Dr. Sanjeev Goel, MD, FCFP(PC) CAFCI - An Intro to Biohacking and Psychedelics Transcript

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Introduction to Biohacking and Peak Human

Hello, Doctor Kent, the whole talk with another episode of the Peptide Summit. Today we are honored to have, Doctor Goyle from Toronto. He is, a biohacker and just really doing a lot of cutting edge things.

And today he's gonna be talking about biohacking, psychedelics, hyperbaric O2 and peptides for peak human performance. Doctor Goyal is founder of Peak Human.

So it's at Peak Human deka again in Canada. And his goal to get you 100 times that you are now, with advanced training and anti-aging, integrative regenerative medicine.

He advocates a healthy lifestyle, really? Which everyone does. But it's that biohacking that makes it much easier and you get there much quicker. You know, center on plant based diet, of course, physical activity and enhancing mental resilience.

He was the main host partner for the Toronto Biohacking Summit in 2018 and brings with them extensive knowledge about a lot of things, but interesting.

Also cannabinoids, psychedelics, in the emerging, science of psychedelics and peptides. So, welcome. Like to go well, thank you for taking the time. It's an honor.

And you're doing a lot, a lot of great things. Thank you so much again for having me here. And and, apologize for my puppy here. If it seems making a little bit of noise, I may have to get my son to take it off.

No. No worries, no worry. We love dogs. It's a little old dog. Yeah. Mini bulldog. Yeah. Nice, nice. We have a, puppy. That's, jack terrier. Jack Russell is just a terror.

Ivan the Terrible. But anyways. Yeah. So. So tell me about what what you're doing there. I know you're doing a lot, very interested in, you know, this kind of emerging field of using psychedelics and, cannabinoids, like low dose for depression, and other things.

So tell me a little bit about that, if you would. Yeah. Like, you know, just be honest. Like, I really came out of this whole biohacking, space and, and, a couple of years ago, I ran a summit here in Toronto at the Biohacker, summit folk from, from from Finland.

And, and basically this the concept of biohacking means to be able to, basically take charge of your own body by measuring it and understanding it and then experimenting on what's out there in the world.

So generally sits outside medicine. And, but I got really interested in this, in this, in this field. And, and then, you know, cannabis, which is, you know, really came out of came, outside of medicine at the beginning.

And really, medicine is now catching up to that. And same with psychedelics. You know, people have been using the psychedelics to expand their brain. And and now we're finding so many other uses like migraine and depression, anxiety, so on, so forth.

Nice. Yeah. Because, you know, with this whole biohacking and you mentioned kind of outside of mainstream medicine, you know, things are moving so fast now and there's so much information, you know, 20 years ago when I'm, you know, trying to get information or write a book or whatever it is, you know, you on the library, try to find the journal and copy it.

Now it's just so much coming out with exponential. It's just really who can gather that information. But there's so much information out there. But, you know, studies have shown Annals of Internal Medicine found most doctors are practicing 20 years behind what's available in the medical literature.

And it takes, on average, proven new therapy, that, you know, tons of studies, take 17 years adopting the mainstream medicine on average, unless it's a new drug without Salesforce.

Cannabis, Psychedelics, and Microdosing

And, you know, they're just kind of pounding the doctors. But now. Yeah. So if everything you know is moving so slow instead of medicine, but the so called alternative or integrative space is moving so fast and it's evidence based.

There's more evidence based around and standard medicine that's still using, you know what they learned in residency and you know medical school. Yeah.

And that's why it's not fair to call this, you know, alternative medicine or, you know, complementary medicine and so on, because then it gets this kind of, kind of, I don't know, yeah.

Stigma. Oh, no study. It's kind of non evidence based on all that the what biohacking is all about science. Somebody's actually looking at looking at actual numbers and science and data and your, and you're drilling down more to actually, you know, cellular or mechanisms and you know basically how the body works instead of, hey, let's lower cholesterol, maybe this pill, lower cholesterol, you know, we're just kind of a little barbaric, you know, where this is.

The more science we know, the more biohacking goes on. And I think what that means is that we're not there's not, particular dogma. Like, you might have a particular, I don't know, a form of alternative medicine which has this.

Okay, this is this is the way it's going to be like, you know, I must we believe in this theory of how things work. But when you're looking at biohacking, you're just looking what's whatever the science takes to that.

You know, if it's today, it's vegan diets. Tomorrow, it could be keto diets. It doesn't really it doesn't all attachment to any any outcome. All we're looking for is what is the science telling us.

And we're willing to change with it. And that's what you know, I love AI medical debates. Right. Free like say here's the thing. You know, everyone has their in, you know, inherent bias of what you've read, what you've seen.

But, you know, just basically going back and four years of studies on this. But problem is that that's gone. Everyone gets it's so political and emotional.

It's like if you say something that's outside the dog when you're quack, you know, it's kind of like you're racist. That all ends the it ends the conversation.

And so you have, you know, vested interest and bias and you and you look at, you know, levels of evidence, you know, you got your randomized, double blind, placebo controlled study, meta analysis, you know, single blind, basically case studies, anecdotal and below that are this by the World Health Organization found that societal guidelines are the worst form of evidence because they're so far behind.

They don't change because there's a big fight. You know, when new studies come out, they don't adopt, say, oh, my patients, okay, my patients are fine.

And I have an article on the National Academy of Hypothyroidism. NIH. And any, any age, hypothyroidism that's have hypothyroidism. Dawn. But, why does my doctor know this and goes through there's lots of concerns in these journals that doctors aren't adopting new therapies, because the system also doesn't amount to even if they spend all the time researching all this stuff, their, their hospital whatever about you can do that, you know.

Yeah. And so it's they're putting a bad position. You know they it doesn't that doesn't do them any good to learn more and new stuff. Yeah. And then you know luckily Canada has been a bit of a pioneer in the whole, cannabis space because it, you know, we've had the medical cannabis screen now for a good ten, 15 years.

And now it's, you know, it's become, the clinics, you know, where we write prescriptions to them, to licensed producers. That has been above already for five years.

So, we've had a lot of ability that, you know, it's been been much more openness now. So I think there's already about 10% of the population has received, has probably used cannabis and, like I yeah, I know you use a lot of that.

And then the and the psychedelic realm. What can you tell me about that. Like what is what have you found it useful for like dosing of things. Yeah. So the psychedelics I mean, again, this is still in the gray zone in Canada.

Like, they're they're not an official thing that one can, prescribe, but I can educate patients on how to use it and what the science is saying. So, you know, generally, what's being in fashion is, is either, microdosing, you know, something like 100, 100mg to, you know, 200mg once every three days, for a couple of months.

And what people are going to, often say, sorry, I've just, tried a psychedelic mushrooms. Okay. Yeah. Those are different. I, I don't know about all this is are different potencies.

Like, how do you know, like which one to use or different strains or. It's still very difficult in the psychedelic world. Yeah. There are, in the psychedelic mushroom world to know, what's more potent or other.

But generally if you just go with that type of, you know, 100mg, 150mg of of a dried, psychedelic mushroom, you should be fine. It's not going to cause an issue.

And then what would the normal dose be? Oh, I mean, if one is going to a therapy session, there is, you know, if you take about if you take about, usually about a gram, you'll start to that.

That's like recreational use. They use about. Well, I mean, I think that that's, it's being used in therapeutic settings and bigger doses. So under the care of a therapist, you know, this is, been shown to help people get, you know, get through some problems that understand what's going on, what has happened in their life.

And sometimes people see, different, see the same problem a different way. And, you know, that's it's something difficult to say. And so is it like a lasting effect.

And so people say they kind of like, look at themselves from the outside and say, I'm not doing this right or not doing that right, or, or that's why I think that's more with ayahuasca.

Is it. There's similar there's psychedelics, there's so similar acting on similar receptors. So it's the, five two way receptor. So there's serotonin receptors specifically the psilocybin ayahuasca or DMT is acting and what that's doing is, is increasing serotonin level.

But it's giving a sense of interconnectedness to this feeling that you're, connected to the, to everyone else, to the nature and, and stuff like that.

And at a higher dose ones are happening is what we call the default mode. Default mode network starts to get suppressed. So whatever's underneath starts to kind of bell shape.

Yeah. Or inverse bell shape, whatever. What about ecstasy? MDMA is MDMA, is the part of ecstasy. But MDMA is clearly being used, for PTSD and in trials right now, when we just don't, we just don't know is.

And so my concerns is that, what are the long term impacts of taking, you know, MDMA on a regular basis? We just, I don't know that aspect, but yeah, whether I think that high dose is kind of the same thing, you, but you start

down regulating or there's some toxicity, you know, probably are could be downgrading serotonin because it's such a big dose of serotonin is coming out.

Some receptors might be getting downregulated, but we don't see anything in the psychedelics. So seven or ayahuasca or DMT of of people, getting any type of overdose or downregulation of those receptors.

But you need to you need to take these doses. The maximum you could be taking is once every three, every three days. Because, otherwise you won't have an impact.

But. Yeah. And then, when do you see a difference and what do you generally see and how long do you do it. Yeah. So I call it let's come back to the microdosing.

So if somebody is taking a microdose then they may or may not feel that dose like it's very subtle. Like there might just be a little calmer. They might think, you know, then they might just feel a little bit sharper or something like that.

But generally they won't feel it. And but it's what the, what the just, research showed was that people who did microdosing after a few months, they did, you know, surveys before and after, they just found that their mood was better.

And, and other people don't notice, like, oh, yeah, yeah. I love you, man. Yeah. Not at the micro level, but if one is taking in a treatment dose, like you're with a therapist or, you know, you're dealing with, somebody who's there to support you and what you first is it's important of that.

We call the set in the setting so that you have, you have set it right intention, you know, then for this one week before you, you know, you set yourself that you're you're not you're avoiding alcohol.

You're avoiding thinking, trying to put yourself in a good space here, you know, to have a getting to fight with somebody you're putting an intention of what do you want to get out of it, even if in your mind you're putting forth. You know what?

I'm kind of working on this issue of my relationship with my mother or something that, you know, you just put that in your mind. And when you actually do have the session, these things just tend to come up that that problem tends to come up.

Oh, interesting. So yeah, intentionally trying to solve a problem I heard like with ayahuasca being drink alcohol doesn't really work or you know, and you found you use this for addiction as well.

Yeah. For sure. I have, patients who are using it, to get off, you know, painkillers or alcohol, and they're taking more of the microdose microdose, dosage.

And they're having a lot of success that year, and you're kind of doing the same every three days. And how long till they start seeing benefit? And how long do you continue?

Yeah, I it can be it can be a long term thing. Okay. This is a again these are microdosing people, doing that. For some time I would say I would, I was just a couple of months, three months to a trial, and, and people are noticing after usually a month that they're, they feel a different and it can increase to, you know, two, 300mg of, if they want and for, let's say, for depression, do they notice, like, oh my gosh, I'm no longer depressed or just like, you know, I don't feel depressed like it, you know, kind of a slow, steady type thing.

Psychedelic Therapy, Set and Setting, and Mental Health

It's it's it's slow to say because what this is actually doing is helping you to see something in a different way. We call this rewiring your brain. It's, I'm like, how do you that like crazy?

We call the antique Tony Robbins. You tell them this is what you can do. I'll give you a thousand reasons why you

can't do it. It's rewiring. You just need rewiring because.

Because you can tell a depressed person, to change the way of thinking was very difficult for. But they do. They can't get out. They can't get out of that, you know?

Yeah. And rumination. Yeah. It's a rumination on it. Also, it's very interesting like, you know, watch some of these documentaries on, you know, some of these people have everything like some of these celebrities, they have fame, fortune.

Yeah. But love them. And they're so depressed they want to, like, kill themselves, you know, it's it's amazing what shows depression. It has nothing to do with logic, you know, like, look at all this stuff I have.

It's it's, you know, what do you have to be depressed about? You know, well, that's depression. You don't have a negative expressed about, you know, or everyone can find something.

But yeah, we look at it that we, you know, this there's, society, unfortunately, that sets us up. So many of us are struggling with, negative thoughts.

Yeah. And I think the, would you say society, the way everything is now makes everything more of the covet thing. You know, everyone's, you know, stuff, you know, and, but also just like, even, you know, growing up, we have computers, you know, you can send a letter you'd wait a week for something to come back.

Now it's like. Or when you're in high school, you know, you never know your, you know, where are you in this pecking order where, you know, it's all vague now.

It's like, how many likes do you have? And everything's texting, instant response, instant gratification, stress. We got traffic, you know, emails. It's like we're just being overloaded constantly.

Yeah, I tend to I don't know if you see A Social Dilemma on Netflix, but it's pretty impressive. Like how I just saw part of it. I was just talking about it, with the Lego friends son.

About I'm like, damn. And I only saw part of it. It's like they know more about you than you do. I heard they can tell if you're pregnant before you do.

By your by how you do, your shopping changes, right? Right. But, yeah, just very clear that it does. Cause, like you said, social media causes depression, anxiety.

Yeah. Okay. Looking at everybody else, and also, yeah, they're talking about news. If you look at certain news sites, they're going to feed you that same news.

So it makes it polarizes everyone because this is all the news. You see this person, all CNN, the wonder, everyone's fighting. You know it's happening.

That's what the political climate is about. This is what people are going down the rabbit holes. And that's how people are getting, radicalized. Yeah.

And they're just adamant because that's all they see. Yeah, it's scary and scary. We can go on by that. Like on on like that's kind of like very political.

Yeah. It's like a delicate opening, basically like, you know, because what happens the more we think some way the roads get stronger and stronger. The parts.

So what we want to do is make it that it's again, again, like wash over some of those roads, you know, like this. So that way you can start new paths.

And so by again, suppressing the top part of your brain, the rational part that's always thinking and thinking, suppressing that allows, you know, some new pathways to that.

So it's not always going to be an antidepressant. It could be put in the wrong hands. If you go take a psychedelic dose and then you're in a bad situation and you're having a fight with somebody you're not not doing.

Yeah, I've heard it's from the yeah, experts. It's like context, right. The get in a bad mood around bad people and, you know, bad energy. And I always like, make a analogy with people.

We see this with a lot of, you know, chronic fatigue syndrome Lyme patients. You know, you can almost tell that they have this illness within a minute on the phone.

Right? And they're just they get wired different. And I think that's kind of like a feral cat. If you bring that feral cat in very soon after you know, it could be totally normal.

But if you wait a month, there's almost no way you can get that cat to be comfortable. You know, holding it like a regular cat. I'd like to see a study on a feral cat and and give the feral cat, see if you can rewire it.

Definitely. Are people giving cannabis to pets? I've definitely seen that. Yeah. And then, the psychedelics compared to cannabis. What's your thought like?

I think you can't really separate two separate types. Yeah. Medicines like one is actually endocannabinoid system, you know, helps with balance immune system and, and, happiness.

But, yeah, they do work in completely separate systems. Yeah. And I think, you know, it's, let's say we'll take out THC, but, you know, it's so anti-inflammatory, you know, the Atlantic Horton's and, like, as I said, multi hormone amazing, like mast cell activation syndrome.

But you got it injected. That's super short acting. So there's like melanin. And which thing is good or bad. You know, it's basic Mylanta and 1 or 2, you know, called the Barbie doll.

Whatever you get tan, you increase libido and you lose weight. We found that, tiny fragment k-p-d, which is also, solvable orally. Is great. It's such a great immune modulator, anti-inflammatory, mast cell inhibitor.

So I think that that are using the Cape for gut issues, it actually absorbs too. So we're using it for mast cell. We just we haven't used it for a long time because we couldn't get it.

But it's also, coming out is available as oral and we're finding, want to do studies on actually showing the bioavailability, but we're finding the clinical outcome like with Marcel is is very good but also gut is great.

Yeah. And obviously with the gut it's also, you know, dump the sleep inducing peptide. You know, we use it for sleep, but the highest levels are in the gut and it's very anti inflammatory.

You know, when it lowers hypothalamic inflammation which causes, you know, diabetes and leptin resistance and, lifetime twitterer dysfunctions, all the hormones are low.

So in a sense, you know, kind of amazing new systems. Everyone's looking at the moon and, and sort of just kind of just one phase of DSP. So are you find that you can give that every single day, like I've been giving it every day. But is it is it something.

Yeah, I found I mean, it kind of, one of the ones that changed my life, for sleep. You know, it's not a sleep medication. Where you where you get sleepy?

It kind of changes that whole sleep center I found if you combine the delta sleep inducing peptide, a battalion. So pineal hormone or piney lion, and then a growth hormone, either growth hormone, secreted, growth hormone itself

or a body, anti-obesity drug, which is a fragment of growth hormone.

Though that combination seems to work very well. It takes a couple of weeks more effort genetically, but I've been the worst. They've had Lyme all my life.

It just messes your sleep up like crazy. And it's, not still not perfect, but it has helped so much because I would, you know, it would cost me a vampire.

I get energy at midnight, and, you know, if I wish the world was turned around, when I was in China was awesome because I could. I was on us to be up all night and just photography during the day, you know, but, it's that combo has helped a lot of people.

Yeah, but salon, are you giving us all big doses that, I can one time I can just grab or people do? Yeah. If when you look at the studies, they're, you know, basically done in big doses, they did like one week every, you know, every six months.

But we just do it smaller doses. Every day. And, and we find that it works. And delta sleep also looks like it's, orally, bioavailable. And it's interesting.

So generally the smaller the peptide, the more likely it is absorb. But there are certain ones at the confirmation if they, amino acids, if it has enough, a, hydrophobic, so lipid soluble, amino acids, that tends to conform, it gets it can actually be absorbed, like, you know, BPC 157, is it's is not the tiny peptide.

Well, it's tiny compared to proteins and things like that, but it is equal potent to injectable for synthetic and for synthetic for systemic conditions.

Like they did a study on same colitis and Alzheimer's, low blood work for about where people with joint pain just give it orally. That's why we also like the, you know, TV for timers and data for, you know, immune modulator, thymic peptide.

A lot of great studies on and modeling that immune system. But it's 43 amino acids doesn't absorb but the, four amino acid, and terminal absorb toll and has the majority of all the effects, some Vega four, but it doesn't seem like massive.

With so that part was taken out and there's another smaller fragment, nano fragment that also is in new story that should be available orally. Coming out to, so kind of interesting stuff when you kind of dig down into the dirt, right.

Yeah, yeah. Very exciting. Yeah, yeah. But, yeah. So, what do you like for cognitive? I know you do a lot of your, obviously a lot of brain stuff. Depression or cognition, dementia.

What what type of things? Like you're pretty excited about? I've use a lot of cerebral lyson, which I'm giving in kind of a big, like, ten milligrams dose.

I, I've, if I, if the person can make it into the office, I'll try to do as much as often as they can get into the office, but usually it's something like once a week, I'll do at least ten, ten treatments.

I've seen, good results in patients with, early dementia. And, you know, just people just want to have a work. And so, she realized that is basically, you know, brain peptides, a mixture, which no one knows exact composition, but we're but we're actually testing with the, mass spectrum of light.

Peptides for Sleep, Recovery, and Inflammation

We're going to figure out exactly what's in there. But, they made it here a biologic, so you can't get it I. V. or as injection anymore. But it is orally bioavailable because the, peptides are small enough.

Okay. And they've had the studies showing that, orally, you know, EEG changes. So they show show that at work. So that's that's I know, going to be out in a couple of weeks or so.

Yeah. I'm pretty excited if you can get that. That's. Yeah. So like one cap is equal like two CCS. It's very difficult. We have to get it shipped right from Austria and like it's not easy.

Yeah. And and you easily get a lot of stuff from Europe and I mean they're approved and you know I'm in Europe and these other countries, but, we had a, a patient who was, FDA, you know, DEA agent, because you're on the list, you better stop getting stuff from Europe, you know, that so, like, oh, yeah, we got to stop, even though, you know, and people think something's FDA approved, that means it's proven and say it's like there's so much corruption in FDA.

But, you know, hopefully there's no FDA. Just kidding. There's listening. But, yeah, you know, all these, these great tools shown to be exceedingly safe, much safer than standard meds, you know?

And, it's funny, right? Pharmacy term, we have so many FDA, they say, yeah, if you find something that's totally safe and works, it's likely to get taken away.

So I've also been using fgfr, at the same time mixing with the superlicence to give and and doing some, see, like and see my patient has, you know, such an anxiety that you can can you talk a little bit about those?

Yeah. So, I'm basically at that. The figure looks to be like, neurogenesis helps to increase, neurogenesis of brain, brain cells, their own cells, and, about two milligrams and putting into the I. V., with every treatment.

And, so with that, you need a little higher doses were a lot of peptides like, nano, you know, basically a micrograms. Yeah. Rather than milligrams. It's a thousand times more.

So they tend to be more expensive. You need so much more. Yeah. That's the problem with some of these is a kind of a $100 type vials. Yeah, yeah. Expensive.

And I've done definitely adding and dime as an alpha, into these in for anybody who's got any type of, brain, concerns, because of, you know, trying to reduce neuroinflammation and, and, yeah, yeah.

And a nice study, dimension data for, frag, reducing microglial activation. Yeah, yeah. So it's all the same brain on fire. And, you know, really, especially these, these chronic infections and, you know, a little about Cmax and see length, when do you like one or the other or what.

Thing. Yeah. I wouldn't I didn't see like as I'm using more for the, for the addiction. People have addiction issues and and Cmax more for the, depression.

But, apart from that, no I don't yeah, I think I'll, I'll agree very similar. You know subtle differences. I think the Cmax a little more activating. People will like take the either diesel or, you know, with it or shot.

And although, you know, I think a little clearer, where like, I find people with, like, anxiety, it's a little more calming. Helps deal with stress. I gave it to rats.

Like which the terrible things of rats like how long they can last, even with, you know, swimming until they drown type thing. But. Or at least they think they are drowned.

And I find when I'm really stressed, I'm looking for the ceiling, you know, but, so I like, doesn't seem like it's a lot of also immunomodulatory properties.

There's some studies, you know, showing to prevent, viral infections like that. What is, you know, just jumping there. You mentioned a frag with the T with, dimers and beta.

So what's the frag part? Is that an addition? No, it's actually a piece. So if you look at thymus it made it for it has multiple domains that do different things.

Right. And like you'll have the, pathogens, the, you know, immune modulatory. Some activate mast cells. One fragment works for hair. So, the fragment that, that is available currently orally is one that does immune modulation.

Very anti fibrotic. Great studies showing, you know, reversing diabetic nephropathy, you know, kidney damage heart damage traumatic brain injury, reverses, you know, heart failure post infarct.

But it takes away that part that stimulates Nash cells. Now, if you give TB for, to a person with MRSA, usually they're better because of the upstream immune modulation.

And, you know, all these Marcel, you know, experts, there's that, direct mast cell innovation, you know, histamine. Yeah, that's part of it. But look upstream and you'll do so much better.

And so and it's also small. So it's only four amino acids. And so it the blood brain barrier. So we get a much better effect. Now there's another fragment that actually works for hair.

And by using the hair fragment, like, you'll see the studies on TV for people object or, you know, put a top right. It's so big. But the fragment actually can get into the, into the scalp.

So what fragment is that? Just cure. So how do you how does one how does somebody who's trying to get this understand with the different fragments. Yeah. So there's yeah.

So you basically got to dig down so the hair so the, the amine fragment is basically the first for amino acids. And then the hair is about three quarters away and another for amino acid.

And then the nano fragment is another one that actually is located multiple places in the Tb4 is a three amino acid. And actually there's also dye peptides.

So two amino acids, it's amazing that they have all this immunomodulatory effects. And you think, how could a two amino acid thing do that? You know, but it doesn't.

It also makes it clear that the enzymes, enzymes don't break them down. And then so they'll show that, you know, they'll do have studies, you know, basically the two amino acids, the three, the four and extend it.

And then all of a sudden, like, if you go to like two stops, you know, makes it not work, you can go backwards. So, it's it's interesting stuff. Okay.

Yeah. Makes sense to me now. Yeah. And let's see also you talk about I know you said you mentioned substance abuse. You found some issues with peptides and also the microdosing you already talked about substance abuse processing.

The peptides I just mentioned the C link and, and some of the neurons, like, FTL and, and, and C max, and dermis and alpha also doing the, vitamin C, I. V.

drips for that. Yeah. Those are, those are those seems to be what got you. So it kind of kind of that rewiring and, and I think just, you know, we see work for depression, traumatic brain injury, post traumatic stress, you know, and anxiety.

I think any time you reduce that anxiety because so many people, some of you, they're really using it as, you know, self-medicating. Yeah. And yeah, you reduce that constant anxiety is huge.

And that's great. And, what are the ones do you like. So you see like famous now for one BPC 157. Yeah, definitely using BPC. I'm using a lot of OD. 906 for, for weight loss.

So having a lot of success in that, and can you talk can you explain that? What just basically it's not seems to be a, it's a fragment, I believe, of human growth hormone.

So it seems to have without the side effects of growth hormone just works on I think the weight loss part, the fat loss, it's called anti-obesity drug is what it came out as of.

And the studies actually looked pretty good, but they dropped it. They dropped from finishing the studies. It was in clinical trials. I don't know what happened because the the studies are good.

You look at like studies on like neuron ten on other drugs for nerve pain. Right. Curves exactly like placebo. Then it dips down a little bit like oh here you go.

You know, it helps, you know, and all the side effects. But yeah, it doesn't increase IGF one. But has a lot of healing effects. And, very safe. I haven't seen any side effects with it.

And you can also put it into joints and things like that. Like. Yeah, like the, BPC 157 and eat a TV for TV for frag. As our kind of standard cocktail for joint injections works really well.

You make a PRP? Yeah. Either. PRP stem cells, exosomes or decentralized growth factors. Now, ozone. I do like protozoan. I think it's, you know, they're all they all work.

But I think putting, indigo, you might oxidize the peptides, but, so we tend not to do those together, but, yeah. Or just even doing the peptides, but usually with like a little PRP or, or exosomes or something like that.

I think these growth factors, I know we can buy some of these growth factors like dermal growth factor. I can these things be added to PRP will definitely benefit.

Yeah, yeah. You can, you know, and also problem is like the growth factors, tend to be very expensive. Like if you try to, you know, there's certain serums and things like that that you can buy from companies that combine different growth factors.

Right. And you know, very similar to peptides and in terms of turning genes on, you know, signaling, epigenetic change, the, you know, basically what genes are turned off and or not and how you do genetics and and the thing is, I love genetic tests, but your genetics are really about 20% of what, you know, of what your destiny is.

Other 80% is how you can turn those on or turn them off, depending on lifestyle, food, sleep, peptides, hormones and like K is another one. So copper peptide I forget exactly.

It turns like on like 78 genes and turns off 43 or something like that. I mean that's not think the right number, but it's like amazing. You know, so it's only I know because I use it topically a lot.

It's, you know. Yeah. Yeah. And stuff. But yeah, it works great for skin. You also do it in injectable and, it looks like oral will work as well. It's only a tri peptide, but as a bluish color.

But so it's finally injecting it doesn't burn or whatever. Injecting it like I use. Oh, yeah. No. Yeah. And yeah. On the body. And so is this two milligrams, injection, you know, a day or a couple times a week.

We'll do higher doses in the, in the joint. And then orally, we're, we're looking at how much is actually absorbed, or transdermal, you know, how how to get it through the skin, not just into the skin.

And it looks like skin by itself does not absorb. But if you have the copper already attached to it. Yeah, yeah. Then much better absorption, right? The Gchq copper. Yeah.

That's how I think I've seen it coming. Yeah. And it's like, and also zinc diamonds get absorbed much better than just nine months of there tend to be positive charge, positively charged.

They tend to get in much, much better like EOD. What is it, like, 167 to 191? Yeah. Right. Right. I think that is that. Yeah. I've seen and and that actually absorbs orally and the studies show that where you wouldn't think based on the size, but it has a lot of positive charge amino acids and, the, hydrophobic or lipophilic amino acid.

So it absorbs very well. Yeah. Okay. Yeah. And well, when you do add like for weight loss, what else did you like the also the mitochondrial boosting peptides, the, along with that.

Yeah. The only ones I'm using is I've used Mots, which I'm telling patients to do, on a weekly basis.

Brain, Mitochondria, and Longevity Peptides

And then I'm also, I'm just testing out the SS 31 on some a few patients. It is. Oh, yeah. That's right. Yeah, yeah. So an SS 31 and you can tell about the talk about SS 31.

Well, as far as I, I was doing some reading and it looks like it's, it seems to be improving mitochondria efficiency, and improving the energy production of the, of the cells.

I think the studies showed that in and mice, the the mice were given SS 31. Just then the older mice became younger I think after a couple of months. Yeah. Yeah.

And and also for some human studies that also showed some improvement in elderly. Yeah. And when you look at all these studies on aging and age related illnesses, they have a number of things in common, you know, immune dysfunction, you know, your thymus goes you get that poor, you know, t th one t rag.

So you can't fight infections, can't fight cancer, but that teaches you has all this inflammation or of unity. And then also mitochondrial dysfunction is huge.

And so the cells actually don't have enough energy to even like detox and kick out heavy metals. They don't have enough energy to die when they're supposed to.

So the cell needs energy, what's called apoptosis. So in the cell, the body's, the cells have a, a, inherent mechanism, when they get senescent and they don't work very well, they self destruct, or they should, but they don't have enough energy to.

So all of a sudden you add the energy. Now they can die. And, you know, it's called the top of G where you're getting rid of all the all bad cells and which there is a lot of, you know, kind of people promoting.

I agree, as you want to do some things for autophagy and get rid of those old cells first and then start promoting the health because you want to promote like, you know, make a senescent cell.

That's all crazy. Especially mitochondria. Has a lot of inflammation and things like, you know, so the TV for TV for frag BPC, so the mitochondria, actually a linea, which is a any parasitic antiviral and a cancer, actually, that's, not in the literature.

It's not approved for that, but it's, amazing substance. Called, metformin, resveratrol. Other bile flavonoids are great at autophagy as well. Intermittent fasting does that as well.

So get rid of the bad cells before you try to. You don't want to stimulate all the cells. You want to get rid of the bad ones first. Whatever you what's your experience with, like fasting, mimicking diet or.

You know, I'm, you know, I don't promote much diet because I won't be a hypocrite because I eat like crap. And and I, I tried the fasting mimicking diet.

And I did lost like, like 10 pounds and then, but then I gained 15 back. So. And I'm also with exercise, you know, I'm religiously exercise. It's my passion.

Every four months for eight minutes, you know, rain or shine. So, I don't I don't want to be a hypocrite, so I, I don't talk. There's so many people that can tell you more about, you know, what to do.

Exercise and stuff. And I think the way you explain the autophagy, that's exactly that's where that's where really is now. That's so exciting. The science now senescence and yeah. Yeah.

How to help get rid of those cells that are in the senescence. Yeah. And I mean it's amazing. You look at people, you know, I have friends in their 80s that it's where they're 40, you know, and other people who are 60 and they're like, well, I remember thinking high school, someone 60 that's nursing home.

And, you know, I'm I'm 56. I'm like, damn, I was 60. And, you know, you think about, whatever was The Simpsons, Mr. Burns on the verge, you know, and just hunched over and and people are like that, and it's it's it's such a difference.

Like, do you want to live longer if you're in a nursing home and, you know, don't have your faculties and can barely do anything, but I wouldn't, you know, so I think that that's the big thing, you know, the healthspan and vitality span versus lifespan.

And you look at the money spent in people's, you know, last year or two in life is huge. We spend all this money to keep them alive, but they're already, you know, our heart's failing.

And, you know, they got dementia. They can't remember anything. And neuropathy and diabetes and. Yeah, that's like, you know, when I got heart failure, it's just from Lyme.

I'm like, I can't live like, I'm not going to go on where I, you know, couldn't stand up and I would walk one mile an hour and remember, you know, going around the world and trying to catch my plane to sweating, you know, trying to make the plane at the mile an hour with my head bent down like a ball and then pulling my suitcase in the in the snow and getting on a subway in New York like this.

And it's crowded. Think someone's going to just, you know, hit me in the back of the head because you're like, oh, annoying. But yeah, like stuff like that.

And some people with heart failure until like the, the peptides, changed my life, you know, reversed the heart failure. And, you know, studies show that with, you know, Tb4 and BPC, certainly, stem cells and exosomes, how they live, ozone.

I mean, there's a lot of things that work. And, you know, there's one, one part of them, you know, it's a it's a nice tool to have in your toolbox. It's pretty exciting.

I think this is I'm so happy that you're doing the summit because this is this is the this is really the future of medicine and. Yeah. And and so many people, you know, they hear about peptides and you know, you can give people studies and you know, even doctors are not going to like, okay, they want to hear what doctors are doing, you know, and, and, and what you're finding that works because I'm telling you, like, there'll be a study that comes out and shows you know, X treatment is so great.

If it doesn't work, you know, but use it like. Wait a minute. The study is showing. It's wonderful. I haven't seen any benefit. Or sometimes it's the first person that works on, but then no one else has got.

Or it's like giving T2, you know, basically the thyroid, there's T4, T3, there's also T2 which stimulates mitochondrial function. And the studies show they're like, oh my gosh, this would be great for weight loss.

And there are some people it works amazing right there. Like this stuff is amazing. But majority of people we found it didn't work. You know, it's saved.

So it's, to try, but it's probably 15% of people notice a difference. And there's certainly not enough T2 and like

armor in those things. So you need to we're doing like, probably 6 to 800 micrograms a day of it.

I mean, no side effects. And but I tell people try it for a month and if it works, great, if it doesn't, no worries. But, for people that works on it's like it's amazing.

And another mother mitochondrial booster? I think so. Same with everything. You know, the other mitochondrial booster. Some people. Oh my God, feel like Superman.

I think all the peptides, I think, really, everything's like that, you know, you can look at, you know, why that's. I think it's a problem. People go to the internet and.

Oh, my God, I got cured me with this or, you know, but try it out. A bunch of people. That doesn't work. And and so I love patients to go to the internet and look for everything.

You know, if the doctors and stop reading the internet run. But just bring it back and we'll talk about it, you know, and, and a lot of things just work on it on a few people.

But we got to play, you know, one percentages. You want things that work for the jority of people are safe, you know, effective and, you know, in cost, you know, and so you try to weigh all those things and, which is like, you know, patient.

Well, my doctor says this. Yeah, well, you ask three doctors, you get four different opinions, but, and we found less a doctor knows them, are adamant they are.

They're right. You know, I think I think you're right. Now, when you get in this biohacking and dig deep and all this stuff, you realize how little we know, you know.

And, that's the thing. I still think it's a it's still quite a bit of an art. I'd like it to be a bit more, unfortunately. You know, the blood tests we have unfortunately, don't provide enough, guidance.

Okay. Like, okay, which peptide work? Which person? That's, you know, it's it's a bit of a. Yeah. And that's why I, you know, tell doctors that, you know, the labs are a piece of information.

And I love getting a ton of labs, like you always have 35 for the sickest patients, but they've been everywhere that you know. And you look at the chart like it's CBCs and chem panels and and you can't find anything.

Well, you don't look and and you should you know, we know it's going to be wrong. But also our job is convince the patient and also convince the patient doctor that, hey, you're in the right spot.

Here's here's what's going on. But, you know, anyone test be a lab? Er, it could be, you know, and there's no perfect test. And, a lot of run, a lot of great tests, but, you know, costs and, a lot of tests are great in research because they're right.

They're doing it. But when they try to commercialize them and you got a tech drawing and it's it's out, you know, we sent our, internet guy, just pretty basic lab.

Just he went to class and lab core lab. Gordon quest one was right on top of each other. Didn't need or anything. Just when one to the other one showed he was diabetic and showed his blood sugar was awesome, you know? Okay.

Yeah. And one insulin was sky high. The was low. I mean it's and these are just standard lab. So, you got to take everything with a grain of salt or. I don't understand why doctors, they order a lab and it's abnormal.

And they go, oh, it's a false positive. Why did you run the lab if you're not going to do anything about it? You know? So, I mean, anyways, there's a couple that showed you what.

What labs do you like to get? Well, yeah. I mean, I tend to get like, I'm looking at the hormones, like, you know, free testosterone or diol DHEA. But I'm also looking at, high CRP, lipoprotein a lpl a to say you're looking for, you know, prevention, heart disease and looking for signs of inflammation, you know?

Yeah. And I think, yeah, you know, the whole cholesterol theory of heart disease, I think is dead. I mean, so many studies, inflammation is is huge. Yeah.

And, and a lot of patients, for instance, Lyme patients have so much inflammation, but their CRP is normal, you know, and also we found if someone says we will check said rates, if that's low, low CRP, often they have coagulation defect, you know, the immune activation of coagulation and give a little heparin like the line the the infection will cause the body to line the vessels with fiber, not a clot.

But now it's lining it. So oxygen just takes two seconds to get in. The cell now takes up to two minutes and waste proteins can't get out. Nutrients can't get in.

Hormones, peptides. Like if things don't work, it's underway.

Measurement, Labs, and Personalized Health Tracking

Look at and you can do a little kind of parlor trick because not perfect because it depends on also patient in their effort. But normally if you have someone breathe out all their air, have a pulse ox on and then hold their breath.

And so normally so the oxygen from the lungs, you know, basically goes into the bloodstream and then, you know, to the heart, into the cells and the cells and is utilized.

So you look at the pulse ox that will go down as you shut off the oxygen. But if they have a regulation defect, it stays barely goes down. And so if someone like hold your breath makes good effort, it goes from like, you know, 97, 98 down to like 80 some people 70s that's actually was getting oxygen, getting into the tissues.

But if it doesn't, it's a mark of a coagulation defect, you know. So when you clear that up and all of a sudden the treatments that didn't work before now start working to some heparin and to some.

Would you do that. Yeah. Yeah. So usually it's very safe safer than aspirin because it's super low dose. And you know, the other gosh, you're a blood thinner.

It's, it's if you talk to hematologists, they'll say why you given that it's homeopathic dosing, you know, but also the, the enzymes like lumbar kinase for the bars that are kinase.

But, yeah. So what I tell people as I got good news and bad news, the good news is the bad news is you got coagulation defect. The good news is you got to go. And we can we can treat it.

But, sort of a different panel we do for that. But, nice. So, I love all the stuff that that you're doing. Anything else you're kind of excited about?

I'm excited about this. Well, everything about biohacking is about measurement. So I have this ring these days. It's called it Whirring. It's really cool.

It basically checks your heart rate variability. That's a so it's a really interesting measurement because it can tell you the stress that your system is under.

So you'll, you'll notice that you have even a 1 or 2 drinks the night before that your heart rate variability will go down during the night. Okay. Can you explain heart rate variability and why is it after variability is is the very issue in your heartbeat?

And when when you're relaxed and your, parasympathetic system is working? Well, there is a very good variation

of between beat to beat. And when someone stress again, it's like, imagine you're it's very stiff.

Your heart rate becomes very stiff. So it's there's less variation. So yeah. Yeah. So the more that actually that actually measures that. Yeah. So it's pretty awesome.

Like and and so you're really competing against yourself. It's, it's not about checking with somebody else. You can see day to day. You know, if you're overtraining, you know, you'll notice the type of variability might take a day or two to come back to normal.

Wow. Well, and we've seen more and more of these athletes, you know, and you know weekend warriors and they've kind to finish this marathon. And all of a sudden they crash. Yeah.

And they've got like quadriplegic syndrome and you know and our immune system shot and that's that's that's very interesting. And because I think someone you know bought me that watch or whatever, I've never worn it.

But that sounds interesting. What what does it cost? You know, it's about, 400, dollars, us, or a rank? It's, Oh, you are a, All right. And g or a ring and, NBA just come out.

I think they've made it their official. Well, they want all the players to use now, so it's, it's pretty cool to check it out. Yeah. And, yeah, that's that's pretty much all right.

I think more and more we're also going to be getting into that, you know, measurement, you know, individual measurements like that. And you can, you can monitor your.

So I think people really need to take an active role in their health care because, you know, just going for the checkup with their doctor, what's they find?

Nothing. You know. Yeah, I think we're more we need to start. I think doctors, because there's no way we can know everything. All we can do is guide the patient now.

And just like you know, the iPhone allows people to take movies on their own. Technology's allowed people to take charge of their own health. And the tools are there now.

But we, you know, we can provide guidance, but there's no way we can understand it ourselves. And so patients have to do it themselves. They need to they need to have they needed to go out there.

And the information's out there now. Yeah. And I find too I think it goes kind of back. We'll kind of circle back the beginning and, that some seems to sum it up a little bit that I think people somebody when they try to take an active role in their health care, it's so confusing because you read the, you know, all this stuff on the internet.

So this is good. This is bad. The official stance is this, which is usually wrong. But those are the sites now that come up, you know, Google suppressing, you know, any alternative, you know, facts or you know, it doesn't matter how many references you have, if you have a couple buzzwords bioidentical, integrative alternative, it's a you get you get penalized, and you don't come up.

And so people see one thing and you tell them like, well, I read, I read this and this, you know, well, here's 200 studies showing that that's incorrect, but that's the stance of, you know, the Endocrine Society or the menopausal site.

So I can see this adds to their anxiety. So a lot of people or let's say at a party, you know, I'm so sick about this and that, and then I go, well, you should consider this a scale.

My doctor said a hormone. Well, okay, how's that working for you? You know, and they're scared to make a decision, you know, because they're just bombarded with all, you know, basically conflicting information. So it is difficult.

Yeah. I don't I don't envy I think it's quite difficult to navigate. And so we can only be a guidance to people to help them navigate this very difficult.

Yeah. Yeah. Well great. It looks like it's doing some great work and on the cutting edge and and I don't know if there's any the second person from Canada, we, interviewed, but, Yeah, we're getting so many restrictions here on all our stuff.

The FDA is trying to shut down everything, but, yeah, everything's big pharma, right? Awesome. Yeah. Keep up the good work. And thank you for taking the time and sharing your knowledge and experience.

I think it's, gonna be really helpful for all the all the viewers. Thank you so much. Ken was really pleasure. Great. Thanks a lot. Okay.