Introduction to the Peptide Series

As we start dancing with these peptides and walking closely with you as more and more of my patients are looking for optimization on top of their lifestyle modifications, what they eat, what they don't eat, how they move, how they exercise.

how they handle their stress, sleep, all the things. I think it's been, it's just been really fun to be a part of this thing. In every episode, my expert guests and I dive into real conversations about what's broken and how we can fix it by making healthcare about people, not just managing disease.

It's time to rethink what healthcare should be and how we can make it better together. Welcome to the ByteCast. Hello and welcome back to My MD Unscripted.

I'm your host, Dr. Clint Carter, and today is part two of our peptide series. Last week, I went over what is a peptide and we talked about metabolic peptides like weight loss and growth hormone.

And so as a, as a quick review, obviously if you missed that, go catch it. But you know, a peptide is basically a small protein. It's, you know, 40, maybe up to 60, but really 40 or less amino acids folded up into a small protein, which we call peptide.

A big protein may have.

What Peptides Are and How They Signal the Body

hundreds or thousands of amino acids and they get all rolled up into a ball and sometimes what we give as a peptide is really just that corner of the protein that sticks out and does things.

So the way your body works is your body has DNA, which is uniquely you, which then when turned on makes RNA that when it does its job, it makes a protein and that protein does things.

So When a certain DNA segment gets turned on, usually oftentimes based on lifestyle or what's going on in the body, it's called epigenetics. Whether we exercise or not turns on and off different DNA segments.

If we're eating healthy, if we are taking in a lot of junk and chemicals and things that your body doesn't know what to do with, that turns on and off different DNA segments, which make different RNA, which makes different proteins, which do different things.

And so what we're talking about here are small proteins that do things in the body that we like. They either tell the body to stop doing things we don't like or tell the body to start doing things we do like, but ultimately it's a signal, right?

It's a signaling. protein, it's a messenger in the body. You know, every cell in your body has, for the most part, every cell in your body has testosterone and estrogen receptors.

Every cell in your body literally has thyroid receptors. So hormones send signals to everywhere. It's a broadcast of information, which we like. We want healthy hormone balance to tell the body to work well, which in turn is going to help turn on and off different DNA segments as well, which is going to reduce you know, result in different proteins being made that do different things.

In our case here, peptides are small segments of proteins or small proteins that are more like a direct text message to a certain part of the body telling it to do a certain thing.

It's a very specific purpose. Now, sometimes a specific purpose has multiple downstream effects. Like we talked about the weight loss shot, semiglutides, and teurzebitides of the world.

They are very specific, but they talk to the brain, they talk to the gut, they talk to the liver, the insulin receptors in these cells. And so. It's a very specific response, but it's, you know, your body has, makes semaglutide or something very similar to it.

And it's a part of the body's natural response to when you eat, where it should be. And so we gradually walk up on those doses and get you close so that when you eat, your body goes, whoa.

I'm full and all these things start to happen. And we talked about the pros and the cons of that. So today we're going to get into a little bit more about some other peptide options that are out there besides, you know, everybody knows about the weight loss shot.

Not everybody knows that those are proteins, but everybody knows that the weight loss shot is a thing. And once again, they're shots. Most of these peptides are shots because we want the protein to get in that, the small protein, the peptide to get into the bloodstream.

intact, whole, so it can go do its thing. If you swallow protein, it tends to get broken down into individual amino acids and then the body just turns it into something else later.

So we need to eat protein to give the body the amino acids that it needs to do stuff. And that's a huge part of, in fact, if you're not doing that, you don't eat peptides, right?

You need protein. And then eventually when we get where we're starting to make some better decisions and we're giving the body what it needs to heal and we're exercising to our capabilities and we're you know, managing our stress as able and we're focusing on getting healthy sleep and all of those things.

And then peptides are a fun next step. And so one of the things that happens when you're out there exercising and take care of yourself or not, you know, injuries happen to everyone is injuries.

And so, um, Injury recovery can look like rest. It can look like, you know, anti-inflammatory sometimes. It can look like physical therapy, chiropractic care, bracing and external support.

But one thing that all of those are counting on, those are counting on the body to be able to heal itself. You know, we're helping the body heal itself.

We're strengthening the part of the body that's going to help protect that. injured area while it heals itself.

Healing Peptides for Injury Recovery

We're going to increase flexibility of that injured area while it's healing so we don't lose our range of motion, but ultimately the body heals itself.

So one thing that we have found is that there are a couple of peptides. The two that we're going to talk about today that help the most with a specific injury.

Obviously yesterday we talked about increasing your body's natural growth hormone secretion. That's going to help injuries in general as far as growth hormone is important for recovery and healing and energy.

These two options are BPC 157. It's ultimately derived from a stomach peptide. It's got good early data on rapid healing when put under the skin in the area of an injury.

So these things work great for superficial injuries, things you can get to. So, you know, a stress fracture and a runner, an ankle sprain, a tendonitis, you know, hand injuries, elbow injuries, things like that.

You know, if you tear a meniscus in your knee, there's a limit. It's hard to get to that, right? I can give you a shot. You can give yourself a shot under the skin, but is that really getting into the deep part of the knee?

Probably not. So there's a limit to that. My kiddos have, my youngest daughter currently is getting over a PARS injury, an injury to her, to the bones in her back from just having an extra curvature to her spine and probably PE coach is pushing them too hard in the weight room.

But the idea is like, I'm giving her some of this stuff under the skin, close to that. I'm not counting on it getting all the way down to those bones in the back and making a big difference.

But you know what? The muscles and tissues around that spine are also affected and getting negative downstream signaling from the injury and the inflammatory and the nerves that are involved in this.

It's still doing her some good and hopefully healing her. So there's BPC 157 and then there is thymusin beta 4 is a thymus hormone. You may not be familiar with the thymus because you haven't had a thymus since you were like 10 or 12 years old.

Thymus, kids are born with thymuses and they produce, it's an immune organ that secretes thymus hormones, which are proteins. that help kids bounce back from injury, help them not get sick, help them bounce back from illness.

And then around puberty, the thymus just resolves, dissolves away and you have, especially most of the time you can't even see a remnant of it on an MRI.

But what happens is you get older and all of a sudden you get hurt and it takes a lot longer to get better and you get sick and it kicks your tail like it didn't used to.

And your kid gets the same illness and they like bounce right back. And it's just, you know, like, man, if I can bottle that up. Well, we kind of can a little bit.

So BPC 157 and thymacin beta four, there's a small section of thymacin beta four specifically works great for tissue remodeling and, you know, cellular communication.

It's called TB 500. So TB stands for thymacin beta. And so TB 500 is a section of thymacin beta four. More information than you cared about, but you're going to hear both of them used interchangeably.

So there is a, you can put these two peptides together and the companies that are compounding this and put them together, it has, it's come to be known as the Wolverine.

So in Marvel comics, the Wolverine character heals instantly. He can get shot and the body just pushes the bullet out and heals right up. And so it's not quite that dramatic.

However, you can do. daily shot of BPC and TB 500 together. There's strong animal data that this is going to cause significantly more rapid, more complete healing.

Obviously there's plenty of human data. There's high level trials going on right now. It's used quite a bit for, you know, anecdotally with great results with functional medicine providers.

It's not a research grade peptide. This is a human grade peptide. that there is still probably some data to be established as far as how much benefit you're going to get, how fast.

I have found that in my folks that are training for marathons and triathlons and things like that, where they tend to get a lot of overuse injuries. And these are great for overuse injuries.

You can do it for tennis elbow. You can do it for a stress fracture. You can do it for a muscle strain because those

are all fairly superficial and you can get to them pretty easily.

And these are just painless sub cue under the skin injections. And so that has been really fun. It's not a replacement for. rehab or physical therapy or, you know, surgery in the right situation.

But if you've got one where the surgeon's like, yeah, I mean, we could go in and fix that, but we could just, you know, put you in a boot and, and, you know, let the body heal itself.

Well, this would be one of those where you go, yeah, let's not do surgery. Let's do the boot or the brace or the PT or whatever it is you recommend. But I'm also going to get from my direct primary care provider, Wolverine to inject into that sucker on a daily basis.

That one has been really fun to have. It's a small protein that does something. These are human. God created these peptides to do things. And then what we're asking for them to do is do a little bit more.

Going back to the thymus for a second, the next segment that we want to talk about is like, Reven up the immune system, things that are going to help protect you from getting sick, help you get well faster when you are ill.

The main one of those is called thymus and alpha. We talked about thymus and beta with recovery.

Immune Support Peptides

Thymus and alpha is very specifically. Thymus and Alpha 1 is it helps with T cell modulation, which T cells are a part of your immune system for fighting off illness.

And so it's used, you know, outside this country is used pretty regularly for viral illnesses, obviously. It's getting growing traction inside the United States.

You know, in our practice, we have different options when you get ill, you can come in for an immune boost. IV can come in, you know, we've got glutathione and B vitamins and C and zinc and fluids and all the things, or you can come in for a quick injection of an immune boost and a B complex.

And then if you really want to go big, we give you a shot of our supply of Thomasin alpha. And so that we call that the triple threat. And so you get a single dose of Thomasin alpha one, which is helpful, probably would be even cooler is if every time we got sick, everyone had already had a bottle of Thomasin alpha one at the house.

that you could just start going with every day or twice weekly use. I know I had an autoimmune attack on my spinal cord called transverse myelitis. And so when that was going down, I got on Thomasin alpha and I was, there's a twice a week dose.

And so I just went with a larger dose twice a week with that, as well as some of these neuroprotective peptides we'll get to. And, you know, I'd like to think it had a big role in how complete and how quick my recovery was, along with lifestyle modification and all the other things that were going down at that time.

But thymus and Alpha-1 is, it's part of the reason that young kids with, you know, under the age of 10, when they get sick, they tend to bounce back really fast.

There's another sort of immune. peptide that's specifically anti-microbial. There's things called biofilms that are mold and toxin related and other things, but ultimately it helps break down the bacteria's defense or even viral, but really bacteria specifically and some fungal.

It helps break down that. bacteria, that cell wall, that defense mechanism, the biofilms involved so that your immune system can knock them out better or if you're on antibiotic for the antibiotic to work better.

But part of the reason these things thrive and can cause disease so well is they have over time built up these

defense mechanisms to protect them from our immune system's attack.

It either helps them hide or it helps them resist. And so, you know, you can get a pneumonia that, that your body knocks out quick, or you can get a pneumonia that, you know, lasts forever.

Or if your immune system's weak enough, you get a pneumonia that's the last thing you get. And so things like this one is called LL37. specifically used for bacterial post-viral syndrome.

So if you get a cold and you get a sinus infection, you get a cold and you get a bronchitis, you know, any immune dysregulation where you need extra help knocking these suckers out.

It's not as widely used as thymus and alpha, but it has a lot of promise and it's getting a lot more use. I think it's. And compared to an antibiotic, it's more expensive and more cumbersome.

However, there are situations where it's perfect. You know, if you had a lot of antibiotics, you're trying to avoid antibiotics, you know, and about the side effect of antibiotics with gut health and, and, and yeast infections and just, you know, all the things can really be kind of a mess.

The other thing that I took as I transitioned here, when I had that autoimmune thing on my back was I took C-Link and C-Max. And so these are. neuropeptides, brain and nerve protection and healing peptides that interestingly are not shots like everything, almost every other peptide is an injection, but C-Link and C-Max are nasal sprays.

And so the nasal spray is another way for it to get absorbed into your body without having without getting digested first. I think it also helps some proximity to the cribriform plate and some areas, but ultimately these are able to get past the blood brain barrier for inflammation.

They help with sleep, they help with thinking, they help with brain and spinal cord inflammation. And so I like to do. You know, C-Max in the morning or C-Link at night or vice versa.

I've got some people that like one more than the other. I've got one patient whose wife had it for one thing and he was taking it and it was helping him with his sleep.

And so, you know, he needed his own bottle. So the way that these things between, so C-Max. tells the brain to release more BDNF, which is, you know, brain derived peptide or protein in your brain area that helps with stimulating the brain to make more nerve endings, to grow and heal and connect.

And so it helps with like cognition and the ability to think. It would be a perfect combination with the ExoMind device that we have here, which also stimulates BDNF.

But the C-link tends to be more along the lines of anxiety. Sleep has more of a GABA influence and your mental state in a more positive position with a healthy, healthy balance with GABA, but certainly anxiety for sure.

I've had mixed results with these.

Neuroprotective Nasal Peptides

I think it's hard for people to. do nose sprays. If you're having to do it twice daily, it's one of the main reasons we have, I have people with terrible allergies that don't like to do Flonase.

They're like, I just, I just can't, I don't like, I don't like it. I don't, I just can't remember. So I think making sure you get it from a good source, follow with it.

And then if it's not, if it doesn't get the result that you're looking for, then it might not be the one for you, but it's certainly a cool option. especially for someone that's struggling with anxiety and or sleep and or cognitive decline.

And especially people who don't like needles, they come in super handy. Another section of health that is obviously super hot, is gut health. The solution to gut health is plethora, right?

So what you eat, what you don't eat, what you take as far as supplements, what you don't take, antibiotics, bacteria overgrowth, probiotics, prebiotics, fiber, the gut, health conversation is one that never ends.

We've had so many cool guests talking about gut health, pre-gut, post-gut, liver and bile and all of the things that go into leaky gut and bacterial overgrowth and all those things.

And it can just be kind of overwhelming. One thing that I've really enjoyed is The BPC 157 that I mentioned when we were talking about the Wolverine and tissue repair that's given with a shot right over the injury.

Well, it comes in an oral form and I said it was gastric derived, right? So it's stomach lining derived. And so your body makes it anyway, but if we give you more BPC 157 orally, Well, it doesn't help your ankle sprain much when it's taken orally because it gets broken down and used up in the gut before it really gets to the ankle.

That's why we do shots at the injury site. However, orally BPC 157 is super helpful at closing the gaps. in the leaky gut syndrome, at healing the gut lining, at balancing your microbiome.

I've got a couple patients that were working on getting some functional testing for the gut health, but clearly leaky gut and or small intestinal bacterial overgrowth or SIBO.

And BPC 157, while we're waiting on the opportunity and the finances to do some of that other stuff, has started making a pretty big benefit. Now we're also working on what they're eating.

We're doing prebiotics and probiotics, a little bit of fiber, treating the gas and the bloat. But the BPC 157 is making a big difference all by itself.

So it's really helpful as we move into some more direct therapies there. Related to the GLP-1s is GLP-2 analog, which is like tetaglutide. You know, there are some things that it can help with as far as the gut health as well.

I don't have a lot of specific experience with that one, but getting into that category with the GLPs, GLP-1s and the weight loss versions tend to cause GI side effects because it slows the gut and does those things.

It doesn't hurt the gut, but I don't know that I would think of it as gut health. So having a GLP2, which is probably how the body balances that, that's promising as we go forward as well.

Another area that's fun is, you know, for skin and hair, as we've branched and gradually got in, launched Live, LYV, our sister company.

Peptides for Gut Health and Skin Regeneration

stands for longevity, youthfulness and vitality, you know, doing some wellness, some cosmetics. The one thing that they use a decent amount over or we use over there is the GHK copper or GHK-CU.

Why CU means copper? I'll never know, but this can be used topically on the skin or in the area of the hair and it can signal the body to make more collagen, turn back on some of the hair follicles, thicken up the hair follicles.

It's certainly regenerative in the areas of aesthetics as far as skin health, the tissue under the skin, collagen. the HLA, the elastins, all those things, especially you combine that with PRP therapies and exosome therapies.

It's just a cool time to be in this field where for so long, your only option was paralyzing the muscles until it was time to get a facelift for those that cared.

And now the opportunity to be healthy from the inside out and have your skin as well as the tissue under the skin

heal itself from the inside out with the help of these peptides that are signaling the body to do just that.

has been super exciting and fun to see and to be a part of. And to sort of be, you know, along that first wave of introducing this to patient care, you know, we're not cutting edge as far as like research is concerned, but we certainly have been on the front wave.

of most things wellness as we got out of the insurance game and realized there was so much more to taking care of people than what insurance likes to reimburse for.

And certainly peptides are well outside of anything that insurance wants to reimburse for other than super expensive name brand But there's just, you know, what I don't like about them is they're limited dosing availability.

The cost is kind of outrageous and, you know, while having a pen to inject with maybe is psychologically easier and whatnot, then drawing it up in an insulin syringe, it's no big deal.

more comfortable. And so having the ability to micro dose, to change the doses week to week and, you know, maybe you need to split your dose and take it twice a week because of side effects or, you know, just go down your dose in general and increase how frequently you do it.

Maybe we shoot every four days instead of every seven and all the things, right? So I just think that when it comes to peptides, I mentioned the last time that we have a peptide management fee that we just apply every month.

As we start dancing with these peptides and walking closely with you as more and more of my patients are looking for optimization on top of their lifestyle modifications, what they eat, what they don't eat, how they move, how they exercise, how they handle their stress, sleep, all the things.

I think it's been, it's just been really fun to be a part of this thing. I think what you have to watch out for, you have to watch out for fly-by-night clinics that are going to prescribe you whatever you want without a lot of monitoring, without a lot of lab work, without body composition testing or whatever's appropriate for whatever peptide.

And they don't follow you closely and give you timely instruction on.

How to Use Peptides Safely and Effectively

you know, how to adjust these things unless you start complaining. So also where you source your peptide from matters. I don't know that I would trust every place on the internet that says they've got BPC 157 or any of these other ones, especially not the semiglutide and tercepitides of the world.

There's a lot of junk going around out there, contaminated or just straight lies. They just don't have it in there. You need to know that when it says it's got five milligrams per ML of XYZ peptide that it's really in there and that you can trust the dose.

And then, you know, these things are all a couple hundred bucks a bottle and a bottle is going to last you a month or two. And so it can be a little cost prohibitive.

There needs to be a decent amount of benefit if we're doing that. No one wants to just spend a couple hundred bucks to say they're on a peptide and hope it's doing something.

You need to know that it's the right one for you and that we can follow up and figure out whether it was ultimately, um, the kind of thing that we should circle back and do again later or keep doing or switch to something else or, you know, however that works.

So it's all a way to optimize your wellness and your health, how you feel and how you're going to feel in the future. If it's not making you healthier now and or healthier later, then what are we doing?

Lifestyle is still the thing. There's really no point in coming and asking me about peptides if you're not working on the other stuff, if you're not interested in diet, exercise, stress, and sleep maintenance, then peptides aren't, you know, they're kind of the, other than, you know, an injury here or there and some weight loss help.

I mean, they're, they're kind of the sprinkles on the icing of the cake of health, right? Like they are cool and they're going to get more and more options and more and more specific and more and more data behind them, but they don't replace these other things.

And so I think that's pretty much it on the peptide talk. They peptides amplify good biology. They don't overcome bad habits. They in direct primary care here at Miami select and live our sister company.

We can monitor, individualize, you know, we're where the rest of the world is just following a protocol or so much of the world is following a protocol.

The fly by night places are just, you know, just, you know, sure, take it like this. That's what it says. Most people do good. What we want is to be able to walk with you and make sure that you are indeed healthier today and healthier tomorrow.

So thanks for hanging out with me. Thanks for putting up with just my voice without a guest. And hopefully we've shed some light together on. what peptides are, what they might be useful for in you.

And thank you guys for coming along in this journey with me and you guys have a great week. We'll talk to you all next week. Thanks for joining me today on My MD Unscripted.

I hope today's conversation opened your mind and inspired you to imagine a better path for your health and therefore life. If you found value in this episode, be sure to subscribe, leave a review, and share it with someone passionate about transforming healthcare.

Real change starts with real conversation, so let's keep on going. Until next time, stay well, stay curious, and never stop pushing for better.