Chris Duffinu2019s Background and Peptide Philosophy

Welcome back to the Bioregulator and Peptides Summit everybody. Today's guest is. He's a bit of a legend. He is one of those rare people who exists at an extraordinary intersection world record holding athlete, mechanical engineers, serial entrepreneur, bestselling author, and one of the most knowledgeable practitioners in the applied science of peptides and human optimization.

Please welcome Chris Duffin. Chris's origin story is almost anyone else you'll hear from in this space he grew up in conditions of genuine hardship, homeless at times, raised largely in the wilderness of Northern California, and forged a level of mental and physical resilience that would eventually define everything he built rather than breaking him.

Those early years became the foundation of what he now calls his endless evolution framework. In the world of strength and biomechanics, Chris is a legend.

He's a world record holding powerlifter and the innovator behind training tools now used by 90% of professional sports teams, the US military and leading universities, earning him a lifetime achievement award for his contributions to human performance.

He co-founded Kabuki Strength, which has revolutionized how athletes and clinicians think about movement and load mechanics. But what brings Chris to this summit is his deep, long standing expertise in peptides and cellular optimization.

He's been designing and using peptide protocols since 2003, well before the rest of us came to them, and now consults with stem cell and functional medicine clinics on advanced recovery and performance applications.

Through his platform Enhanced Executive, he integrates precision peptide science, recovery technology and resilience based coaching to help high performers rebuild their biology from the inside out.

Chris brings both the lived experience and the scientific depth that makes this conversation one I have genuinely been looking forward to. Chris, welcome to the bio regulator and Peptide Summit.

I am so glad that we have you here today. Well, thank you for that theft intro. Yeah. No I'm excited. I've been really looking forward to this episode.

You've been a person that I followed in this space for a long time. And there is. You were an early public voice and there wasn't many. And I have to say, I was one that was involved with peptides, and I wasn't public about it for a really long time.

I didn't have fans to kind of step forward in that. I also had a board with my company that said, no, you're not talking about that stuff. But interestingly, it was the underpinnings around the evolution of the equipment that I created.

And a lot of people don't realize that they're like, oh, you're a movement guy, you're biomechanics engineering background. Now, why are you in this space?

And it's like, no, I was I created those products because I started learning about my my whole lens was created through my experiences in the early 2000 with peptides as signalers, and then starting to understand what we could change with signaling.

And you can literally there is a pathway through exercise, through load to affect that. And what wasn't happening is people weren't using manipulation of load as a peripheral input to neurology, which then could control that further.

So, you know, I don't want to go too far into that discussion, but that is my whole Wins was created, which then created a whole set of products that created their own, you know, identity in the market.

It didn't exist. And now it does. Yeah. And I exactly. And I think what this conversation is about, and we are going to talk about the repair peptides and that kind of stuff at the end.

Nervous System, Load, and Injury Signaling

But what this conversation is about is your, your foundation and my deep belief that if we're not doing all the work around the peptides, we're just not going to get the results.

And that could be where people might get in trouble, honestly, with with these small molecules. Absolutely. And I love to dive into the topics everybody wants to hear one of the protocols.

What are the compounds like how do you apply it. Yeah. And they do incredible things. Things that you you can be told it's impossible. And it's like I have living proof over and over and over again like impossible is a reality through these.

But it is part of a larger framework. It's one piece of the puzzle. And so my methodology, well, my larger methodology is the, the with the enhanced executive framework is outside of the scope of this discussion.

But it's mental resilience. It's the physical like resilience through and then the cellular level resilience and having all those factors. But you can't bio hack your way to health if you're moving like crap, you're loading beyond your capacity to recover.

Like everything's just, you know, adding on. And that's where when you start thinking down that path, it's I call it the regenerative amplification method, but it involves it involves peptides.

It involves the raw materials, the substrate materials. It involves the environment that we're creating for those signals to go in. It involves amplify, what I call amplifying modalities.

This is the use of red light therapy pen shock wave, which are truly fascinating when you start understanding how those can interact with peptides. And then finally is like integrating that, well, there's actually start the signaling to start with from movement or load, but also the integration and patterning that happens to get those things to stick.

The actual adaptation happens in the real physical world. So you can't miss any one of those pieces. Well you can't. There's a few of them you can throw it.

That's the that's the amplified method is including all of those. Yeah. Well, exactly. And I think, you know, you tweak something. It's brand new. Everything's functional around it.

The beauty of the peptides can maybe sometimes when you hit it early and and appropriately you can, you can get through something really fast. And we both know that it's those little injuries left unattended that can turn into chronic issues.

Because you get all this, you, you know, your body kind of tweaks around it. Muscles adapt, movement patterns mess up. Now we build the foundation of a chronic problem that becomes much bigger issue down the road.

So I do think like sometimes in a in a tweaking sense, if everything was perfect beforehand, the peptide can be really helpful right out of the gate. But when you've got these old chronic patterns that have been messed up and layers upon, layers upon layers of dysfunction have moved on top of them, just throwing a peptide at the problem.

Unfortunately, I think it can bring short term relief, but very little long term repair. Correct. And it could potentially make things worse because the peptide could activate signals that in that literally fight against a chronic issue.

So if we roll back to this and talk about the signaling, like where does an injury happen from? Right. And this goes it didn't happen when you strange or bicep with those curls.

It probably happened 3 or 4 weeks prior to that when you were overloading something. And the the body is trying to send protective signals. It always tries to protect nerve tissue first.

And so you end up with this cascade of chemicals around that nerve channel. Right. And that cascade creates some hypoxic tissue. Well first you get the hypoxic tissue from the overtraining.

Then you get the cascade to release around that nerve sheath. Then you get the restriction in that nerve sheath in the movement. And now you've got impeded movement capacity in the following training, you know, training sessions.

That's where like the training looked like training beyond your capacity, you know, having acute sessions that are far beyond the peak. And typically it's like if you're above 7 to 10% of your chronic loading in a in a specific week, you're going to kind of trigger these reactions to happen.

And this then you've got the restriction of that nerve movement which then impedes the muscle. And then you end up with a tear, a strain. These things that happen, and it's literally just a chemical signal release that started, kicked off this whole thing from hypoxic tissue that was typically, you know, a stabilizing muscle that got over that, overworked because maybe you were in poor position or again, poor training that all leads to this.

Like, and that's that's literally just signals. And now we've got it for a great length of time. I'm going on a tangent I guess. So. No, it's all good.

I mean, maybe you were carrying a suitcase that was too heavy for you down the stairs, and you tweaked that nerve in your neck that went down your folder and is now affecting the movement of your little finger, which is my break, you know, like it's.

It happened long ago. Yeah. It's frustrating, you know, but I think what's really interesting, one of the really I mean, all the things you see here, interesting.

But one of the things that I think we need, like I'd like to highlight to people, is this, this idea that it's the nervous system that starts. Yes, it starts with the nervous system.

We think of it always as starting with soft tissue, with muscles, tendons, ligaments. But it has to do with the nervous system. And is it an overload of the nervous system that it's really the body is trying to protect like fundamentally an injury?

Yeah it is. And from my engineering background I've got some I think about this analogous to a traction control system on a vehicle. So the body's always going to protect neurology first.

Like that is a core component that people need to understand. Like when you just have a muscle, it's the body shutting you down from doing something that is going to damage that nerve, like boom, like you're physically it's stopping that from happening because you never tear a nerve in your body.

Like the body is going to stop that from happening. No you don't. But the traction control system in a car, right? A lot of people think that you're going around that slippery corner.

There's a little rain or snow, and one of the wheels starts slipping and the vehicle is sending the power to the to the wheel. That's gripping and that's not what happens.

And the same exact system is actually designed in those humans. And this is how it gets into the performance conversation, not just a healing conversation like setting the records.

But yeah, as that's going around you, the car has, you know, connection to the ground. In this case, it's feet or the tires. It's got sensors all through the car, the nervous system, and it's got a brain.

It's gotten an echo. And it does sense that change. And then it sends a signal which is actually to determine the engine and reduce the shift patterns.

And so it reduces the performance so that you don't so that you don't slip and burn. A fiery death like that is the simple. And so when you also look at like mobility restrictions, why did that happen.

Same thing. The body is sensing weakness which means risk around a specific joint and thus starts tightening. And over time that ends up leading to a restricted range of motion because well your squat looks like shit like.

So you've got so you've got poor. And so a lot of people go like, oh, I gotta it's all about flexibility. Flexibility, my dorsiflexion, my ankle is terrible.

I got a flex flex. And it's like, no, you've got a weak foot. Like that's why you have and the body is trying to protect you. So that's what's happening.

But that exact same we've copied that into vehicles. It's into mini things like there's many things that operate in that exact same function. It is neurologically driven.

Interesting. Okay. I'm going to I'm going to ask one question about squats. And then we're going to move on because I don't want to because this this will turn into a whole other conversation.

So what are your thoughts on people and trainers who will put a person's heels up on a plate to compensate for that restricted mobility that doesn't allow them to get into their squad?

Like, wouldn't it be better for them to restore the mobility and then squat appropriately with your own mobility, mobility? Or do you think it's an appropriate hack?

Because are we circumventing the system? You are certain circumventing the system and actually the if we take that further is why are we lacking the mobility.

Maybe we need to be doing some calf raises. Maybe we need to be doing some lunges with half a foot off of a block. So we're developing that that foot strength.

You do that and the awareness and the whole foot like complex, like 96.

Structural Mobility, Foot Strength, and Squat Mechanics

5% of all cases of planter fasciitis, which is defined as an over use overuse of the foot is not plantar fasciitis as defined as that it imaging shows that it is atrophy of the tissue and degeneration of the white of the of the ligaments in the foot from lack of use and lack of blood flow.

So you have that weakness because you're wearing a normal shoe and it's packing that foot in. And just like I take my hand right here, it's Chris, your stuff up.

Yeah. You see it start to turn white. Like yeah. Lack of blood flow. Like it's it's that simple. It's not actually getting used. The foot is like every other part of the body.

Use it or lose it. It is a specific adaptation to impose demand. So all I'm saying is spend some time. I'm not saying you need to be a barefoot to train your foot.

Use it like it needs to be used like every other part of the body. And so thus, yeah, that is a quick hack to put that up there. Just like, well, we're going to fix plants or fasciitis by putting an arch support so you can passively.

Well that's neurologically now teaching the body to rely on this passive support which further makes it worse. So meta analysis of orthotics as a whole shows zero long term benefit out of a passive release from the first passive relief in the first 6 to 8 weeks period of time.

So if it has a long term benefit for reducing pain and helping fix problems, and it's passively supporting the tissue, it's actively making it weaker, which is actually creating more of the problem going forward.

Simple science. Yeah. Well, we can we can do a whole podcast on this on my podcast. I'm sorry. I just had a question. I had to get those points out. I did, and I had to because I've always secretly believed, like we're always looking for Ford cuts.

We're always looking for fraud cuts. We're like, we're making sure that your foot is strong and the tissues are resilient, is boring as shit. Like nobody wants to do that work.

And and it's and it's foundational. Like the whole body will suffer from a foot that's 5,000 pounds squat for reps. Watch my thousand pound deadlift for reps.

What will you see? I am barefoot, yeah. Performance in hand. I'm wearing barefoot shoes these days. Yeah, yeah, I listen, you'd have to pry my out of my dying hands. I, I love those things.

They're just the best to me. And you probably would say there's too much padding under there, but I need it, and I'm happy with it, so. All right. What we were supposed to be talking.

Was complex back pain beyond structure. And I think that where we're really going to go here because I do want us to get to the peptides. But the headline of the next was neurological and immune drivers of non healing.

And so this is where you have a person who seems to be doing everything on paper. And maybe these are people who've tried peptides and they didn't get anywhere.

Like they're not getting any better. So maybe let's talk a little bit about this in the within the framework of like autoimmune issues or histamine issues or MCAS like these are all people don't think of these things as affecting their motor skills, but they're all coming into play. So.

So yeah, I wanted to talk about this because I'm seeing a lot of this now. My background happens to be around back pain, back recovery, and I work with a lot of clinicians in that field.

And so I end up getting a lot of referrals of these people that are doing all the right things. They're working with the best clinicians, you know, around some of the best in the world.

On that end, maybe there are a couple of years in and they're just not making progress. And some things. Yeah, like, why is that? Something's up. And so that's where I'm getting those individuals.

And one that's great because I don't want to start with let's look at let's, let's look at peptides or you know, other modalities. If I don't know that we're also attacking this from the neurological side like a movement correctly first because back pain a lot of people think it's this structural like my disc is this and so on.

And that's the driver of it, but it's way more complex than that. And the neurology and a lot of like you need to have, you need to be moving. Right. You need to understand bracing.

There's a lot of context to that. So when I'm getting somebody that's referred from a specific clinical network around back rehab, and I know the provider, I know all that's being done.

So I'm like, great, here to go. If I get somebody as a remote client that goes, hey, I need a protocol to fix my back, I'm really hesitant to engage because I don't know that that stuff's being done and we could be putting peptides in this, and it's a neurological condition that isn't an autoimmune or some other driver.

Right? It could be just their motor patterns in some of the things that need address there. And I'm going to be wasting their time, their money and not doing anything in helping resolve that if they don't have somebody helping on that first.

So okay, so how do we help people understand where they sit in on this hierarchy? Like how do we maybe maybe that's where we should go with this is what what's the checklist.

Yeah. So I would recommend if you need to check the box of dealing with this from a movement neurological based approach first and potentially reviewing imaging although that's a whole discussion.

So that needs to be with somebody that understands those concepts. So I would highly recommend a McGill certified clinician. That's a great place to go.

Somebody that's actively involved with dynamic neuromuscular stabilization from the proximal medicine. That's another approach. There's a lot of like research those if you're finding somebody that is working through that framework and lens, I would highly recommend Brian Carroll if you need a remote person to deal with this.

So he did a book with doctor McGill on the gift of injury. Brian's a personal friend. McGill was a personal friend, like the. So I will lay that out there in case there's some biases.

There is, but it's also because that's how it works. You're allowed to state it's okay. Another one for online I would highly recommend is looking at Doctor Philip Snell.

And so I actually have a book that has a video course with him. It's like $20 if anybody wants to get it. And if you can't afford that, just email me and I'll send it to you for free.

But it's got, I think, 30 hours of lecture videos and exercises in the book and it's called Strength Rebuilt. So Doctor Snell, his system is a neurological.

He trains clinicians in look up Doctor Phillips. Now he's got a neural approach. That's what it is. It's the neuro centric approach. So it's kind of a combination of Mackenzie McGill DNS that builds this framework that is very similar to what I said, address the threat first the neurological based approach.

So on. So okay check the box. You did that. What are we doing next. We're so this is where both subjective feedback as well as woodworker are going to start coming in.

Neurological and Immune Drivers of Non-Healing

Because we need to start looking at why are these signals not landing what noise is coming through. And so let's say in this case we're dealing with I run into a lot of kind of related autoimmune type issues if we've got that going on.

There's typically this dampened healing response. Interesting. It's makes sense. It does. So what is the driver. What's the what's the driver of like if we get to the root of a lot of these things you know it's inflammation right.

It's break breakdown an ATP production right. It's metabolic metabolic disease. Like let's look at these three frames in this frame. We're dealing with an inflammatory issue.

So I'm going to start looking really in-depth at gut to start with. Do we have any sort of leakage in that in that pathway if that if we have anything there we are going to start there immediately.

That is the number one, because we can't go anywhere if we've got a cascade that's starting to happen from there. If we've got things going through that cross-linking in the gut, going through that barrier, you're getting an immune response.

You're getting like this. That whole chain is being affected, right? There's a fire. There's a fire. So number one, like you, it is actually pretty rare that you run across, not a mean issue where there's not some sort of underlying.

If you dig longer, you may hear a lot of sense though. My diets really great. My my guts. Fine. It's like, that's not what I'm asking, you know? Do you have any bloating?

Are you having any bloating after meals? Have you have, like, just walk through all of this? Okay. Maybe we need to do the microbiome test. All right.

If we run bloodwork we're seeing that in the inflammatory responses. Like what is the whole picture of this painting. There's not one thing that holds that trigger there.

Now this is really fascinating because typically injectable peptides are way more efficace than oral peptides. Typically typically I will always start an oral peptide route with this for 3045 to 60 days.

Where we're going to go, we're going to you know, we're going to pair it with other things, right. But you know, oral BPC bound to an organ 80 salt. You know, CFPB GCHQ La Raza Tighe.

We're going to throw in tribute Irene. We're going to put in some tude. We're going to go down that route right, right, right up front. And you might be looking at like what are some triggers of, you know, digestion issues and stuff, but just doing that alone, ensuring that up and healing that, that going that route over, going like an injectable version of all those things.

The cascade is just absolutely, almost phenomenal in 60 days that it has for the individual. And my theory is can I interact something here? Yes. I gave my parents that stack, and all I was trying to do was help their guts.

I got a call from my mother three weeks later saying, we need more of that stuff. You know, like, which stuff are we talking about? Is, you know, there's a lot of stuff.

And she describes it and it's and it's the gut healing stack. And, and I'm like, well, why? And she goes, well, first of all, you know, she had a bunch of gut issues that she felt were getting better.

And my dad but my dad's she said, your father's back doesn't hurt and my shoulder feels better. And how many people have you read or spoken to who are like, oh, oral peptides don't do shit for musculoskeletal issues, but you're just describing here.

It may not even be that the BPC ever got there, it may just be the resolution of the gut inflammation that allowed the body to take care of the other stuff, starting to allow those signals to go through.

And this is theory. I don't have any evidence around that, but just the work that I have done before related to vagal and phrenic nerve, like when you're talking about impacting those, the other methods, like I believe that we're having two things.

One, you're having the, you know, there's just a systematic release of the peptide in the system, which it's going to have that effect to some level. But you also have the the dual effect of now we've got a vagal, you know, we're texting that vagal nerve which is affecting the brain, which is then neurologically cascading the down that chain.

All right. So yeah, talking about calling the nervous system and the neurology as well as just bringing down the inflammatory response from the immune system that is like technically that's what we're targeting with this.

But what I see is way more prevalent. You talk about people with brain fog, depression, you'll start seeing really amazing things like, so I had a client, he's one of the most famous actors in India and can't say names, but he no need.

Yeah, he was trying trying to film a movie and they canceled the movie because he looked so horrible. He's getting

close to 40. He's been using steroids since, you know, he started his career.

It, you know, around 20 years old. And he's like, I got referred to him or he got referred to me because it was a unique combination. One, it involved anabolic, which I do have a history.

And from a for Lawrence background, don't use those anymore. Use them with anybody. But I understand them very well. You know I know them. Yeah. He couldn't train because of back pain.

Right. But he also had a staff infection, the wooden heel, an autoimmune disease. And he was in and out of the hospital. And so he was taking what he wanted was what he wanted was wearing an abolish.

Can I shoot so that I look okay and don't trigger me to go into the hospital like I am every couple of weeks so that I can get the last movie of my career done, and then I can retire and quit doing all this stuff, right?

You'll die. So he would die, eat well, my direction. But what we did was start with this path. We started with that path. Once we cleared up those signals, then we switched to some injectable versions of those and then also looked at like, hey, if we've had a breakdown there, what if we had we probably have oxidative stress on the system.

We probably have some breakdown of, you know, the cellular function. So, you know, we're looking at SS 31 five amino one and Q, like just working down this whole repair pathway of that method as well.

Right. In six months autoimmune disease is in complete remission. Staff infection is healed by this point. I have a trainer placed in India with him because he's now deadlifting and squatting the most he's ever done in his life.

He's not on anabolic, and he's in such great shape that they're not only filming the movie, they've got another one stacked behind it, and they've got a fitness release planned after that, because he looks so good and he's not on antibiotics for the first time in 20 years.

It started with that same same thing right here. What are we doing to quiet those systems? Get that down. Like Tuka is a really, really, really great agent anytime.

Like reducing the like by bio signaling has such a bigger cascade of impact than most people think. It is not just the liver, it is related. So these are things that affect what I, what I talk about, like creating this environment where we can calm those signals and then we can start putting in some of those other healing interventions.

Yeah. No, that's so and it's so funny, you know, because you're in your own way echoing what the last guy I interviewed was saying was it starts in the gut.

Does it starts in the gut, it starts in the gut. And it's about calming inflammation, by the way, you can't do if the gut is leaky like it's it's gut first.

I mean, he took and I'm sure you do this work as well. He went into, you know, optimizing the microbiome because that's signaling between the brain and the microbiome is happening through the vagus nerve and all that.

So but that's not always the case. Like that's one pathway. But you can have the breakdown in similar things from others. Like you get somebody that has, let's say a massive, massive amount of stress in their life for long periods of time.

The enhanced executive like that's what I as a few of those, I work with a lot of those individuals that are high performers, and they've been driving at a very high level in business or wherever it is in life for decades, maybe not getting the sleep that they need, maybe not getting the nutrients.

But, you know, their gut has held up and but they have all those same class, like we've got brain fog going on. We've got lack of resilience and being able to manage emotions and control themselves, like all of these things

going on.

And so we the output is very similar because we do have same thing, a lot of oxidative stress in the system not producing energy correctly. We've got like I said, the brain is getting starved for ATP like so we're not starting with that same base.

But some of the later stuff is very similar. So in that case it's not GI driven, but we've got similar set of cascades down the road because we're not having that necessarily inflammatory response from the gut.

Not saying that those individuals don't have those quite a mix of well, but I think a lot of them do. Yeah. So trust me, a lot of them do. But it's not everything.

It's not the answer for everything. You go, hey, we're just going to start with this set of compounds. Otherwise you wouldn't really need to. Well no you talk to the person, but we can I think that we can.

We could probably agree that the lion's share of people at some stage of the game have to do some kind of gut healing, like, I'm a bit of a I'm a bit of a bear when it's saying, you know, once a quarter, not a bad idea to do a 30 day cleanup reset.

Peptide Protocols, Recovery, and Tissue Repair

And maybe if we did that one quarter, we wouldn't get into so much trouble every once, all the other times. So okay. But there's let's I kind of want to get you know, we don't we don't have a ton of time left.

But I do want to get to a place where people are going to walk away from this, knowing a little bit more about peptides than they did when they walked in.

And then. But before we do that, you've talked about neurological issues, structural issues and immune dysfunction. So there's like three different places and there's probably more.

But let's say there's three different these three different pathways, if you will. That could be driving an issue. How do you differentiate between the three, or how can we help people to get an idea of what might be driving their issues.

So that gives them a sense of where to start. Three hour concussion I know, I know, give us, give us. Just like the headlines and a little subtext. That's it.

That's why I'm trying to think through simplifying that discussion. All right. I know I can see the wheels turning. So yeah this is where, you know, doing some analysis like I said, some some more advanced blood work is good actually doing some diligence on you know I said might be microbiome some evaluation.

This is super important to identify. Like if we've got that inflammatory pathway again usually almost always the autoimmune or starting in that that gut.

Right. Which is going to be if you've got immune based issues, they're going to be down that down that path. The neurological comes back to again finding the right practitioner.

And I've got resources if you want to try that, you know, online or with online people, that is something that you can test down that path. Okay. The I don't know if I'm answering your question well enough, but I think if we dive into some of the peptide specific, it might answer the question, let's do that more, more direct way.

Let's do that. You start. Yeah. So activating the system like that's like a great thing that peptides can do. Right. And again we talked about cleaning the signals.

That is first we also need to supply the materials. You know saturating that tissue. And then talk about amplifying

those those type of those signals.

And I don't want to bore the listener with like remedial peptide details, but I think covering some of the base peptides and what they do would be appropriate.

Yeah. Okay. Yeah. Well okay. So let's start with you said you we want to flood the area with what you want to load up the construction site with the materials that it needs. Yes.

Correct. Right. So by that I'm guessing you're talking essential amino acids. You're talking about supporting collagen, supporting healthy tissue protein intake like that.

Exactly. Those are the structural components you need. You're starving yourself. You're injured. You're not going to even if you give the signal, the materials not there.

Exactly. So having good quality omegas in your system, making sure that they're not oxidized. So that is super important because a lot of them are. So ensuring you've got a good chain with that glycine is a is really great.

Typically again if we've got somebody that's got maybe auto immune or high stress or these other issues that are almost always we've got a problem with sleep in the mix of that.

So I would like to use again these are raw materials that are needed. But you would put in some magnesium and glycine before bed. That's going to help with sleep.

Glycine is going to be the raw materials for our ligament collagen right. It would probably put in NAC earlier in the day because depending on methylation status it might create some amplification.

But the NAC is going to work with the the glycine for creating glutathione, which is probably again reduced in these populations due to get higher level of oxidative stress.

So it's going to help with the clearance of some of those things that are driving that high level of oxidative stress is going to impact the neurological signals and cascades that we're talking about.

So this is all going to help build that up. But it's also building the raw materials with perfect within this. Right right. Next. So with that I would also think about like there's two different there's like our cellular signals.

And then there's our hormonal like signals that can kind of build on those same things. So but I'll switch over to hormonal in a second. But now what we have done is we've supplied some of the raw materials to that site.

Right. With those raw materials we may look at like, again, if there's potential like lack of blood flow, tissue, tissue quality issues, we've got tissue quality is really important.

Think about hydrated tissue for signals to move. Right. So things like LCT, Citrine, Hno3 actually even lactate. That's why my formula like these vasodilators are going to help with along with you know, some simple creatine and things like that are going to help create good quality tissue.

That's the substrate material in the environment. If we've got like a soft tissue ish kind of related product, again this is going to really important.

Now we start with okay, now we've got a construction site with the materials and BPC. BPC is essentially like the foreman. It's of the site that tells the materials where to go.

Okay nice. And then from that you would add TB 500. TB 500 brings in a level of inflammation. So that Foreman he's a little disorganized and materials all over.

So it comes in like all right let's clean this up. Let's get this good. But here's here's the blueprint. They're they're the

architect. So they're coming in at creating like here's the yeah the plans for the house.

And that's because it also affects the protein called actin, which takes about 20% of the cell and the structural component of it. So that's the archivist. So you got the foreman.

You got the architect. And I really do like the GHQ in any of these. It goes beyond one. It definitely affects the, you know, the tissue particularly like this tissue, ligaments, all those but FX 4000 different healing pathways.

And more importantly it shows some really interesting things. I know there are rat studies but around neurological tissue as well. It's the studies are with, you know, TBI induced.

I have seen it over and over again. I was the first person to publish healing protocols with GCHQ and people. It's time I remember who the bio longevity lab j j at the time he called me a long time ago, like eight years ago.

He's like, why? Why are you doing that? That I use that in my hair creams. Like, this doesn't make sense. I'm like, trust me on this. Like it. So I started incorporating GHQ when I read that it up regulates collagen and elastin.

It lines. It, realigned the the filaments. It reduces scarring and improves wound healing. I'm like, why isn't this part of our healing stack? It's the master craftsman.

It leaves it in better condition than when you started. It's doing the finishing work on that kitchen. The nice molding in the house. GHQ is the master craftsman, leaving it in better condition than before.

And all these things are actually and this is I'm going to tie. So we're going to talk to hormonal signals. And then we're going to talk about amplifying that modalities and how all that ties in.

I'm going to wrap this really quick because we're running late on time. But giving you some time go. So you hear you've got some other things going on there called like, you know, angiogenesis, the formation of those micro capillaries in some of those areas.

That's why I brought in those, not just the tissue quality, but now the vasodilation of those micro capillaries to feed that tissue, that that tissue perfusion is what we're driving.

And now we're enhancing it with the substrate materials, not just the peptide. Okay. And then we've got KTV which you can throw on. Now if we've got if we've got the auto immune or other stuff, it's definitely in there.

And it again started as an oral because it affects the mucosal lining pretty heavily. So it's like that may even stay oral. But we might switch it to an injectable at that period of time.

And it's more of your insurance. It's hanging out there. It's the firefighter going hey yeah there's something starting. It's that don't over respond because, oh, you know, there's a little fire in a trash can I got a full thing.

We're shutting down. Oh my God. Five alarm fire like you want. The body is responding appropriately because as soon as that happens, as soon as there's a fire, there's nobody listening to the foreman or the architect or the master craftsman anymore.

So that's what that is. It's insurance. Right? It on that end of it. Now we would add them. We talked about the glycine. We talked about the knack, the sleep quality.

If there's an immune response we would probably start slow because these things can trigger immune response particularly if there's GI issues. We wouldn't start these right it at all or move them to later.

But using something like CJC and iPam. So this would be time to properly based on the response. And but the huge thing there, when it's helping it's releasing, it's causing the well it releases causes the body to release HGH.

We've got two different pulses there. So we've, we've got we're affecting the ghrelin hormone and we're affecting the hypothalamus. So two different triggers to release.

And then the liver releases IGF one which is incredible for a healing compound. And so again that's going to help a lot to again with some of these particular structures that we're talking about with back pain.

And it helps enhance sleep really effectively right away with a lot of people, not everyone, but a lot of people. So boom, now you just nail that. You you clean that up and you add sleep to a sleep compromised person.

That's happening that we brought the inflammatory load, brought the immune issues in the bay. Then we had that on top. You're at this point now where you're starting to have life changing issues in the sleep is having an impact on the brain.

And neurology, which is also a massive driver of the pain. Okay. Now let's take it to further amplifying modalities. Pulsed electromagnetic frequency.

What is it doing? Well, one, a lot of people know around like charging that cellular, creating that membrane potential at the cell. Right. So it's charging the batteries.

But from a physical perspective, it that pulls a title of that magnetic is taking those micro capillaries and pulsing them in and out and increasing that proficient of that hard to reach area.

That has been a chronic issue. So we're talking this is where we're starting to target some of the chronic tissue that you haven't been able to get for a long time.

Now. You've got nitrates creating vasodilation. You've got new micro capillaries forming in the problematic tissue. And now you've got a mechanical driving that in there.

I have really great success with temps and chronic back issues in this combination can sometimes be a major game changer. Right. And you've got some heat usually in the mat and whatever.

Frequency is huge. So I'm not recommending any of my amplifying modalities. It's always frequency. So I'm not necessarily recommending going to a clinic and getting a the really high end treatment once a month or every three weeks frequency.

So low quality map for eight minutes twice a day. Money, right? Yeah. I find watching TV, I'm on my mat if I'm watching TV. But yeah, red light therapy probably skipped that one pretty quick.

But there's an impact on nerve. The cytochrome c pathway is really interesting. But the the impact on just reducing nerve sensation and pain sensation following because you've got those neurological pathways that are just lit up.

So the more we can dampen that, which is not necessarily a peptide thing, that's a neurological pathway to the brain that's really lit up and firing. Well, we're starting to dampen that as well.

So we've improved the signaling for all the healing. But that is not affected as much. Right. So it can be but don't but don't BPC in TV I know TB for I don't know about TB 500 as much, but don't they both also help with nerve.

They do and the. So those are helping in that. Yeah. So this is so that's providing the healing. And this is also just creating reducing that signal noise the right. Yes.

Yes okay. Yeah yeah yeah yeah yeah yeah I love the red light for all this. So. Yeah. And then have you ever know. But wait you ever noticed if you do your dosing around your red light timing, you will often see an improvement in your hrvoje value.

No, I gotta stop today. Try that out. Okay. I, I don't have anything there other than there's something similar with

methylene blue, but in GCS blue so that I.

This is pseudo but like there are two different but yeah observational served me well. So shockwave I used with peptide therapies for like a decade or more.

Huge results. I mean I talking like I've had athletes come to me with a torn quad can't even, you know, walk. But they've got a competition world level competition three weeks from now, two weeks from now, we'll do this.

We'll do the shockwave because it'll drive that much faster. And I will have them setting records at world competition in 2 to 3 weeks after having a torn, you know, great.

Like, wow, are you using variable blood restriction? Oh yes. The that's a whole nother blood blood resolution. That's another episode I know. But I think that that one is just because it also drives up micro vasculature like it improves perfusion.

It increases your growth hormone like it does a lot of the things absolutely mechanistic. So the big powerful case studies I've done do all this with with BFR because of the amplifies many of these.

So when the equipment that I was talking about designing, it was allowing people to get into a deeper state of fatigue by improving the signaling to the brain and thus the movement right, that deeper state of is greater oxygen and desaturation, which is then the driver of PGC one alpha, which is like so all the signals.

And fr is another way to do that. But you can also do it with like let's say flywheel or a mechanical drop set, like if you have a dumbbell that changed weight like I had designed while you're lifting.

Yeah, those are all the same pathways to change the signaling network via exercise that if that you can also do. Can you tell how excited he's getting you guys.

Like he's talking faster and faster and fats. So anecdotal evidence shockwave with peptides increases the response from the engineer in me. I just went my theory is it's just like if you put a vibe on a, on sand or in a mechanical environment like concrete, wherever all of a sudden everything just diffuses and rolls out like amazing.

Like it. Just so that must be what's going on in the body. It's driving that those peptides physically deeper into those areas. So I'd apply it with like a penetrance that would drive deeper as well with this whole protocol.

But I'm like, there's something here. Well last year okay. The they they were doing research on staff resistant or sorry antibiotic resistance staff resistance math.

And they found that using shockwave delivered it into the cell by activating the seven receptor and temporarily and decreasing or increasing the permeability of the cell membrane.

Okay. Wait. So are you saying that antibiotic resistance of bacteria is actually about the bacteria having an impermeable cell? This is about delivery.

This is about delivering the delivering. It's about it's delivering the antibiotic to the. So it's not giving to the cell. And so they use no no I know that.

But but basically what you're saying is the resistance what we call antibiotic resistance is somehow the bacteria or whatever the the pathogen has developed the ability to not be affected by the antibiotic, but the but the shock wave breaks open that like, it cracks the shell, if you will.

And then the antibiotic. No kidding. That's crazy. Which totally explains why the incredible results I get from using peptides right before or after a shock wave therapy treatment in chronic issues.

So this is great for chronic or even acute issues to do shock wave with that injection in those areas and it. So if

you've got a hard to reach case it is incredible.

But I like that is I've researched backing what I've been doing ten years now. Now it's with that drug, but it's the path like it's the RX seven receptor and the cell membrane like it's like, is that that's very cool.

So anyway, that's a lot of the stuff I've done for the years. Like I follow like I'm not in the medical profession side. I'm not like my my background is in engineering.

It's in seeing patterns. It's in that application. And so I go with my experiential because I have that's my uniqueness is I have almost 25 years with this.

And sometimes it's really cool when you see the evidence come back around and go, oh, here's the system of that is actually happening. That's remarkable.

Well, we all learned something new today, guys. Okay, Chris, we are going to have to cut it off. But I you know, we'll be doing a podcast together and we'll I won't put that kind of a time limit on us.

We're just going to dive hopefully I didn't know we're on too long. So no, no, it's all I don't think anybody's complaining at this point. So thank you for your time.

Thank you for this. Please let people know where to find you. And yeah, all your amazingness and yeah, enhanced executive. That's where you can find me.

And executive.com coaching consults, supplements and stuff that we use for health interventions. All that. Is there. Lots of free resources. Our communities free and you know, some ebooks on some of the topics that we've talked about.

So yeah. Beautiful. Thank you so much. This was, as expected, fascinating and enlightening. I really appreciate your time and I look forward to talking to you again and forward to it. Thanks.