COVID.

And it's approved in 45 or so, 47 different countries as an anti-infective, as anti-cancer and, you know, huge therapeutic window and low side effects.

So it it kind of started everything off because they actually had a number of studies, but so famous and the famous NS Well number of different on the secreted from your thymus and actually elsewhere as well they'll bring the one up and the tube down.

So we have thymus. An alpha one is the one that's been know approved. It got a orphan drug approval, which was a little strange, but it was a commonly used.

Now we look at we have a lot of options in this thymus and beta for so you think of famous in alpha one as ath1 booster thymus and beta four will also but you think of it as ath1 booster lowering too, but also providing more

growth factors, more rejuvenation.

And there's stimulation which is much more anti inflammatory is is so great for auto immunity, great for eczema, reaction wins. And so we looked at these and, you know, the FDA still, you know, they hate compounding pharmacies and injectables.

And so we looked and said, okay, you know what, oral peptides that we can legally market as supplements. We're not we won't alter them. They are in the food chain naturally in your body.

And so there's a fragment of thymus and beta four called TV for active fragment and so many studies show again now it's going to boost that th1 to lower the th2, but is great at luring th2, especially when you have what's called human factor beta, which we're finding is the key marker for too much to two.

And I know it very well because mine was so high and that's it caused the fibrosis in my heart. So it's it's a marker of that and C for a and like some people will say, well, how do you determine th1, two and oh by the way, Hashimoto's is if you look at the textbook 81 dominant illness.

Absolutely not. It's a in and I was like I remember like 20 years ago thinking if this is th1 graves as to why do they respond to the same treatments.

You know, and what it is they couldn't determine, they couldn't differentiate from th1 cytokines and t h 17, which is the autoimmune cytokine. But the also the cytokine test can really throw you astray because it's like, let's say the body's trying to raise the th1, but because of all these roadblocks, it's just like doesn't work, doesn't work, doesn't work. So those levels go up.

It's kind of like the same principle of, let's say, age, it stimulates the thyroid. If you test the test age, oh, it's high like you do cytokines, you're going to say, well, this person is thyroid dominant because they have high test age, but it's the opposite.

So there's some, some tests out there that will fail and still claim that the Hashimoto's ath1. So don't listen to it, don't agitate you. But so, you know modulating and and we look back what orally can can we give so the TB for active frag then we looked at hey is there an isomer that's naturally occurring and use that and it's 100 times more active active at the receptor site it is much more resistant to enzymatic degradation is the problem with peptides generally and this is with big pharma and everything is that they get broken down in the digestive juices and especially the enzyme will break down most peptides.

But what the body will do is it will be called capping as the kind of slang for it, a C delayed and it will put caps on the peptides ends if it's a critical peptide, but it does it for most of them in that depending on the class of peptide 60 to 85%, 90% of peptides are a C naturally assimilated or imitated as is like BPC.

And there's a push out there which went into it, but they call it stable. BPC is Arginine. BPC, the company had a patent on a C dilated, but it ran out.

So they did a study on an arginine salt of it and said that it's last longer and the stomach, you know, even if that is true, it's not because numerous third party studies showed a C related since and they got for 24 hours and no breakdown but okay use enteric coated but that when you also acetylation and mandated as the body will do to protect it but it also now it loses a charge on each end.

So now it can go in through the lipid bilayer where before it's going to be stuck in the lumen of the gut and not absorbed. So really the stable BPC origin, BPC should be called unstable PBC.

And so I put a bunch of studies out and I actually we have in the process we're going to do comparative analysis of the bioavailable anti of each one just to start of people ask giggling well so-and-so said you know what it's they may it's the company that lost their patent on a C later made this other but anyways and then so it so other thymic peptides by imagine which is it's considered a bio regulator because it's small it's two amino acids only it's 100

times as potent as bind meal in and there's another peptide we call immune peptide aid to as we'll call it by line, but it's trademarked.

So we call up that to put those together and found that we wanted something to replace Thymus and Alpha One and found that it's actually much more potent. And, and you get that immune modulatory effect.

Then you look at things to lower the t age to BP. C 157 PPV, which is the last three amino acids of molluscicide stimulating hormone. And people are using that for like lime to reduce inflammation.

The problem is you get tan, you think, well, that's great. Yeah, if you're younger, you get tan. But if you're older, you get kind of splotchy. And I'm very.

Not arguing that there were you. Know and I. The is is amazing. That what I'm sorry. Creepy I mean. Oh yeah it's I think it's an overtake BPC it's so anti-inflammatory so.

Marcelle it's very antimicrobial. Oh, it outperforms fluconazole and antibiotics and it doesn't cause stimulation of the melanocytes like I took Laverton and it's called like the Barbie doll peptide because you get tan, you increase libido and you lose weight.

But in some doing it delay and all of a sudden I am like someone painted me with a black brush and I'm like, Oh my God. But keep it up to worry about that.

Then we use a natural isomer of that, which was again shown to be 100 times more potent and sharp. So it resists degradation. And the feedback on all these like the, the image at Alpha One has just been amazing CFPB, mass cell patients, chronically ill patients.

And you know, everyone has leaky gut. Now, you know, from all this stuff we're eating, all the information that we see is shown to heal the gut. And now the arginine BBC guy, because they're the rate, they're realizing it doesn't absorb very well.

So they're giving like a snack which breaks open the junctions and messes up the integrity of the gut, like, well, wait a minute, that's what you're trying to fix.

And these people know all the controversy. Even in the big pharma world. They say, well, you know, healthy people will restore that, safe that at all.

Yeah, but I don't know. I don't have a lot of people in my practice and they can't fix it without it using it long term. You're just breaking down the the gut membrane for that.

But just say it did heal. But there's no evidence that with sick bay they never do sick patients in healthy pain like all this LPs and other things that getting cause allergies and our immunity are are getting in and then the KP the TB for frag will actually work on the tight junctions specifically and the KP is wonderful anti-inflammatory anti-microbial and great at know it actually is a great at suppressing active mass cells and it works.

So you compare it to cortisone, you get like that reduction in allergies and inflammation, but you're actually improving your immune system. So it's yeah, it's going to be a thing, but you know, a lot of doctors use it.

But I think more and more they're finding that, you know, so many people have all this information and mass cell activation and branches like people like with pots like they've been.

I really can't help. But we don't even think about we give them these peptides and also bio regulators are great and and it goes away and so it's made a lot of hard to have our job, much easier that we're like constantly other things and all these symptoms that are so difficult.

Oh shoot and resist the treatment just get better. Yeah, it's really exciting to watch too, and patients are just

amazed and these aren't medications or peptides.

They're working with your own body. So it's like a natural kind of treatment, which is amazing. And with the thyroid, you know, we talked a little bit about mitochondrial peptides and five amino one and Q is one of them also might see so why don't you touch a little bit on mitochondrial peptides because that really ties into thyroid health.

Yeah. Oh, it really does. Now just modulating the immune system. So you look at the studies on, you know, BPC and TB, Fort Bragg, I imagine they are going to boost mitochondrial function.

Now, one kind of new concept is as the body ages and that th1 immunity goes down. So the heart of the natural killer cell function to each one is to get rid of these cells that are worn out there.

They're playing nice. They got they're dysfunctional. And these cells going up what's called cell danger response, where the mitochondria, instead of making energy, it starts making more oxidative species.

And so it's trying to protect itself from infections and other things that it recruits. So now it becomes resistant to autophagy. It's called you start hearing that word a lot more because as we get older, especially if we're sick or have chronic illness or low th1, the body can't clean up and reuse all those cells.

So you have end up having a bunch of these cells around that aren't only not doing what they're supposed to, but they're, you know, basically just create all this inflammation and creating.

We call them zombie cells, more zombie cells. So but if you raise that th1 now the body and raise the mitochondrial you give mitochondria peptide where where they are the energy the body can start killing those.

But there is a negative to boosting the mitochondria, especially in a chronically ill aged person. Is that because mitochondria aren't working and you stimulate that mitochondria, you're not stimulating energy, you're stimulating more inflammation.

So but the nice thing is, is that we now have in our toolbox ways to selectively make those cells so the body can now clean them up. Now called senility X, and one combination is just satnav and a and a fi set and or basically, you know, polyphenol or humanoid at high dose.

They also will wipe out two pathways that resistant and now the body can clean those up.

Clinical Resources and Closing Remarks

And if you look at a chronic heart failure, they have tons of these senescent cells and just getting rid of them. All of a sudden, the heart failure, dramatically better diabetes.

They have a ton of senescent cells and all of a sudden the day the diabetes is is dramatically better. All the neurodegenerative diseases, every single one of them have severe mitochondrial dysfunction.

A number of paper, the major articles saying is this they are these diseases of energy production. And there's one mitochondrial peptide called human in and they call it human.

M Because it makes Alzheimer's patients human again. And then there's a version that's 100 times more potent than inverted and more potent than that. And so it's an exciting time.

And in brains, as there is in Israel, they've found a drug that's like killing every cancer without side effects. But the US is trying to get it out there, then knock it out.

But many ways. Yeah. So boosting the mitochondria with might C 5 to 1 MQ makes more energy available to to the cells and with that patient which was interesting.

So we gave her a number of different mitochondrial peptides and all of a sudden it stopped working. We're like, Oh shoot. And I think we overegged her mitochondria so we basically gave her back.

SS 31 which is another mitochondrial peptide that works. It works in a different manner. It kind of relaxes like an antioxidant for the mitochondria and people think might Q PCU, Q Coke.

You tend to do that, but they barely get into like pokey term. We'll just get into the membrane, doesn't get inside the mitochondria. Same with motor.

Q This will actually partition 5000 time and more in the mitochondria than the serum, so it just keeps going in. So that's why a number of studies and you know, phase three now trials for especially neurodegenerative diseases but in in protecting the the mitochondria as well and that's what they're finding is that the mitochondria with these virgin diseases, you get an infection or so dangerous form.

And so those are apoptosis. So these mitochondria peptides not only produce more energy, they'll protect the cells from going into apoptosis. So you don't lose all your cells like in Parkinson's and Alzheimer's.

But if they go into the other pathway into senescence, now they're zombie cells. You do want to get rid of those and the body actually gets gets much better.

So that's the. Amazing and this is just the body healing itself and not just covering up symptoms. And I could talk to you all day long, doctor. Whole off, like your brain is so amazing and we're so blessed to have you on the summit.

How do the listeners find you, your company and your companies peptides? Could you give us all that awesome information? Yeah. I just want to mention kind of a closing in that, you know, like thyroid, anyone who's Hashimoto's you need thyroid treatment key for often won't work very well and studies have shown that like in depression and even the largest study done on any presence, they took all these antidepressants and used them as are used clinically and they put T3 in their E3 outperformed all the any anti-depressants with less side effects.

But they didn't put it in the abstract because they didn't contribute to the cost of a study. Bipolar patients under 35 by treatment resistant bipolar patients who took on average 14 different meds with no response.

They gave them all. T3 didn't matter what the levels were right. 85% responded and 30 plus percent total resolution of symptoms. But so Hashimoto's patients need to be treated, but you are treated with T3.

Again, we didn't get into the exact reason why, but you can find all those studies on the National Academy of Hypothyroidism and nahypothyroidism.org Our clinic is holtorfmed.com.

We are starting and hopefully two and a half months a year long peptide training course which will be mybettermedicine.com but you'll can check it at Holtorf Med and an integrative peptides, integrativepeptides.com you can sign up there will send information and all those things and not number of products.

And we have like cerebral pap which another med that the FDA found to be safe and effective. It's porcine brain peptides and just the the testimonials, you know, people say, oh my gosh, I had this brain injury and I for years and I couldn't get better and this work and I gave it to my stepson.

His brother's like, he's just being an ass. You know? And I'm like, Yeah, whatever. But so him straight replace it and they're like, Oh my God, he's back to his old self.

So his mom's going to kill me. But yeah, so it's just been really fun and we're going to have a lot of new products or combining bio regulators. Let's talk about my regular real quick.

So bio regulators are called that because they're small molecular weight peptides or they're more specific to a particular tissue, like you have heart cartilage, brain number of brain pituitary thyroid.

So you have the thyroid bio regulator which will actually stimulate your thyroid. And we found that it does increase your TSA age because that's suppressed with with chronic illness.

And then another study on the pineal peptide at the Talon, which also called a bio regulator, is orally bioavailable that they took. I don't know, people do some weird things, they check the pituitary out of chickens and they so without the choudhary gland, the thyroid just starts atrophying.

They gave them epic talon, which is above so the pineal hypothalamus. But now there's no pituitary to secrete sage to stimulate the thyroid. But it did anyways.

TSA levels went up to 43 levels went up. And well, we'll find if you come to the trainings like how these chronically ill patients another layer is low control of thyroid where the difference is the body will convert T for at3 that you do it differently in the brain and elsewhere, but it normalize that.

The irony is too. So there's a lot of cool things that that that can be done with, with all the peptides and, and the bio regulation of vascular ones is great and we're having some great results of the a big study where they gave people just bio regulators for two years and they found they did, you know, the age, biologic age and they found they lost on average seven years with those two years on their biologic age, which is really nine years compared to the standard controls that got two years older.

So it is really nice and an easy way to improve different things. I with with my Lyme I still had this little low level chronic kidney disease and so I took the kidney bio regulator and I can tell a little TMI, but I would have foaming urine because I would dump a little bit of protein and in the urine and take that no foamy urine.

So, you know, you know it's working. Yeah So it's cool stuff. So, so cool and exciting. So thank you so much for being here. I really appreciate it. It was such an informative discussion.

Great. Thank you so much. Keep it up and yeah, look look forward to we have a chance to work together. I think you just love all this stuff and follow what you do.

So I appreciate it and thanks for having me.