Episode Introduction and Guest Background

So you really kind of want to know what is your goal. And it may be that you just need a little bit of amblyosomes. It may be that you need something very specific from an exosome perspective.

But you talk to the scientists, the PhD doctors who are researching this and are fully, they're brilliant, and they will help you to figure out what factors, what growth factors, and what are the markers of each of these cells that you would want to use in that situation.

This is Doctor Talks, real talk from real doctors on the issues that matter to you most. Hello, this is Dr. Canton Holtor with another episode. Today we'll be interviewing Dr.

Kathleen O'Neill-Smith, who is a really renowned lecturer, researcher, clinician in the peptide world and actually many other things. She can pretty much talk about any subject on peptides.

So it's so wonderful to have her. The tiny lover of this talk is everything you need to know about peptides in 45 minutes. And if anyone can do it, she can do it.

So a little bit about Dr. O'Neill Smith. She's basically Magna Cum Laude, a graduate from Boston University School of Medicine. She completed postgraduate training in pathology at Harvard Mass General and internal medicine at Brain Young and Women's Hospital in Boston, not too shabby.

She has a degree in exercise physiology, has been an athlete on the national rowing team for 40 years and a coach for six years. Pretty incredible. She has worked as an office and hospital-based internist in 2006 and then shifted to functional medicine, functional genetic medicine after completing a two-year fellowship at A4M.

She completed a stem cell certification through A4M and a traumatic brain injury certification through AMMG. She's been teaching and senior lectures here at so many conferences, many regenerative conferences, many topics ranging from gut, brain, pain.

And we're going to kind of go through all those with her, with very few people that we can do that with. So we're going to take advantage of her. as well as peak performance.

And I know she was just down at the Hall of Fame football camp. And so she's treating a lot of elite athletes as well. She's founder of the International Peptide Society, Clinical Peptide Society and the American Academy of Stem Cell Physicians.

So there's extensive personal use with IV nutritional therapy, medicinal signaling therapies, which is really, I think, an upcoming field where it's really looking at why you get sick instead of, okay, here's this drug to treat the symptom.

And that includes hormones, peptides, stem cells, exosomes, all those things. And she's constantly learning. She's always on the forefront and lecturing.

She's so generous with sharing her knowledge to other physicians and the public. And her son had severe traumatic brain injury and the prognosis was slim and that we returned to normal.

with her. He recently graduated with a math degree two years after having this severe traumatic brain injury. And I have had my own or is with the ER trying to get or ICU.

I, they just don't know the studies and won't do anything. And maybe, you know, because they can't cause it's not part of the protocol, but I can imagine it was very, frustrating and there's so many things you can do and become very limited.

She has direct practice and functional and integrative and regenerative internal medicine. And I know it's quite hard to say what she does. She treats things that no one else can, I think is a good way to put it.

She's been in Boston over 10 years. She's definitely an international thought leader in the kind of use of peptides and in many areas. She is an innovative and passionate doctor, proud to say she's a friend.

We bounce things off each other all the time. Her teaching style is approachable, friendly, and creative. She makes complex ideas simple, which is a test learning to her career as a high school and college science teacher.

I did not know that. why you're going to medical school. You can do that and make things simple when you really know the topic. If you don't know the topic, it's hard to do.

Thank you so much for being on the summit. Looking forward to our talk and we'll just go through different areas and get your thoughts.

Treating Pain with Peptides and Fascia

I'm sure we'll get so much out of it and pearls and how you would approach things. Let's just say someone has a lot of pain, whether diffuse or local, what's your thought?

And also what type of peptides would you use to help those people? To treat pain. Well, it's good to be here. You are a thought leader. Thank you for your kind words and generous words and a good friend.

So I appreciate you and you educating everybody. Kent, you're wonderful. So pain, pain, pain's pretty common, right? So I really have delved in to pain through looking at fascia and the signaling molecules, that medicinal signaling therapy, and peptides are fantastic for that.

So it depends on the kind of pain, but let's say yesterday I had a man who is a lawyer but works in the steel industry and he's probably 60 and so he's always on his knees and he's building and he's doing steel kind of stuff.

I don't really know what that is, but it's construction I think. He's a great guy and He likes to be active. He likes to cycle. He likes to run. He is very physically active and he's pretty strong, pretty healthy.

So he's come to see me quite a bit with some knee pain. And once he started to come to see me, that just built the relationship and he comes always for his pain and prophylactically now.

But he had some significant knee pain and came in and we used a number of peptides, but I think the main peptide we used with him was the growth hormone derivative, AOD.

that works with hard ridge and bone repair. So we basically did a series of AOD with hyaluronin with the lubricant that we would use like Symbis, but it's hyaluronin with the AOD to get a double So you're injecting into the joint in this case?

Into the joint for this one. I also do IV a little bit with him. Yesterday I did an injection in the joint. He had had a series before in the other leg.

Now this leg was bothering him. I think he'll just get one there. And then I gave him a little push of 10 cc's. of peptide BPC with some PRP and just a little bit of saline through the IV push to kind of flush it through on the same side, which was his right side yesterday.

But he's so happy. He says, I tell everyone about you, I tell them all. I mean, they just can't believe it. I can walk

again. I can ride my bike again.

I can hike again. He's really happy. So that's localized pain. Alright, so you're diving deep into peptides and longevity on this podcast, and we're right there with you.

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It's time to elevate your journey starting now. Interesting. And just, do you inject, just going back to the BPC is going to lower that inflammation kind of overall.

AOD being a growth hormone fragment has, you know, the, it's going to induce healing. Do you inject also BPC or TB4 into the joint as well? Yes, but it depends on the joint.

If the joint is really inflamed, then I might use a little bit of TB4 as well. If the joint is not so inflamed but chronically degenerative, I might use BPC with the AOD with HA.

And so he came in pretty much spontaneously with, you know, pretty quickly. So you don't always have what you need. So you'll use what you have. But yesterday I had AOD and I could have put BPC in the joint, but I had enough liquid to put some AOD with some PRP.

I could have used amniacomes. It's all about the cost for everybody. So he's a NAOD HA PRP joint, VPC, little push through the IV with the little PRP and the VPC.

Yeah, and right now it's a tough time with peptides trying to get them, but hopefully with those errors, that will be resolved. Now, I'm fascinated with your work on fascia.

And when I was going to one of your lectures, I'm looking like, fascia? What the heck? How did you find this out? How did you discover this? And then I started fitting with other things.

I was wondering how… Oh, amazing. The reason though, I'm a physiologist and an athlete and a coach. And so I've worked for a little while, like really- Well, you can't describe what fashion is.

Yeah. So for the last two years, I'll explain to you, I worked at TB12, which is Tom Brady's place in Boston, do it as a medical director. And they do some amazing work.

And the reason I wanted to work with them is because I love what their body workers do. You could call them physical therapists, athletic trainers, whatever, but they are very skilled at understanding how to Take the soft tissue where you have soft tissue pain, whether it's from an injury, whether it's from fibromyalgia, regardless of what is the cause of a soft tissue pain.

You could have, you know, people get dry and they age and they lose the lubricant that helps their tissue to flow. And I think of it like little things of spaghetti, all in that little spaghetti thing, and they're the hard uncooked spaghetti and they go up and down, but they need lubricant and they need to be able to flow.

And between each of those little pieces of pasta, I have something here, maybe I can show you, but between each of these little pieces, can you see it?

Cheers to this little picture. Yeah, exactly. These, exactly. These, you need to signal. So between each pencil needs to be signaling. So they move that tissue.

And we, you and I, as clinicians, physicians, would add what they need to put to move that tissue better. So each

muscle fiber needs to go up and down.

So all of that interrelated tissue in and out of each of these pencils and around it is fascia. and it all signals. If this is the back, like the vertebra, and it goes around to the front, to your abdomen, the pain in the vertebra can induce pain in the abdomen.

The pain in the abdomen can induce because all the fascia connects it. So I learned how they move that. And then they allowed me to help them put things in to the body, whether it's through peptides or through IDs, nutrients, or other ways to help it all heal and work better.

It's wonderful. So the fascia is basically lining all the muscles. It's under the skin. Everywhere. Here. Lines everywhere. No, it's like in and out, in and out, like origami.

And so it's in your cheeks, it's on top of your lips. It was really interesting. And we had a stem cell guy come out and he basically, like one of our doctors had a frozen shoulder.

I didn't even know. you know, usually, okay, let's go into the joint, let's go in and go deep. And he just went pretty superficial into the fascia around it.

And he guarantees that if they don't walk out significantly better, he'll refund their money, right? I'm like, it's not gonna work. I mean, you gotta go deep, you gotta go, you know, and the doctor goes, You know, and I'm like, Oh my God, you know, that guy uses signaling molecules.

So it signals everything in the middle, everything in this space, including the pencils, which would be tissue. What he put in superficially see starts the signaling.

And so if we think of fashion, just kind of connective tissue that does not adjust something to push through, you know, No, it's so bioactive. It's active.

It's full of all these biological processes. And even when you touch it, it's very responsive to touch. And each fascia likes certain kind of touch, but when you touch it, you press it, you move it, and then you put the nutrients into it.

Whether it's through a little superficial needle or, you know, IV or orally, it loves it and it moves. Yeah. You know, cupping, does that? Because it kind of pulls up on the fascia.

My girlfriend was doing that. I'm like, yeah, kind of crazy. But she's like, it's helping, you know? And so, you know, there is. It's amazing. All these alternative therapies, when you look, have a good physiologic basis.

Yeah. They really do. If you think of thymus and beta-4, like for polymyalgia rheumatica, when someone, their hips are bothering, they can't stand up, you know, so it's kind of the, and their shoulders are bothering them and you give them a little peptide.

just a tiny bit of peptide, like thymus and beta-4, one of your favorites, and you put it in, and you can move. It's unbelievable. So you can give them a little dose in the soft tissue, like a tiny little needle, but in a big sense, because when we put, when children have insulin-dependent diabetes, and we give them insulin in their abdomen, it gets through their brain, it gets through their toes, it goes from the toes to the nose to the brain, it goes everywhere, from one little injection, even just under the arm, wherever you put it.

It's the same with peptides. They are amazing. Amazing. It's amazing that some of the doses, I mean, you know, in nanograms, you know, usually, you know, drugs are milligrams, supplements are milligrams, and then there's micrograms, thousand less, and even work a thousand less than that.

So it's like nothing, you know. tiny amounts. It's like a domino effect. So once you affect one cell, it goes to the next, to the next, to the next, and they just keep all communicating.

So it makes them function as a whole, as a system, as a team. If you think of a quarterback's arm, Tom Brady or any of the quarterbacks, and you think every layer of muscle In between each little layer is fascia.

So when you're treating a quarterback, if they can't move, you know, I was at a quarterback camp and- Constantly. Yeah. Yeah. I was out there, I was at a quarterback camp, and this is interesting.

The quarterback coach, we said, what if the athlete can't make the movement that you think they need to make to get the ball in the air where it needs to go?

He said, well, I just changed their position. I said, well, you don't have to change their position. You can put in signaling molecules to get this fascia.

to be not inflamed and to glide and to glide in every which direction so that quarterback can throw that ball. Hail Mary. Because I, I know it's just a little side note that a bunch of doctors were kind of fighting, trying to get in that position and they bypassed them and called you.

No, but you can do that. It's really, it's real. I love that. And let's just say headache. What, what do you think of when someone comes in complaining of headaches?

Headaches are interesting. You have to kind of think like, what is the cause of the headache? So if you think, you know, that it's a blood pressure issue or something in the inflammation and the blood pressure, and again, if it's real inflammation, you're going to have to go to, you know, something that's anti-inflammatory.

So understanding the cause of that will be key, but you could try a thymus than beta-4. You could try a cerebral lysine is one of my favorites, a little harder to get right now.

But that- It will be coming out, just so you know, in a couple of weeks with oral cerebral lysine. We used only one and it was great. Yeah. So each capsule is about two and a half cc's worth.

That's amazing. Yeah. So we'll have that because yeah, cerebral isin is like impossible. I finally got some injectable. I can't sell the patients because it's from Russia, but it took three months.

I forgot I ordered it and it showed up. Yeah. Um, but yeah, cerebral isin is basically neuro signaling molecules, you know, porcine.

Brain Injury Recovery and Neuropeptides

Um, and they kind of don't tell you the formula, it's secret. And, but some amazing studies on neurodegenerative diseases and, you know, kind of a significant improvement in Alzheimer's like pretty quickly as well, you know, traumatic brain injury.

Yeah. Think about what it does. Cerebral grained lice. It breaks up things in the brain that don't belong there. So my son had his brain injury. Thank goodness for peptides, because he got the thymusins, the cerebral lice, and he got them all.

Yeah, let's talk about that. So traumatic brain injury. And it's such a problem. And I think it's such a bigger problem than people think, because you don't have to be a professional athlete, although that's where the focus is in the football.

But, you know, people who don't even skateboarding, you know, soccer, you know, and then the longer you do it, and it doesn't have to be like our automobile accident, like one big one, just repetitive, you know, base concussion that you think nothing of.

And they pay the price. And, you know, a lot of these football players, I saw a study, you're probably there, the presentation at the stem cell conference where they did spec scans, again, tell the position of the player by where

the brain damage was.

It's it's it's crazy. So what did you for your son to get this recovery where where the doctors would say, sorry, you know, Oh, he had so much bleeding in his brain.

He was violent. He was in the wrong place at the wrong time and violently was attacked and fractured with a crowbar and then he bled a lot. You got stabilized and then after that, He was home for quite some time from college, and we basically just treated him with peptides around the clock.

And then a little bit of amniacomes and things like that, the other signaling molecules as well, but mostly it was the peptides. nine to 12 months, just kind of cycling.

So we use the thymusins, we use the BPC, we use some CJC, we use some cerebral lysine, and it was more- Okay, can you just kind of explain those? Yeah.

So for the inflammation, The primary inflammation, I use the thymus and beta-4. And so I wanted to kind of reduce inflammation. For the nervous system axonal, the axons on the nerves, regeneration, I use thymus and alpha-1.

So I try to get inflammation down, then build neuronal axons. And then when you're getting the inflammation down, you want the glucose utilization in a dirty brain, so to speak, a bloody brain, to be used well.

So you use cerebral lysine. So we've got a little biomedicine beta-4, cerebral lysine, followed by some biomedicine alpha-1. So those are the three. And then at night, prior to bed, 8 p.m., 9 p.m., We would do a little bit of the CJC, which basically is the growth hormone derivative with IPA.

And so that would kind of help to heal the whole body because he really suffered. And then I love BPC. I think it's one of the most amazing for neurodegeneration.

for all healing, for any actin, myosin, filament within a cell membrane. So the cell membranes break down and that's how the blood gets into the middle tissue.

So the BPC will help restore the cell membrane. So I used the thymusins, both of them, the BPC, the CJC, EPATH, cerebral lysin. I think he had one dose of like a stem cell-like product.

But also C max or C length or? I use C max and C length subsequently when he, maybe three or four months out, he had some anxiety, you know, just random palpitations, anxiety for no good reason.

And that we use some C max and C length for, we would alternate them in C length. And those are both, you know, nootropics, improve brain function, but especially C-Link, it does so many other things.

I mean, modulation really helps deal with stress, you know, lowers all those things. A couple of things. So amniacomes versus exosomes versus stem cells.

What's your thought? Well, I think stem cells, you know, they are cells like if you did a bone marrow transplant, that's the idea that you can harvest stem cells by doing fat liposuction, et cetera.

So that's one way of doing it. It's a little cumbersome because you have to go through the process with all of the machinery. And then exosomes are these little vesicles that basically go from cell to cell to cell and pop into the cell and they carry information.

They can carry good information, they can carry bad information, but the exosomes that we use, that you and I have used, basically are designed to deliver the good information to restore the cell to function, to regenerate the cell back to normal function.

Exosomes and amniosomes are very similar. Amniosomes are from amniotic product. Exosomes are not always

specified that they're from amniotic fluid. They may be from placenta.

They may be from another component of the healthy fetus at birth, but they're pretty similar. look at each of those, the amniosome, the exosome, and the stem cell, and you can characterize them depending on where you got them, and you can see what benefits they may potentially confer in the patient that you're trying to heal.

So you really kind of want to know what is your goal. And it may be that you just need a little bit of amblyosomes. It may be that you need something very specific from an exosome perspective.

But you talk to the scientists, the PhD doctors who are researching this and are fully, they're brilliant, and they will help you to figure out what factors, what growth factors and what are the markers of each of these cells that you would want to use in that situation.

Because people think that the stem cells go to that area, they start growing and regenerate, which they don't. I mean, studies show you separate For instance, with post-MI study, they blocked the stem cells from getting to the heart and it recovered just as well as giving them cell.

Yeah, it's those signaling molecules that are generally secreted in the packets. How do you deliver those? Do you do any nasal? The nasal are great. I mean, especially if you were thinking like these, a motor vehicle accident with a brain injury or even my son at the time, that we weren't doing that.

This was years ago. So I think that's a great delivery mechanism right through the cribriform plenate right here. It's like a little checks serial thing with holes.

And if you inhale that appropriately, it goes right directly to the brain. Are you using a sprayer or a sphenocath to get up in there? No, you can do either.

I've done this phenocav. I don't do many of them. I use the sprayer. I tend to like things a little bit more continuously over time than a one and done.

I don't really believe a one and done is a solution. It's not like you can go to physical therapy one time and you're done. Oh, that's true. Yeah. So I like some consistent pattern of delivery because I think that that's going to give us a steady state pattern and it's going to allow for better healing.

So I prefer an intranasal spray and lots of other docs do that as well with great results. Yeah. And we found like the autistic kids, it seems to work great.

And the problem with doing like a sphenocast, I mean, it's going up in there. It's uncomfortable if you don't snub it up. But I did it because stem cells, you don't really want to use anesthetics.

So they filmed me. I didn't do any anesthetic and the other doctor office and oh man, I was flopped around. doesn't hurt, but it's just so uncomfortable, you know, but you can numb it up.

But I don't think it's needed to get right. You know, I think it gets up in there. You know, if you get like a nasal spray that kind of shoots, shoots.

Absolutely. I try to do the easiest thing possible. And I've had really good results with, you know, nasal sprays and things like that. The patients have had good results.

So if I didn't get a result, I would consider another way. I treat a lot of wounded warriors, too. I love that. All have brain injuries and they're really great people.

They're so motivated to get well. and because they're just heart cold. You know, it's strange. I've met a number of vets that, you know, and this guy was telling me he goes to the VA, no one can figure out his symptoms, you know, if what's the, it's all a cycle.

I'm like, let me guess you have that, that, that, that, that. And he's like, no way. You know, I started talking, I start crying and he's crying. And I'm like, I'll treat you for free.

Just come in. And they don't, I don't understand it. Really? No. Yeah. They're so good. I should send some to you that are out in the West Coast because they're really motivated.

I think they may go back. to a doctor or whatever, oh, there's nothing you can do. They talk to their friends or someone, you know, that goes. Yeah, they really want to know.

I have a group of Marines and Navy SEALs that I've seen and they talk to each other and then they come and they're willing to try a lot of things and they do well.

They're great. I love these young guys. They're like 30 and under, you know, and they need help. And it, it, it's incredible. Life change. And it's, it's kind of same with all the other diseases.

We treat a chronic line, front of peak syndrome, like a big part of it. No one believes them, you know, it's costly, but if you give them something, they're going to do it.

They're really great. Yeah, yeah, they want to get better, but then they start and they go doctor, doctor, doctor. Their friends go, oh, just, you know, eat this exercise or you're just lazy.

Then they start believing it, you know, and they have a hard time. One guy in particular actually heard from him recently. He just moved down to Alabama.

He just graduated college. He's like 30. He was a Marine and he came in, he had seen a lot of doctors, including at Yale, cause he was in Connecticut and he was, he was really suicidal.

He was very sad and he was not really hopeful when he came in, but we tried, he tried a couple of things and he came regularly for some IVs and. all kinds of peptides and all kinds of inhaled things.

Exosomes, Stem Cells, and Delivery Methods

He did great, he graduated and just got a job in Alabama, a great job. He showed me the house he bought, I couldn't believe it. He invited me to the Marine Corps ball, which was hysterical.

So I went to this Marine Corps ball where he got an honor and he was so happy because at that ball, other young Marines were there who were feeling really down and depressed.

And he said, look, you know, he feels like he saved their life and he feels like being, you know, it would never have made it there. And he really felt like.

Well, we have people cry the first visit, just like, you believe me? We're like, yes, and I'll show you on paper that you're not normally. Or what if you don't find anything?

I'm like, that hasn't happened. It never happened, right? Yeah, you just covered. dig deep, you know, they do a chem panel, a CBC and a cholesterol and they go, oh, your cholesterol is high or something, you know, like, oh, you're fine.

You know, it's crazy, you know, I just feel better. Because they really are great guys. Yeah, that's been fun treating the brain, the brain injuries for those.

Yeah. And then how about like the neurodegenerative? Like MS and Parkinson's. And I think, you know, there are, it's funny because we're here and we're doing this cutting edge work.

And I connected with a doctor in Germany who runs the Frontiers in Neurology journal. Oh, that's huge. He's a

young guy, very smart and very proactive.

And Germany's proactive, we know that. So he's working on peptides for Parkinson's, maybe leucine, lysine, some of those things, but just combinations.

He has his own proprietary combinations with amazing results and bringing it to market in a whole new delivery system. And also having it studied with an IRB, but with something different than a DDRCT, a double-blind randomized placebo control trial.

He's doing it, we give different amounts to different people in different groups and we follow their progress. So they really, medicine is changing and this is all going to be utilized.

It's a field that, you know, it has to change. And, and the problem is like, there's so many great things and, but trying to get something published that isn't standard dogma is they just won't accept it.

You can't get into a good, you know, journal oftentimes and, oh, that's alternative. That's not what we do. You know, even if it's like great data and, you know, the show.

Yeah, I think it's really just about if there's a little challenge and conflict between the pharmaceuticals and- Yeah, because who's funding the journal?

You know, it's like you look at there's five page ads of pharmaceuticals each, you know, every five pages. Now you don't see the journal cover, it's wrapped with the ad, you know?

And so they're not going to publish something that says, hey, you don't need this drug, you know? Well, that's where people find you, right? And they find doctors like us.

And thank goodness that we're able to really hear them and help them and measure the data. We can't really follow the data. But symptomatically, they're so much better for a long period of time.

Yeah. They'll say, oh, it's just anecdotal. Those 500 patients you have, that's anecdotal. I know that's not, there's nothing anecdotal about that. And you've been in this business for decades, right?

Yeah. And it's funny. And I'll argue, you know, people they'll say, well, society that it says this, well, you look at the WHR levels of evidence. Okay.

Like what's the highest of double blind, receiver controlled, you got meta-analysis, you got single blind, those down then, you know, case studies, anecdotal.

Then under that is societal recommendations. because they're shown to be 20 years behind, they don't change, they cherry pick studies to just say what they want.

We do no harm, get the right medicine out there, get to the root cause. About getting to the root cause, what we talk about immune dysfunction, gut brain, how do you, what's your thoughts on that?

Yeah, the immune I think is really at the core because the immune system will either create inflammation like heart disease and diabetes and stroke and even some of the results from infections and or it can create autoimmunity, immune confusion And that's autoimmunity.

The immune system becomes confused. What's friend? What's foe? The immune system is based in the gut. So there's a lot of gut interaction around that.

And then the last thing that the immune system does is cause cancer. So we really have to put the immune system on the top and understand which area, you know, is it carcinogenic?

Is it cancer related? Is it autoimmune related? Is it inflammatory related? And then start to really put out the fires, maybe change the pH of the rust, and then really just make sure that the cells don't go rogue.

So for the immune system, understanding which one of those three categories you're in, you may use a thymusin because the thymusin… What do you do to evaluate the immune system?

Well, I look at a lot of immunoglobulins, right? So the Ig, Es, As, Gs, Ms, both mucosal immunoglobulins, the ones that are secreted in the mouth, the ones from the gut, and then the serum immunoglobulins.

So we can look at those in the blood and in the saliva, and then you can look at them in the stool, and you can look at natural killer cell function, and you can look at complement and all of these other obviously ESR and CRP, but I don't think those are all that helpful.

Myeloperoxidase I find very helpful. I find looking at the differential on the complete blood count really helpful. Are there monocytes? Are there immature granulocytes?

What is going on? And looking at that with a myeloperoxidase. If the myeloperoxidase is activated and elevated and you've got a differential that suggested that there's something chronic going on, Then you know that your immune system is likely inflamed and there's likely going to be some immune dysregulation for autoimmunity, so you've got to get curious or cancer.

A stool test will help you. I mean, it will show you a lot of things if you look at the immunology of the stool, like the eosinophil protein X, the calprotectin, the secretory IgA.

And then when you look at the metabolomics, the metabolism of the microbiome, of the microbiota, the bugs in the gut, you're going to also see what's being produced.

Are there kind of like rancid chemicals being produced? Are they recirculating through the body? That's going to be your long-chain fatty acids and your beta-glucuronidase that will be elevated.

And then you'll have short-chain fatty acids that are low, which are your resistant starches that are there to feed the good guys. So you can get a lot of information from stool, from general blood counts and natural killer cell count, a CD4, a CD57 count, really important, just basics.

I mean, those are real basics. Yeah. Well, you're looking at everything different, you know, oh, you're normal, you know, and look to paint a picture.

Immune Dysfunction, Gut Health, and Autoimmunity

Yeah, I had a patient from Bermuda yesterday, relatively young woman, 50s, young 50s, and she has a, her doctor was actually one of my students a long time ago in Sodom.

And so she, she came to me on her own, but she had, so many autoimmune markers that were off. So she has a mixed connective tissue disorder with mild symptoms right now.

Mixed connective tissue disorder is when you go to the rheumatologist, they don't know what it is, so they call it mixed connective tissue disorder. And like her rheumatoid factor for rheumatoid arthritis is off.

Those numbers are off. Exactly. That's the soft tissue. So coming back to fascia, Her fascia is what is bothering her, so we have to treat that. So we need to absolutely understand that.

Heal any leaky spaces, whether it's in her mouth. whether it's in her gut, make sure she doesn't have, you know, rheumatoid arthritis is associated with bugs because the immune system didn't keep them out.

Chronic infections, I think, are just such problems. The mouth, right? The bladder, the gut. And then also, it can

also be related to low secretory IgA, but often hypochlorhydria, low stomach acid.

Yeah. Yeah, and I think everything's a vicious cycle. You know, even look at the gut-brain axis, also the brain-gut axis, you know, and I argued initially, you know, SIBO, everything where SIBO, SIBO, SIBO cause everything, say, well, I think it's kind of also a symptom of things like Oh, you know, I was on a, like a podcast interview and that guy got so mad at me because, you know, Oh, this is the cause of everything.

I said, I don't know. Well, what's making a problem? Cause you treat it and it comes back. Okay. There's something wrong. Right. And Dr. Rubin is going to be on and talk more about that where he's, he's finding now, you know, all these gut presentations are due to systemic problems where the regular gastroenterologist will just go.

Okay, let's scope you. Oh, everyone looks fine, you know, and they just don't look… Well, they look for structural things. They only look for structural things, but there's something functionally that caused that structure to change.

And Dr. Bar is so, you know, open-minded and curious and learning, and he's just an amazing GI doc, but… And he has, I've been told, by the way, the sexiest voice, so…

He does, yes, he's a lovely, lovely little thing. Yeah, that would be a great webinar. I'm excited to listen to that. Yeah. Yeah. So you've got to fix the gut.

I mean, with the gut, you've got to use some BPC always because BPC, you know, I mean, you're an expert on BPC as well, that BPC is so healing for the gut and you can cut the gut, you can cut the colon, right?

And just leave it there dead. for three days and then you could bathe it in BPC or saline without any BPC and the BPC grows back. Is there anything about that?

Or like spinal cords that are separated, you know, grows back. And then we, you know, we have the TB4 active frag, which absorbs and has the effects of TB4 and shown to fix the tight junctions, which are key.

Did you use any melanocortin stuff for inflammation? For the brain, for the MSH, I think that's good in like Lyme and other real chronic infections, right?

Do you use that for Lyme? No, because the problem is you do like melanotan and you do it. I mean, you have the pigmentation increase, which we will. That's great.

If you're older, it brings out the dark spots and that. But there's a fragment called KPD, which is actually much more anti-inflammatory. it basically suppresses stem stems of mast cells much more significantly.

And so we'll be coming out with that product alone and also adding it to the BPC product. And there's a lot of melanocort receptors in the gut. So huge anti-inflammatory, lots of studies on my psoriasis, like one day it's gone, you know.

Oh, bravo. Yeah. Yeah. And my girlfriend developed, um, uh, mass cell activation center. I'm like, just, you know, basically take something like a pencil, you know, eraser and scrap, and then it just welts up and boom was gone.

Yeah. That is amazing. Well, mass cell activation symptoms are growing rapidly. I mean, I think it's from all the exposures and, and our body is just being overwhelmed.

I think that that. I love the idea that KPV with BPC without it. That sounds, how soon? Bravo. Thank you for doing that. Yeah. I'd say two weeks, but I think it's those two weeks.

Yeah. Well, within the month. You're such a renegade. That's my best friend in medicine. We're always trying and we have like no side effects type thing, you know, so it's going to be great.

And that's the thing. I think it's tough because everything's so intertwined, right? Everything's a vicious cycle in a

good way or a bad way. Well, then the hard thing to do is to know where to start, right?

So where are we going to start with these peptides? I say start somewhere, just start anywhere, and then you can always change. You adapt. It's like starting a football game.

You've got to adapt. And I know you have a training course that is very highly regarded and I think doctors are freaked out because there's so many options and they, you know, like, I think you said, you know, where do you start?

Like just start. I mean, you're, it's so hard to screw it up, you know, because they're so safe or whatever you give, it's probably going to help. And what would you say the core peptides are for you?

Also, I could start. BPC for sure. I mean, injectable or oral, off the charts. The thymusins for sure. The CJC for sure. I mean, CJC works in the immune system too.

That's why I used it in my son. It works as insulin, blood sugar, insulin, immune system. Did you add it to like epimoralin? Yeah, always. It's so amazing because you've got the ghrelin with the epimoralin, which works on healing the stomach.

And just so everyone knows, they'll secrete the tele-body secreted growth hormone. But as Dr. Neal is saying, it does a lot of other things. And oh, I want to ask you, with the traumatic brain injury, I mean, there are studies showing that why not give these guys prophylactically, before they play a little You know, TV, TV for whatever BPC, like it just seems like heck.

Yeah. It makes sense because that ounce of prevention is a lot easier than all the cure you need to try to do. It really makes sense. And I think we'll be there.

The problem is the circuits you have to jump through, the hoops you have to jump through, but it's worth jumping through them because they benefit people without any harm.

Yeah. Yeah. And that's either they're so safe and let's just say for performance, because you work with all these athletes and what types of things do you like to do to get someone in their peak?

Because the difference is professional athletes, you know, it's so competitive, just a tiny bit difference. They're going to make it or, or, you know, be gone.

It's a multifactorial program when you, when you take that on like, and I think of it, you know, kind of foundationally and building up, but I, but for peptides, you know, I had an older gentleman, not old, but older in his late fifties who hadn't really trained and was going to run a marathon.

The year before he was going to run that marathon, but he got there, he had horrible back pain. He didn't end up running. So this year he comes in and the marathon was like in October or something, and he comes in and.

He came in in late August and he said, I'm running this marathon. Do not talk me out of it. I'm, I'm running the marathon. So I'm here for you to create the program, to be sure I get through it and that they have no injury.

That's a lot of pressure on you. Well, like, well, are you going to do the program? So we did, we created it with a lot of different peptides and we would use the CJC and we would use the BPC for sure.

Was he in shape to start with? Marginally. Maybe he'd run a mile. I don't know. To me, that's pretty good because I'm so passionate about exercise. It's like a religion.

Every four months, I do eight minutes. So whatever peptides you're using, they're working. And for this man, I thought I would have, I mean, I tried to talk him out because I thought it's not worth it if you get injured, but he said, I'm doing it.

So remarkably, we did for sure BPC, for sure CJC, and then kind of juggling a few of the others around. He did fascia work. through the specialized fascia experts.

And he did his best time. In fact, he ran so fast that I missed it because I went out there for a mile 20 thinking, he's going to be slow. He had already passed by.

And then when I heard that he had done, he was finished. I didn't believe it. I said, you are a Rosie Ruiz. You got out and went back out in the car. Had some beers.

photographed Jim all along, so he was lucky, because otherwise I wouldn't have believed it. But it was quite amazing. I was impressed that that could happen.

So if you really kind of tweak some of these things, depending on who you are, MOTC maybe, or maybe a mitochondrial, the one you told me about, we talked about earlier this week, I think that there's a lot of options for getting the mitochondria up and going, and for healing the tissue, And did you combine that with hormones and nutrient therapy?

Well, what types? I did. I brought actually, I mean, he did probably an IV a week. Of what? IVs. And in the IVs, typically if I do them twice a week, I'll do nutrients and then kind of detoxification things.

So I think of Get the debris to keep moving and then clean it up. Get the debris to move, clean it up. So it's, you know, some glutathione, some vitamin C's or whatever you were choosing to do, then the bees and the minerals and the zinc or whatever they need.

What's your favorite kind of detox IDs? It just depends on the person, but I have a lot of athletes, you know, people, guys and gals who work out regularly and they come in twice a month, minimally for glutathione.

And in the glutathione, there's some B vitamins and things like that. They can get some amino acids to pump them up as well, you know. Do you like phosphatidylcholine?

I love, I love PCA. Yeah. I think that's the best detox. I love PC. They grab so much stuff, like petroleum products, also heavy metals. I'll take that over the chelation.

For sure. How do you do PC? Do you do the cane protocol? What do you do? Yeah, I don't know. I'm not a big protocol guy. Doctors love protocols, so we'll just ramp people up on it.

Performance, Detox, and Mitochondrial Support

Especially sick patients that have poor detox. It's interesting, we're starting to use a lot of genetics. You can see the ones that, hey, no wonder you're having a problem.

All your detoxification pathways suck, you know? And it's nice because instead of like giving everyone like all these supplements and things that I can give you a thousand things are good for you, right?

But we can pinpoint much better what's wrong. And a lot of times it's like, yeah, that makes sense why you're having this problem. Now let's give this, you know, a much more directed treatment.

So. Oh, good. Yeah. Really? What about an NAD? Are you doing an NAD IV? Yeah, I like NAD. I mean, it's just such a pain, you know, it takes so long and I'll do a little sub cue myself and we're cutting down the dough.

So it's like a two or three hour because it's tough to get someone to sit there for eight hours, you know? So hard. But yeah, the ways to increase NAD in the cells, like some of these mitochondria, like five amino, one MQ, and things to increase.

I find that kind of the oral or sublingual NAD, I don't know, I haven't had good luck with that. Maybe mild with some

of the precursors, but they're just short-lived, you know?

poly-MBA, this kind of palladium complex. So it's interesting with like the 5-Wena-1NQ, so revs up the blocks a certain pathway, which ends up increasing NAD in the cell.

And so we gave to people it stopped working. And then we added like PQQ or MitoQ, which is antioxidant goes in the mitochondria, then it started working again.

So it almost like used up the antioxidants. Yeah, maybe it didn't have enough of the ingredient to keep. working. It kind of did its job. Hey, give me some more of other things like co-cutan.

And it's amazing with these theories of aging and mitochondrial dysfunction. You look at all these illnesses, neurodegenerative diseases, you have tons of studies in Parkinson's and Alzheimer's and mitochondrial dysfunction.

Chronic fatigue syndrome, fibromyalgia, I mean muscle biopsies, their mitochondria are just swollen, they don't work. And you fix the mitochondria and yeah, all of a sudden diabetics, their mitochondria are terrible and they have no metabolism.

You know, so thyroid can help, but I mean, there's, yeah, so many things, you know, in terms of fixing the mitochondria, some of the exosomes actually have mitochondria DNA, which, which repair mitochondria.

Um, they had one baby who basically came out with total heart failure. And this was a research they injected out of how many billions of mitochondria and heart recovered and fine ever, ever since.

But it's only for people who are really sick and they don't usually make it from stage four mitochondria disease. They don't make it to like, they die by 20. Yeah.

For me, it's like, okay, what about the people who are living horrible lives, costing the system a lot? What are they doing for those? They're doing a lot of infusions of a lot of the different things that you're saying.

I mean, not the peptides more, just the nutrients. Yeah, just like kind of keep that going. And also those kids are very prone to vaccine injury too. Oh, for sure.

Yeah. And so we were thinking of doing kind of a vaccine basically harm mitigation program where, you know, it's kids with immune dysfunction where their immune systems are already like this, TH1 is too low, TH2 is too high.

And the vaccines, that's the problem is they go like this, cause a bunch of inflammation, change brain chemistry. So if we can normalize our immune system before they do the vaccines, I'm like, everyone freaks out.

I'm not an anti-vaxxer. I'm just saying, let's make them as safe. And they will say, you can't even question vaccines. Why not? If they've helped more people, I go, I agree.

Well, sanitation has probably helped more, but it's just like antibiotics has also saved human lives. We question antibiotics all the time. Nothing is black and white.

Some of the studies show that people that get hepatitis B vaccine when they're born, why are they getting that? Where are they going to be drug users and prostitutes?

and shown developmental delay, but you can't say that you become a tac and anti-vaxxer. A lot of studies show increased autoimmunity, 30% increase in obesity, which comes back to personal choice, I think.

Let's say we have this shot that's going to protect you from this rare but pretty serious, potentially serious illness, but your child will have a 30% higher increased risk for obesity.

Would you do it? Yeah, exactly. You know, it's weighing this, but we don't give those choices to the parents. It's just do it. And you're not allowed to even question anything.

And again, I'm not an anti-vaxxer. So they do a lot of great things, but how safely do we give them? Usually it's spread them out. And like HPV vaccine.

Yeah. The HPV vaccine, oh my gosh, we've had people devastated by it. But if I even mention that, I become an anti-vaxxer. What I think is that you get surprised.

You show up at the doctor or something, and then they don't even treat what you showed up for, but they shove in a vaccine. I mean, that's true with pneumococcus, that's true with the flu, that's true with the HPV vaccine.

You're just born, they're shoving vaccines in you. We never even looked to see is this patient in a good state of health right now that they could handle one vaccine, let alone three vaccines.

Yeah. What do they get? 105, I think now. And, you know, the whole thing is COVID, like they're just waiting for a vaccine. Like, you know, it's an RNA virus and the antibiotic, the antibodies don't stick around.

You know, we don't have an HIV vaccine. Funny thing. But the body will secrete IgA antibodies in the nose. So I think the nasal vaccines are the ones that are going to make it.

Right. From the secretary, IGA. Exactly. We have to understand that. And they think a lot of people are actually probably immune or have some immunity to it because of the Corona, cold viruses and things like that.

So you look at the death rates going down. I don't know. By time this airs, I might be saying what's going on, but I think they're making it much worse than it than it seems like a lot of people are getting it, but the death rate, the death rate for people, you know, generally healthy people under seventies is close to zero, you know, pretty low.

It's well under, yeah, well under 1% like zero. which is like the flu. So, but anyways, I don't want to get too political. It's like if you mentioned anything like that.

No, I'm seeing the same thing with COVID that people who were sick, they did fine. I had a couple of people hospitalized, but they did fine. And they had antibodies, but the antibodies are going away.

And so I'm just beginning to check the second round of antibodies. You can check quantitative or numbers of antibodies here as opposed to just do you have them or not, which is I think what Quest does.

And I'm kind of amazed that people will go from 30 to five in a several week window. I mean, yeah, and some people never secrete antibodies. So those tests are tough and you're looking at the PCR test.

The false positive rate is looking like 30, 40% because even though specificity is 90 plus percent, but let's say, you know, let's say it's 90%, but let's just say the incidence is 10%. It's probably higher, but.

With that combo, well, 90% is 90% accurate, but really, because of 10% prevalence, it's a 50% false positive rate. Right. Right. So it's, the testing is…

They're a math guy. That's, that's a little complicated math. Yeah. But yeah, people don't understand that. They just say, oh, how accurate is it? But okay, this has been great.

It's going through all these things and how you approach, or what to say, one last thing, just person who wants to stay healthy and prevent. Well, what, what do you think of?

What? What age? Let's see. Middle age, 55. So middle age, 55. The middle age between 45 and 55? Yeah, I think middle age, you know, really, if you're pretty active, you know, the weekend warrior, the weekday warrior, you're definitely going to want some BPC.

You're definitely going to want some TP4 if you've got injury, any type of injury.

Healthy Aging, Hormones, and Prevention

Does all those drop as we get older, you know? Thymus and alpha 1 intermittently, depending on the season. That's going to boost your good immune system and prevent cancer.

And yeah. And so, you know, by the time you're my age, your thymus is pretty much 90% gone. So, and that's when all these diseases of chronic illness of aging come about.

Cancer, heart disease, autoimmune disease. Absolutely. Yeah. And, and if you bring those back and I'll just kind of talk about COVID, like with, you know, they found people with sepsis, like their TB4 is like zero, you know, with, with bad sepsis and giving TB4 not only boosts it means just, but prevents that overshoot.

And so it prevents that. bad immunity that just goes crazy. And so you were saying when we were talking before was that Frontier is doing a trial, I think, Thymacin Beta 4. Yeah, it is.

The people who, you know, they're in their 80s and they've been involved with the Thymacins since the 50s, 1950s. They have a trial going on in the DC with Thymacins for COVID.

And the thing about the thymusins and what you were saying about the thymus gland is that we can change our, well, our chronological age is fixed, like you're 54, 55, but your biological age can be 50 or 48 or 46 if you put back the things that have been polluted, like your thymus gland, which is down here.

If you put back the support for that gland, then you're going to be fine. If you support your testosterone, that's like easy to understand. if you've lost your estrogen because you're postmenopausal, if you support the things that are gone, you're going to have a healthier life and a better biological age.

Your biology is going to work better and you'll feel… Yeah. And you know what's scary is like, you know, a bombard with toxins, pesticides, plastics are very estrogenic.

We're going to be, everyone's going to be a woman, but Like, you know, you look at each decade, the range, so when they do lab tests, each lab, they have to do their own reference range to take everyone.

And they take, you know, 95% of people are normal, only the highest, 200% most, and a percentage of them are normal. So each decade, people are lower testosterone, so they just keep lowering the testosterone.

So now, if it was 30 years ago, for the same age, you'd be super low. Now, oh, you're normal. It's like saying diabetes is normal, cancer is normal, heart disease is normal.

It's crazy. So optimizing those things, or they'll be in the lowest 3% in the dark is like, oh, you're normal. It's like saying, getting a D minus, oh, you're fine.

Next year, we're at the top of your class. Unlikely, right? Yeah. I know. It's really crazy. It is a really big issue in terms of we can do a lot about these things.

And I think it's exciting that people can learn that there are ways that you can treat these things safely and effectively. So they can be safe, they can be effective, and they can be sustainable.

What's better than that? Yeah. Well, I can name a couple of them. I don't know. That's when we're at a conference and we're just like, who's joking without being on.

That's the after conference. I'm joking. Well, it's been wonderful talking with you. You're just a wealth of knowledge and just, you make me smile. You're such a good person too.

And so I really appreciate you being on and thank you so much. Thanks for having me. It's always great to work with you. I love doing these things with you.

And thanks for being a great colleague. Great. Same here. All right. Thank you so much. See you soon. Thank you for tuning into Dr. Talks. We hope today's episode has enlightened and inspired you on your path to optimal health.

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