Podcast Intro and Episode Overview

But it also did the studying because they think it looks like a help increase total energy expenditure by the Beijing of white adipose tissue is returning that white adipose tissue.

That's not very thermogenic. That doesn't have besides just storing lipids. It doesn't have a lot of, energy expenditure, capacity. It also they're they're studying it now to see if it can decrease oxidative stress in the muscles.

Welcome to doctor talks, the podcast where every episode leads to a healthier you. Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease.

In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors. If you'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.

Welcome back to this week's episode of back to the basics. Did you know that in 2017, it was estimated that $20 billion was spent on peptide therapy? Fast forward to 2024, that number is approaching 50 billion.

And actually currently in the United States, about 12% of people say that they've actually used a GLP one agonist, which is a form of peptide therapy.

So today I have Hayden Collier, and he's going to teach us everything about compounding pharmacies. And we're going to talk a little bit about peptides.

He's the director of clinical services at New Bio Age or Progressive Pharmacy in Florida. And he is going to tell us what he does for them every day. Thanks, Cassie.

So I get the pleasure of talking with providers all over the country about awesome peptide supplements that we have.

Compounding Pharmacy Safety and Regulation

So we do protocol development, clinical questions, we'll do patient cases, just help educate our providers on some of the cool products that we have that are out there.

Because, I mean, unfortunately, a lot of peptides are still really new. And, you know, sometimes, you know, it's really hard to find a great, credible source for a lot of these things.

And sometimes I'll even go to conferences and they learn all this cool stuff. But it's like, how do you implement it Monday morning. Right. We're pharmacists.

So we think about dose side effect, contraindications, things that unfortunately sometimes they don't learn at these conferences but are vital to help patients have great outcomes.

So that's I had the pleasure. And then I hear what providers are doing, what's work and what's not. And then I get to share that with everybody. So it's definitely a very fulfilling job.

Yeah. So if I didn't say that he's a pharm.d, that's my fault. And so he he is a PharmD and he helps us that modern endocrine system with some of our peptide therapy.

So I love to just text him like, hey Hayden, I got this going on. What can we do? And put him in rabbit holes. And so he's great for that. And so I brought him on really for a couple reasons.

We're going to talk about some peptides. But before we talk about peptides, you know, my episode just released about supplements and making sure that you're safe with your supplements.

So I really want people to understand compounding pharmacy. And are you safe with your compounding pharmacies. And what's the difference between compounding pharmacies and who regulates those things.

And so Hayden was going to speak to that for me. So let's start with just 503A503B pharmacy. What is the difference. And then like can you explain that to people.

Yeah of course. Well first I don't think a lot of people realize like pharmacy is probably the most regulated industry there is in the United States. Besides just there's different state laws for each state.

Then you have federal laws. There's also clinical things that you have to follow specifically about scope of practice. And then how that all fits in with managing patients.

But then when it comes, you know, let's just regular as I remember. So, you know, so pharmacy is probably the one of the most regular industries there are in the United States here, you know, so there's different state laws for each day.

There's federal laws. There's also clinical aspects that we have to follow when it comes to scope of practice and things that we can do with how patients.

And then there's different pharmacy compounding pharmacy aspects. And that comes to Non-Sterile pharmacy, HDE pharmacy. There's and then the sterile pharmacy, there's different guidelines for all of them.

And then and then the difference between A5A, three A and A5A, three b. So 5 or 3 A pharmacies are patient specific pharmacies. They follow what's called USP United States Pharmacopeia.

There's certain guidelines and it's called 797. So those guidelines specifically go over sterile technique testing requirements, things that they have to follow.

When it comes to certain aspects of how you compound, certain preparations, and those 5 or 3, eight pharmacies are regulated by the state boards. So state boards have use USP at the guidelines.

The state inspectors will come in. And, how they interpret the law and how they interpret those certain guidelines will come in, inspect the pharmacies to make sure that they're up to par.

So like I said to all those are patient specific. So when they receive prescriptions it has to be patient specific patient name address all those things. They can only go for that.

Patient 5 or 3 B pharmacies or more large scale pharmacies. They and those pharmacies can do for office use prescriptions. But those pharmacies are regulated by the FDA and they probably there's just different regulations on, how they can, compound certain things.

And there's a certain formulary. So, you know, there's a there's a very small, limited list that they can make in those pharmacy at at large quantities.

So, you know, there are some differences. Definitely between the two, you know, 5 or 3 regulated by the FDA, 5 or 3 be regulated by the FDA, and then 5 or 3 AA the regulated by the state boards.

So if a patient so how does a patient know that they're using a compounding pharmacy. That's a good compounding pharmacy. Like different accreditation boards that pharmacies can elect to have them come in and

inspect the pharmacies to get certified.

And, you know, a couple of them. One is nap p cab is another one. So these pharmacies will elect, you know, third party companies to come in to inspect the pharmacies.

And then they can get certain certifications. Right. You know, all pharmacies have to be compounding with, you know, when they order products in particular, has to come from an FDA approved wholesale.

They're, you know, they're going to get CEOs and all of their products, you know. So of course, if patients have concerns, they can talk to their providers and maybe ask the providers these questions.

Hey, have you you know, have you, have you talked to the pharmacist or the pharmacy? Do they have these have any accreditations? Have you have you ever asked for CVS, things like that.

You know, and and the pharmacy should have no problem. You know, being able to offer any of those, you know, it's answer any of those questions that either patients or providers have on their standards of quality, because they should be of the utmost importance.

So if a patient is just buying a peptide randomly online and they haven't really seen a doctor, how does that work? So unfortunately out there, you know, there are research chemical, you know, companies and they, you know, they'll say peptide research chemicals on them.

And those are not for human use. If you go on there and you try to buy them, it's going to tell you three times it makes it click your life away. Liabilities that they, you know, they take no responsibility for the quality of their product.

They'll say on their that it's tested. Yeah. It may be tested that what they put in the vial, maybe the powder that's in there. Sure. But they don't do sterility testing and you know, endotoxin testing.

So besides, what else is in those vials? You know that you know, that they don't account for. And I highly recommend to stay away from those places. And you need to be under the watchful eye of a physician.

If you start taking those things and you're having side effects and you're having, you know, complications, you can't reach out to anybody on the on those websites.

They're not going to answer any questions. They're not going to help you. And unfortunately, you know, you can seriously hurt yourself. So definitely do not recommend those at all.

And and even if you do buy something and you call Cassie, hey, I took this. This has happened in like she has no way of verifying what was actually in those vials.

She has no idea. It's. You can't really help you. She can't make a recommendation because, you know, she has no idea what happened. So. Yeah, it's really, you know, there's a fine line, you know, and we just we do not recommend doing that.

Yeah. And that's one of the main reasons I wanted you to. Come on. I mean, I want to pick your brain about some peptides so that people know. But, you know, I, I am shocked at the number of patients who tell me I bought this online and I don't see a doctor, and I think that's what I'm injecting.

And I'm just like you.

Methylene Blue for Mitochondrial Health

You think that's what you're injecting at your body, like I'm flawed. And you know, I did this podcast with Sean Wells that where he was talking about all the toxins that you can actually find in supplements, mercury and lead and, if

you test them.

And so then I just think, like you're injecting something in your body to your point that like, might not be sterile. We have no idea what it is. How do you figure out the dose?

You know, I'm just I'm floored that that people do this. And yes, it may be cheaper. It should be cheaper. I hope it's cheaper. You're really dumb. But you know it.

It's your health, and you have no clue what you're injecting into yourself. And to your point, it's just it's alarming to me. So I really didn't know how that worked.

Which is why I called you. Like, how do these pharmacies, you know, because I have people coming in with these vials and I'm like, where did you get this?

And I can't even tell what pharmacy it comes from. And I try to look up the pharmacy and I can't find an accreditation. And so that makes. Yeah. You know, they're labs, they're not even pharmacies.

They're just a lab. It could be a lab in my garage. And I just. And I got vials from Amazon, and I'm throwing powder and a stopper and, and, and then sending them out the door, you know, so and you'll see, you know.

Yeah. Because there's no, unfortunately no government regulation on those things because they're not made for human use. And they say it all over the bottles, you know.

So yeah, it's definitely alarming that patients will, you know, use those products. And it's frustrating to me because then it gives peptides a bad name.

So I love peptide therapy. I mean, it's changed a lot of my patients life. It's changed my practice. It they can be so good if they're used correctly, if they're dosed correctly, if they're cycled correctly, if they're.

But if it's kind of like hormones, when people are just out there throwing things around and don't know what the hell they're doing, and they don't know how to mitigate side effects or explain things to you, then they get a bad name.

And that's the thing that I don't like about this whole like, just go online and buy a peptide and shoot yourself up type of thing. So I just wanted to kind of talk to you about that.

And so I mean, I agree, obviously you if you're going to use peptide therapy and I think they're wonderful, you need to be under the care of a physician who knows what the peptide is, knows how to dose it.

You know, it's you know, contraindications complications and aspects. So, you know, that answers my question why people can just randomly buy peptides without seeing a doctor.

Okay. So let's talk about a few peptides then. So I want to start with mitochondrial health. So at modern endocrine we have this ten pillar of health system that we kind of follow.

And you know I tell people gut and mitochondria is where everything starts. If you can't absorb stuff from your gut or detox through your gut, and you actually can't get those things into your cell membrane because your cell membranes and mitochondria damage, then it doesn't really matter what we're getting, right?

So mitochondrial health, some of the things I think about with mitochondrial health because of the ATP pathway, right. The five steps you have to go through nad obviously the first one methylene blue and then just to iron for detox.

So I want you to talk to us. Let's start about with methylene blue because I feel like that's kind of, you know, new people. What is it. So tell me about methylene blue.

Yeah for sure. So I mean, and it's crazy because methylene blue is probably one of the first manmade drugs there ever were, there ever was one of the first FDA approved drugs as well.

You know, they used to use it for malaria back in the day. And, you know, in some patients look it up, it's like, oh, it's a textile dye. What have you given me?

You know, because it you know, and unfortunately, our technicians, they hate compounding it because it gets blue everywhere. Right? It really does stains everything.

It gets all over the place, but super beneficial when it comes to it. Like you said, when it comes to mitochondria, our health, what it really does is it acts as an electron carrier in it helps bypass those complexes.

There was a study that came out recently that showed, you know, compared healthy patients, but patients who were active and then patients who were sedentary, those patients who were sedentary, even though they were healthy, they had issues transferring electrons to complex one and two across our electron transport chain to help make the ATP at the end.

So a methylene blue can even help those patients when it comes to bypassing those complexes. And it helps decrease reactive oxygen species, again, because that's where you during this complex that they're in that that process of moving the electrons, you know, arrows can be created.

And so it helps decrease that as well. And improving the mitochondrial efficiency. So you know, methylene blue will help carry that across. So we get that increased mitochondrial production.

But the great part about it is it's such a small molecule passes the blood can very very well it's as well. So you actually get those benefits in the brain where you have a bunch of mitochondria.

And that's where we see some of those issues when it comes to Alzheimer's disease, you know, Parkinson's disease, just dementia. Or they're studying the use of methylene blue to help prevent the progression of those diseases.

So for our listeners, we're going to kind of dumb this down for a second. So fourth grade level Hayden we're not all arm DS. So electron transport chain.

So when we're talking about mitochondria that is what's in the cell. And that's what gives all of our cell energy okay. It's kind of like our gas tanks and our cell inside your mitochondria there is something called the electron transport chain, where it's almost like you have five doors that are closed and they're locked, and they each need something different to unlock them.

And you have to pass through all five doors. And at the end, the product that you get is called ATP, which is like gas gasoline for yourself. So if you're asking your cell to do something, whether it be provide you energy, grow hair, make your heart beat, you know, let me talk to him.

Let me breathe. It requires energy. And so in order to make this energy or ATP, there are five steps that have to happen. Methylene blue is essential to I think it's step four of the mitochondria.

And so that's what he's talking about when he says it's an electron transport chain. You know, it's carrying an electron or donating an electron. It's almost like it's opening one of those doors.

Is that right? Correct. Yeah. So like the first complex, you know, involves nad in the beginning. So a bypasses that complex. The second one is like a fad fad H2.

And then the third one is where donates that hydrogen. So you know bypasses those. Go straight to complex four where it converts the O2 and that hydrogen atom together into oxygen, which then helps move it past two ATP into a ATP at the end.

So you get, you know, all four of those doors. But yeah. So it helps bypass because a lot of you could say, well, a lot of those patients will have issues opening those doors in the first two doors.

And then it's not going to get to the end to make the gas. So methylene blue just skips past them. So here's your electron that you need to help make that water molecule to help make ATP.

So that's been extremely beneficial for a multitude of different diseases. And we talk about neurodegenerative diseases but also when it comes to patients with Covid because they have, you know, some kind of mitochondrial dysfunction caused by, you know, decides to, virus.

And then also when it comes to patients with just chronic fatigue and it could be due to, you know, autoimmune disease or, you know, Lyme, things like that.

So, it's been beneficial for a lot of our patients. Yeah. Inflammation in general. So inflammation is the cause of all disease. And so it when you're inflamed your cells are inflamed.

When your cells are inflamed, they can't receive hormones and they can't give back energy like that doorway between, you know, the cell and the outside world is, is very it's locked and it's very stringent when you have a lot of inflammation.

And so just helping any inflammatory process methylene blue. And you know I've seen it help a lot with ADHD. I'm going to say that with parentheses because I think there are so many people in this world that have ADHD that don't have ADHD.

They're just diagnosed with it because and medicine now we just throw pills at people and give people a diagnosis and we don't know how to answer their questions.

And so I think a lot, you know, a lot of people that have gut issues and that have nad deficiencies and maybe they have some methylene blue, you know, or have some electron deficiencies with making ATP.

Methylene blue is help a lot of those people, which is awesome because I don't want somebody taking a stimulant, for sure. You know, and then even that, you know, we see some benefit in some of the higher doses, like, I mean, Jenny, generally let me under 50mg.

We don't see the search and urgent effects, but sometimes some of those patients, they do need some of the higher doses pass 50 because of that issue.

You know, and like you said, gut health. Maybe their you know, their gut isn't making enough serotonin. And that's you know, they're having some other issues as well.

So it's been extremely beneficial. And like I know like you mean you you linked it to inflammation like the besides the mitochondria making energy, it also makes antioxidants to help Purdue, you know, help, influence some of that inflammation as well.

So it definitely will help, you know, with that you like what you've heard so far. If so, modern endocrine is now able to provide telehealth services in eight states, including Arizona, Nevada, Oklahoma, Texas, Ohio, Illinois, Michigan and Georgia.

If you would like to become a patient, visit our website at Modern endocrine.com backslash contact. You can also email us at hello at Modern endocrine.com, or call our office at 405 286 1571 to schedule an appointment.

Please note we no longer accept insurance for new patients. However, we do have customizable membership programs available. Your first visit will include a detailed intake, and lab orders will be provided to further assist us in developing your ten stages.

The Ultimate Health plan we do offer discounted lab rate with a nationwide lab service. And now back to the show. So methylene blue. The way we get it is an oral pill that people take.

And so when you take it, it is pretty common to have very bright blue to green tinged urine. Correct? Correct. And is not something that people should expect forever.

Is that something that goes away? Is it bad if you don't have blue urine? Like talk to that. Yeah for sure. So yeah like it is going to be blue maybe even Windex blue right.

So when it comes to that you know, so when blue when the methylene blue it gets you know when, when it gets reduced, it gets reduced to a compound called Lugo methylene blue.

But that actually takes the blue out of it. So if you aren't having blue urine that just means you're you have really good tissue absorption. Something like red light therapy can help with that.

It actually helps increase that mitochondrial, support. So you actually get more methylene blue in there as well. So in some of our patients who may be taking it, you know, frequently what they're doing, red light therapy is well their their urine isn't as blue.

You know. So yeah. You know, that's exactly what's going on. My urine isn't blue anymore. Well, you're using it all. That's a good thing, you know? So that's definitely, you know, very important.

I thought I was dying because all of a sudden, my Aaron's not blue, and it's not even green, and I'm like, oh, my God, Hayden, am I dying? Like, what's going on?

But I do red light every day and I do cold plunge and all the things. So I'm not dying. My tissues are just utilizing you, utilizing it very well. So that's important, you know.

And then so, not going to be blue. Oh. What else do you want me to talk about? Well, no, I just I just like people to know that, like, you can't have some very blue, blue urine.

And then, you know, whenever we give it to people, people who have pretty significant ADHD issues are really, really inflamed. You know, I typically say, hey, let's do it daily.

But I know there's a lot of people out there who talk about, I mean, you can do it every other day. You can do it three days a week. Is that correct? Yeah for sure. And so that's what I mean.

And even with some patients with maybe poor renal function, you know, like chronic kidney disease and but they're also having some cognitive function issues.

Do you think it would be really beneficial. You know, we'll usually tell those patients like hey like take the methylene blue and then and you know, don't you know, take another one when your urine is clear, you know.

And that way, you know, they will not it's not going to get super physiologic where we where we don't want it, you know too high. So having some of those other, you know, toxicity issues.

But yeah, we do I mean, it can't be done every other day. You know, the, you know, we generally recommend hey, usually after like, 3 or 4 months, you know, if you're not using it for the neurodegenerative diseases, let's take a break.

You don't want too much Redux after a while. Let's, you know, let the body maintain unless you're having some severe mitochondrial issues as well. So every other day, you know, if you did it every other day, every third day, you could probably take it continuously.

But, you know, every day, you know, after a couple of months, it's like, hey, just, just take a month off, two weeks

off, and then and then you can start up again.

Yeah. So I usually take it about every other day. And I will say some people that are listening, one of the side effects and we kind of ran into this with me is headaches.

Right. So not very many people get headaches, but you can get a pretty significant headache from it. So that happened to me at the beginning. And then I tried to inhale it.

And I would not recommend that, but intranasal, I mean, I tried to intranasal it and it just it didn't go well for me, but mostly because it's live, right.

And so it's all good. And I was just about to ask you that didn't work well, did you? So let me tell you what happened. To be completely honest with you, I inhaled it and it burns a little bit.

And so then it made me sneeze. And then my bathroom wall and near were stained blue, and it looked like a Smurf had, like, died in my bathroom. And I had it on my face and I had it on my hands.

It was just. And then my staff were cracking up and so we just decided that probably wasn't a good result for me in the future, but it was pretty comical and I think I have a picture I can send.

You were literally look like a Smurf, just like died in my bathroom. But but you know that that visual spastic headache, it went away after a couple days.

Yeah, it didn't happen. But you know what's crazy is I think I don't. Maybe it was just my mitochondria weren't in great shape because so I that was in like Ma may remember I tried it and I got a headache.

Tried the intranasal in June and then didn't really do anything. And then I've been doing red light therapy at the office, you know, every day. Not negotiable.

I've been sauna. I'm on another peptide, which we're not going to talk about that messes with your mitochondria. So I think my mitochondria have just gotten better, you know, like, I think I'm getting better.

And so then I tried it again, a couple weeks ago. And as long as I'm really hydrated, I'm okay. I'm not getting the headache. Okay, good. So I've been taking, you know, I've been taking it every other day.

I took some of this morning reps for this, so. Yeah, I've been taking it. I usually take like Monday, Wednesday, Friday. The our favorite combo at the office is the methylene blue in the morning.

And like a low dose nicotine truck in the afternoon. And that little, nicotine low dose, like one milligram. Oh no no no no no. Yeah I think I think it's like the most, under Mr..

Or under it's the most what is Frank say is the most under Mr.. Neurotrophic that there is it's extremely beneficial when it comes to taking nicotine trophy trophies at the low doses.

It's extremely beneficial. Decreasing microbial inflammation, inflammation. It's extremely beneficial in, focusing cognition side as well. I mean, I think there are studies coming out with like Parkinson's disease and other.

And, I mean, I know if people were using it for long Covid or even with Covid doing, like the nicotine patches and stuff and patients were okay.

NAD, Glutathione, and Detox Support

You know, we're responding really well. Is it going to make me want to smoke a cigaret? Like, no, no. So like, I mean, look, I've never smoked a cigaret in my life.

I've never, you know, I've never I've never done this in. I've never done anything right. But I have tried the nicotine trophies. It does it, you know, I mean, nicotine is a really neuro addictive chemical, right?

At higher doses at the one milligram is I mean, I have no issues with it, you know, like, I don't feel like I did them all the time. I mean, Leonard loves them and he's like, oh, I got to have, you know, but, you know, he just likes that because that is, you know.

So I don't know if it's if it's like he feels like he needs to focus or maybe he is does have an issue with him. I don't think he does. But it's been it's been, you know, really beneficial.

So you take it like at lunchtime or when are you taking this? Yeah. Like 1 to 1:00 in the afternoon if I need one. I mean, there is some benefit to with nicotine in your gut, which is a whole interesting thing too with like, Crohn's, you see things like that, but, okay, I don't know, so I guess.

Oh, that's interesting. You know, I've never heard of nicotine for to figure out that. I mean, I have to look into it. That's how. Well, it's for people that with with Crohn's, and ulcerative colitis, for whatever reason, nicotine is supposed to make it better.

Allegedly. So, yeah, maybe I'll. Okay. So I'll, I guess we'll try some. We'll have modern endocrine and see. Did you better not make me make smokers out of people?

Okay. Methylene blue, I love it. Great amount of control. Health. What about you, nad? Talk to me about it? I think an ad is one of the most underutilized peptides that there is, to be honest with you.

But what you tell me about an 80. Yeah. So, you know, I would say under utilized, but a lot still the unknown when it comes to nad. Right. So when it comes to some of anti salvage pathway, some of the other coenzyme enzymes that it may increase as well, you know that aren't beneficial. Right.

So and I and I totally know energy has has its place especially when it comes I mean we see it have tremendous benefits when it comes to patients who are battling addiction.

I mean either patients as well when it comes to battling like long Covid, like long Covid or long viral fatigue or having, you know, metabolic disorders and their energy storage is are just run dry and you give a person a dive or any supplementation. They feel fantastic.

I just have some concerns when it comes to using NAD, you know, going to get NAD infusions multiple times a week or, you know, continuously for an extended period of time.

You know, there is, you know, coenzyme called NT that can increase for PPR, which is a certain, as you know, it is a but a byproduct of NMT that can cause issues with metabolic disease and with cancer.

So that's just something that is just like, hey, you know, I love nad patients feel great. I definitely see the benefit in it. I just want to make sure that providers just aren't overdoing it because some patients are like, hey, I need to get my energy infusion so often it's like, let's just slow the roll a little bit.

But when it comes to helping increase in my mitochondria bioenergetics, it's fantastic. You know, we love combining it with maybe something like apogee and, and you know, or something with some, one which is in there, MMT inhibitor.

You know, we really like to improve endogenous NAD. But I mean D supplementation has its place as well. Okay. So yeah. And I, I agree with that. Like so we use it, you know, subcu three times a week.

I don't do a lot of huge like I. V. loading doses every now and then, but not a lot. I get a you can get the palpitations and anxiety if you run it too fast and, you know, you gotta wait two, three hours.

So that's definitely a barrier as well. Correct. So and then with all peptides, you know cycling is important. So okay. So nad you know and again NAD is like that first door that you open in the mitochondrial electron transport chain.

So and I do like nad you know I feel like I don't take a lot of it, I take about 20 units three times a week or if I'm just feeling tired. But I do think that it helps me like it gives me a little boost, I just for sure.

So yeah, and that's what we see with some of the other like NMT like five amino which is an anti inhibitor will help improve endogenous NAD patients will feel like they have a little more energy, will feel we'll give them a little more exercise capacity.

And then there's also, some soak up some cool supplements that you could take that actually decrease that threshold for nad for some of those metabolic processes like activating Ampk for fat loss.

And usually it's around like low doses of leucine. So we have like our loose energy product that has 1.1g of leucine, it actually decreases the amount of energy needed to activate some of those metabolic processes, you know, and then we pair it with something with like resveratrol, which will increase Sirt1, which is a, you know, Ampk downstream, gene activation for fat acts for fat oxidation with, you know, B6 and leucine are shown to help increase thermogenesis.

So there are some cool things that you can pair with energy supplementation to even make it more, beneficial. Yeah. And then glutathione. So let's talk about glutathione.

So love glutathione for detoxification. Tell me about glutathione. Yeah. So like you said it's one of the main antioxidants that we have from our liver.

And sometimes patients who are, you know, that are going through a lot of toxicities and their glutathione storage will be depleted. You know, so I think the biggest thing when it comes to that is the research shows like sometimes, you know, the supplementation that you can do either I. V.

or certain, you know, I mean unfortunately the oral one doesn't get absorbed very well. A lot of gets oxidized in the gut. So that's why they have those liposomal ones.

There's nasal sprays. There's some topical ones out there that seem pretty cool, but it's also getting an interest, getting it into the cell intracellular.

So and it can have those effects there. You know, so I mean we love it as well. There's still a lot of research coming out to show like, you know, which products are the best.

But it definitely has a great, great place in, in detox. Okay. And then so yeah. So glutathione we use it a lot. I've, you know, I use it injectable. But I do feel like it helps with the detoxification pathway along with, you know, red light therapy.

And then you have to put people like you have to because everything like that kind of loses not sweat. So you know, I have know how often do you ask patients how often you have a bowel movement.

And people say two, three days. I know like my doctor said, that was normal for me. Like that's not normal for anybody, but it's so or God bless the women who have hypothyroidism and are going through menopause listening to this.

Like you know, I'll be like, when's the last time you poop? Seven days. And like, there's so many toxins in you right now. Like we this is not normal.

So, yeah, I own will help you detox, but you still have to poop and sweat. Okay. Yeah. That's a that's a non-negotiable, which is why I saw it, so. Okay, so mitochondrial health, we kind of touched a little bit on that.

There are some other peptides for people who are listening. Like we're not touching on all of them. But the other thing I want to talk to you. So let's transition to the gut because that's like our you know, I love the gut.

I'm like so intrigued by the gut. I love it. So you guys and I use a lot of your, your gut time. So you guys have this, it's a supplement and it's got BPC and Cfpb in it.

And so I just really helps with inflammation in the gut because I see so many people with high cal protected levels, which is an inflammatory marker of your colon and just all these bad bacteria.

And I'm like, Dear God we have to stop the inflammation, you know? And then the other thing is, you're going to go kill all these bad things that they have in their gut that's going to cause more inflammation, right?

A lot of these bacteria that die release LPs and they release all this bad stuff. And so then I'm just sitting there thinking like, oh, your guts already swollen with start killing all this stuff.

Like you're going to feel terrible. And so I, you know, when people start, they think, well, it's that cause stuff, it's like, no, when you start fixing the gut, unfortunately, you might go through it like a couple of days of a bad period, like you said.

And it's so common that we see when it comes to gut permeability and that in like, you know, Sibo or bad, you know, a dysfunction in the microbiome, there's overgrowth and there they go hand at hand.

Right. So like when you have the gut probability issues, which is going to cause inflammation and then that overgrowth and you know BPC does a great job when it comes to if you have any kind of lesions, any kind of tissue damage as well when it comes to healing that damage, Cfpb in particular does a great job when it comes to inhibiting tumor necrosis factor alpha, which is one of the main inflammatory cytokines that we see in the gut.

So, you know, BPC also has, you know, inhibits nucleocapsid activator, some inflammatory gene transcription factors that will help decrease some cytokines as well.

So both of them together, you know, work really well. And then, you know, besides gut tides we also have La Raza Tide, which is probably my favorite gut health, peptide in particular to eight amino acid synthetic chain.

But what it does is inhibits cellular. And so that protein that goes in disassembles a tight junction cells which will cause LPs and other highly inflammatory particles to be released in the body.

It gets inhibited as well. So that one does a great job of where a lot of your patients that have leaky gut, I mean, they studied it, celiac disease. It helps a lot of those patients.

It was a phase two or phase three trial. But you know, like combination of the La Raza tide, you know, inhibiting and leaky gut PVC weave for healing the tissues.

And then also in the further decreasing inflammatory markers in the gut is a great combination for a lot of patients. So with La Raza Tide, you're seeing that it inhibits the blood from releasing.

So for people that are listening. And so the cells of your gut line up. They're called epithelial cells. They're supposed to have really tight junctions.

They're supposed to be lined up next to each other really tight. No leaking no holes. They're held together really tight by something called Zombieland.

Okay. When we eat things we're not supposed to or we, our body is. You know, we have a lot of inflammation in our gut because bad bacteria are dying and releasing things reasonable.

And these little there, like, you know, ties holding things together, they get damaged and then they start to release.

And when they start to release our cells that are stuck together start to open up.

And when our cells start to open up, our gut starts to look like Swiss cheese. And then imagine eating something and it's flowing through a tube that looks like Swiss cheese.

Gut Health Peptides and Leaky Gut Repair

So you've got all these little food particles leaving the Swiss cheese lined tube. They end up in your bloodstream. So now all the crap you're eating, the red 40 and the dyes and the sugar and just the garbage leaks through this tube that it's supposed to stay in and is in your bloodstream.

And then now you've got this immune response where this immune response, like, what is all this crap in your bloodstream, like what is going on? And so then your body's like attacking the food you just ate.

Well, that takes a lot of energy and causes a lot of inflammation. And then you wonder why you feel like crap and your stomach exploded every time you eat, because that Zombieland marker is not there, or the Zombieland is not there to hold cells together.

So that's what he was talking about with Marisa. Tide is it will help keep those Zombieland pieces intact, right? Yeah, exactly. The zone. And we'll disassemble those tight junctions. Cells.

And that's what. So when you have that good, you know, those those holes that LPs from, you know, being those bad bacteria being broken down, going to the gut instead of leaving the gut while you poop, it goes back into the bloodstream and causes even more inflammation.

And that's what I mean. It's not just LPs like you said, food particles there even did a study with La Raza Tide, at Boston, mass. General with, you know, in children that had Covid, but they also had, you know, mothers.

So you know, they did it as part of adjunct therapy. Well, unfortunately, the rising tide didn't decrease the amount of time that they stayed in the ICU.

But the one thing that it really did was help decrease spike antigen clearance. So it went from five and a half days to one day while they were on the rising tide.

So their body was able to clear the protein much quicker because it wasn't getting redistributed back through the body. So the La Raza Tide should make your signal and marker come down on.

You have leaky gut. Yeah. Yeah. It's it's definitely going to go down. Yeah okay. And that's something you take orally. You have 2 to 3 times a day 500 microgram capsules.

It's tolerated really well. Even in some of the celiac trial studies, they did, you know, 500 micrograms. They did one milligram and two milligrams. After that 500 microgram dose was the most effective.

But they all were, compared to placebo when it came to side effect profile. So definitely super safe. You know, we generally don't see too many side effects with it.

Like you said, when you start fixing the gut, sometimes you get some bloating, some gas, some, you know, maybe diarrhea, constipation, kind of depending on what your issues were.

But, you know, it's generally really well tolerated. Is this something you recommend for like three months? That's typically what it takes for like a GI protocol.

It kind of depends right on the indication for patients. You know, some celiac patients unfortunately may have to take it continuously because their body just sees gluten and sees other of food and sensitivities that they may have as a bacteria and will constantly release, you know, you know, soluble in to attack those things.

So, it kind of depends, you know, some patients unfortunately, may have to be on a continuously. But for a lot of patients, if you're just kind of fixing their leaky gut, fixing their bacteria issues that they have and you know, some patients can do it.

You know, like I said, kind of depends. Usually recommend six weeks kind of start, but three months is definitely very common. And then patients can, you know, maybe do butyrate supplementation afterwards to help with, you know, that that mucus, you know, barrier that on your epithelial lining that will help prevent leaky gut and also help increase the amount of tight junction cells that you have.

You know, we love butyrate supplementation as well. So you know that, you know, patients may be able to be transitioned to that. You know, sometimes they need prebiotics, either something like low dose like Dulos or something like, you know, at progress we have, poly sulfate.

It's a pentose oligosaccharide so similar to xylitol oligosaccharide that you can use to help promote good bacteria growth as well, you know, so it kind of depends on the indication, you know, like gut health is so complex.

You know, I sometimes I hate talking about just protocols and a couple of things just because it's like, you know, sometimes some things may work better than others.

You really, really depend. But a lot of these products can be used with a bunch of different indications. Yeah. Gut health is hard because there's not really a protocol.

You have to look at everything that's going on. So I would agree with that. But the other thing, you know, butyrate, I love being drink too. It's great for feeding your good bacteria.

So if we're you know, we want to make sure our commensal they need a mucous membrane to live in but they also need food. So I'm a huge proponent of butyrate as well.

And then just fiber, you know fiber helps a lot of things. And most Americans are very fiber deficient. Oh yeah. So fatty acid synthesis helps because even your own production of GLP one slept and then peptide. Why why.

So even some of your patients who are having weight loss issues because their guts messed up. Sometimes it's just you just need a little bit of weight supplementation and it'll help the patients either on GLP one or kickstart their own weight loss journey.

So yeah, that's been, you know, beneficial as well. And that's why we recommend at Modern Endocrine we have a weight loss package that we do with patients and we do this full workup.

But we also we recommend you do a GI map so we can see what's going on in your gut. Because I can give you everything in the world, puts you on track, give you hormones.

But like if your gut is not going to absorb what you're eating or the hormones we're giving you, then it doesn't really matter. Exactly. That's what I mean.

We we we talk about it a lot because junky ones, when it comes to reducing that oxidative stress and inflammation, sometimes it's enough to help patients lose weight.

But as soon as you get it off, the GLP one inflammatory status cause it comes back, causes insulin resistance, patients gain the way back and then they try to go back energy up one doesn't work as well as I did the first time because it can overcome that inflammatory status.

And then patients like hold that if they think that I'm never going to lose weight and then I'm stuck. You know, it's like, oh, I have to do this, fix the gut a little bit, you know?

So yeah, that resistance, that weight loss and refractory weight gain issues, like if you don't address that gut,

sometimes you're not going to have long term success.

So you heard it from the pharmacist, not just from the doctor. Your gut. I want to talk to you about thymus and alpha and beta really quickly. So tell us the difference between thymus and alpha and beta.

What are they. Yeah. So they're both thymus peptides, but they work on the different parts of the immune system particular like thymus and alpha one helps AT1 helper cells migrate.

A maturation and helping increase the proliferation. The number of t one helper cells thymus invader four has to do with like fiberglass migration, soft tissue injury repair, healing and things.

So usually we recommend times an alpha one when it comes to like autoimmune disease you know inflammatory status things like that. And then thymus invader four when it comes to either acute or, you know, chronic injuries, post-surgery repair, you know, we will generally recommend, the thymus in before, you know, in combination with VFC.

And that's a great combo there when it comes to decreasing inflammation and increasing some, you know, protein packs and infection and, facilitation to soft tissue injury sites of those worked really well together.

Yeah. I had some dimension data with some BPC and some exosomes in my knee in May, and it was amazing. Like it sucked for four weeks and then my knees like, feel better than they've ever felt in my entire life.

So, I've never done Thymus and Alpha. I'm going to though I think it's great for autoimmune type stuff. And so luckily my autoimmune stuff has been spent on rats, so I haven't really needed it.

But I kind of I think I'm going to play around with it. And yeah, I mean, it's still good if you like a six week run just for, you know, prevention of flare ups.

But I mean, if you have patients who have, you know, some severe autoimmune disease, we see patients in Vionic continuously, some of our type one diabetics.

Yes, we'll use it. You know, especially there's like the late onset type one diabetes that are caused by some kind of viral, issue. And, you know, there are antibodies attacking the pancreas.

And we've seen, you know, use like times an alpha one. You some, you know, La Raza type things like that. And extremely beneficial in those patients. Yeah.

In my, my Hashimoto's patients where we just can't get their antibodies to go down or they're just really inflamed. Like those are the people I'm thinking about too.

And so just, you know, so that they hear it from not just me. Side effects risk like, oh yeah, it's time to settle for one. I mean, they were testing, you know, so usually we recommend a dose around like 450 micrograms daily or if you're like a maintenance dose, you can do 1.5mg a couple times a week.

But they were studying in patients with Covid on the in the ICU, doing like ten milligram doses every single day. And it had no it had no severe, detrimental effects to patients.

So like side effect wise and safety wise, it's super safe. You know, you know, I haven't had any patients have any kind of reactions to them as well. Times in beta four, they've tested doses up to like three milligrams even or four milligrams.

And we generally recommend like a 750 microgram dose. So we still see benefits at those lower doses. But, you know, at the higher ones, you know, it was as safe as well.

So, yeah, you know, of course we talk about moderation, but, you know, some of these peptides are extremely

safe. Okay. So now we've talked a little bit about gut health.

We've talked about mitochondrial health. Two of my favorites. Then we're going to transition to hormones which is also one of my favorites. So I'm doing a bioidentical hormone summit.

It's really going to be just like a summit where we talk a lot about hormones and how women in higher mood transitions through our different hormonal, avenues in life.

And so Hayden's going to come on and we're going to do a whole segment on just peptides for hormones. But I want to give you guys like a little brief intro into it.

So let's talk about this is more men related. But hCG I get a lot of questions from guys about HCG. Should I be on HCG should I not? What's your take on.

So HG can be an important part of, you know, a men's aspect of, you know, HRT in particular. And it kind of depends on what the goal is for that patient.

Right. So if you have a patient who's interested in, you know, in testosterone replacement therapy, but they're concerned about fertility, you know, issues and they don't want to lose, you know, lose that.

They want to have future kids. You know, HG can be a great option for those patients because it helps increase LA. So luteinizing hormone, which will then increase from out of Genesis in those patients as well.

They're also going to get an increase in testosterone production as well. So it can be extremely beneficial because if you do regular testosterone therapy it's going to decrease your LH and FSH.

You're going to get to the tequila atrophy and it's going to cause decrease in spermatogenesis. So this is a way that patients can either be on lower doses of testosterone.

But you know with hCG therapy combined so they don't lose that function as well okay. What about oxytocin. So and I want you to talk about it with sexual health.

But I'm also very intrigued about the antioxidant stress. And then you go to max changing. Yeah. So this is a bunch of awesome you know looking at the benefits of oxytocin right.

So they know the benefits when it or how it acts when it causes you can increase contractions in pregnant patients, things like that. They call it a love hormone when it comes to binding.

You know I some great effects when it comes to decreasing cortisol because you know as an anti-anxiety, you know, so it has a bunch of great benefits there as well.

So for you know, hormonal patients, maybe they're having some stress and anxiety, going through, you know, those changes as well. You know, oxytocin can be a great therapy.

But it's really cool. Recently they're you know, they've been studying because it has an effect on, say it so. Right. So feeling that fullness while you're eating.

So it's been you know, people have been used as part of their weight loss program. But it also it just because they, they think it looks like a help increase total energy expenditure by the Beijing of white adipose tissue.

So turning that white adipose tissue that's not very thermogenic. That doesn't have besides just storing lipids, it doesn't have a lot of, energy expenditure, capacity.

It also they're they're studying it now to see if it can decrease oxidative stress in the muscles. So they're doing a study. Actually I saw I just finished they haven't posted the results yet.

So I'm extremely interested to see how it went. But they took like 40 Navy Seals. And they did like an extra strenuous exercise. And right after the exercise they did like, you know, multiple 48 unit, international unit nasal sprays of the of the oxytocin.

And then they're going to measure their glutathione reductase activity in the muscles themselves. And then three days later, they're going to do a VO2 max test to see if it changed from baseline beforehand.

So I'm really interested to see how that works because I think it can definitely be much more utilized in different aspects. Just just besides anxiety and, you know, in sexual health when it comes to the love hormone and binding and things, that it has been used, you know, before.

Okay. So when we do our podcast for the Hormone Summit, you may come back to that one, but we will at that study show where we will.

Thymus Peptides for Immunity and Recovery

Yeah. And the last one, I mean obviously testosterone I mean that's in we'll talk about that. But the other one that I really, really like even in women is CJC In Memoriam.

So talk about that for just a minute. And then I'm going to tell you my what I see patients especially. Yeah. So I mean actually a hit the morale and like I you know we used to have a rule it was like any patients, especially females that are going on varsity.

You should start on lip and morale and at the same time. Right. Just when it's benefits I mean as you get older and growth hormone production is going to decline, drops by 3% after every person after the age of 30, right?

So you're going to get a decrease. But the benefits that we see, besides just increasing that neuroplasticity at the growth hormone receptor site, you're going to get an increase of androgen receptors as well.

So the patients are going to respond better to their therapy. But then you get, you know, patients are going to get better sleep as well. So to help increase the delta sleep we're going to see it help increase, you know, collagen type three production in their skin.

They're going to get better skin. Elasticity. We're going to get you know, we see improvements in cognitive function probably has to do with them sleeping better as well.

You know, it's going to help them preserve muscle, you know, which is super important in our ladies as we're getting older to prevent sarcopenia. So like, you know the growth hormone secreted guys are I mean it's to prevent official with any patient, you know, going to, you know, menopause and that are going to be a part of therapy.

Yeah I completely agree. So what I see in women and in myself because I track it very well, is your REM sleep increases. And your deep you know that deep sleep REM sleep your HRT goes up which is amazing right.

Because HIV is a very very good prognostic indicator of mortality. And so I think a lot of it is tied to sleep. And you know, when you're supposed to be making a growth hormone from like 10 to 10 p.m.

to 2 a.m., growth hormone is so important to sweep your brain, clean your brain, let your brain heal. Make all your memories from the day before help you learn.

But then also make all your hormones for the next day, right? Like that's what we're supposed to be doing. And I think there's so many people in this country who are just so, you know, stress and and overworked and just everything's going on and they're not resting and then they're not making hormones for the next day.

And it's just their RV's are terrible, too. Like if you actually look at wearable devices, like I looked at a patients yesterday that was in the teens and it's like, oh my God, we have to fix this.

You are going to die. Like your body is screaming, you know? And so what I find with that peptide in particular and myself included and I'm, I mean, I sleep pretty well.

I mean, I take care of myself, but when I take that peptide because I'll do it for like a six week period, eight weeks maybe, and then cycle off. My HIV goes up by like five, six, seven points.

I sleep like a rock. I feel so good when I get up. And then I mean, obviously my workouts, my trainer is always like, oh, with your muscles. I'm like, yeah, I know it's my healthy, like exercise performance capacity wise.

I mean, I'm the guy. I'll do it 2 or 3 times a day right? I like I love it. I mean, I would say it helps my sleep, but I got three little kids at the house, so like a four, three and a one year old.

So like I haven't slept good in about five years anyways. So like, yeah, I could definitely do better. You know, I don't think there's no peptide. It's going to help my kids sleep throughout the day as well.

So but you know, I definitely I love, you know, the exercise capacity performance it's anabolic the muscle as well, you know. So it's definitely a favorite for a lot and you don't need a lot of it.

And I know people like, you know, I don't take very much of it, but I will tell you, like, it makes a big difference with the recovery too. And like, even today, I was doing glutes with my trainer and I was putting some weight up and he was like, dang.

I'm like, I know I'm right in the middle. Microformats like, it was like, I, I will I will say though, a lot of patients like, especially if they start it for the first time, sometimes it takes like two weeks right before your, your body kind of realizes, like, hey, what's going on?

And then like after two weeks, it's like, oh, you see? And I will say like when I first start a cycle two, it makes me kind of bloated at first. Yeah. Water tangent.

You told me that I am so like I am a little bloated at first, but then once I get going, man, you're. It's just crazy. It's, And I and like I said, I track my exercise.

I'm a very, like, data oriented person, right? Like, I want to see the data. And so, I mean, my trainer tracks all this, right?

Hormone-Related Peptides and Growth Support

Like, we do workouts, but, like, when I like, I'm in week three right now with my cycle that I'm going to do for six weeks. And I did an exercise my exercises today that I did last Friday.

And I mean, he was even like you were putting out some some more weight, like what is going on? And not only the only thing I can tell you is that there's nothing different from last Friday.

Other than I'm on week three of my in world, so. Well, and you mentioned earlier your hydration status probably super important to you're drinking more water and you know, using creatine.

And we talk about creatine is my favorite supplement. But yeah that's super important as well. But yeah we I mean we've gone along with the CJC if it's fantastic. Yeah okay.

So thank you so much for clarifying the difference between 503A and B and explaining to me why people can just get random peptides on the internet. I'm glad I'm not the only one that doesn't think that's a bad idea.

I you know, that's the thing that is a word about safety and efficacy of the ones that, you know, it's like, hey, at least they were being watched by a doctor.

Now you're going to drive all these people to go get it from some site that, you know, there'll be a form and people, oh, my rat felt better. You know, it's just like all this crazy stuff.

You're like, what is going, you know, and it's yeah, it's the patients definitely need to be maintained and watched by rider. And we also need to make sure that doctors are educated to like, you know, if you're going to prescribe it.

People that understand it know, you know, there are some I don't know. So I don't prescribe them. Or if you know somebody ask about them, I'll call Hayden like, hey, what what is this?

You know, because I kind of started with putting my toes in the water and then I've, I've done more and more. So I just think as a provider to, like, obviously first do no harm and so figure out what you're doing, before you, before you do it to others.

But I do appreciate you coming in, just explaining that to us and then explaining some of these peptides for people. I think peptides are wonderful. I would, you know, my hope for America is that we ask for better out of health care and out of doctors, and that we also are just sick and tired of all the drugs like we need to get off the pill mill in this country, and we need to get back to like, being healthy.

And, you know, I think that tides are the key to helping with some of that because again, these are I don't look at these as drugs. I look at these as hormones your body already had.

It's just not continuing to me. Right. Yeah. It's just literally molecules that help your body heal itself and do certain aspects like I, I saw your there was a podcast you were talking about the other day how like you were seeing patients and you were like, oh, I you know, I only have to add one medication this time.

Like I worked retail pharmacy for like ten years, right? So I would see the same patients over and over again not getting they were never getting off medications, like you said. We were always adding more.

And it was just, you know, and then I found this space and I'm like, oh, this is where I like we're truly helping people. This is where I want to be. And yeah, these peptides, like you said, when it comes to the risk to benefit ratio as well, when it comes to side effects and how how much better people can do, it's something that we generally don't see and in our modern healthcare system.

So we're actually right because we're not just putting Band-Aids on things and preventing, you know, cutting, you know, preventing mortality. We're, you know, you know, we're fixing their issues.

So it's yeah, it's. Yeah. Because when I was like, you know, 30, 32, I'm this 32 year old woman with horses and all these things, and I'm taking all these drugs and I'm, you know, I'm just like, I.

I'm taking medicine and I'm doing all these things. I feel terrible and, you know, and now I do take a lot of supplements and I do take peptides, but it is all by choice.

So like, I'm getting ready to go on vacation next week and my choice, I'm not taking a damn thing with I'm not taking a supplement. I'm not taking a peptide.

I'm just going to chill for a week and I'm going to feel great, you know? And so it's like, that's the cool thing too, is like you're giving your body something that it needs to help it perform better.

But it's not like you get to have, you know, it's not like and when you're taking all these prescription drugs, it's like you get all these side effects and you don't know what is causing what and what, you know.

And then it's just like, well, let's throw more things on it. And it's just like, we've got to get off the pill mill in this country. Like there's so many people that are so sick because of the prescription drugs that doctors are writing, and doctors don't even realize what they're doing.

The patients, because that's what we're just, like, bred to do, you know, until you get out of it, until you come to my clinic and see some of these people, like, come, please, to my clinic and to some of my patients that have gotten off medicine, that cry, that tell me I've changed their life like it is the most rewarding, amazing feeling when you're like, yeah, you came to me on ten drugs and now you're on none.

And I had a patient yesterday literally say, you saved my life. Like you saved my life. I've never felt better. I don't take the medicine I used to take.

Like, I just, I feel like a human being. And that is like. Like there's no there's no better. Oh, there's nothing, no better feeling I get, you know, the lady now focusing on our gut health stuff, right. They've tried everything.

Unfortunately, when it comes to gut health, our modern healthcare system is either steroid or biologic. And, like, who wants to do either one of those things? Right?

So it's like I get people call me like, oh my God, I can actually eat food. I can actually, I can actually, you know, like do things again. And yeah, like you said this, like to that point, this lady yesterday, I mean, her main issue was her gut.

She had diabetes. You had a lot of things, but it was her gut. And we worked on it and it that's exactly what she said. I don't have to worry about where a bathroom is.

I don't have to worry about, you know, pooping my pants in public. My stomach doesn't hurt. I'm not. She's actually not taking her diabetes medicine anymore because we've cured your gut. Or.

I mean, it's just like. Like she said, like the same thing I just said. I can go on vacation and not worry about taking all this medicine and not worrying about not being able to eat with my husband when we're out, because I have to find a bathroom and it's just like it's.

And it was just she's full of all these pharmaceutical drugs that were just masking other things. And we really just needed to let her body heal. That was it.

Just let her heal or something, you know? So it's it's wild and it's so cool and it's so different than what I was doing, you know, four years ago, even two years ago.

And it's just it's awesome. So really. Yeah, it is, it is, it is. It's like the best feeling in the world because, like, that's how I wanted me to I get it, you know, like I said, I'm going on vacation.

I don't want to put 30 supplements in a bag or 30 pills in a bag or be forced to swallow all these things like, I do it most of the time just because I feel better, but like I'm not taking anything.

Yeah, I'm chilling and I'm going to feel just fine. And that's so amazing. So I end my podcast with three questions. And so I ask everyone the same questions.

Don't overthink it. But what is one food that's most beneficial and why most beneficial one food. One food. And that's a good question. You said not overthink it, but, not if you're overthinking it.

Just give me the food. That's tough. That that's a tough question, right? Because I it's probably different for everybody. So like, my most beneficial food for me, just because I'm like, I'm so worried about like, you know, like I'm trying to get my 200g of protein a day, right.

So like for me, you know, my most. But I would honestly probably be eggs, right. Like I just get, you know, bang for your buck protein wise. And it was funny because that new study came out where that kid ate, like, what, 700 eggs in his month and his LDL cholesterol actually went down, right?

So just like, I mean, but, you know, eggs and, you know, for me, I mean, I love a good ribeye, right? So, like, you

know, one food hate in one egg. Yeah.

Baby eggs. You know, I just, you know, when it comes, you know, when it comes to good cholesterol as well when you need to, good fats and things like that.

I would probably say eggs, but it's a personal that probably best for me. Is that the most beneficial for everybody? Probably not. You know. But you know, for me eggs, I, you know, I'm a fan.

Okay. So I get a lot of eggs. Next question. What is the one thing that anyone can do that would benefit their health? That is completely free exercise?

Okay. Give me an example. Resistance training I mean, I love I love resistance training. And I think is, you know, muscle is the key to longevity. You know, we want to risk patients being sarcopenia as you get older.

You know, and then when it comes risk resistance training is what's one of my favorite things to do. I've been working out since I was like 14, so like, you know, I used to be, you know, powerlifter, all that stuff.

So, like, I love resistance training. I think it's super important. You don't have to go and lift a bunch of heavy things, but trying to pick up heavy things every once in a while is definitely extremely beneficial to everybody.

No matter if you're up that who you are. Resistance training is free and you know it's all about motivation. Like people need to get discipline. Discipline is what gets you in the gym.

Like you lose motivation, but discipline will continue to get you there. Okay, so eggs resistance training. The last question what is one thing you wish you would have known about your health ten years ago and done differently?

I mean, me personally, you personally, My own health, I mean, I would, I am fairly healthy. Honestly, I probably would. I probably would do more. I probably would have started doing zone two training a long time ago.

And honestly, I struggle with it. You know, but making that a part of my actual exercise routine a long time ago, so I would probably can still be doing it now.

But adding that into, my training regimen. Okay. Zone two cardio. That's what I struggle with it, too, I hate it, my trainers always like, get after it.

I'm like, but I would agree. Okay, so Hayden Collier, thank you so much for coming on and teaching us all the things peptide peptides. I'm excited to interview you about sexual health peptides and hormone peptides.

For all of you guys listening, if you're interested in them, in our, information in the show notes, we're going to put the link to their pharmacy. If you guys are a provider and you want to get in contact with them, they provide great educational resources.

You can reach out to me or they'll be a link in the show notes. But thank you all for listening. Make sure that you share this with somebody. I know that you're listening to this and you're thinking, oh, somebody needs to hear this.

Please share it with them. And also make sure you subscribe so that you get all of our podcasts and leave me a review. Have a good day. Thank you for tuning in to Doctor Talks.

We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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