Introduction and Root-Cause Medicine

you're taking all these supplements and the peptides and everyone wants to play in this fancy new world, which I love because that's what we integrate.

But you are missing the foundation. So I say you got to eat right, sleep right move right talk right poop right. so that you feel right. And the problem is we only usually begin to feel or pain begins to manifest once you have two of those pillars knocked out.

That's kind of a slow drip that happens over time. Welcome to Take Back My Brain with Lori Hammer, where real healing starts in the brain. I'm Lori, a functional nutritionist and mom who's walked the path from anxiety and burnout to clarity and calm.

Each week, we're going to dive into brain-based tools like amino acid therapy, gut health, fasting and faith to help you reclaim your energy, emotions and sense of self.

Hello, welcome back to the podcast. I am delighted that you are here and I'm so excited. Today I have Dr. Daniel Keeley with me today and we are going to dive into some functional meds, some microbial medicine, so you're not going want to miss this.

So make sure you listen to Dr. Keeley is a functional and integrative medicine practitioner who helps patients reverse chronic disease by getting to that root cause.

And we are going to dive into that today. He specializes in Neutrogenomics, Microbial and Cellular Medicine and Advanced Diagnostic Testing. So Dr Kleeley, welcome to the podcast.

Thank you for having me. It's so great to have you here. So you talk a lot about root cause, total body wellness. Can you kind of define that for my audience for me?

Super simple. If you look at a tree, the foundation is the root causes. That's what's growing beyond the surface, right? That what we don't see. I don' like to guess, I like the test and treat.

We check under the hood in terms of what driving things that are above the level of the roots. Right. So if you're looking at, um, again, a tree, you see the branches are a little bit, scaley or full of mold or the leaves are falling off and withering.

Obviously there's a problem, but usually and often enough, the problem resides below the surface undetectable to the eye. And so my goal is ultimately to uncover what's driving those symptoms physically or on the.

Which is coupled with what going on on internal biochemistry. I love that. So was there a point in time in your life where you had to find the root cause for your own wellness and change your lifestyle?

Pain drives purpose. That's why I do what I. Unfortunately, it started off early for me. There was this, I mean, was a medical malpractice at the time.

What happened with my wisdom teeth extraction? And it's like God doesn't make mistakes, but yet my teeth were seen to be impacted. I didn't have any pain or anything, needless to say, they had to taken out.

And the surgeon at that time said everything went perfectly. Well, after three rounds of antibiotics and very aggressive painkillers, I was in diabolical pain and I went just for a second opinion to my dentist and he said, well, the extraction and go, while you slow about a piece of your tooth out, he put on some gauze with some chemical to

dissolve the bone and instantaneously my pain went away.

Wow. But yet that set. the stage, you know, for some GI issues. But the GI issue is actually are transgenerational. I was a C-section baby, which creates a very specific microbial signature.

We realized that in terms of babies that aren't C section, that are not vaginal, they have higher rates of plexiella, clostridium, streptococcus, staphylococcius, oral microbes that were found to be then translocating into the gut.

We now know the consequence because when you have a poor microbiome, especially from birth, Reduced species of bifidobacteria or lactobacillus species we see later in life now It's prevalent this very ubiquitous atopic March or eczema allergies asthma all of which are normal in allopathic care But we have begin to normalize the abnormal right?

It is the homer symptoms of the world sick equals healthy, right That's this has become the problem and so my situation is Just like many of my patients, with many patients that's why I empathize with them.

Fast forward many years later is when I go to the Mayo Clinic as a very, very young adult because I'm defecating six to 12 bowel movements a day, all of which are very runny and liquid.

And I got to them and they diagnosed me with lymphocytic colitis but the treatment plan is Imodium or Peptobismal three times a week for 12 weeks. and I'm no better off.

I have to stop after eight because of severe abdominal cramping. And then I just thought this is the zenith of modern medical care. This is just my life.

Microbiome Basics and Transgenerational Health

For a long time, I normalized that until I realized within my own pursuit in the medical world that there definitely is a better way and a way that within the scope of what we're doing now is Diagnostics have begun to advance and yes, it's above the standard level of care.

So insurance doesn't cover it, but it gets to the underlying drivers and it helps us heal much like it helped myself many years ago. Oh, wow. That's an incredible story.

And how many clients have you seen over the years? I know I've seen hundreds. with similar stories, right? Even with just, you know, getting diagnosed with colitis.

You know when we changed the diet, I have so many clients that just change your diet and all of a sudden it stops. I had a gentleman not too long ago and his wife is like, they've been married almost 30 years.

He's like I've never seen him have a solid bowel movement. And I'd never known him to have one in 30 and he's, like oh, it was way before that. So like potentially 40 years this guy had never had We're going to move the foods that he's sensitive to.

All of a sudden, he has solid bowel movements. His anxiety goes away. A few, you know, supplementations here and there, but he is like, I feel freaking amazing.

Like, well, yeah, because you're eating toxic stuff. When you plug the holes, improvement comes quickly, sometimes overnight and nutrition is instruction.

It's no longer benign. it's going to heal you. And we were just on our podcast and had a wonderful conversation and the principle I always say, if nature made it, it is okay.

If man made its day, lay. Yes. Yeah, I totally agree. I would love to dive into the microbiome because you are such an amazing voice and expert in this field right now, and the micro biome is getting a ton of attention more than it

ever has before.

And I love your term, microbial medicine, because we're more microbio than we are anything else. So I will love for you to define that and then let's just dive in to it.

By a factor of 10 to 1, it's estimated there's 100 trillion bacterial cells and about 10 trillion human cells, and it is estimated we are 57% non-native human biology and 43% human.

So we're more kind of walking bacteria than anything else. And it's even suggested just like in your pinky alone and even just about the diameter of right outside your pinkie nail, maybe approaching the middle of the pinky.

you have more bacteria that reside on that little finger than the residents in the United Kingdom. I mean, it is remarkable you don't understand in our modern culture how we've created this kind of sterilization or germ mentality, right?

We have to kill everything. We use hand soap very aggressively with triclosan and these non-native chemicals. And same thing when we go after bat bugs in What we don't realize is that we've evolved with bacteria, with fungus, protozoa, parasite, amoeba, archaea.

We've involved with mold, we evolved a lot of these pathogenic strains. The problem is we never evolved in conjunction with that, heavy metals, environmental toxins and our modern stress and trauma induced era.

That's really the big elephant in the room. But going back to the microbiome, decoded the bacterial genome, if you will, we use shotgun genomics to be able to see what level of species you have, what's the richness, the diversity, looking to Shannon's symptoms index.

We're able too discern very quickly what are very specific healthy ratios for your ancestral DNA and the ancestral part is very relevant because what your microbiome looks like if you reside in Asia.

This is very different than our European ancestors, very differently than their Central American, North American and onwards. So it's estimated that when looking at an identical twin, while they are identical and you and I are 99.98% identical, our microbiomes are largely different.

For identical twins, it was about up to 40%. How interesting. that becomes your personalized signature and what you feed your microbes feed you and that's what largely we neglect right what we're doing is in a sterilization culture it's a very antibiotic rich culture and we see this now in our kiddos where it is estimated that one in two have chronic disease one and three with eczema and allergies and the story continues we are still to cognitive issues and behavioral issues severe mental health issues with anxiety and intrinsic thoughts so this is further exacerbated as the children evolve but the problem starts earlier on with our parents because what mom and dad has is passed to kin and what their parents had is pass to them and our microbes are transgenerational and that's why when we're looking at a full medical intake we are looking familiar history, not necessarily to the impact, you know, look at, cancer, stroke, heart attack, diabetes.

To me, these are metabolic issues. Genes play a small role. I don't want to negate them. It's the environment that pulls the trigger. But ultimately, it's our microbiome that's passed on transgenerationally that affects every single biological system in the body.

That just blows your mind. It just bulls my mind every time I read about it, think about, it help people with that. Like that is just absolutely incredible.

When we're talking about longevity, so on my one side of the family, like my mom's side, they don't live very long. If you look at them, you know, You see all sorts of the same different thought patterns.

So, eating habits, all those kinds of things, but they clearly have the Same type of microbial stuff, because they kind of all smell the The same. Does that make sense?

So I think that always comes from that microbio piece. And on my dad's side, they live a really, really long time. Do you believe that those types of Things are microbially related?

You know it's interesting when you suggests smell, right? And that is a huge driver for connection, pheromones actually matter. Once upon a time, that's how we were very much attracted to the opposite sex.

Now we're masking now with these very chemical rich fragrances that are very endocrine disrupting, unfortunately. And so I'm at the point where I don't even use deodorant often enough because if your microbiome is healthy, you don' have to.

how your stool smells is very qualitative, how you smell is qualitative. If there's a yeast overgrowth, if there is too much acetylaldehyde production and then not only from nutritional consumption, but from a fungal over growth, let's say, because you're eating then too sugar or sugar swingers and that's feeding the burden.

Well, that is definitely providing a specific microbial expression because Food that feasts on kale is very different than meat, which is different from potato and very much different to other starchy carbs, or worse yet, candy and processed foods.

So, you're absolutely right. Everything is instruction, everything is definitely connected. In terms of familial history, again, it's interesting because, when I talk about nutrition with my patients, nutrition is personalized.

All the time I get, what should I be eating? I have no idea anything about you let alone your microbiome and until I look under the hood I'm definitely not certain but just as a general rule of thumb I'll provide some very actionable insights.

So number one I say eat what your ancestors ate because that's largely what you're going to do best with.

Nutrition, Circadian Timing, and Sleep

The reason being is because, that is going be your very specific microbial signature. So they're going to be able to help break down your nutrients as well as rebuild the wall of your gut.

So short-chain fatty acid from sacrolytic fermentation or proteolytic fermentations to create these post-biotics in terms of butyrate, acetate, valerate.

And then you rebuild that gut lining so everything that stays in the gut should be contained in that. Instead of what's happening with disease, which is immune dysregulation, and high inflammation.

That's how the body fights. The immune system has very specific instruction with inflammation and now we have set up the stage for chronic disease or metabolic dysfunction.

So eat what your ancestors ate, that's kind of my rule number one. Second is eat seasonally, That is very, very overlooked. Berries and avocados do not grow year round.

Are you sure? maybe somewhere close to the equator where things are more tightly controlled, where we actually upregulate the production of amylase, an enzyme to break down starch and carbohydrate much more readily than efforts to live within our environment.

But we're not doing that. We've evolved to migrate. That's okay. And that's why certain foods that grow seasonally in terms of, you know, our Noric ancestors and maybe proliferate on a higher fat intake do much better because that is how they have evolved, right?

Eating seasonally is very very relevant and then the third one is going to be eat locally right not food that has that's travel it's interesting go back to avocados we band tt here but what do we do export to meds to go where they do they spread on their avacados and come straight back.

how interesting, right? And so eating seasonally, eating locally matters, ideally food that growing in your backyard, one in two of the 1900s had a farm, now that doesn't exist anymore in our kind of hybridized monoculture system, but we have to rely foods from that's traveling far, sitting on the back of a truck, often sprayed in wax and very kind replete of nutrients.

So it's very difficult because when we eat, the body goes through three phases, Toxin elimination the second being nutrient absorption and then the third being.

Cellular repair but often we never get to that third tier only because we're stuck in layers one and two that proceed that so those are kind of my. Biggest three and that ideally in this modern era you know your.

Eating organic, grass-fed, wild-caught, you have to make that distinction. That's the problem here in the United States because everything's heavily sprayed versus other parts of the U. S.

which I've seen that to be the case because I lived abroad and I know that when you buy organic quote-unquote literally the next day it's full of mold.

It spoils. I can't get that on my local Whole Foods. Nothing against them. So it is a very harsh reality here. But then perhaps the biggest one is the timing.

And we see that which within Sasha and Panda's work with our circadian biology, living in conjunction to the cycle of the light and the moon. You're not meant to be doing everything, anything after sunset other than sleep.

So my philosophy of, you know, going to bed at the same time, waking up at same, time eating at a safe time. Yeah, there's no credence to that. The body likes regularity and routine.

But what if that should happen earlier in the summer or in winter? because the sun is setting earlier. Maybe we need less nutrients, we have less vitamin D, our immunity is a little bit more vulnerable.

We need sleep more to heal because that's when the body metabolically cleans out waste and our hormones replete as well. That's kind of how I integrate nutrition because it's going to be fuel for your microbiome.

So are you saying that in the summer we could eat say at eight o'clock because the sun is still out. But in winter time we should move our supper meal back to maybe like five o clock when the Sun is setting.

So 100% yes and 100 percent no. And the only reason I would say no is only because that ideally you're not eating close to bedtime. So if it's sunsetting at eight, but then you go to bed at 830 and you just had your meal at it, that's still a problem.

Right. Ideally you are avoiding any sort of intake three hours before bedtime, obviously foods take, certain foods, take longer to heal like protein three to four hours.

You don't want that fermenting Overnight you want the body to be able to break that down before you go to bed such that then you can now work on the other repair systems of the Body I love it.

So ideally so if you were eating like at seven o'clock in the summer you got about at 10 1030 But in winter time, are you saying to move your bedtime even up?

further A hundred percent. Yes. The problem is we evolved right with this industrial era and the technology, the light, right. It has become, allowed us to become more productive.

So we've made great advancements in form of technology and even in longevity. We haven't, we don't have to deal with some of the same threats as we used to largely, which was scarcity, fruit scarcity or being hunted or.

Being bitten or, being killed in some respects. So that safety profile was increased in a sterile environment, which

helps in some component. But it doesn't mean that we're living healthier lives because if you look at what's happening with the next generation, it's estimated 290 chemicals in the mom's birthing placenta, estimated that, we are going to live longer than our children.

That's a huge problem. Right our environment dictates our genetics are the expression of our genes and so while our jeans haven't changed largely in the last millennia it doesn't explain the prevalence of cancer auto immunity cardiovascular disease diabetes all timers etc.

So unfortunately we're not getting healthier necessarily so we have to be very mindful living with intention. Again so in terms of. trying to get to that earlier.

To me, that's the goal. Again, living in conjunction with the moon and the sun and that dictates our circadian biology. Every single cell organism in the world creates melatonin.

incredibly therapeutic. It's an antioxidant, it's antiviral, prevents again cancer. This is why tumors cannot proliferate at night. So the premise behind getting to bed earlier helps us sleep.

And so we weren't designed to push the envelope in the evening where we're trying to get more work done or we were staying up or were rushing our kids to activities, which again is a whole nother discourse as I drive my daughter to dance at 930 at nighttime which is just crazy but I know that she loves it so I'm trying play the part of you know not be a dictator and dad understand there's a benefit to doing what we enjoy but we're not necessarily setting us up for success either with certain things so i don't believe in balance i believe priorities so finding kind of that the priority within work works for you but understanding your circadian biology will dictate your health outcome.

Yeah, absolutely. So how does that happen? How does, how well we sleep, when we asleep? What, How Does That Shift Our Microbiome? Hey friend, just a quick break to remind you if calming your brain is the missing piece in your practice or in home, my Mind Thrive Certification Course teaches you exactly how to do that with targeted amino acid therapy.

It's real science, real results, no band-aids. Enrollment is now open. Link is in the show notes. Back to the Show. Well, interestingly very, very severely because it's estimated that one or two bad nights of sleep, whether the sleep density is off, meaning the quality or your depressed REM or deep sleep which I love tracking data.

We're very data driven here. we quantify almost everything and we can see that without wearables. That's the beautiful part without having that drive you or anxiety, right?

But it will, should drive how you prioritize your lifestyle. So looking at the quality of your sleep will dictate how insulin sensitive or resistant you are.

And when I look in terms of healing, the first thing which is critical is oxygenation, your ability to drive the electron transport chain, to fuel the mitochondria, generate ATP and to derive function, right?

So what happens is with one or two nights of bad sleep, bad asleep meaning, you know, four to five hours, just under six hours because what happens is if you're in bed for six you actually sleep for about five the body goes through stages of sleep cycle.

Exuming you are not you know highly toxic or you don't fact it but new list to say is you can track that you you get. Specific inputs looking at respiratory rate or carbon dioxide and definitely hrv when you look at certain tech now.

The impact happens very, very quickly. We shift into a very specific TH2 protein branch, which is more pro-inflammatory, leaky in the brain which that's your specialty and we're looking now at cognition and in brain chemistry and the blame barrier is very very thin and so that interplays with now our microbiome because we see very different specific signatures in our micro biome ones there are much more pro-inflammatory so we have the prevalence of more proteobacteria, gram-negative bacteria which synthesize more of these lycopolysaccharides which is kind of this gram negative bacteria that when they lyse they spew out these severe endotoxins just like

chemical messengers that cross that blood brain barrier and now drive beta amyloid plaque or the prevalence of cognitive decline whether that's dementia or Alzheimer's in Parkinson's or autoimmunity such as MS.

So there's that interplay that's very very fragile and it's a very predicated upon healthy sleep. So key, so key. And we talked about that in your podcast, too.

So I mean, sleep, you don't heal. If you Don't sleep. You don' heal, So it's like, I always hope you'll make that your priority. if we do nothing else, let's just make your sleep your party and do everything we can to get you those, seven, eight hours a night.

I love that because it does affect your microbiome. What's the biggest mistake you see people making when they're trying to heal their microbiomes? You know what's so interesting?

My answer immediately is neglected. I just got off of a patient call right before this podcast and it was a referral and a consultant. He goes, Daniel, evaluate my supplement stack.

Okay. And he goes through a list of, you know, seven, eight different supplements, all great supplements. Right? I haven't done a nutrigenomic test for him.

So I don't know what their predisposition center biology, why we do that too. hedge against specific risk factors, but also plug any holes in your biology from a nutraceuticals perspective.

We can see that now, so I can practice what I call the epitome of precision-based medicine. Second to that, I'll look at a microbiome test to look specifically where the ratios are off.

What species have dominated?

Foundational Mistakes in Healing

Are we missing some key commensal strains that we now have identified and we understand their impact on rebuilding colostocytes and enterocites, helping with restoring healthy immune function.

But long story short is he gave me a list of supplements and yet I asked him, okay, how's the sleep? And he goes, well, i'm going to bed, probably 10 or 11. I wake up every morning at four.

Okay, red flag number one. How is your stool? Well, I go probably once about every three days. Is that normal? Yeah. Well you tell me, imagine if you go into the toilet, you defecate and you let that ferment there for three day, how's your toilet going to smell after day one?

You're rotting from the inside out, but yet you're taking all these supplements and the peptides and everyone wants to play in this fancy new world, which I love because that's what we integrate, But you are missing the foundation.

So I say you got to eat right, sleep right move right talk right poop right. So that you feel right and the problem is we only usually begin to feel or pain begins to manifest once you have two of those pillars knocked out and that's kind of a slow trip that happens over time.

So, that is what we don't see on the inside right going back to the roots that are kind rotting internally, but then the leaf start falling. So that's why I like doing a testing.

I don't like guessing, I, like testing and treating, but ultimately it's neglecting the foundational components that we control, right? Do not prioritize sleep, not prioritizing healthy motility or understanding what that means, because we have normalized the agronomist.

As I said earlier, seasonal allergies are not normal. That is barrier dysfunction. Same with asthma, same with any sort of skin or topical issues. same With any joint issues or inflammation.

right in the aging population perhaps with your females as your hormones go off the planet and you become very high risk factor for cardiovascular disease or dementia or osteoporosis worse yet so the realities there we understand that certain things are foundational and serving your your healthy commensals is that foundation but the way to do that if The way to do that effectively is doing a stool test, evaluating your microbiome, and seeing where the ratios are.

So we've identified, accessorily as well, understanding, okay, what should be right for you. In general, we know kind of what's going to be on a large platform.

We can be hyper-specific in terms of demographics. Needless to say it. That's what I do is I quickly look to see where do we need to restore these healthy ratios because what happens it's like we've almost become God in some respect or very reductionist in isolating nutraceuticals right and not to undermine because we have very similar physical philosophies in terms of treatment right we're aiming to plug holes right someone doesn't need a shotgun formula if they're missing you know one nutrient right but typically it's not only deficiency in one nutrients just like we are not one organ system or one tissue or joint and that's what a lot of allopathic care treats right if you have a something going on with neurology, you're going to a neurologist, but the problem is multifactorial, yet you are trading the end stage.

Often enough, it starts with looking at under the hood, what's going at the level of the microbiome, and then repleting what is necessary. If your question is where do you start after the fact that let's not neglect it, well, definitely a GI test.

To me, that is testing number one, but ultimately it starts really with a simple question. Are you eating right, sleeping right? Moving right. Talking right pooping right mastering the foundation and then plugging those holes.

Right. If you have those things mastered, so the eating, right living, talking, poop, all of those, do you feel like you need anything else after that?

Well, it depends how someone feels because in a modern environment, It's very, very difficult. You have to, we don't live in vacuum, right? We're going to go through unpredictable challenges, whether that's death, Whether that, um, I lost a partner, Um, in, my business as an example, you go Through challenges that hit you really hard, Right?

So adversity, while it tests you, things, You know, certainly happened for a reason in many circumstances and it teaches us a lesson. There are things that we need to do to support ourselves during that time.

And caregiver syndrome is real, right? My partner says all the time that you prioritize everyone else's health at the expense of yours. I'll go days without eating because I'm working back to back-to-back, and so that's not necessarily healthy.

It's interesting because, I was at a conference speaking and one of the practitioners stood up and she said, your quote really resonated with me and it's, if you're selfless, you lose your sense of self.

but I look at my parents, it's an immigrant story, they sacrificed everything for my brother and I to be able to achieve what we have. And so, again, there's no balance.

It's a matter of priorities, certainly, but maybe because again we're biased because we only see sick people, right? But I do have the one percenters that just like you, you're doing everything right.

So then the question is, okay, is you feel great, let's get you feeling superhuman. Now with modern science, right, with the implementation of stem cells and exosomes and plasmapheresis and peptides, certainly.

Now I can get someone superhuman and now I could help them heal if they're not doing right in half the time. Right. I love that because I mean, generally speaking, I feel amazing most of the times.

We were just talking about sleep and I went to, were you at the A4M conference? That is where we connected

within doctor talks. So I was there. All of a sudden my brain was like, was that where it was?

Anyway, yeah. We connected there and I didn't sleep hardly at all while I there because the hotel room I had, the light was just filtering in all the time.

When I got home, I get sick and people are like only picked up a bug. I'm like no, my gut was messed up because I did not sleep. So I'm kind of trying to figure that out again.

And so, I mean, things happen to you, and things happened to me. We have to go back to those foundational pieces. So, as we're going into all of those foundation things, there's a lot of fun things that we spread out into and I always kind of hesitate to talk about those because I don't want people to go down those, those trails until they've addressed the foundations.

But I would love for you to dive into peptides because my love from amino acids. I think peptide are amazing. And I personally dive in to those in my practice, but I, I'd love you too.

What's the, what's, the excitement about in them and how do you use them? Drum roll, please. It's like, Let the audience be on a cliffhanger for a moment because I really want to address something key that you said.

We are at the epitome of cutting edge research, cutting-edge science, evidence-based medicine, right in a conference where we are locked indoors, we don't see any light, We're not outside getting clean oxygen, Right, were not eating on our regular schedule, Were certainly sleep deprived as you've said, and yet we're preaching about optimal health.

How interesting that paradox is, right?

Peptides and Advanced Recovery Tools

So what we are forced to do to be able to help our patients, many patients don't see, in order to stay current, stay relevant, we expose ourselves to very extreme measures just in provide the best outcome that we can, not only for ourselves or for them, but how interesting because we're trying to practice what we preach and yet we are forced to kind of be exposed to our modern environment where we living in one box, going to another box getting into our care, to transport to other box to go to the bedroom in another, we never outdoors, were not crowding, enough vitamin D, we're sleetified, were overworked, where under recovered, malnourished, overfed.

And so this becomes the problem. So I just wanted to underscore that for a moment. But in terms of helping heal with the advent of peptides, you know, peptide science has been around for decades now and the research is unequivocal.

with our counterparts in Asia and Russia. They've been doping the Olympians for years and the US has recently caught up. The evidence is certainly unequivocal and that benefit is remarkable.

I can't even make up these stories because in terms of rehabilitation as an example, I have people walking into my office with crutches two days later walking off.

And it's the same thing with me. It's like I've recently torn ligaments, broken a toe, and my recovery is half the time. And even with our younger athletes, when we utilize them, it is no different but even faster because kids bounce back even fast.

But looking at gut as an example and the implication with inadequate sleep, so something that we go to right away is BPC 157 and TV 500, which unfortunately are now on the come and you can't necessarily compound them.

But needless to say, there's certain workarounds with similarities of various peptides. But what they do very effectively, so BPC helps rebuild the mucosal membrane of the gut.

It is extremely therapeutic in healing the got lining. high signaling capacity of bone connective tissue, neurotransmitter vehicle as well. And we use it with any sort of therapeutic gut treatment because of its impact on the level of the gut.

It's naturally synthesized in our gastric enzymes. So what it does, it helps rebuild that gut lining. helps restore gut integrity, shut down inflammation and restore immune surveillance appropriately versus this overactivity, which to me is the aggressive pursuit of aging and why now aging is termed a disease.

But that's something I always take in my travel kit because whenever I'm traveling, you were never meant to fly over time zones overnight. You would travel by horse and buggy at best.

or walking, where the body was slowly acclimating and you were grounded the entire time, never so close to the sun and really exposing yourself to high solar radiation and the carbon monoxide levels on a plane are certainly what's being pumped out in Las Vegas in the hotels.

So, needless to say, everything is a consequence, but those are the two that are very effective. And the second one, the TB 500, which is the thymine peptide, what's one of the organs that involutes as we age preserving our in our kids that's why we see kids you know that bounce back so so quickly but it's is best for injury recovery for inflammation modulation for tissue repair and action regulation it really helps rebuild extracellular matrix.

any sort of scar tissue, any cellular debris. It helps with the breakdown and cleaning that out. You need to make sure that your lymph is flowing, that you're moving, your pipes are not backed up, and your motility is adequate so that it's eliminating adequately.

That's a very, very effective way. What's now known as the Wolverine Stat 2.0 is with an addition of copper peptide which to me is a genomic stabilizer so people think of it as you know hair, skin and nails and yes it does help with collagen production.

but it also helps with membrane. So cell membrane permeability is absolutely quintessential and often overlooked. We use a lot of PC complexes, phosphatidyl ethylamine, and phosphotidylecholine, a lotta the complex to ensure healthy membrane function so that the body can eliminate toxicity and the membranes are not rigid.

That's a very therapeutic combo in terms of where we start with many patients, but again, it depends what someone is looking for. I think, you know, a lot of what you do is looking at healthy brain chemistry or transmitter function.

And so where we start often enough, it's again very, very contextual. So I don't like painting a generalized picture, but things that work very well, depending on what your trying to target.

As an example, C max, which is commonly again paired with C length. It is interesting how peptide therapy is Very synergistic. It's almost like same thing in nature, right?

You I don't like eating egg whites. I like Eating egg white with the yolk and the yoke to me is the superfood I Don't believe in any super foods because if nature made it there for a reason but needless to say is um To absorb protein, you need fat, right?

So going back to peptides, C-max and C length, so C max is used very effectively to increase brain drive neurotrophic factor, which helps with neuroplasticity, with learning, With cognition, it modulates dopamine and serotonin signaling, Which we went deep into in my podcast.

It's very neuroprotective, anti-inflammatory. So we use that with patients who struggle with focus or brain fog. And then with C-Link, better for anxiety, for calming, and for sleep.

It modulates GAVA. So it's very GABA-nerd. Like it gets it to this calming and stress-reducing pathway, which also helps with neuroinflammation and its reduction.

We'll use this combination, again, depending what someone needs. One of the best, with a capital B, is very difficult to get here in the US, but there's typically sometimes workarounds or if you fly abroad it's used ubiquitously in terms of TBIs and neurodegeneration is cerebral lysine.

So really, really accelerates brain recovery, brain injury, post stroke, again, cognitive decline, and it mimics neurotrophic factors. So it supports neuronal repair and plasticity and survival.

And it also helps metabolic function in neurons. It's used very, very effectively in this decline. There's other ones that you can integrate like dihexafor of memory, but needless to say that it's very contextual in terms of what someone is going through and when we integrate.

And I want to provide even one further caveat because when use peptides, one plus one equal two, but often at one, plus 1 equal 10, the caveat here is you got to eat right, sleep right and move right talk right poop right.

So when I refer to you, you know, that anecdote as I was on a call earlier right before this, and the gentleman asked me about his stack, which was a great stack that he was taking, But he Was going, You know defecating every three days and his sleep was severely inadequate.

Well, At that point one plus one equals two and that's okay. It's going to help you write these. This is where science has evolved where things can can.

the nutraceuticals are going to, things are gonna help you. But you have to master the foundation. And then once you do that effectively, once your layer these things in, like I said, in terms of my rehab population, or in my UCLs or colitis or my Crohn's population.

We are helping them heal half the time. So what sometimes took a year or two, we're seeing almost full recovery within six months to a year i mean it is remarkable how quickly the gut is very forgiving that's what people don't understand your your cells turn over every three to seven five days it wants to heal the problem is this constant bombardment and another simple free tool fasting let your body just quiet and reset Again, another big caveat is that when you're fasting, sometimes you don't get in the nutrients you need, right?

So you become conditionally deficient in some of these aminos and cysteine and glutathione and your ability to detox in certain pathways, both phase one, phase two, and then looking at phase three with elimination.

So there's a right time and a wrong time. I think there is a way to do it. And often people now in this modern culture where influencers dominate, which again, some people are trying to spread the good message, Fasting isn't always right for the right individual at the time, neither cold plunges, nor extreme HIIT training or fill in the blank.

So the question is understanding what is the timing for you and the roadmap. I love it. If you could leave the listeners with one empowering truth about healing the body, what would it be?

If we look at our blue zones, the two things that really stuck to me are movement and community. So movement is medicine, that's why sedentary is the new smoking.

If you look the Hajin or indigenous tribes, what's interesting is there's more seated than we are.

Movement, Community, and Closing Takeaways

While that is interesting, let's step back, how is that possible? Well, while they're sedentaire, they have constant micro movements. They're foraging, kneeling, playing, constantly seated to standing, doing these little small movements, whereas what we do is we need to wake up at four so we can be at the gym at five so, we could inhale the toxic air and I have a clinic that has a gym.

Fitness to me is a core component but that's because our modern evolution is we're then seated for the remainder of the next 16 hours right or 15, 10 hours, 8 hours whatever the case may be.

So movement is medicine, but second to that is community. And that's one thing that I am definitely trying to improve. That's why, you know, I'm doing the podcasting.

I meeting wonderful practitioners like you who are doing things that are very high level. We're generally trying too, to help people as best as we can.

So we're trying build a community, the quality of our relationship will dictate the equality of out health. Same thing, equality our peers, quality our environment will dictated our health, And that's an often overlooked piece, especially within mental health, right?

We are mastering the foundation, but we haven't mastered our relationships in the first being with ourselves. Right. Sometimes looking at my two year old, right.

It's the self-deprecation, the cell sabotage. She's bathing cortisol. And now that she's five, I see a very different maturity, but it's taken a lot of patience and work on my end to be able to showcase that to her because I use this 10 90 rule like this, 10% action, 90% reaction.

Everything's predicated on how we react to it. Right? So can you remove yourself? Can you try to find this other lens to say, okay, can I try and walk in someone else's shoes?

Or can evaluate my action or reaction and how I'm showing up for my friends, my family, partners, colleagues, patients, trying to balance. Remember, balance doesn't mean anything.

It's a matter of priorities. So ultimately, trying to design a life that's intentional because in this modern era with our chemical soup that we reside in, in some respects, it's very, very difficult and we're only more toxic.

One of the most ubiquitous tests I run is a total toxin test looking at environmental toxins, heavy metals, mold microtoxins, PFAs, et cetera. And what I see is that, we are all toxic, that is the reality.

The question is to what degree, so that why mastering the foundation is Ultimately the the key but do not discount the quality of your relationships I think that is so key.

So thank you. Thank you for bringing that up, man. I have loved this conversation. This has been great Thank You for being on I appreciate your mission and all that you're doing you are phenomenal So, thank for blessing my audience Thank so much.

It's been a genuine pleasure And everyone listening, I know that you know someone who needs this message. So I would love for you to share it with somebody who has not heard this yet.

Everybody needs to heal their microbiome and build community. Share this with someone. I appreciate each and every one of you very much. God bless you.

See you in the next episode. Thanks for listening to Take Back My Brain. If today's episode helped you connect with hope or direction, I want you to follow the show, leave us a review and share it with someone who needs it.

And if you're ready to start your own healing journey, explore our courses and our coaching programs at lorihammer.com backslash store. So until next time, remember you cannot medicate away a nutrient deficiency and healing your brain isn't just possible, it's powerful.

you