How To Stay Young With Bioregulators Transcript

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Introduction to Nathalie Niddam

Hey, everyone, welcome back to the Peptide Summit. So, Dr. Jen here, we have a great interview today. Nathalie Niddam is a self-proclaimed science geek with a passion for human health.

She's the host of the Biohacking Superhuman Performance podcast. If you haven't listened to it, it's amazing. She is a certified holistic nutritionist and an epigenetic coach with a keen focus on human longevity and health span.

A few years ago, she stumbled upon peptides at a health optimization conference. She was captivated by the potential of these tiny proteins and what they represent for human health.

She believes they will truly continue to revolutionize, revolutionize medicine. Nat's passion is looking at longevity through the lens of all we can do in every area of our lives to promote vibrant health, boundless energy, focusing on a healthy mind and body.

She works with clients one on one, manages two large and growing communities, and speaks frequently at international conferences on the regenerative powers of peptides and peptides by regulators.

Welcome. Thank you. Excited to have you. Thank you. Yes. You are the go to for peptides and bioregulators. And we are so happy to have you here today.

well thank you. I'm, it's an honor to be here. I really appreciate being here. Thank you. Yes. Of course. Well, let's dig right in to to the meat and.

Well, maybe first, before we dive into bioregulators. You said you just discovered peptides at a conference, and and you were like, what are these? Because I think this is what happens to everyone.

You hear the word peptides and people think of collagen peptides and you're like, no, it's more than that. Yeah. No, it's so much more than that. And it is.

And it's truly like I think they had been mentioned to me a couple years before by someone who wasn't particularly, he wasn't very committed. Right. He kind of went, oh. And have you heard about these things called peptides?

And I'm like, no, I haven't heard of them. Right. And then but then it took I was at this conference and, and I if people have heard me speak before, they probably heard this story.

So I'll keep it very short. But I, I was tired and I needed to sit down. And I literally found a chair in front of the stage. And there was a guy standing there talking about these, you know, he was talking about whatever.

And he said a few things that just really caught my attention. And then next thing you know, I'm on the edge of my seat going, wow, did you just say that?

Oh, did he say that? And at the time he was talking about, I think the peptides he was talking he talked about BPC 157.

How Peptides Caught Her Attention

He was talking about Melanotan II and he talked about it put a lot and by and the pedal on he was talking about that old people study that Kevinson did way back and and I by the end of it my jaw was on the floor.

I'm tapping the guy's shoulder in front of me, going, like, is this guy for real? Like, I didn't know who he was. I'm like,

you know, it's like, is he making this up?

And the guy turns around to me and he turns out this guy owned a compounding pharmacy, and he's like, oh, yeah, no, this is real. This is the future of medicine.

And I just like, from that day on, I was kind of obsessed. It's just I, I tried to step away from the shiny new toy and I just, like, I just couldn't I kept getting drawn back and drawn back.

And at the end of the day, it's it's become the thing that I talk about the most that I'm, you know, and, and and in as much as I think that it's really important for people to keep in mind that this, these, these are very powerful, they're very important tool.

And they still even as powerful and magical and amazing as they are, they are still part of the toolkit. But I think very important, they can be a real mover of the needle, as it were, because it's work, because they work, they work with the body, because they are fundamentally native to the body.

So this is this is one of those things where we're not bringing in a, you know, a medication that's designed to block a pathway or amplify a pathway in without and kind of very often what happens with drugs, which which can be the negative is they they're very effective at blocking or amplifying a pathway, but they don't really concern themselves with the fallout.

And sometimes they prevent the body from having its own checks and balances, in that it all generally has in place. Right. So for example, if you look at exogenous growth hormone, you introduce exogenous growth like synthetic growth hormone into the body and the body.

At some point, because it has negative feedback loops to produce growth hormone, your body will at some point say, okay, well, we've got enough. We can stop making our own.

That's a problem. Because then you, like, you kind of can't come off this stuff. Whereas with the there's a category of peptides called growth hormone secretagogues that stimulate your body to make its own growth hormone.

And in that case, it leaves that feedback loop kind of intact. And so it doesn't it's not a perfect science. You still have to be mindful that you don't overuse the growth hormone secretagogues but it's a much more nuanced approach to promoting growth hormone in the body than just bringing it in from the outside and overwhelming your whole system.

Yes, and I loved the point that you brought up that these are great, but you still have to work on your general health. You know, like sleep and gut health and all the things.

And in my practice, I will kind of sometimes I'll pull out. I call peptides kind of like the big guns. Right? So sometimes I'll pull them out right away, but usually not until the second or third appointment.

I'm working on their gut health. I'm working on their sleep, their nutrition. But if people have done all those basic things in their stomach, it can really move the needle and, and really put their body back in balance.

And that's what's so great about them. As you said, you're not getting these nasty medication side effects. Yeah 100%. And you know it's it's I think the way one of the ways to encourage people because it's not to say that something like a BPC 157 can't help someone even before they've made changes.

Right. Like if you have someone with lots of gut issues, sometimes that BPC will give them that little toehold. It'll help them to feel that little bit better so that they can then make the other change, you know, like they can do all the other stuff.

And I know you're going to be having Kyle on, you know, like there there's an oral formula BPC 157 for gut health that I mean, I've been yapping about this stuff for two years, ever since I just he discovered me on my Facebook

group and reached out and and that was when I had him on the podcast.

But but you know, with something like that, sometimes it can be the, the domino that we, we help for the, the client or in your case, the patient to help them feel that much better so that they can do the rest.

But remember that if you've taken care of the basics like you're talking about, like the sleep and the diet and all the things you actually may not need as much, you don't have to spend as much money.

And the peptides or the bioregulatory or whatever it is that you introduce, even sometimes the supplements, they can do a better job because, as you know, as Dan Stickler says, who's the guy?

As it turns out, he's Dr. Dan Stickler, the guy I first heard talk about peptides, as he taught us in, is that you can't optimize a body that's that's out of balance. Right?

We in order to get optimized, in order to get to be better than than baseline, you have to get to homeostasis. You have to get to a balanced state. And only once you're in a balanced state can you actually optimize.

That's a great point. And it makes me think of I'm looking at my cold plunge right now that's in front of me. There's so much drama over that. And it's like, well, of course, if you're in a health crisis, you shouldn't be getting in a cold tub.

Like that should. Happen. Yeah, but it's not common sense for everyone. You know, I started cold plunging because my thyroid, you know, I was in remission for my Hashimoto's.

I felt at a good place health wise. So then I added that in as a biohacking tool. So yeah, just we are I use common sense when we, when we talk about all these things too.

So let's talk about the peptide bio regulators. And so some people are like okay I just learned what peptides are. Now you're trying to talk to me about bioregulators.

What. Because that happens a lot. Yeah I know so they're not that different. You know what guys think of a peptide only littler. So so a peptide is as you guys know a peptide is a protein that is 50 amino acids or less in length.

Right. The bioregulator is a peptide that is a protein that is less than 50 amino acids. However in the case of the bioregulator, it's at most four amino acids and as few as two amino acids.

So it is really these are really teeny tiny messaging proteins and they're not. And whereas the is in the seas of the world are messengers. Right. So they're chemical messengers.

They attach to a receptor, they initiate a cascade. They may even through that receptor influence the expression of genes, what the bioregulator is able to do because it's so tiny, is it seen it it is able to get across the cell membrane.

It is going to use a transporter, but it crosses the cell membrane. It gets into the nucleus of the cell, and it actually binds to your DNA. And by binding at a very specific site on the DNA, it'll upregulate the production of proteins, which helps us with rejuvenating and restoring function at a cellular level in specific tissues, glands in organs.

So but, you know, it's interesting as you talk, I know that you presented at a forum on GCC copper, which is everybody's favorite peptide these days.

What Bioregulators Are and How They Work

there's a lot of people that believe that it should have been classified as a bio regulator because it's only three amino acids. It absolutely influences the expression of DNA like a bajillion times over.

And so, you know, it's in. But I always think of it as maybe it's a little bit of a thing like champagne, where, you

know, unless the grapes are grown in a specific region in France, you're not allowed to call it champagne.

The bio regulators were discovered, developed and research primarily by or in in leadership by a man by the name of Professor Kevin Sen from Russia. Vladimir, Kevin and and he didn't discover JFK.

Lauren Picard did so yeah. Isn't that funny? Because, yeah, it's just the three, but it is. It's well known as a peptide. It's just like in that class.

and the gene expression, the studies on how many genes it turns on and off is, is so cool. Is 11,000 or 4000 like I, I've seen both numbers bandied about.

Yeah. And it's around like 60 to 70% of our genes. It like affects or something. It just has really high gene expression. And and one thing that I feel like people are also turned off by peptides and by regulators because there's like, oh, there's not a lot of research.

And that's not true either. Yeah. Well, I know you're. Looking to regulators. You're looking like. No. Well, I'm talking about when I talk to like conventional doctors that have never heard of peptides and by regulators, they're like, well, a farm rep didn't come in with them.

Right. Do you really want to wait that long? Yeah. So the bio regulators are those tiny little proteins they are able to influence. genetic expression.

So they're classical epigenetic switches, and they you make them like your body makes them. And that feeds into cabin science theory, that peptide theory of aging, which is, you know, we have all these different theories of aging.

And there's probably truth to all of them. And certainly the hallmarks of aging is the it's the leading theory right now. And, you know, there were six, then there were nine, and now there's 12.

And probably by next year there'll be 15. And ultimately, it's basically scientists elucidating how at a cellular level, things shift in the human body that either cause aging or is caused by aging, like it's a bit of a chicken or the egg thing.

With the peptide theory of aging, we know that the human body makes its own bio regulator. Peptides. really, really well. When we're young and like so many other things, we don't make them as efficiently when we get older or when we get sick or when we're under undue stress, whether it's chemical stress or emotional stress or, you know, getting chased by lions or whatever.

You know, I was going to say saber tooth tigers, but there aren't too many of those around anymore. So so basically, you know, the the peptide theory of aging that was put forward by Professor Kevin Sen.

Is it it's wildly simple. But, you know, if you have any understanding of human physiology, you understand that those 12 hours of aging will also impact the peptide theory of theory of aging, and vice versa.

So it's the all of these things are intertwined. It's not an either or. The fact of the matter is when you, you know, you bring up research, you look at bio regulators, there's probably more human research on bio regulator peptides than there is on any other peptide.

Because for 40 years, for decades, and maybe not for, you know, it probably for two of those for decades, Kevin Sheehan had a blank check, carte blanche, thousands and millions of people he could, like, run experiments on and not even scientists experiments.

More like, you know, this group's going to get poly vitamins that groups going to get these bio regulator peptides. And let's see how what their what their outcome is.

And I think the other thing that's really interesting about the by regulators is they're exceptionally good for people

who are older. Right. Because the bio regulator that one of the reasons why the bio regulators have such a high safety profile is something that I mentioned earlier, which is homeostasis.

The bio regulator is really working hard to bring you back into balance. It's not trying to push you into superhuman land. It's not trying to suppress anything.

It's really saying, let's let's allow the body to self-regulate. Let's restore the ability of the body to self-regulate and to be in a state of balance.

Yeah. And that's what makes it so unique. So the origin bio regulator, that one you give it to hyper and hypo thyroid patients. And that's what's really cool.

So Hashimoto's patients graves patients I can use this on. And that's different from from other things. But when we talk about peptides too I mean you're going to use things like thymus and Alpha one or thymus and beta for to to restore their immunity.

with these autoimmune type problems which are just running rampant right now. So that but that's like what Nathalie said. It's it's bringing it into homeostasis.

So with the thyroid I think is a good example of that one. what is your favorite bio regulator? I think I know, but. Yeah, you know, it's it's that's like what's who's your favorite child?

It depends on the day. Right? I think that, you know, it's interesting my I mean, I've spoken most to as my, my desert island bio regulator, I've always spoken to as being a epitope on which is the pineal gland, bio regulator.

And, and in part because the pineal gland itself is so critical for the most crucial aspect of human health, and that is, regulating circadian rhythm.

It also is a master endocrine regulator. So if we have a way, you know, in health and in functional medicine that you practice and all of these things, what we're trying to do is how far upstream can we possibly make a positive impact to allow the body to do what it does best on its own.

Right. Like the less we intervene, the better off it's all going to be. As you know, generally speaking, human intervention in human body. You know, unless you've been in a car accident or something and you need someone to put Humpty Dumpty back together again.

Generally speaking, as much as we can get ourselves out of the way, the body has ways of healing and restoring itself that are that are unique, that we still can't reproduce.

And so the cool thing about the pineal gland by our regulator is by normalizing melatonin levels, by restoring circadian rhythm, by having this kind of the upstream kind of downstream regulation effect on the endocrine system, which doesn't mean that all of just to be clear, doesn't mean all your hormones are magically going to come into balance.

But it kind of has that influence. And with a side hustle that it activates telomerase, that restores the telomeres on the end of your DNA. We can take care of a lot of things just by getting those things kind of taken care of.

Right. So that is by and large my my desert island bio regulator. But the other one that's becoming a close second, and this is partially driven by some research I've been doing.

And, you know, kind of digging around is the bio regulator that sounds like it should be the pineal gland by a regulator. Only it's not called pineal on.

And pineal on is the, you know, if you look it up it's the brain bio regulator or the central nervous system bio regulator. It also influences the pineal gland, but it also influences the entire nervous system and the brain.

And again, like everything's coming from the brain, the the signals and the messages to your heart, to your lungs, to your kidneys, to regulate your blood pressure, to like everything's coming from up here.

So maybe I'd have to like I'm going to have to modify my, my opinion and say, you know, pineal on and a little on the to brain bio regulators might have to be the the top picks.

Well it makes a lot of sense. And so many people are just dysregulated from that nervous system. And then that's impacting all their other functions of their organs.

And we see this a lot. Oh, especially gut health. If they're not regulated then their gut health is is going to be going to be a mess. So I love those two.

So how if someone's out there and they're like, well bio regulators. what how the heck do I use them? Right. So a lot similar to peptides. These are something that you're cycling in and out.

Yeah. So I mean so maybe let's, let's, let's enrich the conversation a little bit by saying there are available about 21 different bio regulators. Right.

And so they correspond to 21 different organs, organ systems, glands. So you know, rattling off the big ones, we've got the heart, the kidneys, the lungs, the stomach, the muscle, the bone marrow, the adrenal glands, the thyroid gland, the eyes.

cartridge. Yeah. Cartilage is a big one. and we talked about the brain, the pineal gland. So, so, you know, if we if we step back and we say, okay, first of all, it's the pancreas.

If somebody has if we have people that are having metabolic issues. Right. So what we're going to do is we're going to say, okay, so what are the systems?

What are the organs that are being challenged here? What are the organs that maybe have had some damage? What are the organs that maybe are fatigued that, you know, it's like if you imagine the tread on your car tires, where are the treads been?

Kind of worn down a little bit. You're not you're kind of skidding a tiny bit. And I find to rented a car where the tread was completely gone on the tires.

I didn't notice I, I it was like it was like driving on ice. And I was in Florida. It was crazy.

Favorite Bioregulators and Organ-Specific Stacking

So what we want to do is we want to restore the tread on those tires, to get back the grip, to be able to do for our organs, to be able to work again.

So if we have someone, let's say, who's got crazy blood sugar regulation issues and we know that that in genders a whole lot of other problems down the road, obviously we're all going to sit there and go, okay, pancreas.

Pancreas needs attention. We need to give the pancreas some love. Who else want liver, liver, liver is going to be involved here. So we want to give the liver some love.

And we almost always want to bring in the blood vessel. Bio regulator, at least for part of the cycles. Right. Because those blood vessels, the integrity of that endothelium of the blood vessels is going to be critical in terms of getting nutrients to the cell and removing waste products from the cell.

So so definitely, you know, we we want to be looking at what's going on. So for example, another example might be, you know, cardiovascular heart issues or blood pressure issues.

So again I mean the cool thing is for someone like you who's a medical doctor and you've got all the labs in front of you and you've got all the data that you need in front of you, you have a sense, okay, in this patient.

Are is are the kidneys involved here? Right. Because the kidneys very often get forgotten when it comes to blood pressure. And they're whether they're, they're a driver or they're or they're suffering the consequences of high blood pressure.

Kidneys need some attention. We have the heart that needs attention. We have the blood vessels that need attention. Maybe that central nervous system needs attention.

Maybe. Maybe we need to pay attention to the brain a little bit. Likes. So we start to build these stacks right in. A woman who's perimenopause, for example, and her hormones are all over the place.

Her ovaries are like, you know, breathing their last gasp. They're to kind of passing the baton over to the adrenals who are like, what are you talking about?

Like, well, what do you why me? Like, I've been carrying you for like a bajillion years and you're telling me I need to take over. So now we might say, okay, well, here we're going to give the ovaries some love.

We're going to give the adrenal gland some love. The adrenals are going to be hanging on to the thyroid, dragging it down, saying, well, we need to slow down.

So we're going to have to give the thyroid some love. And let's not forget what we talked about at the very beginning. Our master endocrine regulator, the pineal gland is going to play a role here as well.

So we're going to now start to build a protocol and stacks paying attention to all of these different pieces. And it's it's so cool. And I love how you described all of that because it's all related.

You know, all these organ systems, they pull on each other. If one's out of balance, like help me get into back in the balance. And and then we, you know, most people get on medications or get on antidepressants or sleep aids.

And it's just it never ends well. It never ends well. So I love how you explain that they stack because they're all leaning on each other. And all they want to do is get into homeostasis.

And I've seen I know you've seen it so, so many times. Once your body gets back into homeostasis, it just breathes and it can work. Right. and, and this is where these methods that we use are not, well received all the time in the conventional community because it's not it's not through a drug company and whatnot.

But and it's very unfortunate. So with these bio regulators, there's a more aggressive plan that you can do if someone has more an acute or emergent situation.

And then there's kind of more maintenance things. Can you go through those a little bit. Yeah. So I mean so one thing I want to I want to stress here as well is when you look at the research on the bio regulators, don't forget that very often they get used in conjunction with conventional treatments.

So we don't want to throw away the baby with the bathwater. Here. There is value to modern medicine like there is. The problem is when you use it as the only lever, you leave yourself exposed to real trouble.

So I don't I want to say that because in a world where you have someone who really has major medical issues going on, you're going to want to be bring all the tools to bear.

But the difference might be that you're not saying to someone you're using a PPI for the rest of your life because that's your solution, right? You might say to them, look, you've got a bleeding ulcer.

We need to we need to change the environment of your stomach for a for a little minute while we get repair done.

And then you're coming off that thing, right?

Like PPI are right. PPI are are have been demonized for good reason. But they actually do have their place. So so in a more in a, in a situation where you really have something going on, you might use the buy regulator for 30 days at first, or you might use it for 60 days, you might instead of two capsules a day, you might use two capsules twice a day or three times a day.

This is where the by the use of bio regulators, I feel, has a lot more art and nuance to it than it does than it leaning only on science, whether it's because we don't have the data, or if it's because different, it's allowing for different people to respond differently, and for the physician to really look at the patient and say, okay, what do I think this person needs?

Where do I think we can really support them and help them? And so that 1 to 2 months of intense course and then what they might do is, you know, you start to see the needle moving, you start to see things kind of coming back into balance.

And now you might say, okay, let's kind of let's, let's let you fly on your own for a few minutes here and let's do like little ten day pulses every month to see if just giving that stimulus for ten days and then stepping away for 20 and ten days and stepping away for 20 and help to those results to kind of stick.

Yes, absolutely. And then in the long term studies that they did in Russia, this was something that they continued all year round right when they were using the Uptown.

Well. So again, it depended on this study. Right. So I think that and and the funny, the other funny, the interesting thing is about the Russian work is that some of it was really well translated and some of it wasn't well translated, like, for example, there was a lot of confusion around dosing of the synthetic, a piddle on for the longest time.

For the longest time, you had people running around saying it's ten milligrams a day for ten days or 20 days. And as it turns out, it's not ten milligrams a day of the synthetic.

It's ten milligrams a day of the biologic, which is not nearly as concentrated. If you're talking about the synthetic, it's actually 100 micrograms today, which is 100 times less than the ten milligrams.

So so when we look at what they, you know, what they did in some of those studies in the old people study, and I call it the old people study, because that's what they called it.

To be clear, I'm not calling anybody old. I'm just saying, that what they did is they it sounds like they gave them the bio like a pedal on continuously for two years and then and then checked in at six years and at 12 years again.

And the group that got the capital on had a way lower mortality rate, I believe it was 44% lower mortality rate than the control group who had been given poly vitamins.

So everybody got something. Nobody knew what they were getting. One group was getting epithelial iron, which is a very specific extract of the pineal gland that is an intramuscular injection.

And in that case it may have been ten milligrams, but it was. But it's it's a product that we actually don't see at outside Russia. Whereas the control group who were getting also an injection of polymer vitamins was but both groups.

It was a two year stint and then they were followed to see how they fared after six years and then after 12 years. And then that study was repeated with elderly people, unless the first one was elderly and the second one was old. Whatever.

The second one was 75 to 85 year olds. And those people, he only he only followed them for six years because of course, they're much older. He didn't really expect them to live that long.

And the first group got the poly vitamins. The second group got just epithelial iron, which is the pineal gland, by a regulator, and the third group got the epithelium and timeline, which is the the thymus bio regulator.

And that third group crushed it. Right. And so he wasn't. And you know, it's impractical with humans to see what what the longevity is because we just lived too bloody long.

So what he was looking at is mortality. Can we reduce the mortality rate by administering these compound. And so the control group had an 88% mortality rate after six years.

So they were pretty much out of the picture. and these are people living in fairly harsh conditions. You know, in Siberia or something, which, you know, Siberia is a beautiful place, don't get me wrong. But they were not living an easy life.

and then the Italian group did better. And the exact numbers are escaping me at this very minute. I apologize, but the guys that did the best were the people that got the epithelium, the pineal gland by a regulator and the thymus by a regulator.

And it makes sense, right. Because look at a lot like the newest hallmark of aging inflame aging is inflammation of the system. This is dysregulated immunity.

Dosing Strategies, Research, and Safety

And so if we can keep our immune system happy and balanced, we're going to we're going to do better on and in every way. Because that low level inflammation, which is a dysregulation of the immune system, is ultimately what's being linked to metabolic disease, neurodegenerative disease like unit, cardiovascular disease, all the things.

Yes, I often explain to my patients, I'm like, you can't have disease without inflammation. It just doesn't it doesn't happen. So we need to bring your inflammation down.

So I, I love all those studies. It's it's so fascinating. You know why why isn't this being handed out. You know anyway we're. Doing our best. Yes. You're nuts are. Here.

That's what's great. Spreading. Spreading the word. now, you did mention synthetic. So there are, there are more natural bio regulators, you know, coming mostly from cows and, and then the synthetic.

Can you explain the difference? and what's what's better is one better than the other. Yeah. So, so definitely the, the biologic or the natural bio regulators are typically extract from, young cows.

They can also be extracts from young sheep young and young pigs. Now one thing for people to remember is by the time you get your capsule of bio regulator, there's no animal protein left in there except for those peptides.

So it is unrecognizable as pig, sheep or cow. It is just bio regulator peptide and maybe with some cofactors from that tissue. So I think it's important to understand that because, you know, people worry about prion disease, they worry about all kinds of stuff.

And this stuff has been so refined and so, you know, it's been dealt with so deeply, if you will, that by the time it gets into that capsule, you have none of the messy stuff left.

and one of the things I like to talk about is, you know, one other way to get some bio regulators into your life is to eat organ meats, because that's where they're getting the bio regulators from.

So which which feeds into ancestral nutrition and ancestral ways of healing. If somebody had a heart condition, they would feed them heart. If somebody had a lung condition, that would feed them like like it's a really interesting thing that this ancient wisdoms kind of baked into human, into human.

I don't know if humanity, let's just say, yeah. I try to sneak all the organ meat into my family's meal. So because it's really funny. So I put like, liver in taco night one time and I could taste it because I knew it was in there.

So I'm like, oh, this taste gamey. Is anyone going to notice? And they're all just like, you know, mom, I never I never tell, I never tell them, but but yeah, but that's good.

It's good for my kids. It's good to eat nose to tail. And we just we don't anymore. Which is, which is very unfortunate. And it's similar. so I, I had Hashimoto's, so I had to have some of my thyroid long, long story pain to purpose.

But I take NTP thyroid and, and that has a little bit of that same bio regulator. but I also take some T4 only to make it more, like what our body produces.

But but yes, that's a great point. if you're getting if you're taking liver capsules or eating liver, you're getting a little bit of that. It's just not as concentrated anyway.

So getting back to the question that you asked about the synthetic by regulators, sometimes I digress. I apologize. but I do come back to the question, and that is that what's happened is that over time, as they've been studying these by regulators, they've kind of come to identify the exact amino acid sequence that is really responsible for that genetic switch, the switching of the genetic.

Now, I will say that there are five bio regulators that are not available as synthetics. And that would be the adrenal, the thyroid, the bone marrow, I think muscle.

And there's one other one that's escaping me. there's one other one that's escaping me, but there's five of them that you won't find as synthetic. And that could be because they basically couldn't find the one that was the most dominant.

And maybe what they're saying is you need the complex that you're going to find in the extract to really get the effect. but in any event, in the case of the pineal gland, the brain, the immune system, even lungs, kidneys, heart, stomach, liver, all those guys we have synthetic by regulators, which means that in a lab they are able to re synthesize that exact amino acid sequence in the exact orientation that it's in.

So this is really important because there are two bio regulators venom being one of them and I can't. And the other one might be the AI bio regulator that the R the exact same two amino acids.

Now how is that possible? How can you possibly have I mean I mean, come on, you've got two little bitty amino acids and they're doing completely different things.

And it and this really speaks to the sophistication and the complexity of the human body in that, the way that they are arranged in a 3D plane, the way that they're bound to each other and the and the whatever molecules are attached to them really defines how they're going to interact and bind to that DNA.

So in the lab, they're able to reproduce this exact, amino acid sequence in the exact orientation that it occurs in. And that way they're able to now produce it and make it available.

The thing with the synthetics is they can be administered in a couple of ways. And this is a testament to how freaking small they are. And one of them is there's some bio regulators that are available as sublingual drops or sprays.

And then you can also find them as injectable by injection injectables. and typically those are available. They were available through compounding pharmacies.

And now, you know, with the FDA regulations that have come down, they're more readily available through the better research labs. but they're you have to be very careful because research labs are these days a dime a dozen.

And you got to really know who you're dealing with to make sure that you're getting what you think you're getting. When you get that itty bitty little, teeny tiny vial.

Yeah. So that's a great point. I when you were talking about the different the bind, how they're fold together, it's kind of like when you fold your hands one way and hold hands with someone one way, and then it feels awkward and then that feels good.

But that's, it's it really is amazing how these affect our body at such a molecular level with the epigenetics. And you if people are listening, they're like, oh, this makes me kind of nervous.

Well, you can turn your genes on and off by your diet, by stress. Yes, yes. So this is this is a good thing. All of these are good things. It's it's not just biohacking either.

It's it should just be looked at as getting your health back into homeostasis. Because we live with so many stressors, so many toxins, it's you almost have to work at it.

I mean, this is like a job to. Yeah. To get your to get your health. You do. And you have to take care of the whole machine. Right. And don't forget about you know, we were talking about this before we started recording like, don't forget about your your spirit and your thoughts and and this is going to sound woo.

Humor me here for a second. But you know, if you think about how, how there's actual clinical research that shows that being like, your thoughts and your feelings can actually suppress your immune system, like being incredibly stressed or being angry too much can have a negative impact on your immune system.

People have actually measured this drop. And so not that we are to walk around being Pollyanna positive, even when our life could be a whole lot better sometimes.

But there's there's any work that we can do to help ourselves, to be more resilient, to help ourselves, to live in the present, to live in gratitude in as much as it's possible for us, is going to put us in a much it's a little bit like what we said earlier.

If you can get into a balanced state, everything else you do is going to it's it's going to be amplified right. So so I'm not to go too far over the side, but I just think we mustn't forget that peace.

Absolutely. That's so true. And one quick question about to wrap up about bio regulators. What about side effects. Are these products something that, you know, you see a lot of side effects and or should we be worried about that.

Thank you. That's a great question. So the short answer is and as much as I never, ever, ever say never and I will not say never, even now, I haven't seen a whole lot of issues here.

Like I just haven't. the worst thing I've seen is it doesn't work. Right? So people will come back and say, well, it didn't work. And I'm like, okay, how what else are you doing?

Right? Are you just using this as the one thing that you're hoping is going to move the needle for you? And look, I get it, people are there are a lot of people out there who are desperate for answers and for solutions, and they're working really hard, and we want to grab on to something like this and say, this is going to be the thing that's going to fix me.

So understand that this is still although it's very powerful, it's a powerful piece of the puzzle. It has a relatively really good safety profile simply because of that.

What we talked about before, about it really working towards bringing you back into balance. What I have seen on occasion is sometimes it can be too much for someone, so they have to start at a lower dose, or for someone with a lot of autoimmune issues sometimes.

And I know that in Russia you know, I learned this from people who worked with Russians, and that is that they will sometimes start with a synthetic bioregulator instead of the biologic, simply because it's simpler.

You just have the amino acids. You don't have any of those co-factors, you don't have anything else kind of getting into play. And so maybe for someone who has a very sensitive system, it's also easier to titrate, right?

It's easier to do even less. But by and large they play really well with medications. the only thing is you know, as Dr. Jen will tell you, if you're, let's say, working with the thyroid bio regulator and a couple of others, and you're on thyroid medication, have an eye on your numbers on the in case you're starting to see that maybe sometimes the thyroid will kick back in.

And this depends on a million things. It depends on how much damage has been done to the thyroid. It depends, you know, it depends on a thousand things, but it is not unheard of that people might see some a little new life breathed into the thyroid gland, and sometimes they're able to reduce their levels of thyroid medication.

But this is the kind of thing you want to be doing with your physician. And keeping an eye on labs and things like that. Yeah, and that goes the same for blood pressure medications, all the things you just you have to know that you're going to have to keep up with the labs up with your your readings.

Because if your body does start to go back in homeostasis, then you can pull off those medications, those conventional medications. But I agree with what you said earlier in the podcast is that don't just go on a bioregulator and then throw all your medication away.

It's a gradual, gradual thing like most healing. I mean, you see it probably someone is sick. You know, it takes them ten years to get sick and then they expect to be better within two months.

And it's like, that's just not how our body works. Give yourself time, give yourself grace and time. All the things. Yeah. And and it's usually going to be a process.

Right. It's it's trying different things, adding different things to each other. and and really feeling your way like we're, you know, you're on this healing journey for whatever reason.

And hopefully you find the doctor, like Dr. Jen or practitioner who can walk with you and, and kind of support you and help you and bring you insights and help to shine the light on what you're discovering in yourself.

Like, you know, your greatest healer is you ultimately. And so but we need help and we need support, and we need someone to bounce ideas off of and to bring another body of knowledge into play that you may or may not have yourself.

So I think in a perfect case, you got a really great person by your side. And and it's encouraging, right? It's it's the way I think it's hopefully the way that medicine will be practiced.

I think right now what's really difficult is our medical providers are under massive stress. They they're overworked. They're they don't have time in many cases to be able to sit with people and really lean in, like all of our systems, like, you know, Canada's a hot mess.

I don't think the US is that much better. You've got hmo's kind of breathing down people's necks, and you've got six minutes with this person and they're out the door, you know, they're not getting paid for a second more.

and so this is where we really, as individuals have to step up, grab the reins, find that person who's going to walk with you, and then go for it and be the best version of yourself that you can be.

Absolutely. That's such a great way to to finish. So beautiful. So much fun talking with you. I could talk all day with you. you have so much knowledge.

Where can everyone find your health groups? We talked about your podcast, which is great biohacking Superhuman performance podcast. How else can everyone reach you?

Thank you so much, Jen. so the on Instagram it's @NathalieNiddam, just my name. And I've got a private membership community on a platform called Mighty Networks.

The community is called the BSP community because I couldn't bring myself to use biohacking superhuman performance again. Like, you know, my best attempt to use all the letters of the alphabet is the title.

so the best way to find out about all these things is to go to natniddam.com. That's my website, and you'll find information there about the BSP community.

There's the podcast. There's, you know, all the things that I'm doing. I got a new project in the works that I can't really talk about yet. and then, you know, Dr. Jen and I will be meeting up at Hack Your Health at the end of May.

I'll be at the Health Optimization Summit in June. So, you know, just lots of different ways. So I hope to see you guys somewhere, somehow. Yes, absolutely.

Thank you so much. Thank you. This has been great. Thanks so much for having me.