Introduction and podcast reset

Welcome, everybody, to the Peptide Summit. My name is Doctor Mad Cook, and I'm with doctor Amber. And I'm delighted to to be with her today. This is scene one.

Take two. We, we did an amazing podcast that was, fun. And, due to technical difficulties, it cut out in the middle. So we get to do it again. And so I'm kind of I'm actually I've been I've, I've been actually looking forward to this.

So, I'm delighted to have you on. And, thanks for taking some time to talk to us. Likewise. No, I'm happy to be here. We had a great conversation, but we'll recapture some of those main points for everybody.

And recapture. Recapture the magic. So then, tell me a little bit about your background, how you got into peptides and, and, how you think about medicine.

Yeah. So I'm a nature doctor by training, and I really I learned all the, the fundamental tenets of, gut health and hormone health and bioidentical hormone therapy and really built this foundation of medicine in school.

But peptide therapy really came afterwards. I didn't learn anything about that in school. I mean, I learned about amino acids and I learned about proteins and biochemistry, but I didn't know about peptide therapy specifically.

And so I found peptide therapy in my own health journey. At a point in time where I was run down, burnt out, adrenal fatigued, hair thinning from med school, also had, some Candida overgrowth, probably from stress and lots of factors.

And so, I found a lot of the peptides started using them on myself.

How peptide therapy entered her practice

I was, early in my practice, realized, wow, these are so transformational for how I'm feeling and started incorporating them with patients, seeing really good results as well.

So I use a lot of the peptides that help improve quality of sleep. So deep sleep, also peptides that help to support immune function. And we know that high cortisol levels, especially like those being in medical school, can suppress that, that optimize immune function.

So I started using a lot of those peptides, noticing transformation. My hair grew back, my skin improved, my sleep was deeper, and my brain function, I was so much sharper, that I had been in a while.

So yeah. And then I got trained by for em, went through their training course, several other peptide training, events and, and. Yeah, it's been I'd say a huge focus of my practice is not only at looking at, functional labs.

So running stool panels, hormone labs, working with women on a weekly basis, you know, walking through their lab reports, but incorporating these peptide therapies when indicated, in addition to everything else that we're doing.

Okay. Awesome. I'll take it. So then, let's let's dive into the, esthetic stuff. And so you brought up hair and I think that's, that's probably one of the top things that, people think about.

I thought I, I was like two minutes, a couple minutes late. I thought, oh, I'm going to do an esthetics interview. I better get my hair right. It's okay.

Yeah. So, so tell me, tell me about. Tell me how you think about hair and what you're doing with peptides. Yeah,

well, you know, the last couple of years with Covid, I think one of the top Google search terms in 2020 was hair loss post Covid.

How to resolve that or remedy that? So there is a lot of men and women right now that are dealing with hair loss, whether it be post-viral, high stress levels of the pandemic, other hormone imbalances, lots of medications could lead to that.

So I think it's it's more of a, issue that maybe than ever, in our current day and age. And there's a lot of internal reasons why that happens. And there's some esthetic and external things that we can do to treat that.

So peptides can help on both planes, as well as, you know, looking at other, lifestyle factors, dietary nutrient depletions, iron levels, all of these different pieces that we're evaluating for, for hair talk, me through the Covid piece because we're also seeing, the same thing, the hair loss.

Talk to me about, how you put that together in terms of the internal causes. Yeah, well, we know, we know there was a paper, actually, that was published in the journal biochemistry in 2000, and the main finding in that paper was that high levels of glucocorticoids or cortisol, that stress hormone, will kill sinusitis or those cells in the thymus that regulate the immune system.

And so we know that when we have, poor thymus function, we have worse immune regulation, we have more cytokine in production, we have more higher levels of inflammation, more frequent infections, or we just don't respond quite as well on an immune level.

And so I think that's definitely part of it. We know that there's actually receptors in the hair follicle for IGF one. So when our growth hormone levels drop IGF one is a byproduct of growth hormone.

So that could be a part of it right. As we age we tend to decrease. And and growth hormone level. That's a piece of it. But I think the the cortisol the effect of cortisol is a huge piece in hair loss.

Most people that have a stressful event will notice that hair loss about 3 to 6, three months afterwards is really where they start to see it. 3 to 6 months is the the maximum hair loss.

And that just follows the the hair growth cycles. Right. So we have that antigen growth phase, the cardigan and the telogen. Just like that resting phase.

The goal is to keep your hair in that growth phase for longer periods of time. But stress will really, stop that growth phase and move you into more of a stasis.

So yeah, I think the stress, the immune function that's compromised with, a viral infection, I think those are the big players.

Hair loss, stress, and immune dysfunction

Yeah. And and I've always felt and so there's and we have to kind of dive into the science a little bit of that more. But then that, that stress that is generally to me in an autoimmune category.

Yeah. Almost any autoimmune, any, any stress that involves an autoimmune. And so then that means and so there's, there's antibodies going on. There's a whole bunch of things going on in an immune inflammatory process.

When those things go sideways, everything else goes sideways. So your growth hormone levels are going to go down your and and so then it may be just inflammation in the blood that's affecting.

But it may be autoimmune. But then you'll see people that are and those that come in. And we've been seeing a lot of them after Covid that are, you know, come in and says like I'm shedding, you know, and I'm pulling hair out.

Hair's falling out. And so then let's say we got somebody and they're, they're, they have maybe some autoimmune in their background and then they've got Covid and they or they had Covid and now they've got hair loss.

What how what would you what do you like to do. What are some or some treatments you like to do for that. Yeah. So and I see a lot of autoimmune patients, so many of my women have autoimmune conditions.

And I think about it from that model of the declining thymus. Glenn. Right. So, working on that immune function, there's a lot of nutrients that are critical to immune function, things like zinc and selenium.

And if there's a gut issues, we're not absorbing those. That's really pillar one, right? We we need to make sure that we have sort of these really critical nutrients for immune function on the level of peptides.

I like to use some of those immune supportive peptides, things like thymus and alpha one, thymus and beta four. And then there's a peptide called Samia Lin which sounds very similar.

And it has some effects on here. We can use zinc stimulant for hair. So yeah we're really working on improving immune regulation. Again. There's no mistake in that.

So our thymus gland is optimized working, you know, optimally when we're young, five, six, seven, eight years old. That decline starts to happen about age 15 when women are about 30, their immune function, their thymus function is substantially lowered.

And there's no coincidence that we tend to see increased rise in autoimmune conditions, female cancers around that time because we just have poor immune regulation.

So yeah, I'm really working on recalibrating their their immune health. That is an alpha one is really powerful for me. Many women have multiple chemical sensitivity.

They have food reactions. They have a lot of, you know, allergies to things. And that's really a sign of immune dysfunction. Right? So the anything that we can do to improve that immune regulation, son, about, boosting the immune system per se.

Right. We don't want to skyrocket an immune response, but we want regulation, which is what's not happening in autoimmunity. Right. We're self attacking self as autoimmunity.

So that is another one really powerful peptide for doing that. And again our thymus gland produces these already right. It makes famous and alpha one and makes thymus a beta and makes these thymus peptides which are really hormones.

Right. And with act in the body. So we're just improving the production of those by giving these peptide therapies. It's it's interesting. And it's a you can think of if the somebody I was I've been using this analogy for the last couple of weeks, somebody described autoimmunity or immune stress as like an immune system that's angry.

It's like a little kid that's throwing a lot of punches, but none of those punches are actually landing. And so then, you know, how do immunity in these in these cases of immune stress, then, things that regulate immune function often lead people to feel a lot better.

And so then things like that, I was setting off a one and that, you know, there's from a regulatory perspective, that's a little hard to get in the United States now.

But I still think that it's a profound, adjunctive, helpful thing for people. And just kind of it's kind of interesting. I remember vividly, probably one of my most the thing I remember it like was yesterday having a couple friends that I knew who were women at, like right when I finished their residency.

Like, I was like 30, 31. So this is like 20 years ago. And they basically had that constellation of, of of kind of

endometriosis, autoimmunity and inflammation, an autoimmune, autoimmune, low thyroid.

Yeah. And then we almost looked kind of swollen. And then they would get swollen and then all of a sudden come back to normal. And you know I now I would be like oh I, we would probably see that person and we would do something fairly similar.

I mean, you know, so in that sense you're ahead of me clinically. But, but I remember and I was and I thought and I and basically, you know, I remember talking to them and realizing Western medicine definitely has nothing to offer.

They suppress the immune system, if anything. Right. Shut it down. Kind of. It's kind of fought for that population for that obviously big, big fan of Western medicine in many ways.

But then so then, you know, that that's a vulnerable, vulnerable crowd for sure. And so then I just spent an and in a way, I'm just and I think now we maybe see a lot of those people.

We see those same people when they're in their 50s, basically they're same people in their 70s. So the women's health is such an important thing. And I think that an integrative approaches are really important.

The first in your in your do you have any kind of insight maybe we'll kind of go into that a little bit in, in terms of women's health. What what are some of your highlights you like to think about when you're, when, when you, when you see people.

Yeah.

Autoimmunity, womenu2019s health, and hormone balance

Well, of course I'm looking at I'm running a full panel of labs and I'm looking at all those hormone levels and I'm looking at medications that they're taking.

I think inflammation is such a buzzword, but also such a common phenomenon, whether it be chronic pain, migraines, we know the the cytokine model for depression.

So when we have poor immune function, we can have this elevated production of cytokines, which can drive, you know, mood dysfunction as well as an immune related issue.

And so many women dealing with anxiety and depression. And how much is that related to their immune function. So yeah, I look at all those pieces I'm looking at, you know, homocysteine levels in the blood and looking at, crp or said rate.

I'm looking in inflammatory levels as well as are they taking in hormones. Are they flatlined in progesterone, low testosterone. And I think about hormones hormones and peptides.

They help tissue repair. So as women are taking in those hormones, especially early in life in their 30s, late 30s, early 40s, and they're going through an early menopause, there are lacking the signal to repair their bone, their muscle, all of these tissues in their bodies and in their skin, you'll see faster skin aging.

And so I really think about pillar one as regulating and supporting that hormone health. And oftentimes there's all these endocrine disruptors, lots of medications.

Birth control of course will shut off that signaling completely. For those hormones. So yeah. So I'm looking at all of those factors. And then, you know, I think about peptides as an adjunct to really slow that process of, of aging.

And by aging I mean that the the repair is not happening as fast as the breakdown of the tissue. And that could be any tissue, muscle, bone. Yeah. Skin tissue.

And so women, we we don't want to we don't most women don't look their age. Right. So adding in some of those therapies, but thinking about definitely, baseline hormone production, what might be interfering with that?

How can we improve upon that? And then as women get into menopause, I think bioidentical hormone therapy with these peptides is really the golden ticket for optimizing that process of aging.

Tell us about tell us, what do you mean by bioidentical hormones? Yeah. So there are, synthetic hormones, right? Which is different than what our body makes bioidentical.

Meaning it's very similar to the actual hormone that our body is producing. And if you look at the research on this, there could be potentially higher risks with the synthetic forms of these hormones versus the bioidentical hormones.

Very identical to what our body makes. And I, I even use that word synonymous in, in peptides because we're really helping the body to produce something that, it, it already makes bioidentical in that sense.

But, yeah, there, there can be much, lower risks. We know that cardiovascular disease risk of, neurocognitive decline in women is substantial, improved with using these bioidentical hormones.

Lots of women still have this. There's a stigma around bioidentical hormones and how they could be harmful even. And and there is a lot of, research on how it can actually improve quality of life and stave off some of these massive killers of women.

So then so then basically on the bioidentical hormone front, there's the on the good side, good for your bones, good for your brain, good for your heart, probably good for connective tissue and healing.

And so then there's the, the, managing, managing the risk of, of, of cancer, you know, for some people. But what are your thoughts on that? Yeah. Yeah, it's definitely a conversation to have.

And a lot of my women, it's usually an issue of poor liver detoxification. There is a genetic component, obviously, that we evaluate for before utilizing bioidentical hormones.

But yeah, it it's really improving that liver detox, estrogen and looking at those three different types of estrogen, you won't see two, three. We really don't want high levels of E one.

That's really the the one that form investigation that's more linked with some of those estrogen related cancers in women like breast cancer. So yeah.

So improving liver detox I like to utilize something called glutathione, which I know you utilize a lot in practice. That is like an insurance policy for women and protecting against any DNA damage, any, downstream effects of estrogen in the body as well as think about them and, milk thistle different things to help support liver detox of estrogen.

Yeah. So that's a good one. And basically there's there's I like the old movies. So there's a, there's I think there's a movie called The Good the bad and the ugly.

And and so then the, the, there was this idea that, that and that, estrogen can get broken down into a kind of a good and, maybe a medium good. And then, and, a form is more pro cancer.

And so then some of the things that you mentioned, like the dim, there are supplements that will drive it more towards the gut. And so then the more that we we, the more that we can balance how we break down and redo our metabolism, like in the liver, which, you know, I don't think I understood that one either, going back to when I was, in my 30s, either, you know, we didn't understand that.

And interestingly, you know, everything that we did was actually relatively toxic to the liver to, like, anesthesia. But, but but so then, you know, when we're thinking about on the good side of hormone replacement, it's all of these

benefits on the worry side.

Then you worry about some people may genetically have a higher risk, you know, of have cancer, but then you you can do things like a 24 hour urine. You can look at the breakdown of those and so see where you are as a functional medicine.

And so then all of a sudden start to do a little bit of testing, look under the hood and say, okay, let's look at it. We can see where our biochemical pathways are.

And we can begin to influence that and drive us towards a more healthy state. And so then that tells you that, you know, suddenly hormone replacement is not necessarily black and white.

And then somebody see somebody like you and you're going to walk them through that and then figure that out and kind of design a program and then continue to track basically and keep them optimized.

Absolutely. Yeah. I run the Dodge test, the urine test, and I look at all those levels of estrogen I break down. And that's that is powerful information that I don't think we were utilizing in medicine 15 or 20 years ago.

So that's probably not you. It's probably just that we're we've developed that level of detail in terms of our testing and knowledge now. Right? We we didn't well, as as an anesthesiologist at a surgery center, I definitely didn't have that.

But tell us about the Dutch test. That's a good one because then that's the that would be a test. That would be if somebody knows how to interpret that, that's going to be useful.

Yeah. So the Dutch test, it can be used in men or women. But I use I run that test in a lot of women and it's just a urine test. So for women who are very needle phobic or men as well, you can run that test, but it gives you, I think, a lot more in depth information than even a blood test can.

And oftentimes I'll run a blood test parallel to that. So I'm seeing those blood levels plus the Dutch test. And that can be very, very helpful to have those as well.

So yeah, it it'll look at adrenal function. It'll look at all of those hormones. So DHEA estrogen, estradiol, all those forms of, of estrogen. Astronaut.

And then it'll look at testosterone breakdown of progesterone. And it just walks us through essentially how how is the liver breaking these down. It talks about Comt and methylation pathways, which for many women they can have issues with and notice changes and in mood.

So a lot of more lower mood anxiety depression associated with poor methylation. So we can look at all these different factors. It has a mini organic acid panels.

So we can look at some of those factors as well. And you know gives us just in one test gives us a lot of information, clinical, decision making information of what's going to be most beneficial for this woman at this point in time.

Okay, awesome. And so then, you know, as, as, as and so then medicine is always an evolution. And so then as you think about, hormone replacement, I would say ten years ago or even five years ago that, if, if somebody said, but bioidentical hormone replacement or hormone replacement in general, we were basically just talking about, the, the sex hormones like testosterone and estrogen and progesterone and, now for almost everybody that we see who does hormone replacement, a lot of those people like to, do something to help their growth hormone.

But but that's not actually taking growth hormone. It's something that tells their brain to make growth hormone. And I think you're probably a fan of that as well.

What what what's the what's your approach to that? How do you think about that. And tell us, tell tell us how you incorporate that in as part of hormone replacement.

Yeah, I think that's a really forgotten aspect of hormone replacement. Now, I think, you know, you and I are very in the loop and utilizing this in our practice, but it's not commonly one that's thought of by patients or practitioners for the most part.

And so yeah, growth hormone we know that those levels diminish. They're about half of what you'd be producing at age 60, as you would, in in your 20s and 30s.

Right. So you have substantially high levels in your 20s. And that's what makes your hair grow thick and makes your skin look beautiful. You can stay up half the night and feel fine the next day.

That's what's responsible for that is that repair hormone called growth hormone. And so, we also know that growth hormone is really pivotal for for mood.

So it's involved in in PTSD we often find low levels of growth hormone PTSD, interference in sleep. And so, I think adding in some form of peptide to support growth hormone is one of the most valuable, additions.

And of course, there's some people that are not there's definitely some contraindications. Pregnancy, breastfeeding. We don't give it to certain people, but, I think it can be really valuable when added in a protocol for somebody who's like, age, well, feel better.

The biggest thing with these peptides that help, growth hormone releasing peptide, growth hormone releasing hormone. I like the combination. There's CJC, I Maryland, there's some Maryland, there's different ones that are, that are available or on the market, but, utilizing some of these can improve that deep wave sleep, which is when you improve sleep rate, you can prove all these other metrics.

Brain function, cellular repair, muscle repair, bone health can be better because we're just getting that optimized cellular repair at night. So yeah, those are transformational for me as well in my own health journey.

The so then the, the the morale and is I also found to be helpful for sleep. And so some people will will like to take that at night. Some people will do it twice a day, and then they'll do it in the morning, maybe before a workout and then also at night.

And so then we've, we've definitely, seen that it can, it can be a, a powerful adjunct for sleep.

Bioidentical hormones and estrogen detoxification

And a lot of people will take it long term. Five days on, two days off. And so then, that one's a that one's a good one. There's a, small percentage of people that can have kind of a flushing type of symptoms from it.

And I generally notice that in people with autoimmune and immune type of problems. And so a lot of times if we resolve those things first. And so if I, if I have patients with a lot going on on the immune side, usually I'll, I'll delay starting CJC.

Yeah. Yeah. And I you know I would do a very similar thing where I'd work on immune function before adding in more of those repair peptides like CJC, I Barellan combo or this is this is thematically, an interesting one when you think about sequencing and all of the stuff because and, and so then, you know, we're talking about the hair stuff.

And so then even even though there are peptides that are great for hair, a lot of times if there's if people are losing hair, I may think about immune stuff before I think about doing doing good things to the hair.

Maybe we'll do them at the same time, but we're trying to go upstream and find the cause. And so then and the same way. And so then often we'll, if somebody has fatigue, we'll look at immune stuff before we try to do things

that might be stimulating, for example, mitochondrial stimulating things.

So it's kind of just an interesting for people who are hearing to kind of to recognize that in this whole palette that we have to paint with the, the, the sequencing I have, which ones you start with and then cycle on and off of can it can be is is probably going to be helpful.

Very true. I couldn't agree more with that. Yeah. As so many things boil back down to that immune function. And then, you know, the connection between the gut and the immune system, that gut immune axis and, and looking at, you know, yeah.

What else could be driving the hair loss. It it's often an inside out issue whether it's hair or skin. If it's showing up esthetically or externally. We're we're thinning hair.

We're having, you know, faster skin aging or, you know, rashes or anything showing up on the skin. It's usually something much deeper and often related to that immune function.

So I completely agree. It's starting now. But speaking going back to the hair thing in terms of topicals and there there's going to be a lot in the area of let's say we we we we said, okay, we're going to get dialed in.

We're, we're going to resolve some of our immune autoimmune stuff, and maybe that's going to be through a functional medicine and some naturopathy principles, which we're going to be deeply supportive of.

Let's say that we, we may take some immune peptides. And then we said, hey, I want to I need to put something, I want to put something topically on what where am I going to put on to talk me through that.

Yeah, yeah. So we we were just at a forum and went through this, amazing discussion and also demonstration of injecting many of these peptides in the scalp.

There are. Yeah. You can, you know, inject nano fat and you can inject these peptides, BPC and thymus and beta and, and GCC c you but you can also get blends that are available over the counter that you can apply topically that don't really require that numbing and that whole or procedural process of injection of those peptides.

And so the one that I think is most simple to use from home and, and a lot of women can benefit from is that those copper peptides. And so that's the GHQ.

So tri peptide connected to copper. And we know copper is really important for collagen synthesis, connective tissue. And one of the things that I think the copper peptides excel at is resolving that issue.

So as we age we tend to have less blood flow to the capillaries, which means less blood flow to the hair follicle that's in the dermis. Right. And so if we can improve that same root cause of erectile dysfunction.

Right. We're just getting less blood flow. So copper peptides are really phenomenal at, helping with angiogenesis or blood flow to the hair follicle again.

And so we're bringing nutrients and we're able to really feed the scalp with, proper blood flow. So that's one of the amazing things we can improve that peripheral circulation in, in the scalp.

But we've found the copper peptides when we researching wound healing. So for women who have scars, noticing faster aging, applying that the copper peptides topically, I use it as a night cream.

Or if I'm ever doing any sort of microneedling or, laser therapy or anything, you can actually apply those for better collagen synthesis and production.

And it helps with the last. And how should the collagen, how should the glycogen amino glycans, which are in the deep layers of skin. And so, that one is really phenomenal.

And again, we know that this level will decrease with age. So when we're age 20, our blood serum level of copper peptides is around 200 nanograms per milliliter.

And by age 60 that'll drop to about 80 nanograms per milliliter. So less than half of what we have. So it's really beneficial to add in some of that support.

And to help repair tissue, hair and skin.

Growth hormone support and sleep repair

Okay. So then that one's a good one. And I'm just going to so dive into that a little deeper. So the so we can we can take gray copper. And if there's copper and a peptide you're going to know when you look at it.

Because this can be a brilliant kind of Prussian blue color. Kind of like the dream bigger on behind you. Yeah. And so then you can inject that one into the, scalp and, we've seen that to be helpful, for hair stuff.

And then we can combine it with PRP or, or sequencer with PRP or other, you know, growth factor type of injections that you do in the hair. But then you said another good one, which is just to unpack a little bit.

Tell us about Microneedling. So that's another way to get the peptides. And and interestingly the it's good for the face as well as the hair. But tell us about Microneedling a little bit.

Yeah, I love Microneedling. Essentially what we're doing is creating a little bit of micro trauma, whether that be to the scalp or to the skin. And so when we damage that tissue and then we supply something topically to help it repair, we end up getting a better effect versus if we just applied something topically without doing the micro trauma, the essentially the microneedling is usually I have a 36 needles in the head of that microneedling pen.

And so it's just a really fast rotating head that will damage that tissue. Oftentimes you do want some numbing on the scalp or the face because it could be painful depending on how the depth that you're going.

But yeah, it's that combination can be really phenomenal I think for hair and skin. And then that's nice because basically it's just like a little thing that creates these little holes.

And then you're rubbing the the peptide on and you know, we were we've been doing kind of microneedling forever. And so then we'd be good. And one thing that I find is, is that if you use peptides that downtime is much less.

And some people seem to recover a lot faster. Yeah. Have you noticed that? I've definitely noticed that. I think that, you know, whenever you do microneedling, you really need a suite of products or certain things that you're applying after to enhance that repair process.

Without them, the repair peptides or whatever you're using, I use hyaluronic acid. And then the copper peptides sometimes are Joleen Lou Fasal, which is this Botox like peptides as well can be really helpful for repair.

Yeah. Faster skin repair. And so then, so then we got those, but then we could just put the cheesecake copper right on the face or as a topical serum or in the hair.

Correct. How's your experience been with that? Yeah, I like to combine that with those other three, those other two peptides to create this. There's a blend called the trio.

And it has come the Botox like peptides to the Lou Faisal the arginine and the GHQ all in one. And so yeah that can be a really good night cream. It can be something you put on a scar, especially like a post-surgery scar.

I love having women apply that if they, don't want to have such dramatic scarring, can really help with wound healing and proper collagen cross-linking.

To prevent scarring. Awesome. What's it have? What about in your highest areas of success with acne scarring? Yeah, the microneedling is really, I think, the way to go, with some of those those peptides topically, I think that's a a great way.

Trying to think if there's anything else that I've used esthetically for that. Yeah. And for rosacea, I'll tend to use like EKGs and a combination of, of some of those peptides.

Like BPC, you can get that at cream now and that's super anti-inflammatory. That could be a good one. I've been a big fan of BPC for topical and and and then also for even for little problems.

We, you know Barb, I live with Barb. And so then Barb well, Barb had a has probably had about 15 or 20 times when she's kind of burned herself cooking.

And so then it became a joke because it would be like, oh, we need another BPC miracle. And so then I would like make, you know, a different I made creams and would did injectables and topicals and, and BPC and tb4 fragment and times better for also kind of all fairly helpful for burns.

And so then but BPC topical has been quite, impressive for me. So then all of a sudden here you got a peptide that you could take it orally is helpful for your guide.

You can put it topically and it's helpful for your face or burns or it's kind of interesting. Yeah. And then you can inject it for more of those musculoskeletal.

Right. Right. So that one's, Yeah. And BPC and I and so then I'll just tell you, I think. I'm kind of currently kind of in this journey of, my idea is, is that people are going to start to do Botox less and start to kind of intersperse, like every other time do peptides.

Topical peptides for hair, skin, and wound healing

And then I think that and I think, I think that there's again, you start to build, you know, we went to that great lecture at a forum and I remember somebody raised their hand and then they said, oh, who is this good for?

And then she says, well, that's good for people that have had too much filler and, and too much Botox in their skin's getting unhealthy. And so then we have to bring it back.

But then if that's the case, what if we start to intersperse some things to bring that skin back and keep us super healthy and looking good at the same time?

Yeah. And you're a living example of that. I mean, to be your your face looks so much younger than your actual age. Well, I mean, as a 70 year old, I mean, it's kind of.

Yeah, it's, you know, it's kind of funny. It's interesting. We've been like. I've noticed, like, it was interesting. I was like five years ago. I remember I would be like, oh, there would be always, a little hair.

And the in the bottom of the shower. Yeah. I was, I know I was, I thought I was just like in the shower the other day, I was like I never have any hair in the shower anymore.

And so then it's kind of interesting as you start to get healthier, it's like the I don't I don't really do too much. As for esthetics, and yet I notice I keep feeling and looking better.

Yeah. Our younger you know, it's all the inside out things that too right. Which is really the goal of what we do is to when your your system and you're repairing your growth hormone on board assignments is working, your immune function is, more optimized.

That's a natural byproduct. Right. And so then then that's why like I that's and that's really I love that attitude

because that is that's kind of like what it's like, and it's kind of like if I was going to pick somebody to come see as a doctor, that's exactly what I would want them to do.

You know? So it's kind of, so good job. Yeah. Well, yeah, we both share that. And I think that it's a, countercultural ideal in a world where, you know, there's a pill for every ill and whenever it's cosmetic, we want to fix it immediately and and not really work through the underlying reasons why we're breaking down tissue faster or why we're aging faster.

But the the secret is the inside out approach. And I think peptides as well as, you know, a lot of the work that you and I do and, Ives and Chris, I own and a lot of these nutrients and dietary therapies supplements this these are really where that change happens.

Now, you mentioned, you mentioned the term the, Botox like peptides. Take me through the a little bit of your thoughts on that. Sure. Yeah. So that's again, that's just that combination of the GHQ.

So those copper peptides, the arginine and the Lou Fasal. And that's just the combination of those three are called those Botox like peptides. And I created a, video on YouTube about those for just talks more in depth about what they do.

There's some research on the how they can decrease, wrinkles in women. They've shown pretty extraordinary results, decrease in like 30% of wrinkles just by, once a day. Use.

And those are all. So the arginine is a six amino acid peptide. The GHQ is the three amino acids. And the copper and then the little fizzle as well. And so really just used topically, not so much for hair but really specific for the and a wrinkling effect.

This is really what Botox does, right. It paralyzes the muscle. The Lou Fasel actually has this aspect to it where it works on the calcium channel and it can prevent acetylcholine release, which is preventing the muscle contraction that leads to, those smile lines around the eyes and around the face.

So there is a little bit of, effects there on acetylcholine in the Lou Fazal. And that's why we added with those other three peptides combined, there's, you know, synergistic effect.

Yeah. Good one. Now they also never use okay without copper I have. Yeah. Yep. I'm familiar with that. Yeah. So then that one there Jake with copper for some key people can burn out this sting a little bit with injection.

And so sometimes we'll do like a little bit of a 5050 of between the two of those, however, I think for, for esthetics, the Jake with the copper is the best is ideal.

Yeah. The other consideration that I have some people ask me about too, is if I'm injecting the GPC. Q those copper peptides, is there going to be any issue with that zinc copper ratio?

So the good the ideal ratio is an 8 to 1 ratio. More zinc and copper. And so if you're I haven't really seen an issue, but you know, you have copper toxicity when you get your nails start to turn blue.

There's some other symptoms of that. It's never really been an issue. But I do have women take zinc anyway, because zinc tends to be really phenomenal at, supporting thymus function, which is another goal for us is supporting immune regulation and helping the thymus.

Glenn. So it doesn't hurt to add anything. And then also there's the peptide zinc simulant. Yes. Yeah. And that one is really good for hair growth as well. So yeah, the zinc is really pivotal for simulant.

So you don't want to really separate them. You want to have the zinc on board or have sufficient levels of zinc. When you use that. But the goal of that one really is to improve the antigen phase, that growth phase of hair, just like many of the other peptides.

So we know the the copper peptides help with the blood flow to the hair follicle. The DBM, which we haven't mentioned yet, that's another topical hair peptide helps with putting hair back.

And then antigen growth phase, which can we can be in that, not an antigen growth phase. When we're highly stressed, we can go into that more dormant phase of hair growth.

And what how will you how will you, dose that? How often will you have people do the, the, PTB yeah, I actually there's two droppers that you can get like two bottles that have two peptides in each.

The one has the PG DBM with valproic acid, I believe. And then the other one has the, zinc thiamin and something called methyl ventilate. And so I'll have them do those two droppers of do the drops on the scalp after they get out of the shower before bed.

Just kind of massage it into the scalp. Ideally you're doing some microneedling to cause some trauma. That's going to be your best result, but I've even seen really good results.

I have several men, 40s, late 40s and 50s, noticing hair thinning. And this is one of the things that we're adding in, among other treatments, internal sort of therapies.

And yeah, I noticed thicker hair growth. Over, over time, more of those baby hairs growing in. Yeah. So yeah it can be really helpful to, to utilize those topically.

Yeah I, I would, I would totally agree. And then I echo everything that you said around the, the, the zinc copper sort of conversation. And then you know the, the zinc I think is part of the inside out kind of wellness.

And so then we will do testing, for zinc and we're doing testing for copper, sort of tracking that. Yeah. We've never we're always paying attention to that.

And we like you are always pushing a little bit of the zinc conversation. And so then I've never seen that. However, I've and talking to other people, I've been hearing that people who take the copper for an extended period of time can have without any balance and can kind of run into some trouble with that.

Yeah, I can see that, you know. Yeah. And I did a test on myself. I've been taking 30mg of zinc for months on end. Liquid form a very, you know, bioavailable form.

And I wasn't even up to the therapeutic level. So it should be above 80, nanograms per milliliter. And even with that, so, you know, and if you're sick, your body utilizes zinc.

Zinc can help with preventing viral replication. So, I think about having adequate zinc levels not only for immune function, but also for, hair growth of these other things.

So, yeah, zinc is a pivotal one.

Botox-like peptides and zinc-copper balance

And, I mean, I'm not even up to that therapeutic level after a couple months of taking, pretty good. Right? So then that one is so good because then you realize, oh, okay.

And suddenly it makes quite a bit of sense to think about coming in and check your like, so think, think for for where we are in the world right now. Maybe it would be really good idea to check your vitamin D, because we know of vitamin D, you're more likely to have a bad experience with Covid.

Okay? If you have low zinc, you're probably also more likely because what? Where does everybody tell you that when you're the first thing that you hear with these big viral infections is, zinc can help immune function.

And so then start that and then the great thing is, is if you have some numbers, then that gives you a little something to track towards and come back and follow up on and then often and it takes 3 or 4 months or six months to sort of bring things into balance.

And so that's a good one. That's an interesting one. Also. Yeah. Yeah. And the pivotal thing too is, you know, when we're giving somebody zinc, to ensure that they're actually absorbing it.

So we've got health and making sure that, you know, their, their bowels are moving too quickly or they're not really absorbing the foods and have zinc or the nutrients that we're giving them.

I think that's another piece, too, is, especially with those fat soluble vitamins like vitamin D, I found that sometimes I can give that to people in high doses.

And their, their, gallbladder bile function, ability to absorb fat soluble vitamins is so diminished because of their gut being so unhealthy. Gallbladder issues.

So, yeah, really looking at other forms, sometimes I'll do the injectable vitamin D, I have that or other ways to, to get that to them. If, if you're giving that or you're taking that consistently and it's still low on your labs, that's something to consider.

But they always they always we always send functional medicine. We talk about the gut brain axis. Because if you have inflammation in your, in your intestines then toxicity leaks out, from, the intestines into the bloodstream.

And it can affect the brain. But we could probably say there's a gut hair acts. That's also there is very because that's that that's another thing. And so then when you hear when you hear somebody comes in and they're losing a lot of hair, if it's not, if it's not, any of the things that we've been discussing up until now, one thing is to begin to think, yeah, if you if you think gut and often, gastrointestinal inflammation is actually a cause of autoimmune, stuff in the first place.

Yeah. We need to coin that gut here. Axis. We got harassed. Okay, we can do that. Great. Well, it's super delightful to talk to you and, kind of go through go through the stuff.

And I think this is a nice little package of a whole bunch of interesting things to think about. And, where can people find, you, doctor Amber? Yeah, absolutely.

So a couple places, they can find me on my website, which is just Dr. Amber endy.com. I'm also fairly active on Instagram, which is just going to be doctor spelled out doctor Amber and or YouTube.

I'm the peptide docs. I'm creating a lot more videos content about peptides, the copper peptides BPC. I have so many people who have commented on those videos about their own personal experience asking questions.

So it's kind of a forum of exchange to talk about peptides and, and what's happening and new developments in that space. So yeah, so they can find me at all those places.

Okay. Awesome. Well, I think if you go, you go to any of those places and see Amber, you're going to end up looking better than you already do. So, thanks so much for for coming on the show was a delightful to talk to you.

And I look forward to working with. Yeah, absolutely. Thanks, doctor. My, appreciate it. This is great.