Welcome, everybody, to the Peptide Summit. My name is Starker Matt Cook, and I'm, really delighted to be here with Doctor Betsy Greenleaf today. She's an osteopathic doctor.

And, she's a premier women's health expert. She's a bestselling author, entrepreneur, inventor, and business leader specializing in female pelvic medicine and reconstructive surgery for over 20 years.

She's a trails, trailblazer as the first female in the United States to become board certified in Europe. Gynecology. Which, you may not know this, but that's a very high level of achievement, so that's super awesome.

She, possesses professional reputation. That's led to her being sought after. By medical societies, associations and corporations to provide lectures, teaching and advanced training.

She was honored, by the title of Distinguished fellow of the American College of Osteopathic, Obstetrics and Gynecology for her service and dedication to the field in 2018, and she holds committee positions on many national women's health organizations.

She is an A board examiner for the American Osteopathic Board of Obstetrics and Gynecology and serves as the spokesman spokesman for the American American Osteopathic Association.

I'm going to get tongue tied if I keep reading this. And then she was, recently awarded the Future of Health Care Impact Award at the prestigious Mindshare Summit 2021 for her Ted like talk on the brain gut vagina connection.

So that seems like a good place to start. Yeah. And honestly, I'm delighted to talk to you. I was actually talking to another urologist, and I got my signals mixed up, and and so I said, what do they want to talk about?

And, they said, my staff said pelvic pelvic pain. And I go, oh my God, I can't wait to have this talk because I, I used to work at a surgery center and had never met a urologist that even remotely wanted to talk about pelvic pain.

And so then I sat down and they go, oh, no, you have the wrong one. I don't want to talk about pelvic pain. Talk about all this other stuff. And it was an amazing conversation.

But then and I go, oh, I go, who's the person that you're going to talk about pelvic pain? And you go, oh, you're talking to her tomorrow. She's super awesome.

And so and I think pelvic pain is probably one of like the defining problems of, of the specialty of urology and, and in general, for you barony and and then it's also interesting when there's a specialty that doesn't like to take care of a problem that it does is interesting.

So welcome to the podcast. I'm so happy to meet you. Thank you so much. I'm so excited to be here. It's so funny when you read all those things. I keep thinking, gosh, I haven't accomplished much in my life.

And then you readers are like, wow, wait a minute, I've done some stuff in that crazy. Yeah, yeah, it. And so then you've been a trailblazer. I love that you, you were able to, you know, be the first woman.

What was that like? Tell me about how how, how has how has it. I remember when I was in and, when I was in medical school, I remember clearly like it was yesterday.

This three women came up to me and they go, we need to be clear about one thing. And I go, what's that? They go, gynecologists in women's field and you can't go into it.

And then that was my that was on my first day. And so then they go, I go, okay, well that's like it was interesting. It was kind of a and so then they go, are we clear on that?

And I go, yeah, I go, okay, good. Then. So then they go, we're going to get along great. And you're going to do good on this rotation. That was my gynecology rotation.

Oh that was University of Washington. But I loved it I still loved it. But I think I think gynecology is the hardest field than medicine because it's so stressful and everything.

But then how was it. So how was it for you? Actually, you didn't listen to any of the naysayers. And then becoming the first, what was it like to go through that journey?

You know, it's funny because it's a good thing. A bad thing because I, I have a tendency to be a little spunky in that lesson and follow the rules. So, it, it it was a long road road, but it was, you know, fun to it.

In Europe, gynecology is a funny field because it's been around since about the 70s. So it's pretty new. But it was never a board certified specialty because the urologist and the gynecologist could never agree on how to set up the the board exam process.

So it took years and years for that to finally occur. But, you know, even a lot of people don't even know what Euro gynecology is. I, I remember when I told my mom for the first time, like, oh, I'm going to do some more training, I'm doing Euro going, you're going to college.

She thought it was like Euro Disney, like it was some fancy European, like gynecology. And I'm like, no, it's urology. Like I'm going to do the bladder and pelvic health and gynecology dealing with women's women's parts.

So it's a nice combination of those field. But there's only about 1500 of us across the country right now, so. Oh really? Yeah. What would be if. Well, so what would be the top 3 or 4 things that a year all gynecologist would see in normal clinical practice?

Yeah. Well, you know, I mean, we talked about pelvic pain, but I have to say that with pelvic pain, the even as a Euro gynecologist, there's not a lot that practice it because it's can be a very difficult, condition to treat.

So your most your organs will deal with incontinence. So leaking if you cough or sneeze or you have to run to get to the bathroom or prolapse where I kind of like it's the, so the vagina has dropped and it can't get back up like it has syndrome.

And we have these, ligaments that hold things up and things kind of start drooping and dropping from either childbirth or lifting heavy objects or straining.

So most of our time, like recurrent urinary tract infections, those tend to be like the top three that most Uruguayans take care of. But then there's also some of the pain syndromes, like interstitial cystitis, which is an inflammatory condition of the bladder.

And then there's a there's a number of us that do pelvic pain or specialize specifically in pelvic pain to okay. That's amazing. So then I'll take that.

So then tell me tell me. How do you define and how do you think. Kind of just kind of at the beginning from 30,000ft. How do you think about pelvic pain?

You know, I think it's very difficult. I mean, just in general, like, let's just talk about pelvic health for a minute. In general, 80% of all women will have a pelvic health condition at some point in their lives.

And what drives me crazy is that nobody talks about it because our culture is still just so hung up, you know, without talking about anything, acknowledging the pelvis as it is.

You know, I know I'm constantly, you know, getting shut down on Facebook and Instagram for posting anything, having to do pelvic out because it's not in community standards.

And people, people just all automatically assume that, like, they're the only ones that have this problem and that, or it's like normal or that, you know, this is just a part of being a woman.

And so unfortunately, I think just in general, when we look at pelvic pain on a, on a whole is it's not talked about a lot. So unless you're suffering from it, people don't know that it's even a thing and that something can be done about it.

And and then you go into like what are the causes and, you know, it amazing. People will be fine, fine, fine. All of a sudden they get pelvic pain and it can be it kind of just sneaks up on you and it can be devastating.

It can affect not just that person physically, but can affect their relationships are going to affect their work performance. You know, say you have a mom who's suffering with pelvic pain.

She's going to be more snippy with her kids. You know, she's definitely, you know, not going to be engaging with her partner. So it really affects that whole person.

And in that too, it's with pelvic pain. It's usually not one cause it's not like, okay, this happened, we'll do this and you get better. Usually there's so many things that come into that.

I mean, I always talk about with just health in general, that total health is like a three legged stool. You have body, mind, spirit. And if all those legs on that stool are not equal, that stool is going to fall off, fall over.

So if you have problems physically and then you go to the doctor's a lot of times and we can fix we have the tools to fix the physical part. But if there's not any addressing of the mental and spiritual aspect, which a lot of that work, you know, as practitioners, we can guide them into what they need to do.

But that's work that the patients really need to do on their own, and that's how they're going to get, you know, that's how they'll ultimately get better from these conditions.

I, I got to go back to this in the face. And it said they shut you down for not being community standards. And in what way? What would be a type of thing that they would shut you down on.

Well, the word vagina would be the big one. So, Facebook doesn't like that. That one. I always get blocked. So, you know, apparently Instagram I got, I got deleted off on Instagram this summer, like, completely deleted it.

And I'm like, well, wait a minute. There's a lot of even though Instagram and Facebook like, own each other or if Facebook owns Instagram, there's a lot of people that say the word vagina.

You know, they got the vagina whisperer. You got, you know, there's a lot of vagina people out there or on Instagram, but apparently that wasn't the issue.

All we can guess because my posts are pretty, you know, they're educational. Is that the word you on Instagram is actually goes against their anti-bullying policies, so you can't say have you ever and then connect that with something that has to do with race, religion, gender sexual orientation or medical condition.

And I had a post and it said it was a kind of funny post. It said it had have you ever and it had a cat licking themselves. And then the post was all about like feminine itching.

So so we think that that got me deleted. So no, no I'm good. I'm back and I'm building it back up again. So okay you're banned I got no I banned Euro gynecol.

Just living on the edge I love it. Yes. Yeah. So then, It's interesting to consider. So consider like you can it's and it's I, I don't know, this may be a starting point, but like, let's, let's say my elbow was or it's a fairly it's and this is going to interesting one.

It’s pretty easy to compartmentalize that I’m I may be sitting here and my this kind of hurts but I can basically totally focus. And then I have an idea that there’s pain, but I can kind of work my way through that.

But if you have pain, basically that is in your chest or your pelvis, it’s so connected to that sense of identity that it becomes sort of overwhelming and it begins to affect mental, emotional, spiritual.

I think. And so then that leads to three legs end up getting off. And then that when when you have 2 or 3 of those things going on, it seems like it kind of compounds on itself.

Yeah. And it gets it’s again. Yeah. And it feeds, it definitely feeds into its itself. Because then, then you start building up the anxiety and you start getting stressed because you’re uncomfortable.

And we know that stress and anxiety will produce hormones that go like cortisol and which can then lead to leaky gut, which can then lead to more inflammation, which can then kind of go back into, well, now I have more pain.

And then I also like to explain to patients too, that when they are having a pain condition, especially if it’s pelvic pain, not to put off and be like, okay, this is nothing, or it’s going to go away on its own, because the longer you put it off, the more you increase your risk of developing chronic pain.

I have this picture that I do in this lecture, and it’s it’s basically a picture of like somebody taking a hammer to your hand. And if you take a hammer to your hand and you go, ouch.

And you’re like, okay, that’s a one time event, you know, it hurts. You know, we want to have pain in our life because then I’m going to be like, okay, I’m going to pull my hand away from that hammer.

But if you have chronic pain that keeps happening over and over again, we’re not exactly sure what’s causing it. That’s like somebody taking a hammer to your hand constantly, again and again and again.

And over time, what ends up happening with that is now we have those nerve cells that from your hand that are going up your arm to your brain, and now you’re up regulating your pain receptors all the way along that cord to the brain.

So now like three months later or six months later, I come and I touch you with a feather, like you’re going to go out and you think I’m touching you with a hammer because you have more pain receptors in your arm, in your spinal cord, in your brain.

So you’re going to perceive more pain. And this is why it drives me insane to as, a doctor that practices gynecology and pelvic health, still, gynecology as a whole is still kind of backwards when it comes to pelvic pain because so many women end up getting hysterectomy or like, well, you’re having pain.

Let’s just cut something out. And I’m always like, well, you know that that doesn’t work when someone’s got like a leg that’s bothering them and we amputate their leg, they still have that phantom limb pain, because you still have the receptors in your spinal cord in your brain.

And so, you know, the same thing happens with pelvic pain. We surgery and cutting out body parts should be the last thing. And we should be focusing more on ways to down regulate those receptors, which there’s been a number of studies showing, you know, anything from the treatments that we talk about here.

I mean, peptides can help with that. I mean, even things like, at, meditation and yoga, they’ve actually done studies where they looked at the brains of people with chronic pain, and they physically had changes in their brain, and they could see somebody’s brain that had chronic pain and someone who had not pain, pain and look at those brains.

And then they put them just through an eight week course of meditation. And those people with chronic pain, their, their brains structurally improved.

And they also reported less pain. So there are so many different things that can be done. Yeah. I, I even, I, I feel like we spent, we spent the kind of, you know, from 2000 to 2000.

14, 15, almost 24 hours a day doing yoga and mindfulness and meditation and traveling all around the world while we were doing integrative medicine and injections also.

And, and and when I when I look at it now, I feel like basically for chronic pain, there's almost needs to be a curriculum. Yes. Of of all of these wellness mindfulness meditations and basically that a curriculum that basically is a lifestyle of of how to balance yourself.

And then in parallel to that on the other side, then there's all of these modalities that we do and then but there's a whole bunch of stuff in the middle.

And so then and maybe we can kind of take that as kind of a starting point because yeah, when I, when I mentioned pelvic pain, when we were talking before the show started, you said, oh, I like to work on the gut and maybe and I think that's that that's kind of central to that whole lifestyle piece to why, why is it that you, you go there that why was that your first place?

That was I was intrigued and happy to hear you say that. You know, it's funny. And that's something I've kind of figured out as years have gone on. And it's really, I always quote Hippocrates, which always amazed me.

And for 40, BC, he said, let food be thy medicine. And I'm like, wow, how did he knew that back then? And yet we don't. We still are not doing that, as a whole, as Americans, in fact, as Americans on a whole in general, we're still eating a lot of fast food and still having a lot of chronic conditions.

But, it's just been like over the years through my studies and trying to look for, like, constantly looking for answers for patients, that when I started looking into the gut, I really started finding more answers.

Especially for those chronic pelvic pain patients where like, I had tried every injection, every medication and everything I could think of and nothing was working.

And I kind of tripped up across the idea of the pelvic health. And it's been a game changer. So you know, with the idea of so many of our neurotransmitters are made in the gut, like our serotonin, 90% of our serotonin is made in the gut.

And that's the hormone that helps us feel happy. Gaba is made in the, in the gut. And so that can help. That's another neurotransmitter. 85% of our immune system is made in our gut.

And so a lot of times to when I see with pelvic pain patients and only they have pelvic pain, they usually have anxiety. They usually have depression.

They're usually getting recurrent infections. And so I don't start with the gut though. You can get in the circular argument that it could be stress that affects the gut, because they go hand in hand.

But this idea that whether it's food we're eating, like inflammatory foods like sugar or dairy glue in processed foods, or if it's stress now, like because of of chronic stress, we're throwing off our gut, that you develop leaky gut and I explain it to patients.

It's like that protective mechanism, that protective layer of the intestines gets damaged. And now you get these little gaps in the intestines where food and toxins from our food can get into our body and now cause inflammation.

And in one person that might cause arthritis and then another person that might cause like worsening of heart disease and another person that causes their pelvic pain.

So I think everybody's inflammation shows up in different ways. And in some people it really is. Is it, you know,

we'll see it with, with, pelvic pain.

And so I always like to go like, look at that. I always like to go back to the basics and look at their diet and look at their, you know, what they're eating.

And if they're drinking a fluids and if they're getting enough sleep, you know, in decreasing stress in their lives. But then I also love to test their microbiome of the gut, because we know that certain overgrowth of bacteria will aggravate that inflammation and lead to leaky gut.

And I'm finding that certain things that we do to try to like rebalance the gut is showing, and patients are getting improvement in, in their pelvic pain, like one thing that's like simple.

I like to do the testing because I think I'm still in that medical mindset. Like I want to see the answers, I want to see the labs. But, you know, I've had some patients who just don't want to pay for the labs because they can be pricey and not all insurances cover them.

So some patients will be like, well, let's just do something. And then if that doesn't work, then I'll do the labs. And so sometimes just adding, like a glutamine supplement into their diet will help calm the gut down and will help to like we they kill that lining of the gut 100%.

And then, you know, I, I, when I don't know when this like maybe in 2012 or something, but do you ever have a moment that, like, you remember, like what happened about four minutes ago all the time, and I was and and then, you know, to think about, you know, the I was in the hormone module at the Institute of Functional Medicine, you know, which is a great one.

And they, you know, they're going through the biochemistry and so, so complex. I was like, God, this is amazing. I can't even believe it. And then they popped up this picture and it was a picture of like the pelvic floor ball.

And so then they show the uterus and then they show the colon right next to each other. And then basically it was kind of blown up. And then the diagram shows the inflammation and the leaky gut and how when there's inflammation and then inflammation in the colon, then you show all of these, these inflammatory cytokines and mediators going over and basically kind of attacking the uterus and causing inflammation and all of those pelvic floor structures and, you know, I think that that is a, a central and defining cause of, of inflammation in pelvic floor structures that can lead to pain, I think I would you agree?

Oh, definitely. Definitely. Because they all share similar nerves. And that's definitely especially known for years with interstitial cystitis, which is an inflammatory condition of the bladder, that there's this gut pelvic connection, but they've never been able to actually say why.

And so, you know, they've always connected to food and they're like, oh, well, acidic foods may be causing your problem. Where I'm finding it's more leaky gut in and in some people, histamine releasing foods that may be causing the problem.

Right. And and and so then, I was trying to delay this until later, but then, one thing that you will see is you'll see a lot of people with complex illness in the more than Lyme spectrum that, end up with sort of an inflamed immune system.

And one of the side effects of kind of an inflamed immune system is that the the mast cells are a little over activated. And so then patients that have a little bit of an over activated mast cell, we call that mast cell activation or vessel activation syndrome can be real susceptible to histamine.

Yeah. And health men and foods. And so then yeah I've had some people have go from being able to eat anything to almost able to eat nothing. And so then there's a lot of mast cell diets out there that and let's put up a link to maybe a couple of men and make a note of, of the list.

And then, but then also, I think there's a fairly big concordance and an overlap of people that have been, to have Lyme disease with pelvic floor pain.

Have you seen that? Yeah. I mean, I definitely have seen that. And I think, like you're saying that the mechanism is you have some kind of like first injury to the system and maybe that's that tick bite.

And now the body's now up regulating all these other, factors and becoming inflamed. And like you said, some people, you know, that's like I think with Lyme's, you see so many different ranges of symptoms from and anywhere from neurologic symptoms to you, you know, arthritis to even like the pelvic floor symptoms.

And then I have I had patients with that. And what you said was really good because if you go back to my kind of analogy of, okay, here's the call. And it's super inflamed, let's say, because because of what we call the worst diet in the world is the standard American diet.

Yeah. And then then you've got the bladder and the front and the uterus in the middle. But then what you said is they all share the same nerves and so basically these nerves that are kind of coming up basically from the sacrum and from the bottom.

And if the nerves to that, if, when, when three things share the same nerves, if one thing gets inflamed, then the nerves two, all three end up getting inflamed.

Have you seen. Oh yeah. And that's why I tend to see a lot of especially in patients with vaginal parties. They tend they're tend to get they're more likely to get recurrent urinary tract infections or urinary symptoms.

And then also those, you know, people tend to come in with irritable bowel, or for example, somebody with interstitial cystitis. They, somebody comes in to me with like, all right, I have pelvic pain or I'm urinating frequently and they start telling me things like, oh, and I also have irritable bowel and I also have arthritis.

And they also have and and like any one of these it could be like that. All of them. But they come anyway. And I also get migraines and I get headaches and I'm going, all right, there's some kind of underlying inflammatory issue and that the pelvis isn't necessarily the problem, it's just the symptom of a larger problem that's going on.

Right. And so then this is why I'm I was kind of excited to talk to you because I'm basically the same as you. And so it's kind of funny like you talk about I was like, what else are you going to do?

So we went into like totally different fields, but then we're going to see the same patients, because I'm going to see those people for headaches and nerve pain.

And then but then when I'm talking to them, they tell me the exact same thing. So then now so then I want to. And then you see endometriosis, that's at all.

Yeah. Yeah, I do too. Okay. So then I got to we got, we have to talk about that. So then but let's start since we were talking about interstitial cystitis.

So I want to just run through a handful of these conditions. So I have somebody with interstitial cystitis, say, say just, a little bit about what that is.

And then, and then we're going to talk through how you think about it, how you like to treat it. And then maybe we can talk about things that you use.

Could be peptides, could be something else. And we kind of run through it. So we'll start with start there. Yeah. So it's interesting. It's also it's a mouthful to say.

So a lot of people call it IC for short. And in traditional medicine it's really a diagnosis by exclusion. It's because they don't. Even though it was discovered in the late 1800s, they still know like nothing about it compared to like

what we knew in the 1800s.

So this is something that I've also developed over time. There's theories that it may be genetic. There, there is that it may be related to, to gut inflammation.

There's theories that it's related to, acidic foods, but nobody really knows. And it can present itself as recurrent urinary tract infections or like feeling like you're having a recurrent urinary tract infection, like peeing, like burning when you're peeing, urgency, frequency or even other pelvic pain.

And typically what we see when we're looking, well, that's the other thing, is that you can look in someone's bladder, but you can't always see it because it's it can be like a microscopic inflammation.

And the theory is that the gag layer, which is the protective layer of the bladder, somehow doesn't repair itself. It gets damaged. Nobody exactly knows, but it's almost like you get like, microscopic paper cuts in the bladder.

And so like I say to, you know, people, if we if I poured salt water on your finger and your finger is fine, you'd be like, oh, all right, whatever, salt water.

But if I poured salt water on your finger and you had a paper cut, that would hurt. And that's what that's what interstitial cystitis is like. So yeah, sometimes we can go in there, we see ulcers.

And if you see an ulcer, that's kind of a mnemonic like that is interstitial cystitis. But a lot of times the majority of people we don't ever find like a specific cause or not, there's nothing that we can test for it now.

Now, when you say go in. So then what? One thing. Just so what you're a gynecologist to, which is kind of amazing, is you guys have little tiny cameras that are, like, smaller than this pan.

Yeah. Then they can kind of stick a catheter very carefully into the bladder and then kind of look around that to take a little peek, just like a surgeon looks inside a shoulder and.

Yeah. And does arthroscopy. So you can take a look in there, which is an interesting thing to think about. And then what would be in your experience your top three things in terms of effectiveness in terms of treating people for I see.

Yeah. So I you know, I always start with diet, even though that's kind of traditionally what you're supposed to do. But I think a lot of times it gets kind of overlooked and people jump right to medicine.

But I always look at diet and typically I always start people on like a histamine, a low histamine diet because of the upregulation of the mast cells.

Then we know that if you take a biopsy of somebody with interstitial status, they will have more mast cells in their tissue. So we know that those mast cells that release histamine are just going crazy.

So you know DOH is a low histamine diet. Always the answer for everybody. No. But then like I said, I then go to gut and look at the gut microbiome and like, let me try to get the things I know, like under control, under control.

So I'm like, okay, let me check their gut microbiome. If their bacteria yeast is off. I'm not surprised with the number of parasites I've found on people when I do that gut testing, because when I was taught medical school, parasites were things like, you went to another country and you drank some water, and then you got parasites.

Like, I never thought I would find it right on a regular basis here. And people and, and I remember even, like before I got into integrative medicine, in my integrative medicine, friends were telling me about parasites, and I was looking at them like they were crazy.

I'm like, no, that's not real. That doesn't happen. But I was surprised at how much I find with that, you know, and

the imbalances of the bacteria in the yeast, whatever.

You know, it's kind of interesting, both at a forum, which is one of the good educational systems and Institute of Medicine, and basically everywhere you go, whenever you meet the people that are intake gut health, they always say, by the way, we're the most important.

Like all those other people, the important never because you have to fix us if you want to get better. Yeah. And then you kind of think that and you think, you know, for people like you and me, we do whatever we do.

And so we're loving, but well, okay, that's fine. But then in retrospect, I still every single day I, I learn something about to get every single day I have 5 to 10 conversations about GI things, and I feel like I'm just steadily getting better every month.

And yes, I see parasites all the time. Yes, you know, it's a it's this incredible journey and we I can't believe how important the mast cell diet is for some people.

So I echo everything that you just said that I definitely like I think to start with, even if it's not a marcel diet, it's I get them off the inflammatory foods with, you know, hey, I was a sugar junky forever.

Like, you know, I definitely I mean, you know, I love my sweets. And then, you know, finding out that sugar is more addictive than morphine. You know, there were studies where they gave rats like sugar, and then they gave them morphine, and then they gave them a choice, and they went for the sugar every single time.

I think that was kind of like I found out about that. I was like, you know what? I'm not letting sugar take over my life anymore. I mean, like, not that I don't eat it.

I, you know, have it every once in a while, but I'm not like, I used to eat something sugary every single day. So to really get those inflammatory foods out of the diet.

And then I think a lot of times, you know, combination, you know, lifestyle, of course, you know, if we're not sleeping enough, then we're not, you know, we're not healing trying to get that that there decrease that sympathetic nervous system by decreasing stress.

And then, you know, doing things to kind of boost the parasympathetic nervous system, which kind of lets you that rest digest, reproduction healing, and that there's a whole bunch of things.

I mean, I actually would even, you know, if we have to go the medicine route, I often will start with mast cell blockers. So things that are typically used for when you take asthma.

I was kind of forced into using finding those and using antihistamines and Marshall blockers. Because one of the medicines has been used for years to help heal the the bladder called Almera, which happens to be a peptide, which is interesting.

It's been on the market for years and it's a peptide, that we all of a sudden became really expensive and especially in patients that are Medicare patients, because in class I'm like $600 a month to get that prescription.

And there's not an alternative on the market. So I was like, all right, well, look, look at the mechanism. And like, all right, let's try putting you, like Monte Lucas, like Singulair and see if that helps.

And so that did seem to help some people. But you know, they're like, really? I mean, I like to try to do things as naturally as possible. And so, you know, even getting involved in the peptides, I really I really been, you know, fascinated with the use of peptides for interstitial cystitis.

And I love BPC 157 because I'd going once again going back to the gut. So, what is a body protective complex? It's made naturally in gastric juices and it's naturally in our intestines.

And so and it's one of the few peptides that you don't have to inject. You can take orally. So I started using that with patients and not only seeing an improvement in their gut health, but then seeing less anxiety and depression in them and less perceived pain.

And so, that's one of the ones I like. And then going back to Omron as a peptide, as a prescription peptide, it's very expensive, but you can get it compounded, from, from pharmacies into an injectable form, which I've used, either having patients inject them themselves, like into their thigh.

It's also used a lot in arthritis. And we've even actually put it into the bladder, whether it's just kind of like washing it into a bladder with, like, a little, like straw catheter or actually going into the bladder and injecting it into the wall of the bladder itself. So.

Okay. That's amazing. That's super good. The, the I love the idea that BPC 157 orally for these patients because then and that goes along back to my so, so it's it's like it's this is a good one because we think similarly on the one hand we're having this mechanistic conversation which is, is that if we turn inflammation off in the gut, then that's going to affect leaky gut and that's going to affect everywhere.

We're live here as the fact that, on the other hand, also doing something in the gut, if we decrease leaky gut in that area of the colon right by the bladder, maybe that's going to actually take take away the trigger that's causing some of some of that, inflammation.

The just for the future. You know, there's, there's this whole category of peptides that are bio regulator peptides. And so then there's one for almost every organ, and there's one for the bladder called vessel that.

And so then I'm, I just, have you ever tried that? No, that's one I haven't tried. I mean, and so then this is going to be part of, we're going to engage with each other and I'm going to send you some patients, and then we're going to start talking because that I'll be curious over time to see if that one has any, benefit the, the other peptide. Right.

That's interesting. BBC 157 generally is super amazing. Very rarely. I'll see some mast cell activation from it, but I never see the mast cell activation orally.

And then there's cGRP is a real good peptide for massive activation. And there are some formulations that will combine Cfpb and BPC which are really good.

And then the when you think about overall inflammation in the body, then, you know, have have you ever done much for stem cells or regenerative medicine?

I was until the FDA got crazy about it. And then I got a little nervous. Oh, that's it. That was good. But but we have, we we have some clinics outside of the country that we send people to.

And so then I've, I've treated, people with interstitial society with, like, culture standards, expanded stem cells where you get like 100 million or 200 million stem cells.

And we've seen benefits with that. People who were doing, even like adipose stem cell cases. And I've reviewed a lot of cases of adipose stem cell cases for, which is the one that they took away.

That was kind of one that I had trained a lot in and, and spent a lot of time with my mentor, Bob Alexander, doing, and that that was helpful kind of before that went a little bit by the wayside for a while.

Although some of my international, colleagues are still doing it quite a bit. And so then and those are all things that also regulate immune function, regulate, inflammation and then the, those, those bigger things, well, bigger things, stem cells and exosomes, smaller things.

Cfpb I've noticed all of those are quite helpful for regulating mast cell activation, which then is central to things like Lyme and complex illness. But it's also central to potentially things like I see.

So you see how deeply complex you know this I it's conversation is it's just like, it's staggering. And you can see if you had a, $100 visit that you had 15 minutes for, and then you had somebody that that has something of that complexity, and then you have to and there's not a drug that's covered by insurance that solves the problem.

And we know there's not a drug that's covered by insurance that solves this problem. Then those patients are fundamentally well, it yeah. Oh no. Definitely.

And you know, it is. It's such a shame with the, with the stem cells and the exosomes because they have such amazing healing properties. We've done things where we've actually injected it into the walls of the bladder, like, I've had patients who had non healing ulcers for years in their bladder and injected into those.

And that got them to heal with them. Yeah. Now what. So so then that just goes to show you like this is like a missionary appeal, you know, to regulatory and oversight agencies like you're listening to your own gynecologist has is and we see the same type of things and then so then this is just like a forecasting the future of medicine.

So then what you would do is you would stick a catheter in and then look at that ulcer. And then you would basically inject basically stem cells into the wall of the bladder where that inflammation was.

Is that right. Yeah. Yeah. And then we get it to heal. And then I even used stem cells for incontinence. So I went when I trained, I trained unfortunately during the time that vaginal mesh was a big thing.

And that's that, you know, when it first came out, that's when I started my training. So we were putting in vaginal, mesh. Laughter and right and left and right.

And as the years went on, I was like, I need other I need other options. And so I was using at that time where we were using, stem cells that we were injecting under the urethra for stress incontinence, and patients were getting improvement in their incontinence without having to have a piece of mesh put in there.

You know, we were using we're doing other surgery they used to make and they don't make it anymore. There were these sheets of, tissue that were either like liver derived or there was ones that were like amniotic, sac derived.

And so they had stem cells in them. And we almost use them as a graft to place them under the bladder to help lift and repair the bladder. And they would heal so nicely.

But they got they got taken off the market. Yeah. No. To I, I, thank you for saying that. What? So if you said what would be the worst thing to do to somebody in the world that I know of?

It's like I had a list of 50 things. One of them would be like this vaginal, you know, mesh kind of operations. Tell me. Tell me about why, why? That's not a great option.

Yeah. You know, and it's funny because it's kind of a whole that's a whole can of worms mesh itself isn't necessarily bad because we've been use mesh since the 1980s for hernias.

But the problem is when you're dealing with the vagina is that the vagina is not a sterile place. So it has, you know, it has its own microbiome. So starting at about ten years ago, I started looking into issues with the mesh.

And I'm like, okay, wait a minute, let's start taxing the microbiome. You know, doing like a swab of the vaginal microbiome. And I would not implant a mesh until I balance that microbiome.

And so and then those patients had less issues. So then from that standpoint, because you would get what's called erosions or extrusions where. So this mesh would get basically infected with bacteria.

And now that'd be kind of sitting under the tissue and smoldering and causing all these other inflammation. They're seeing the same thing. I have a really good friend who, is one of the number one, breast implant planters

in, in the world.

And he's, you know, this idea of this breast implant illness, and he is finding that it's not necessarily the implant, it's that when he's going in there now and doing this advanced microbiome test on these, implant beds, like, after he takes it out, he like swabs there, and he's finding all these crazy bacteria.

And so it's that it's that bacteria that's kind of getting introduced into the body and really kind of just sitting there and, and causing this long term inflammation that that may be causing what they're terming as breast implant illness.

And not everybody gets it because not everybody has these bacteria. The other thing with mesh was the problem. And I will tell you straight out, I was a trainer for some of the companies to implant these things.

And it was very frustrating to see that they would basically bring in doctors, sell it to them and be like, oh, this is easy. Anybody can do it. Send them to like a weekend course and learn how to do it on a cadaver once.

And if you were lucky, you got your hands on the cadaver. Sometimes it would be like 20 doctors around a cadaver and you couldn't even get there. And and then they would go and like, you know, send you off into the world and be like, okay, go implant these things.

So the other problem with, with, the vaginal mesh really was it was a lot of people implanting them that really didn't have the knowledge and the skill in pelvic reconstructive surgery.

And if you don't put it in the right place now, you're going to affect like, the dental nerve. And this is where I see a lot of pelvic pain issues. So the other thing I forgot to bring up was pelvic pain is a is this theory of it maybe like a chronic regional pain syndrome.

So with chronic regional pain syndrome we see issues where someone's like spinal cord or something upstream of there where they're sensing the injury or sending the paint.

Something upstream is injured and now all those nerves going downstream become inflamed and you get that mast cell release and all that. So that's actually another theory behind interstitial cystitis that may almost be like a chronic regional pain syndrome of the of the bladder.

If there's something else higher or even like what I see with pelvic pain, because I see a lot of pelvic pain where it's not in the pelvis, it could be a problem with like a herniated disc in their back, or I find a lot of hip disorders.

So, you know, they have they have, you know, they've injured their hip. I've seen a lot of women who've injured their hips pushing when they're having a baby because I don't think we were naturally meant to be giving birth, laying on our backs with our knees to our ears.

Yeah, that's a position because it makes it easy for us doctors to control and catch the baby. But it really naturally, we're probably meant to be standing up and using gravity to help bring the baby out.

And so I've seen where people have torn their labrum so that that cartilage material around their, their hips and they don't have hip pain, but they have pelvic pain and they have vulvodynia, which vulvodynia is a fancy word for pain in the vagina or vulva.

So, and once again, those vulvodynia, the, these chronic vaginas that are not infectiously cause, they tend interstitial cystitis. It tend not to be their own condition themselves.

They're a symptom of something else that's going on. Yeah. So then that's a lot that you just said. And I agree with 100% of that. You know, we take care of a lot of complex regional pain syndrome and, and, and I and so I'll just give you a little thing on this that I think is kind of an interesting one.

Imagine if you were just living your life and you were supposed and the typical the typical thing is this in like a hand or an ankle and an extremity.

And then somebody was gotten in an accident and maybe what they did in their life. And the one thing that brought them emotional peace was running. For example.

And then they got in this accident and now they can't run. But then now. So there's there's a big psychological overlap of like, you take away your greatest thing and then then that and then now they're in pain.

And then what happens is, is that those feed back and forth on each other, and then that turns you into kind of an inflammatory neuropathic situation where you get stuck in fight or flight and you get decreased blood flow to that area.

And so then the and and so then what happens is was all of a sudden you start to get skin changes and, and and pain and not and decreased blood flow and decreased oxygen and all of those things happening in there.

And then it just gets progressively worse and, and, and, and there's a reason I'm kind of leaning into this because then so then that goes on and on and on.

And so then next thing you know, and we, as anesthesiologists, we do nerve blocks to reset fight or flight. But they were never very effective. Like, I remember, that my surgery center that that one of the women that worked at the front desk.

So it said, Doctor Kirk does, this this person's been her 37 times, does not work do that. And I was like, well, they kind of work. And then interestingly, it was kind of what drove me into doing what I do.

And then I the stuff that's regenerative medicine works quite a bit better for those problems are those are very difficult problems. So then that's part one of my response.

Part two is I suffered like with the same thing that you talked about. Because what would happen is I for the most part I had the best surgeons that worked at my surgery center, but then I would get people that came in and just took that course.

And then I we're about the same age. And so then I had all of those people that just took that course and then were operating all of those women who were putting those meshes in.

And the real thing on complex regional pain syndrome is you think you're just having a simple thing, you think you're just going to have a little mesh, but and it's going to be no big deal, and then you're going to go back and have an amazing life.

Now, and I remember as we were going on, this guy says to me, doctor, proceed as he goes. Doctor cook, do you know that 1% of those meshes get infected every year for the rest of your life?

There's a 1% chance every year that's going to get infected. That's what the hernia. So the the if your microbiome is not balanced or something goes sideways on you and the, the pelvic, it's going to be much more likely.

Right. So then we would see that. And so then you imagine all of a sudden inflammation decreased blood flow, all of those things that I was just talking about in the ankle.

Imagine if that happens in your pelvis. That's pelvic pain. But there's a lot more of emotional connection to the pelvis than the rest of the ankle. Yeah, yeah.

Interesting, And then, you know, then when once you have pelvic pain. So then you talk about like, how does that affect your sex life. And then that becomes a big circular thing.

Because if you have pain every time you have sex, you're not going to want to have sex, which could then, you know, or actually, when it comes to muscle spasms in the pelvic floor, so you have sex, it's painful.

It's your muscle spasm because they're trying to protect you. So they're trying to splint against something. And now now what ends up happening is those muscle spasms now become the trigger of the pain.

Because now you're getting decreased blood flow into those spasm muscles and you're getting, you know, like that itself now causes pain. And then then that triggers your muscles to spasm more.

And then it makes you and it affects your sex drive and it just becomes this whole horrible circle, of pain is it's miserable, unfortunately. And it's sometimes very difficult to, to break.

And that's why. So the medical term vaginismus, which is a spasm to pelvic, vaginal, the muscles around the vagina like that. Once again, I don't believe when I find a spasm pelvic floor, I don't believe that the muscles themselves are the problem.

I think there's something else triggering it, and the muscles are just trying to splint to protect you. But in that protection there then becoming pathologic, how would you how how do you like it if somebody came to you with those symptoms?

How what what what have you found that's helpful? I'll say my thoughts. So yeah. Well, you know, having worked years and years and years and insurance there was the, the pathway I used to take.

And now that I'm, you know, I don't I no longer work in insurance system, but the, the pathway of insurance was like pelvic physical therapy, heat stretch, massage.

You know, anything you would do to like if your leg was spasm? But for the people that are just really severe, really severely spasm, Botox worked really well.

And it actually the truth is the Botox can be covered by insurance. I actually like zoom in better because I talk about Botox on zoom, and so Botox is an older molecule and it has complex proteins on it.

And they found that some people are developing antibodies against that complex protein, which has no clinical significance other than the fact it's there.

So this is why especially women who are gay or people who get it cosmetically, if they're getting it repetitively, all of a sudden they're like, oh, the Botox doesn't work anymore.

Well, no, because you have antibodies against it where like so a normal molecule, which is found in the brand name Zero Men doesn't have that complex in protein.

It tends to it tends to work better. And with repetitive use it seems to keep working. Are you are you familiar with like the idea of the what some people call the o-shot that Doctor Reynolds came up with our.

Yeah, yeah. So see like, yeah, PRP. I'm going to define what that what that is. Yes. So using platelet rich plasma is, precluded. Plasma injections are also great.

They're they're wonderful. So you take your blood and you spin out the red blood cells, and you're left with this nice kind of golden colored fluid, which has a lot of growth factors and healing factors in it.

And it's used in orthopedics all the time. It's, you know, they're injecting it to joints and knees and all sorts of things to help with pain. But it can also be a great modality for helping with not only healing, but also with helping pain in the pelvic area.

So whether that's, you know, near nerve or whether you're doing it into the muscle. So, the, the, so then it's

interesting. So then if you think about trying to reset nerves and you, we go back to the sun.

That's my initial picture of the pelvic floor. So then one thing that we do a lot of in this population is we'll do what's called a caudal epidural, which is the same thing that we just, I used to do.

They wouldn't let me do gynecology, but I did do a lot of obstetric anesthesiology. So I still got to be around the babies, which I like. But so then we'll do an epidural kind of done by the tailbone, and then that will get all of those pelvic nerves and wear something anti-inflation, matri and regenerative.

That's kind of with growth factors to calm down the nerves. We'll will, have people lie on their sides and do an ultrasound guided injection, sort of, by the prudential nerves and, and and and to the, we'll come basically deep to the proximal gristle muscle right at the pelvic floor.

And then when we do nerve Heider dissection around nerves in kind of the groin, then the what we inject is actually going to work its way up into the pelvis through the pelvic lymph nodes.

And so then that that can affect those things. And then I and interestingly, I think peptides are going to be part of that conversation. And and BPC 157 you can inject that in subcutaneously in your belly or you can do it in your, your I call it I always say the gluteal.

Somebody yesterday somebody told me yesterday in your booty. But then but will you speak one by seven for nerve headed dissection of the, the pelvic nerves?

And that's been, profoundly helpful for some people. And so then suddenly, you know, and you hear all of the interesting things you do, and you suddenly begin to realize, oh, there are a lot of options for people.

Yeah. And you know what? You brought up that also that idea of hydro dissection I've seen too, where we can't we and we've tried things, we've tried steroid injections to try this.

And sometimes there's the idea, like maybe they have a little scar tissue in the area, and sometimes we'll go in where they're having nerve pain and flooded with just something as simple as saline, like kind of a whole bunch of sealing, because that's basically going to separate all that tissue without having to go in there and do surgery.

Because especially for potential nerve issues, I've seen where people have had potential nerve releases, where they go in surgically and basically fillet their buttocks.

Yeah. And, you know, that's like a last resort. But even then, I could probably count on one finger at the time I've seen that be successful. So, yeah, I've seen, I've, I've like seen or talked to like more than 100 people that have had that surgery.

I've never had anyone got remotely any benefit. And if you said how many? I've never even heard of anybody that had any benefit of a surgical approach to nerve compression.

Whereas what we're doing is we're taking a needle and then putting it in between two muscles and then using that fluid. And like you were mentioning that you use dextrose.

Sometimes saliency comes in, people use everything from peptides to growth factors and lots of different solutions. And so I'm really glad that you mentioned that.

And then just kind of back for completeness, the the interesting idea, is, is that if you imagine the, the if we were like doing a pelvic exam and then, in between the urethra and the vagina, you can actually go in and there's kind of tissue playing there.

And so you can do a hydrate, a section of that tissue plane, which fundamentally is the tissue plane between the vagina and the bladder. And so then, I, I've been doing PRP and growth factor treatments there for a long time.

Was a teacher for Doctor Reynolds. He's we we really like him. He's been a very influential person in the field. I, have done tons and tons of, ultrasound guided peptide injections for men for sexual health.

And I think and I'm just going to throw this out to you, I think that there's going to be a big future in BPC. And, and potentially other peptides to be used, in, in that tissue plan, kind of like quote unquote, what they call an o-shot.

And I think that that's going to be you might be that could be an area, that you could help a lot of people with that. I love that idea. Yeah. I haven't tried it. And BPC is specifically in that area.

But now that you're saying I'm like, ooh, it's that would work. The reason, the reason is, is because if you have, if you have elbow pain and and you take BPC one, five, seven subcutaneously, generally it'll be helpful if you inject it in your booty.

However, if, if you pinch some subcutaneous tissue and you can get it right there, right, right where the areas it works like ten times better. And so then, and we've had great.

I've, I've had a great experience 100% of the time with doing peptides and, and in particular BPC all over, very close to the pelvis. And so then, you know, that's an intriguing a very intriguing and interesting idea.

You know, I want to ask you because I'm pretty confident in using peptides in most people. The only population of people that I have reservation. And because I can't find any information that supports it or or not is in the cancer population.

So I'm not sure what to do with those patients. So then that's that's the million dollar question. And the, it's my most difficult answer and I don't have an easy answer for it.

The, but then here's how I think. Here's how I think about it. Okay. The, there are a handful of, of peptides that will, promote angiogenesis, which is that means that they will promote blood flow and, and to some extent, blood pressure, health, blood vascular health.

The that's obviously a great thing. And that's something that we're always trying to, to push. But at the same time, we're not trying to push it too much because the if there was a cancer, cancer could utilize hyper hypothetically that angiogenesis.

On the other hand, there are certain peptides and the thymus and alpha one has been controversial just because I think it's helpful for Covid. And so people don't want people to talk about it.

But then, the theory on that one is, is that, that it's not like a ten out of ten anti-cancer, but it has some mildly anti-cancer benefits. It turns out, the vast majority of pain is immune pain.

Okay, is immune related or has an immune component to it. And the vast majority of even nerve pain that is inflammatory will have an immune component to it.

Okay. So then, you know, my friend John Francois, who's a great and heroically interesting person, you know, called me and he goes, you know, he goes, and, he goes, you know, thymus enough.

Alpha one is good for nerves. And whenever he tells me something like that, it's kind of like, probably almost for sure. True. And that's just because he he talks to people is like he's on the street 24 hours a day to talk to people.

So the if people if he tells me that it's almost always true. So then I, I started doing some nerve hybridization where I would put with thymus and alpha one in people who had cancer and nerve pain.

And I was trying to do something. But and so then the way that I mitigated it in my mind is, okay, well, I'm going to avoid these B like thymus and beta four and BPC, the ones that promote a lot of the genesis, because those are probably the two best for just straight up nerve pain that but and there's even some like, patents out for thymus

and better for, for neuropathy however.

So then I say, well, I, I know that I can there's certain things that I could use and so would if, if someone had cancer, if somebody had pelvic cancer, would I be okay with putting thymus.

And they had a lot of pelvic pain. Would I be okay with thymus alpha one either in the pre dental nerve or, you know, in between the vagina and the bladder? Yes.

And so then from there you begin to find some things that you would feel safe about. And this is just kind of my intellectual logic. Now then step two is to say.

Is angiogenesis that big of a problem. And then what's the state of the cancer. Is the cancer in remission? And it's gone and there's five years out, in which case I would probably just say no problem, it's fine to do.

Are you in that in-between area. And so then and so then it's kind of like a board exam. I think the answer depends. And then and then we have to develop a better clinical understanding of cancer, integrative things that can be done.

What's our model of it. How do we think about it. And and in general I would say that's the most controversial difficult, overwhelming topic of the day compared to everything else that we do.

And so it's not a perfect answer. But what I do is I kind of work around the corners and try to find things that I feel are safe. Yeah, this is what I love because I think, unfortunately, we've gotten away from the art of medicine, and I think that medicine still is so much an art.

I mean, that's why we always say the practice of medicine, because I think the more you do medicine, the better better you get at it, and the more that you can critically think about it.

And sometimes I get really nervous about them pushing toward evidence based medicine, medicine. So it's nice to have evidence, but I don't like what I'm seeing due to people I and this is not everybody still have critical thinkers out there, but I also see a lot of people that are like robots and they're like, oh, you know what?

Can't, you know, this is, you know, it's the evidence has to do this. Well, you know what? We know that people's bodies don't follow textbooks. So evidence based medicine actually works amazingly well for simple problems.

Yeah. And it works very well for problems that have like 1 or 2 components. But then it works horribly for things that have ten components. Now then, speaking of things that have ten components then, and we're later in the podcast, but you mentioned that you take care of and Dimitrios.

And so then to me, that's my hardest condition or one of the harder ones, but I've got a couple little things in the background that are interesting to tell you.

What, what, what's been your experience with that and what helps? And has that been? I will tell you two, they are probably the most complicated also.

And in complicated too, in that it's we still don't know, 100% the mechanism of why this happens in people. And I have to say, I've seen the rates of those go up over the years.

And, and at first I thought, well, maybe just because I'm seeing those patients and then I'm like, nope, I've seen the rates are going up. One of my theories behind why I think the rates are going up, as I think we're being exposed to a lot of more endocrine disruptors in our environment, whether that's from plastic bottles or household cleaners with toxins and so we know that those endocrine disruptors trick the body into thinking they're estrogen and they bind your estrogen receptors.

And something like, I think I saw something like 80 times that of your natural estrogen. So we see a lot of the

women that have endometriosis and even polycystic ovarian syndrome.

I've seen that also increase over the years that they tend to be in this paper estrogen state. And now the interesting about estrogen is estrogen is a neurotransmitter.

And people don't always think about it as a neurotransmitter. And we've seen that the higher your estrogen is, the more likely you are to sense pain. So we know that that high estrogen level and and and pain, pain perception is, is higher because of estrogens, affect on a nerve transmission.

So now but now but now tell me back up. That was really good. Give people a what is what how would you define endometriosis. And then how would you define polycystic ovarian storage.

Yeah. Yeah. So endometriosis is so every month when a woman is menstruating they build up this nice tissue and blood vessels in the uterus to kind of create a nest.

If a pregnancy was to take place. And so when a pregnancy doesn't take place, the body's like, oh, I don't need that. It's sloughed off. And that's the period.

It's the blood. It's the old tissue. It's gone. Well in people with endometriosis, that tissue, instead of getting out of the body and sloughing off, somehow gets back into the body.

There's a couple mechanisms that have been theorized of why that happens is sometimes they think may be the pressure of the cervix is is too tight, and now it's sort of coming out, whereas where whereas pressure going to go, what if there's too much pressure or the least amount of pressure, go back out the fallopian tubes into the abdomen.

And now that tissue kind of like has no place to go, and it attaches itself to different organs and it responds every month like it would a period. It would build up in response to estrogen.

And it would bleed off causing pain. So and then we've also seen where it's actually has gotten into places that people were like, how do you get endometriosis in your lungs?

Like they found it in strange places on people. And the thoughts are that maybe somehow it can metastasize, meaning like somehow that that tissue, instead of getting out, gets maybe into a lymphatic system or into a blood vessel, now ends up some other strange place in the body and is growing and responding to hormones every month.

So, so that's what the endometriosis is, where polycystic ovarian syndrome is, a syndrome and where women tend to make, you know, they make they develop an egg every month.

And it and the egg is in a little cyst, nicest kind of ruptures. And that's obvious. And while in polycystic ovarian syndrome, these women tend to get a lot of, follicles that are developed.

They get a lot of cysts in their ovaries, but it's really, like a derangement of estrogen and, a hormone called DHEA. They tend to have very high levels of both of those issues, but they also have a lot of metabolic, problems where they have issues with the hormone, metabolism.

They also tend to have almost be pre-diabetic or even diabetic. And, and tend to have very high cortisol levels. So there's all this, all this, this big derangement in the hormones associated with that condition.

And so then for the how do you like to treat those? So well? All right. So let's all right. So I'm going to try to say which one to pick first. So a lot of times I'm doing hormone testing on those I love Dutch, I love the Dutch tests. I love the dried urine test.

Even though, you know, I was trained that, well, I wasn't trained in traditional medicine to traditional medicines,

like, hey, look at your hormones on blood.

But we know blood is only like a snapshot of what your hormones are at that moment. That they take the blood is not really an indicator of what your tissue is is doing.

So saliva is technically more accurate, but I don't get them to metabolites. I can't see how your body's metabolizing hormones. So that's why I love the dried urine, where it looks like hormone levels and it looks at how you're metabolizing it.

It looks at your adrenal gland hormones. We can look at your stress hormones and cortisol. So it looks at a whole bunch of things. So I usually start off with let's let's look at where the hormones are and how are they doing.

I once again, I always go back to the gut. I'm always looking at gut. I think a pretty much everybody that walks through my door, I'm looking at their gut health to look for, like, things that may be more inflammatory if they're having some sort of inflammatory issue.

And then, I mean, the endometriosis is so, so tough. I no longer do surgery on those cases. I send them elsewhere because even though the literature showing that even though you do surgery on it, it's really not ideal because you can have some like the surgery doesn't really help and you can end up having more problems because the surgery, I mean, surgery is definitely indicated if you have scarring of the fallopian tubes and you're trying to get pregnant, that may be, you know, or even infertility treatments to help you get pregnant because they can get scarring.

The polycystic ovarian, I just again, a lot, a lot, a lot of hormone balancing and then having to treat, you know, they have tend to have hair issues.

So then it's like, okay, what are we using to, you know, we're using a lot of topicals. If they're having problems with their they're getting balding.

Sometimes these women end up getting their testosterone gets so high that they start to bald as opposed to get like a hairy body. So I, a good friend of mine who has the same last name as me, his name is Andrew Cooke, is probably like one of the he's one of the top two people in the world for doing the endometriosis surgery.

And so then that was and just randomly that was like something that I did in my anesthesia career. So it's like back another one of these things is like back in the day.

But like of brutal surgeries that exist in mankind. That's like in the top ten because and they do it through a scope. Now. But basically, if you imagine my conversation of the here we go back to this ball of the pelvic floor.

And so then the front, you've got the bladder and then the metal, you've got the uterus. So imagine what you just said. Something happened. And some endometrial tissue kind of went up the uterus and somehow got out into the pelvic floor.

Every time estrogen comes along, then that grows almost like a tumor that's inside of the abdomen. And then it goes back down when after the period happens.

But so then every month it's almost like there's multiple tumors going on. And we would look in there and then you would see basically black all over the pelvic floor.

That looks kind of like blood. The he told me, he said the only thing that correlates with a negative surgical outcome 100% of the time is lime disease.

And so and this was a very interesting data point for me. And so it's an important thing because guess what we've been talking about. Infections is causing immune problems in the gut potentially that causes an immune problem in the uterus.

And so but but these fields talk so little that you know, normally you know gynecologists are probably not talking to people in integrative health for the most part.

One of my best friends, we helped, had Lyme disease. We did. I was on dialysis and all of these things and basically got it into remission and then the animatronics calmed down, and then she had a surgery and then ended up being pregnant.

And so the baby is like a year old now. So that was kind of a I have some big wins on the surgery side. We have people who've gone to Mexico and the culture expanded, stem cells.

And so then reporting back that and Dimitrios and Mass, all symptoms are going down. And so then I, I think that my and we kind of hesitate to even talk about endometriosis because it's so difficult.

And yet I love somebody like you that's kind of out on the front lines with that, because I think that the regenerative medicine conversation, that's one there's a bunch of conversations that like, it doesn't really matter.

Do do you could there's like 19 things and they all work. But then like some of these big problems they need you. They they need they need a total solution.

They need the lifestyle pack package. You know, what's going on is that when that woman takes, takes all hands on deck, that definitely and definitely more than one like specialist because there's just so much that goes into that.

So like you're saying, take me, maybe in conclusion, take me, through to another direction. You know, the tell me about your experience of helping people kind of with sexual health and, and and how's that been?

You know, that's that's really interesting, because I can't tell you, ever since Viagra came out, women are like, where's our pill? Where's our pill? And this is something I've been arguing with them.

I was like, listen, Viagra doesn't put you in the mood. All it does is affect blood flow. And I went, I can't tell you how many times I went to Pfizer and said, you guys are studying the wrong thing because they were they did try to study Viagra for women, as to help with sexual, like libido and I'm like, you can't study libido with the with that pill.

I'm like, you could do a great study to look at blood flow and improvement and, and thinning of the vagina and improve lubrication, because I have I actually have used Viagra, I've used cialis.

I've used all those medications in pelvic pain patients, especially pelvic pain patients who, who have spasm, pelvic floor muscles because you would once again talk about the pelvic floor muscles.

And when they spasm so much, the cutoff, the blood flow and their, their tissue on top of it gets really this pale look to it. And, you know, they have pain with intercourse.

And so I've been like, well, let's try. If we can increase the blood flow to your pelvic floor, maybe we can get some of those muscles to relax and make sex more, more comfortable.

So I've had women very successfully use those medications for, for intercourse. And with a side effect, it increases, it'll increase blood flow to the clitoris.

It'll increase blood flow to the labia. So they have increased sensitivity, they increased lubrication, less pain. Now, the problem is those pills are expensive, and insurance definitely will not cover it for a woman.

So then I was kind of forced to start using or finding alternatives. So then I started using a lot of L-arginine. So L-arginine works in a very similar manner.

It is a little bit different, but it helps with blood flow. And nitric oxide, production in that tissue. So, that can also help,

especially and also with patients, topically they can use it.

I will have them use like a cream with a little maybe magnesium in there. So to put on the clitoris or right now. Okay. Yeah. And then so then the other thing goes okay.

So then everybody was like, well that I want the I want the pill that's going to put me in the mood. And I'm like, well, that gets a lot more difficult because of the way sex drive is.

Not everybody has the same thing that puts them in the mood. This is why I always tell people your brain is your most important sex organ. If you don't stimulate the brain, nothing else down below is going to work.

And there's actually some really interesting research from Rosemary Basson. I've been trying to interview her forever. She's hard to get Ahold of, but she took the traditional masters and Johnson's graph that we always see, you know, like, you know, they you get arousal, you know, desire and then arousal and then plateau and then orgasm and resolution, which was amazing work when Masters and Johnson came out with it.

But it doesn't really, especially for women, doesn't really explain the experience of women. And so Rosemary Basson took that model and she turned it into all these interconnecting circles which, the biggest thing for and not, you know, not every case, but the biggest thing and especially I'm going to generalize this to women, is that you have to have the willingness before the desire and the arousal.

So a lot of people are still stuck in this idea of like, I want it to be like I was 18 where, you know, you just look at me and I'm like, you know, we're rolling around, you know, in the waves, which I never understood, the beach and the wave thing because I'm like, where is that sand getting into?

But, but you know, the so there's the you still can have spontaneous desire. But Rosemary, besides work has shown that for majority of women, if they just go through the steps with a willing partner, that's going to be like, okay, you know, we can stop.

They're not like, we're not we're like a race where we got to get to the end, but that if they just go through the steps, then all of a sudden, then the arousal comes first and then the desire to have sex and then they have a good sexual experience.

And so usually when I start with patients, I start with that idea and I'm like, okay, let's start with that first and see if that makes a difference. And I have a lot of women that come back and they're like, wow, you're right.

You know, sometimes you ask them like, you know, when you have sex, is it enjoyable? And they're like, yeah, like once I get into it, well, that's because that's the Rosemarie Bisson model.

So but then we have we have some fun peptides for this. So, so, you know, with the medications that are on the market before, before peptides while peptides around.

But before that we had the, what they call the pink pill, which I'm blanking out on the name right now, but it's made by a company, called sprout. And it was a pill that kind of a couple different companies had it.

And, and it was supposed to be pill that was going to put women in the mood, but it got rejected a number of times by the FDA. And, Adi, that's a called it's Adi.

Adi, I think I why I like that, yeah. Adi. So it got rejected a number of times from the FDA. And then what ended up happening was this small startup company, sprout took it over and they kind of really keyed into like, social media and women's movement, and they basically strong arm the FDA into passing it by saying that the FDA was being sexist for not passing it.

But in reality, it's not the greatest drug in the world. So it's something you have to take every single day. You can't drink alcohol on it because there's a risk of of passing out.

And it really didn't increase the number of satisfying sexual experiences that much over placebo. Anyway, in the study, which is sex is a very hard thing to study anyway. But, you know, in some people who take it and they love it and it works great.

But I also say placebo, if you believe in anything and it it's going to work. So, you know, you wonder how much of the placebo effect. But then what, then we talk about peptides.

So if there's actually a prescription peptide on the market for women, which is called by Lisi is the brand name, but it's REM, Alana Tide, which I always have fun saying.

So from Alana Tide is a, peptide that was used in research and was used clinically from compounded. But now now it's, you know, a actual prescription, but it affects the Milano and four receptor, which is an interesting receptor because like this receptor is responsible for skin coloration, sexual desire and food societies, satiation.

Like so like like if you feel full or like, you know, so people that have defects in that that like receptor, we know sometimes it's associated with overeating disorders.

So it's weird to me that I still haven't figured out why all of those three things are on that receptor. Like, why is that? Like, why are they connected?

But, I think, you know, that peptide has been really interesting. You can take it. Basically prior to sex and either the prescription form, it's an injectable that has to be done like 30 to 45 minutes before, before, sexual activity.

And, and that can actually help basically put people in the mood. It's been used for years before that as a nasal spray. What dose do you like as an injectable?

You know what, a lot of times I try to put it, I, I've been putting it through insurance to try to get people covered. And it comes as one. You know, that's a good question because if I list you just comes as one dose. So we usually use one milligram okay.

Because I've seen anywhere from like the nasal sprays in the, in the compounded anywhere from 1 to 2. Now, so then you know, that acts on the hypothalamus.

And so that's very upstream. So you can see, begin to see why it could affect the, the skin and all, all of these things. Have how, how help when do people tell you when you give them that if they take let's say they take that as a, as an injectable or as a nasal, both from kind of an arousal perspective and then from kind of a within intercourse, how do people what do people tell you they experience with that?

You know, people are I really loving it though? The only downside is like in the literature has up to a 40% chance of nausea. So it's really not good if you're like going to be like, okay, I want to be in the mood.

But I'm nauseous. Though at the same time, I don't think I have personally like my own experience with patients. I don't think I've seen as high as 40% with the nausea.

But but that can happen. That really puts a damper on being in the mood. But I think patients are really, you know, patients have really said that they they are really enjoying it.

And that it's kind of boosted their sex lives though. So I'm finding that in general patients are using it, but they're not necessarily depending on it all the time.

It's almost like they're kind of using it for a while and almost like getting over this hump of like that mental stress of like, like putting themselves on pressure, like a lot of pressure to have sex.

And then they use this medicine for a while, and then it kind of like, like letting go of some of their inhibitions and kind of start getting to the point where they're like, oh, I don't need the medicine anymore.

Like I'm just you know, I've developed this better relationship with my partner and now I'm, I'm able to, you know, do things without having to use the medications.

Yeah. So then I can I tell you, one is just this one is so interesting. And it took it has taken me a while to wrap my head around this. So then we were talking in the, pre-show sort of about VAP, which is another peptide that regulates the brain.

Yeah. And so that's another one that's kind of and and, and, and I actually think and I'm going to we're going to do this next time I talk to you. Because I can't wait to talk to you in about a week. But but I want to we're going to talk about more than pelvic stuff, because I think there's going to be a big overlap there.

But what happens is this imagine if you take people with complex on this, the, the and and mold. You detox them for a while and you do these things and then eventually you get after you get them kind of where their visual contrast test is negative and their inflammation in their brains down.

They take this peptide called VAP, and then they take it and they're fine. And but then and then it regulates basically inflamed genes, calms them down.

And then people start to feel a lot better. That's like the cliff notes of how to fix mold. Okay. So then now imagine if you give VAP, which has a brain bio regulator, to early, it can cause flushing and headaches and a variety of problems.

And so then in the mold world, there was this conversation of, you got to this whole long journey of getting people better, and so then they can start doing stuff.

Now, this is a long winded story, but this is going to be totally worth it for you. So then now imagine what we've discovered is that there's a bunch of all of the bio regulators you can do before VIP, and then BPC 157, and the immune peptides kind of calm things down.

So we have this peptide oriented approach towards mold that helps people get better. You get them through all of that stuff and then you give them VIP and they're fine.

But then that gives you this indication that there are some people that if you give the peptide too early to, they'll have trouble. It turns out that population of people who and and and and TW 141 is related a little bit to Milan to tan, which also causes nausea.

Oh yeah. And it turns out that like VIP and I think this is because it has an effect on the hypothalamus. TW 141 which is, Bramhall and a tad, tongue twister.

In the sick population, they'll get sometimes bad headaches and, along with the nausea and kind of it, it behaves a little bit like the tip. Okay. So then and it's important to say it because you're my, you're, my sexual health guru.

And the. I have seen that. And then when, when it happened, people are like, what happened and was. And especially if it's kind of like if you thought you were going to do something for sex and it was going to be super fine, and then, that happens.

That's crazy. But then what happens is, is what my what I have found is if you regulate the brain and you get everything dialed back down, then they can take it.

And then I have seen and but then I'm going to ask you this. So for guys if they take it and if you take it before dinner a lot of times like almost like during dinner, you'll have kind of like a, a one third erection.

It just kind of more blood flow, which I think is puts you in, set. It just surprises you. And so just kind of puts you into an arousal space. And I don't know if you've seen that in women.

I think I think my sense is kind of similar to that. And then I 100% totally agree with you that a lot of times, just getting into that space and finding, oh, okay, oh, okay, I can get back into that space suddenly that teaches your brain how to do it.

And you don't have to take it all the time. But it can be like, a crutch. That's kind of helpful in the beginning. Yeah, yeah, definitely. Yeah. Also brought up we were talking about inflammation and, there's also connection between inflammation and sex drive.

And they're actually finding that. And this is another thing I do in my office all the time is I will do, vaginal microbiome testing because the theory what are some of the theories is now is that if the microbiome is off, that's going to create this inflammatory state in the vagina that the body's going to sense, and they're thinking it's through the vagus nerve, but they haven't been able to prove it.

Yeah. That there's going to be this feedback loop to the brain saying like, oh, this is not an ideal time to reproduce because your brain doesn't know the difference between you want to reproduce and you want to have fun.

So it's going to then dampen those hormones and peptide production that would be associated with reproduction, hormone health and and even sex drive. So I have I've definitely seen that from the reproductive standpoint where I fix someone's microbiome who didn't get like couldn't get pregnant for years and all of a sudden got pregnant without even thinking about it.

But I'm starting to now because this is something that's really within the last year come to my attention. And so I'm starting to do this, and I'm finding that patients are like, you know, what company did you use for the microbiome testing?

You know what? I I've used a couple different ones, but the one I'm really, really happy with and really excited right now is micro gen. Okay. Yeah. Yeah, that's the one because they're fine because they're using I've used PCR testing probably for the last I think what, 12 years.

But they take it a step further. And so PCR looks for the DNA presence of the bacteria. But then there's this more next generation sequencing. So it looks at and it will report every single thing that's there.

So there's sometimes there's coming back with bacteria that when you look up in the literature they know that it exists, but they don't know. You know why, why.

So so it's actually been fun to kind of watching these patterns of bacteria that I'm finding and, and, and not just be like in medical school, we're taught that Gardner Rella is what causes, that bacterial vaginal vaginosis, when in fact, in the last couple of years I've found specifically you there's ones that are like mega sphere.

And Gardner. And then there's two there's like bacterial vaginosis associated bacteria, number one and two. Like they haven't even named them. So that was really fun to find that in, like when we do the PCR test.

And now I'm getting reports where there's bacteria that I'm like, I have never in my life heard of any of this stuff. And I'm constantly trying to look at look it up.

So I think we're getting a, you know, much clearer. There's a lot of research going on right now in vaginal microbiome. So, okay as well. So then I have to ask you then how, if that's the case, a how do you rebalance the microbiome and then how do you commit bacterial vaginosis since you brought that up.

Because so yeah. So and I think there's another reason why we, we like the traditional gynecologic world. They see a lot of issues with recurrent condition like recurrent vaginas because they're not treating all the bacteria that's present.

So once again, I go back to the gut because I'm like, if the gut is imbalanced, the vagina is imbalanced because of the rectum, and the vagina so close together, no matter how well people clean, bacteria gets passed back and

forth.

So I see this, especially with the yeast and those patients who get recurrent yeast infections, and you're treating them and you're treating and treating them, I will tell you probably with like 99% certainty, they probably have gut back gut yeast that is not getting cleared at 100%.

So, you know, not that we're seeing necessarily these types of bacteria for vaginosis, but we'll see like other thing that they have like high E.coli or high Enterococcus, which is those are two that are really associated a lot with urinary tract infections.

But they're getting into the bladder by way of they have to be in the vagina first. So so when we see like one thing, throw it off, it's going to throw everything off.

So then these other bacteria start showing up. The other thing that has a big role in that is, low estrogen. So low estrogen from somebody who's on birth control, who's post-menopausal, who's breastfeeding or just had a baby.

When you have low estrogen status, the vaginal wall thinned out. And when that sends out, it stops producing, you start you stop getting glycogen production, which is produced by the sloughing off of healthy tissue.

So like our tissues grow and it dies and they sloughed off. Well, if you don't get that sloughing off lactobacillus, which is the healthy bacteria in the vagina loses its food source.

And so now the lack of Ocilla starved to death. Lactobacillus keeps the vagina healthy by producing peroxide and in a very acidic environment so that those other bacteria, it keeps away those other bacteria needs.

Now all of a sudden you don't have any lactobacillus. PH changes, everything changes. Like once one bacteria comes in, the whole thing gets shifted. So yeah. So that was really complicated.

But one of good. So then it's the is the highlight of my week to interview you. You're the greatest of all time. Thank you. I'm impressed by everything that you're doing.

And you're a trailblazer. And I'm super grateful for that. You're sharing all of the stuff and thinking about it. And so I look forward to sharing patients with you and working with you.

And, learning together about what is happening with people, because you're obviously an amazing physician. So thank you. Thank you so much. Okay. Well, this has been the Peptide summit.

And, Matt Cook with Doctor Betsy Greenleaf and have an amazing week.