Unlock The Transformative Power Of Peptides Transcript

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Introduction to Peptides

Welcome back to the Reverse Hypertension Naturally Summit. I'm Dr. Laurie Marbas And today we're going to really get down into peptides. So we have the peptide expert, Regan Archibald.

How are you today? I'm doing awesome. Good to be on. Well, thank you. And I'm excited to learn more about this topic. It's definitely not one that, you know, most physicians are going to be utilizing.

So I'm excited to learn about your expertise. So can we just start with the basics of can you Kind of provide a brief overview actually what peptides are and what their role is in the human body?

Absolutely. So if you think of peptides as just signaling molecules, for the most part, peptides can function like a hormone, they can function like an enzyme.

They also create structure for the cells. But at the end of the day, peptide is just simply a way that our cells communicate. So in in the human body, there's 7000 known peptides.

And as long as those peptides are keeping communication down, then that's your micro RNA or messenger RNA. These are all peptide structures, but as long as your peptide population is healthy, then you can express the genes that will keep your body from aging and getting diseases.

So there's, you know, there's, there's about 700 peptides that we've research in sequence. So we've got a long ways to go. But the very first peptide I'm sure everybody will be familiar with is a peptide called insulin.

And insulin was a came came around in the 1920s and there was the first human to ever have it. Actually, it was discovered on dogs. They found that if they cut out dogs, pancreases, they found that dogs died if they removed the pancreas, but they found it as they put in some of the insulin.

They didn't know exactly what it was, but they found if they could actually replace some of the secretions from the pancreas back into those dogs who didn't have a pancreas, they lived a lot longer.

And so and then the first human to try it was a 14 year old boy, Leonard, I can't remember his last name in Toronto, Canada. And he had type one diabetes.

And, you know, he was, you know, on his deathbed. And they gave him they said, well, let's try it. And they gave him, you know, some pancreatic insulin from a dog pancreas.

And and he lived and he lived on another like 40, 50 years. So that was the very first peptide ever discovered. And I think that's a great story.

Personal Journey Into Peptide Therapy

So in the sense of using insulin for type one diabetes and type two, of course that they need that, right? There's other peptides as well and then you have other, more specialties.

So if we can get a little bit more into what you're doing, how did you become interested in, you know, utilizing peptide therapy, maybe even in the context of cardiovascular health?

Oh, man. Well, so I grew up on a farm in Idaho, and I always wanted to be anything but a rancher when I grew up. And and and so the only way I could get out of farm work is if I was I made the sports teams, you know, the basketball team, the football team.

So I'm always looking for ways to get an edge, you know, competitively, because I'm, you know, I'm short and I'm not athletic. And if you look at my DNA, I'm like total benchwarmer genes.

Like, no way. I should have made the team genetically. I had to work for it. And, and so it was kind of that original drive that led me to peptides. Later on, I ended up getting diagnosed with an autoimmune disease because I was exposed to a lot of roundup on the farm and so I was diagnosed with Hashimoto's while I was doing my undergraduate work at the University of Utah, and then that led me down the path of, you know, looking for alternatives because the doctors really didn't have anything they could do.

And so that's where I worked with a naturopath and an acupuncturist and recovered my own health. But then beyond that, I was looking for solutions. I started EastWest Health.

I finished my schooling in 2004 and set up EastWest Health. I'm here in Utah, and that's when I started looking for other therapies to keep my autoimmune city at bay because it kept flaring up and it was challenging.

But it wasn't until I found peptides that I was able to put it in remission and last time I checked my thyroid peroxidase antibodies they went to at the all time high was 680 and now they're, they're below ten. So and but peptides are one of the main therapies that I used to treat my own autoimmunity when it comes to cardiovascular conditions.

My dad had a heart attack and, and so one of the things that I looked into this was about a decade ago when I was first getting into peptides and the treatments that they gave my dad, you know, he was on a blood thinner, which is normal, but they also put him on a hypertensive med and a cholesterol medication.

My dad did not have hypertension and he didn't even have high cholesterol. But the doctors said like, the only way we can let you out of the hospital and for the insurance to pay for your open your your open heart bypass surgery is if you're on these medications.

And so and my dad said he was having pretty severe side effects. And so we started using BPC157 and Thymosin Beta-4 to help the tissue heal in his in his surgery.

And so just post-recovery. And then I also started looking into and I found that these peptides also could prevent him from getting hypertension. And so that's, that's how we got into it.

And then since then we've seen, you know, thousands of clients and we probably are now peptides are we get very specific in peptides based on what people's labs show. So, so it not uncommon for people to come in with hypertension or not even know they have hypertension and then we use peptides to treat that.

But what percentage, Dr. Laurie of people have hypertension but don't know about it?

Hypertension, Bloodwork, and Mechanisms

That's a good question. I don't know if it's as high as, you know, pre-diabetes and obese. That's at least a third of our population. So it's probably right up there close to it.

Yeah. It's got to. And it's so cool you're putting on this summit because that's like the silent killer, right? I mean, yeah. That's the number one silent killer.

Yes, absolutely. It's wild. And I don't know. What are the first things you notice in bloodwork that gives you the indication that somebody might have hypertension, even if you haven't seen their, you know, put a blood pressure cuff on them.

If I have anyone that has any type of metabolic disease like you were mentioning, insulin resistance and I think it was before we were even starting. So that's a piece there.

But of course, there's so many people that have metabolic disease in our country, you know, for overweight or obese. So that's my first indicator. And that's when I actually asked them to get a blood pressure cuff.

What's interesting, though, is so many patients that I see because I'm licensed in all 50 states in the country, I was I seen patients all over. They'll come in and think, oh, my doctor said that my 140 over 90 is good oh, really?

So, you know, it's like, you know, let's, let's talk about that like maybe our medication but yeah that it's it's disturbing that people are okay with kind of limping along in life versus you know like you mentioned looking for ways to optimize your health and performance.

So yeah, it's a it's the first things I see. I worry about kidney health. You do worry about cardiac health, of course. And then also, you know, I think any type of insulin resistance is certainly a big piece of it.

That's actually with my master class. We're going to focus in on insulin resistance and hypertension because it's a unique way of looking at it. And I yeah, definitely, definitely excited about that.

So yeah, absolutely. I, I guess when we get to this, we're kind of in this realm of what do I see as a family medicine physician? What are you can you give us like what is the actual mechanism?

Like, what is the physiology when someone is taking the peptides in helping with hypertension or cardiac health, like when you mentioned the numbers, like what does that mean?

Like what's going on inside the body? Yeah, and I think that's a good question because the great thing about peptides is, you know, not all peptides are therapeutic.

You know, there are certain just like exosomes, you know, people are really into, you know, exosome therapy, but some exosomes carry disease and they, they signal different things to the cells to turn off.

So but the probably the biggest mechanism of action that we see, like, like if you take a peptide like bpc157, for example, probably the biggest way that it helps with hypertension is the fact that it's angiogenic.

So it helps supply new blood vessels and new blood supply. It also there's it releases nitric oxide. So you get this nice vasodilation, which is interesting because it helps with the gut.

So, you know, it's been studied for people who have leaky gut or people have had even traumatic brain injuries, but it also works for tissue injury. So, you know, if you've had a surgery, it helps recover from surgeries very well. So so I think it even works on the fibroblast that growth factors in the body so so you know interesting in how it works.

So my question would be just coming from the standpoint of is this across all or like do we worry about if you're worrying about angiogenesis, I worry about cancer and things like that.

So what are the potential side effects or is that or is it more directed towards particular tissues or like how how do you direct there? Like there's always side effects of oral medications and other things.

What does that look like in this type of therapy? Yeah, I think angiogenesis is, you know, it's a term we all have to be concerned with. But in the literature, it doesn't seem to feed cancerous cells.

You know, from from anything that I found we do. If someone has cancer, active cancer, we don't prescribe these peptides just out of abundance of caution.

But in any animal studies, it doesn't selectively, you know, preferentially, you know, cancerous cells are, you know, they want to create their own ecosystem.

But I think because PPC one, five, seven can also be used as, you know, it, it, it creates an environment where there's not that mechanism where it's going to fight cancer.

So so not one you have to be crazy careful about. But if you do have a patient that's got active cancer, probably I wouldn't use it.

Peptide Protocols, Safety, and Delivery

But yeah. And so for someone maybe like with clot accretion or, you know, peripheral vascular disease, I'm assuming you see similar type of benefit in those type of in a patients big time.

Yeah, that would be a perfect indication for thymosin Beta four or BPC 157. Okay. And so how do you know what someone needs? Like what are the blood tests that would actually indicate this is what they need is are specific different types of doses.

Like I get insulin, I prescribe insulin. I understand. So but what does this look like? So what is that exactly like? How do you prescribe it, so to speak?

Well, it really you know, what we do is we run the comprehensive blood labs and then our team will sit down and and review the labs. And based on what areas of the body are either the most depleted or, you know, areas that are the most damaged or inflamed, then that's where the peptides come into play.

And then there's the subjective requests from the the patient as well. So if somebody is looking to recover faster, that's where BPC 157 is known as the Wolverine peptide because people have such a dramatic ability to recover after workouts that Amazon made it for is even better because by Amazon Beta four is the gene that's activated when there's a wound in your body and it's the first peptide that caused the parasites and and action from your blood vessels and they turn into the medicine of stem cells and start with the regeneration process and help your body heal. So, so I think there's certainly looking at blood labs, but if somebody has like kidney issues that's triggering the hypertension, then we may use a peptide called Area 290, which is it's a peptide that helps heal small nerve fibers.

There are studies that show that it can decrease blood pressure and then it also decreases cholesterol, but it works on the urethral point and pathway.

So it it works through the kidneys. And it's also a peptide that I use when I especially in the summer because I'm a big mountain biker. And so to increase my endurance, I'll tell my friends, I'm like, hey, just in case you feel like you can't keep up, it's because I'm using some area to 90.

You wouldn't want to use that if somebody has like hemochromatosis or if they've already got high red blood cells. So this is where I see so many, you know, 80% of peptides are purchased on the black market where there is there's no supervision and people are just buying it from unknown sources.

We get all of the bars from a compounding pharmacy, but people don't realize that they're, you know, putting themselves at risk. It's not like you just want to, you know, load up on some of these peptides chronically.

But but that is a peptide that we've had really good success with in some of our hypertension patients. Okay. Okay. And then so what is a treatment protocol look like?

Is this like forever or is there just a period of time? Like, how does that get started? What's it is it once a like are these injections like what does that actually look like?

Yes. So once we read the blood labs, then peptides, you know, they're it's they're most of them are metabolized in 5 to 7 minutes. So they have a very short metabolic life.

But once you turn on the gene because all they're doing is turning on the switch to activate genes that you want activated, like a peptide that I love called silent.

I use it in the afternoons. It turns on the genes responsible for GABA, so you get this nice relaxation and is better

for brainstorming or creative work.

It's a good way to kind of start, you know, calming the brain down from a day's work. But but essentially what we do is we work based on people's blood labs.

You put together a protocol for six months and then we switch up the peptides every month. Sometimes we'll keep someone on a peptide for more than you know, more than just 30 days.

But but in general, once you turn on those genes, you don't want to just keep pushing it. And what a lot of doctors do is they'll prescribe a singular peptide because they'll be like, Oh, I love CJC 1295 and it activates growth hormone.

I'm just going to get my patient on that for good. And it's like, Well, it's, you know, it's not going to cause cancer. Like, you know, we've been taught like with growth hormone itself, with human growth hormone, but, but when you turn it on chronically, then your body starts building up a tolerance just like anything else.

But if you use it properly, you know, you do five days on, two days off, and you do that for about 30 days, then take a pause and work on another pathway.

Then you actually maintain the benefits. So it's in, in my opinion, if it's done right, it's much safer than supplements and especially for then a lot of the the pharmaceuticals that are prescribed.

So but yes, it's a it's kind of a one month on, one month off. And if you stack peptides, so if you're doing, you know, two or three peptides, you're going to amplify the results over just using a singular peptide.

And so you can stack peptides to improve your outcomes. Okay, so what is that. Is this I'm injectables I'm assuming or no. Oh, excuse me. Yes. So the majority of peptides are in injections.

There are more peptides that they're learning how to make them orally available, but most of the peptides will get destroyed before they ever make it to where you want them to go now.

So they're done by with an insulin syringe. Usually it's a very small dose. You're injecting, you know, 25.25 milliliters.

Emerging Peptides for Metabolism and Longevity

So very, very small injections, not super painful. Some peptides like BP c157, which we've been talking about, that can be done as an injection. You can use it as a topical.

We've got a company that we're working with right now that uses it as a with Ianto into for rhesus for absorption and then you get like longer lasting because like I mentioned, it's it's metabolized in 5 to 7 minutes.

So if someone's got a pretty severe injury there, their research is very promising and that could be a really helpful therapy. And then it's also available orally because it's it's body protective complex is what the BPC is and it's actually made by a gastric secretion.

So the original versions of BPC 157 is where they would actually take human gastric secretions and pull the peptide out of it. So we were talking about the the gastric production and the oral and the protection there.

So my question is, where else? So you mentioned hypertension, tissue repair and such, your dad's heart attack, it seems like a very vast array of things, like what are the exciting things you see there coming on the horizon or something that you you do regularly that we haven't spoken to, maybe like diabetes or something else?

Sure. And I don't think it's fascinating because, you know, like I mentioned, we've sequenced about 10% of peptides. So we're it's just in its infancy.

But the most popular peptides right now, and I'm sure you prescribe them, which is like Mozambique and what Kobe and Maduro, these Japan agonists are for, not life, life changing.

I mean, I've never seen anything change behavior is as quick as the issue. I don't know if you saw this, Laura. Do you use a lot of the GOP? When I have used GOP ones, mostly for my diabetics, I tend to be more lifestyle intervention first or use it in conjunction with lifestyle because I don't want them to be on these long term because again.

Yeah. You know, we don't have decades of information on these things. So but yeah, no, I appreciate it. But they don't even want to do like gambling or alcohol.

It's, there's some smoking. Yeah. So my concern is if they stop it or they can't afford it any longer, does that return if they haven't really embraced the habits, lifestyle, habits while they were shut off the brains, like I guess I don't know, the reward center, but yeah.

What is, what is it. Is it that. Yeah. Well and that's why we, you know, we have a nutritional team and a fitness team and then we don't keep people on it for longer than 90 days.

Then we take a pause and then there's other things you can use, like five and you know what you might see. And those were just great. Once the behavior is made.

But if you can get someone off sugar, I mean, that's like you win the game and if you can keep them off sugar, that's how the game stays. Wine. And so these are like a shortcut.

I tell people now we can remove willpower from the equation what the GOP wants, and they're kidney them in their renal protective. I have a client who has has had chronic low blood sugar.

I mean, he he wears a CGM and his blood sugar was hovering like 20 to 30. I mean, dangerously low. And we decided, all right, we're going to try to we're used to his appetite and see what it does.

And his blood sugar is now is averaging close like in the nineties. So and he feels so much better and he's lost a bunch of weight. And his kidney markers are starting to come up because he's got chronic kidney disease and treatment resistant hypertension.

One of the things that we're he's also that we're using is Bactrim stat. I don't know if you've looked into back or stat for, you know, treatment resistant hypertension, but now it's a very fascinating molecule.

So so I think some of the you know, you ask what are the peptides that are coming up in the future? Well, GOP ones have create a lot of buzz for weight loss specifically.

And obviously diabetes. That's what it was first indicated for. But what's really coming down the pipeline are exercise medics. So. So okay, so. So now that it's like, well, you don't have to worry because we took care of your appetite for you.

So you're not you don't need to eat, you know, now you can control your diet. We're going to exercise for you. It's kind of funny. Yeah, but. What's going on there. Is so fascinating.

I mean, because I use the I've been using these peptides for years because what we do is we find that the research that's going on and we see where patents are being filed and when drug companies are straining to bring something to market, it usually takes them about a decade.

And then I try it myself for six months or whatever, and I do it like almost every month and and then I make sure that, okay, this is great. And then I talk to other providers who are using it and then, you know, we start using some of these peptides if our compounding pharmacies will make them.

And that's our criteria is it's got to be from a compounding pharmacy. We don't we don't do the research use only and not for human consumption. We make sure they're very well studied.

But there is a couple of peptides. One is called SS31 and SS31 is now in two phase three clinical trials, one for Alzheimer's and one for diabetes. And so if you think what's the what's the, the common denominator in those two diseases?

Yeah, absolutely. It's insulin resistance like Alzheimer's type three. That's it. Yeah. And SS31, what it is, is it's a mitochondrial derived peptide and so I'm mostly excited about the mitochondrial benefits because, you know, primarily what we do is like age reversal medicine and we help.

I work with entrepreneurs who are trying to extend their life span and their health span. And so by using like SS31 which helps repair the damage mitochondria.

So if you stack that with methylene blue and NAD or NAD precursors, you can get some really phenomenal benefits, not only for from an energy perspective like your patients will just feel better, but you look at their blood labs and things look much better objectively as well.

The other a mitochondrial derived peptide is called MADA C and MADA C is is more, you know, typically expressed in the Japanese population. But MOTS-c is, is it's a peptide that's expressed from heat shock protein.

So, you know, when you workout really hard, you're sweating, you get heat shock proteins. When you're in the sauna, you get heat shock protein. So naturally you can express these peptides, but if you can add a little MOTS-c see to it.

They've done research where they put my son treadmills and old mice and young mice, and so they take these three month old mice and those are young mice.

And then old mice are closer to 24 months. And then they look at how they perform side by side. And then they'll do seven days of MOTS-c They did seven days of MOTS-c injections to see if the old mice would have an improvement on their performance.

Because MOTS-c Express from the satellite cells and the muscles. And what they found is that the old mice could run just as far as the young mice could after seven days of MOTS-c So if you happen to treat mice in your clinic, Laurie, and you want them to run farther, that's.

There you go. No. Have there been human trials for that type is such a thing. There there have been. There's one that that the trial that I know of from MOTS-c that was done in humans was actually done in adolescent kids who were because MOTS-c also helps with insulin resistance and obesity or diabesity.

And they found that in these adolescent kids who use MOTS-c they had kind of a placebo group. And then they had the they had the control group and then the MOTS-c group, and they found that their blood sugar improved.

They were able to lose like 20% of their weight very effectively now. So yeah, and there's other studies, but most of the studies and these trials have been done on animals and on Regan.

End of one The best end of one. Yes. Someone's got to go first. Yes. I totally appreciate it. Wow. Okay. Well, there's a lot coming down the pipeline just getting started.

But even still, it's exciting what's available currently. So thank you for sharing your expertise. Expertise of this day. That was fascinating really nice and dove into a unique specialty.

My my pleasure is it's awesome and thanks so much for putting this summit on. I can't tell you how much I appreciate it because what you're doing is helping people think about their health.

And I think the more we can improve people's health, the more we improve our communities and our society. And life is just better when we're all healthy.

That is true. And that will put me to work and I'll be thankful. So, yeah. Thanks again for joining us, Regan. My pleasure.