The Brain – Hormone Axis, How Stress & Negative Thoughts Affect Your Mood, Sleep, & Hormones Transcript

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Podcast Intro and Guest Introduction

Exercise. High impact, high impact interval training. High impact aerobic training, any kind because it increases a lot of the beneficial chemistry of the brain, like the brain derived neurotrophic factor increases.

Welcome to Doctor Talks, the podcast where every episode leads to a healthier you. Join us as we navigate the world of optimal health, uncovering groundbreaking strategies to conquer chronic disease.

In each episode, we'll bring you the latest insights from leading health experts, medical innovators, and wellness warriors. If you're seeking to transform your health journey, or if you're looking for answers to burning questions, you've come to the right place.

Get ready to unlock the secrets of lifelong health and vitality. This is Doctor Talks real talk from real doctors on the issues that matter to you most.

Welcome back to this week's episode of back to the basics. I have a very special guest for you this week. I have a neuro endocrinologist who's going to tell you guys how important the brain gut connection is.

So I ramble about it all the time. All my patients know. But this gentleman has spent his life learning about traumatic brain injury and also teaching people how inflammation, which I talk about all the time, leads to disease.

And also telling people that even though you might not have symptoms of your gut, whenever you're having symptoms of other diseases, it can possibly be your gut.

So I am thrilled to introduce you guys, doctor Mark Gordon. He has a plethora of things he's done in his life. I'm going to let him tell you a lot of them, but he is a board certified family medicine physician.

He had education and clinical orthopedics, cosmetology, dermatology and sports medicine. He's written several books. One of them is about anti-aging and medicine.

He's done a lot of volunteer work. He's been a medical director. He's participated in tons of projects.

Neuroendocrinology and Brain-Gut Health

He's been on HBO, ESPN, CNN, Fox, Good Morning America, on several Joe Rogan Experience shows as well. He has spent his life just taking care of a lot of people and teaching us a lot about traumatic brain injury.

And so I would like for you to help me welcome doctor Mark Gordon to the back to the Basics podcast. Thank you very much. Pleasure to be here. So can you tell everyone briefly?

Kind of I guess what you do or you know, what you're passionate about. We were kind of talking about it before we started, but give everyone like a little five minute synopsis of what is it like to be in a day in your life?

What do you do? Whoa. Okay. The the bottom line is to do everything possible in the sciences to give people a chance of living in. Absolutely optimized life.

And that starts, obviously, with making sure the brain works. And if the brain works, you need to make sure the support systems from all our organs below the neck are working as well.

So in the area of neuro endocrinology, neuro for neurology and endocrinology, for endocrinology implies that the relationship between, our neurology or neurological system, our brain and the endocrine system is tied together and it turns out where the endocrine system that's in our brain, which is separate from below the neck, helps to regulate the way that, different areas of the brain communicate, as well as production of key chemicals like neurotransmitters.

That helps us from being depressed, anxious, bipolar and so forth. So the importance of, healthy endocrine system is in the brain is a healthy mental state or mental health state.

And how I got into this is back in the 90s. I had previously six head traumas, which I woke up one morning in the mid 90s with depression. And the medication that I was put on too, did not really help in my escape in life.

Has always been to read so, and one of the things that one of the articles I was reading, it said there was a relationship between trauma and loss of these hormones.

So I went and had my blood work done, and lo and behold, I was deficient in growth hormone, testosterone, and thyroid. And within 90 days of having it replaced, it was like the world opened back up to me.

I was I was, you know, still in my game, in my practice and all the work I was doing. But it was that quiet moments where I had problems. And, I went back to my patient population that I had been treating for hormonal replacement called anti-aging medicine.

My first book was Interventional Endocrinology, which is my terminology for anti-aging medicine. Since the community I was working in really thought it was, inappropriate to say anti-aging medicine, you know?

But after a while, telling him, wait a second, do you prescribe blood pressure medication for a person? They said, yes. What happens if you don't prescribe blood pressure medication and they have a heart attack or stroke does not curtail their life?

I said, yes, well, by using a medication like a blood pressure medication, you're practicing anti-aging medicine. You're maintaining quality longevity medicine, if you will.

Anyway. So what happened was in from 95 until 2007, I was working with the NFL, NHL, a lot of sports people, and then a private population of people who were on our protocol.

And when I started going back to them and saying, hey, have you ever had depression? Have you ever had that? And yes, all of them had depression. And on top of that, I asked, did any of you have any kind of trauma, any head trauma or body trauma or chronic stress?

And everybody had it prior to that. It was the reason for hormonal deficiencies. As we mature, as we age, we believed it was genetic. It turned out it's not genetic.

Our lifestyle, whether or not we physically active, we eat well, we drink well, we exercise well, we sleep well, we take care of our gut. These all influence the chemistry of our brain because it's all connected.

The gut influences a lot of the inflammation that happens in the brain. When there's inflammation in the brain, what happens is your hormones are shut off in the brain.

And that goes back to a 2013 article which started it, which showed that if you have any form of inflammation, the area responsible for controlling the pituitary, called the hypothalamus, shuts down inflammation from vaccines, causes it to shut down.

The recent Covid epidemic has caused a lot of people to have infertility because of shutting down of the hormonal regulation. So what I do is, a very technical but readily available grouping of laboratory tests.

The laboratory tests are interpreted through a AI software package that gives us, not only the medical conditions that are present on a very in-depth, scale, but it also gives us a predictive treatment regiment.

So what we do is our patients come in, run the blood work, make sure their guts are working well with either GI mapping, which, is I shared with you. My daughter Allison is, takes care of that because of her training in GI.

And, we then treat them and 90% of our treatments on nutraceutical natural products that influence the brain, which has been the battle that I've had because a lot of people say, what is a good how could you know?

How could quercetin help? How could PCU, CoQ10. Rhodiola? How can all these natural things really help? Don't you want a prescription? Prescribed medication?

Well, it turns out that all these products called nutraceuticals, these natural products are real medicines. Yeah. So that's in essence, what I do keep nature so fascinating.

So that's kind of what we do at Modern Endocrine. We were talking about how, you know, I feel like inflammation is the root of all disease. It's it's why we have symptoms.

It's why we get diseases. It's why we age. It's why we die. It's why we feel bad. And so, you know, I like that you do this this big lab panel. So for people that are listening to this and in my patients, you know, that you've seen me.

You know, I get this giant lab panel and a lot of people think, like, do you really need all of that? Will you do? Because the point is to figure out how inflamed you are and then figure out all the things that aren't working.

And so to your point, you know, I never really thought about it, but neuro endocrinology, like we do kind of do that because it is the gut brain connection is is really important.

And so I do love that you do that. And we do a lot of GI maps as well. And that's what I'm finding. You know, I was an endocrinologist for six years and I did everything I was supposed to do, like they taught me in, you know, endocrinology and fellowship and, you know, I did all the things.

I even did some functional medicine stuff on top of that. Because what they teach you in school is, is really mostly garbage. But I was an endocrinologist for six years, and I never dabbled with the gut.

I was just like, okay, I'm going to get hormones, right? I'm going to, you know, and so unfortunately for my patients, for six years, I mean, I made people better, but I didn't make them as good as I could.

Inflammation, Cytokines, and Reactive Nitrogen Stress

And I got really frustrated last year because I was like, all these people are so optimized, right? Like they're according to their labs are optimized, and according to what they tell me they do, they're optimized.

So I don't understand why some people, to your point, like feel great. And then some of them are still like, I don't feel well, you know. And so that's kind of what led me to the gut brain connection or neuro endocrinology, as you call it.

And so we started doing gut studies in my practice. And it is wild what you find in people's gut. And then once you start cleaning that out and fixing it, it's like a light bulb goes off eventually. Like, not at first.

You know, for people listening, if you're like, you're on a gut protocol and your three weeks and you don't like anyone, we know you don't like us. You don't like, you know, you know, like yourself you don't like.

But it gets better, right? Like it gets better. And so, you know, you brought this up to me. You said if you have a really, really good immune system, it's so good that sometimes you don't even have symptoms.

But you may have a bad guy. Matt. Is that right? Correct. My daughter Allison, when we started introducing the GI map to our patient population 3 or 4 years ago, she said, you've got to do it.

So I did it. I delayed, but I did it. And there were, you know, there were bacteria, there was H. Pylori, there was fusiform, there was this there was that.

And Zon Lin, which, you know, is, the marker for the tight junction between cells. It was high, but my IGA, which is the what we call secretary immunoglobulin, it's produced by the mucous tissue, which gives us the protection in our lining of our, you know, all the mucous membrane, close mouth, vagina, gut and so forth.

It was very high. And that was probably responsible for protecting me from having symptoms from the bacteria that were active. Steph and Strep were there.

You know, there was staph aureus and strep species, you know, from the mapping. And I had absolutely zero symptoms on it. And at the bottom it said, oh, go on this, this pattern of antibiotics so on pleura through mycin and, and amoxicillin.

I think it was what I went on for a month's time. And, you know, there was no change because I didn't have any symptoms before going back and having, a repeat test, before the end of this year.

So, just compare the two. Yeah. And, you know, with GI maps, with us, I don't even use antibiotics a lot of the times, like, I try not to. So now there's a lot of really good herbs you can use.

So you can drink, like. Because what I don't want to do in somebody like you is kill your good bacteria. Right. So you probably have somebody that had amazing good bacteria.

Now there are tons of people out there that have no good bacteria. And in that case it's like, well, you might as well drop the bomb off the antibiotics and start over.

Like, we've already got Hiroshima here, so we might as well just but I mean, there's more than one way to to skin a cat. Right? But I did think it was interesting that you said that to me, because I do have a lot of patients who say to me when I bring it up, you know, I had a conversation with 3 or 4 people today that they're like, I just still don't feel well.

And I have exhausted, you know, lab testing. And I'm like, well, we need to look at your gut. Well, I don't have a single symptom. I'm like, really? You're not you don't have acid reflux, you're not bloated.

You don't have, you know, and usually sometimes we'll find one. But to your point, if you even if you don't have a symptom, it doesn't mean that your gut is balanced, right?

It doesn't mean that everything is okay. And so I want that to be like a point that people take away from this is like, if you really are to a point where you're not feeling better and you are with a provider you trust and you do feel like your hormones are optimized.

The thing I think about is gut first. Second of all is, is Dutch testing. We do a lot of Dutch testing to see how hormones are metabolizing. But, you know, to your point, the the gut brain connection is very important.

And so you were also talking to me about cytokines and inflammation and different things that happen in your brain. And then you said this other word.

Was it from, what did you say? Something that causes neuropathic pain. Oh, sorry. Hydroxy nitrate. Roxy. Nitrate. Nitrate. What is Roxy nitrate? Right. Okay.

Let me just step back for a second. Relative to, being proactive. I mean, one of our, subdivisions in our mind is do we wait until people are symptomatic, or do we become proactive and do things that make logical sense based

upon certain patterns?

Like you have a patient who is not getting better. And we have seen on a lot of cases, we've seen on a lot of cases where the gut a very, very quiet form of inflammation, whether or not it's dysbiosis or overgrowth.

And what happens is our body tries to maintain a balance until it is overworked to the point it crashes. Well, we can either wait until it crashes or we can be proactive and benefit the patient before it crashes so we can catch it before they slip and fall.

So jumping into the area of proxy nitrite. Proxy nitrite is, a free radical. It's actually called reactive nitrogen species, which is one of the byproducts of the body trying to, get rid of inflammatory cytokine inflammatory radicals.

In this particular situation. It is the reactive oxygen species which are free radicals that are produced when the body is fighting to make energy to go against cancer, to take care of a mold or a bacteria, or to clean up debris in the brain or any place in the body, it generates these things called reactive oxygen species.

Well, it turns out that the rose is reactive. Oxygen species will combine with something called nitric oxide. Nitric oxide in the brain is a signaling molecule that tells one cell from one cell to another what to do, as well as the more, specific use of it is to cause vessel dilatation.

Blood vessels dilate. So what happens is you steal a nitric oxide, add it to the reactive oxygen species, it neutralizes the reactive oxygen species, but it makes this horrible chemical called proxy nitrite.

Proxy nitrite is responsible for, killing three key enzymes in the brain, the one that makes serotonin and serotonin to melatonin. So when you have inflammation in the brain, that's why all these people develop depression, they develop insomnia, they develop, sleep deprivation syndrome with depression, cognitive impairment and so forth and so on and fatigue.

And then in a presentation I just gave in Utah was about proxy nitrite, damages a, enzyme in the area, the brain responsible for protecting us from, Parkinson's disease.

And it's called the substantia nigra. And the specific cells are are the dopaminergic cells, the ones that make dopamine. And it's dopamine deficiency that leads to Parkinson's.

Well, it turns out that this proxy nitrate stops the protection of the cells. So they can't make proxy. So they can't make dopamine. So this is why, Parkinson's occurs.

And we've had a number of cases where we've reversed Parkinson's by addressing the inflammatory cascade that occurs in the brain. Cytokines, as you mentioned, are part of our normal immune system.

When a bacteria, mold or virus or, inflammatory process secondary to a vaccine gets into our brain, the immune system in our brain, which is based upon these cells called microglia, they start releasing inflammatory chemicals.

You might have heard of it in what's called the cytokine storm, which was responsible for killing everybody who had Covid because it dumped these inflammatory acid like cytokines in the lungs and stopped the lungs from being able to exchange oxygen and carbon dioxide.

So you suffocated in essence. So the cytokines are part of our normal system, and they become produced, over actively. And there are things we can do naturally to drop it down.

We can use, gamma tocopherol, vitamin E we use in a seal system. We can use quercetin, we can use fish oil, omega three, specifically DHEA. We can use or EPA, we can use a number of omega threes to help to reduce these inflammatory processes.

And they work just as well as medication without the side effects of killing you. Right. And another issue is they

found that, the Covid, creates, damage to the microbiome of the gut.

So if you've had a VAX or if you've had actually the active illness, Covid, what will happen is it'll denigrate the quality of the microbiome in your gut.

And it turns out there is one of the bacteria which is responsible for protecting us from cancer, by the way, that it stimulates our immune system and protects our body.

Hormones, Sleep, and Mood Optimization

And we lose that. So you have to put back into the body, the, probiotics, you know, select the good probiotics to address these things. And we have to be my is very specific on the types of probiotics she used based upon the case after antibiotics, after Covid, after stress, after alcohol, gastric ulcer, you know, hyper acidity and so forth.

So you have to address all those things. Do you know which, strain you're talking about that's lower. You were talking about with like Covid. Yeah. I have the article that she sent me.

So I, you know, I can make it available to you. You know, there's no way fit it. This they've got so many bugs in the gut. And it was one of the less common ones that's responsible ones that we, I don't talk about.

Gut is not my area. That's why I'm happy to have my daughter. Allison, you're. Yeah. So she's on maternity leave now? Yeah. I mean, I want to talk to Allison.

Okay, so then going back to the, paroxetine. What is your product for, Roxy nitrate. So you're telling me that when you are inflamed, like, if you have inflammation free radicals from whatever reason you drink alcohol, you hit your head.

You didn't go to sleep early enough. You have toxins. Your insulin's really high. Whatever. Then when we have these free radicals, you're telling me that nitric oxide is what it connects to the free radicals and then creates this correct Roxy nitrate capsule?

So nice. So nitric oxide is a vasodilator? Yes, but I thought it was good to have nitric oxide. You like what you've heard so far. It's so modern. Endocrine is now able to provide telehealth services in eight states, including Arizona, Nevada, Oklahoma, Texas, Ohio, Illinois, Michigan and Georgia.

If you would like to become a patient, visit our website at dot modern endocrine.com backslash contact. You can also email us at hello at Modern endocrine.com, or call our office at 405 286 1571.

To schedule an appointment, please note we no longer accept insurance for new patients. However, we do have customizable membership programs available.

Your first visit will include a detailed intake, and lab orders will be provided to further assist us in developing your ten Stages to Ultimate Health Plan.

We do offer discounted lab rate with a nationwide lab service. And now back to the show notes. It's good to have nitric oxide, but it's not good to have excessive amount of reactive oxygen species.

And the only way that we can take care of the reactive oxygen species so that they don't have an opportunity to steal nitric oxide, how do I know that it steals it?

Look at Spect scans. What Spect scans a room showing us is our areas of the brain where the nitric oxide has been stolen and has been used for whatever.

But in my perception, it's used for adding to the reactive oxygen species. That's why we need to take in really good, antioxidants, you know, the whole gamut of antioxidants, whether or not it's vitamin C or things that suppress, the

development of, proxy nitrite, like melatonin does.

So what about nitric oxide? So like, I take nitric oxide every day. Is that a good thing. So nitric oxide is okay. But you said vitamin E. You said vitamin C, you said quercetin because you can get a.

Yeah nitric oxide is very good. I take selenium because there's so many methionine and all its benefits there. Helps with the thyroid, helps with the, yeah.

Helps with the conversion of testosterone, DHT. A lot of people don't know that. It's, depresses the five alpha reductase, the enzyme responsible for converting testosterone to DHT.

We need a little DHT. Not a lot. So. Okay, so it works very well, but for us, minimizing reverse T3, selenium helps with that as long as everything else is in play, you know, good levels of cortisol, good levels of B6, B12, folic acid, B9 and iron and, selenium.

These are all very important. And this is how we treat, some of our thyroid related problems. So when this peroxide nitrate is high, then you're saying that's what can cause mood issues because you're not able to make dopamine.

Serotonin. Correct. Or melatonin. So it can not only cause mood issues, but it can cause sleep issues. Correct. And it's because of L Phi Roxanne hydroxylase.

And also l thyroxine, l tryptophan. Excuse me, l trip to faint d carboxylate. You need to have both those enzymes to go through serotonin and then to melatonin in our population.

You know I take care of only military. My daughter takes care of all the civilian population. All our military come to us with what depression, insomnia and fatigue.

And it's all due to the fact that they have chronic inflammatory, you know, chronic inflammation in the brain. And we know that by looking at some of the markers that we look at and they are directly related to, inflammation of the brain, curtailing the ability of the brain to make luteinizing hormone.

It's one of the key markers. And then you get the, you know, the just L index, which is also called the, TSH index, thyroid stimulating hormone index, which is a mathematical, model which relates to H and T4.

And when it's less than 1.3, it relates to central, dysfunction of the thyroid mechanism. When you have a greater than 4.1, it implies it's all coming from the neck.

And that's where we find the Hashimoto's and the graves disease by this pattern. Yeah. I see so much inflammation in the brain, secondary hypothyroidism.

It's pretty alarming how much you see. And then if doctors don't know what they're doing, they're not treating thyroid correctly. But what did you say about luteinizing hormone.

So you're saying if luteinizing hormone is low that's a good sign of inflammation in the brain. Right. And the whole thing came out I sharing it prior to the recording is that in 2013, a group of articles started to be published, and what they talked about and trying not to get too technical on it, is that inflammation shuts off one of the cells in the brain, the astrocytes.

It's called the glial cells and the supportive cell. And it generates a chemical that they call PGE two prostaglandin E2. PGE two needs to be available to the hypothalamus for when it signals for good night tropic releasing hormones.

So if you don't have PGE two, the hypothalamus can't release the gonadotropin releasing hormone to go to the pituitary to release fission. LH so when you have a person, you have to understand I work with the military where all of them have trauma because IEDs, mortars, repetitive gunfire, you know, subconcussive, trauma, soccer and so

on.

It's it's a given that they've got trauma. And, you know, we did a study 4 or 5 years ago looking at cytokines from the peripheral, from the blood to tell us what's going on in the brain.

You can't do that because the, cytokines are produced throughout our entire body. So if you have an elevation in cytokines, in the chemicals of inflammation, the question is where does it come from?

Could be coming from the gut. That being coming to my inflamed ankle or from my tendon or from my back or from the brain. You can't be specific. So the only way to find out about the cytokines is do spinal tap.

And who wants to do a spinal tap? When was the last time you did a spinal tap? Okay, we used to, I probably did 1 in 2014. It's been a little while. My last one was probably in 2001.

Yeah, yeah, when I was last. Well done. One done one since then. So can you measure prostaglandin levels in the brain, the PGE two. Can that be measured in blood.

You get what's called a surrogate marker. So what happens is the you know from their history that they've been exposed, my patient population, they've been exposed to correct.

And an assault a slip and fall, chronic stress blown up. My partner was blown up in his fourth, tour of duty. And, that put them on to a pathway six months later on 13 medications.

His wife would tell me that she'd find them in the whole closeted fetal position with a sidearm in his mouth. You know, that's not healthy. And then, he comes.

He gets on to our protocol. Three months later is off all his medication, ends up getting an MBA from Pepperdine. In business. He ends up co-founding a, 415013C veterans organization to help them get into our program.

And he and his brother write a book that gets made into the movie, quiet Explosions that was nominated for two Academy Awards. And it talks about the work that we've done.

It's not about me. It is a part about him because he was one of the cases. So about how to, reverse everything. Another issue with the inflammation is that this proxy, nitrite, is responsible for migraines.

When we drop the level by giving them high doses of things that will drop it, like vitamin D, DHEA, prednisolone, progesterone, testosterone, making sure the thyroid is correct.

What happens is you see them getting better and they get off their psychotropic medication, their medication for mood disorders and so forth, you know, whatever they're on.

Yeah. So I'm just thinking so a couple things I'm thinking about these young patients that I see, I saw a gentleman today is 29 and he has a testosterone of 320.

And you know, that's not normal. Although the bloodwork says that's normal because anything from 200 to 1100 is normal. But if you're 29 years old, that's not normal.

And his FSH is 2.7 and his LA is like 1.3. And he had a little bit of insulin resistance like his Insulin's 12. But you know, going through his labs, it wasn't awful.

And so I talked to him a lot about his gut, and he admitted to not having a great diet. But then, I mean, so that's that's screaming he's got inflammation in his brain from something.

Now, he's not that I know of. He doesn't have a traumatic brain injury. He hasn't been in the military. You know what is on those people. But so something's going on with his brain. Yeah. Yeah.

He's had some sort of. But it could be from his gut. Yes. Yeah. Could be from the gut, which we all need to look at. But the question is, what is a traumatic brain injury?

I mean, how do how do you qualify someone is having a traumatic brain injury or not? What are the parameters that you need to have to be included into that category?

I have no idea. That's a great question for you. I think of somebody who's had like a, you know, obviously a head blow, you know, a significant car accident, but I don't know, like, could it just be I could it just be like really significant verbal trauma?

Could it be, you know, I don't know, like childhood trauma. Yes. It can be all that. And that is the reason why I asked is because this is the dilemma in medicine.

It's the dilemma in the way that patients perceive that they've had head trauma. So we have a sheet that we give to them because in asking them, have you ever had head trauma?

And they'll say, no. Why? Because the way they interpret it is traumatic brain injury or head trauma. They're knocked unconscious. There's another form of head trauma which is called subconcussive head trauma.

It's also called repetitive head injury syndrome, where it's these minor taps that happen and a characteristic of subconcussive when they have it, there are no symptoms.

Traumatic Brain Injury, PTSD, and Military Cases

But what happens is with over time and with repetitive injury, it leads to the case that I was flown out to Tampa to talk about, which is a 17 year old, man who jumped off a cliff and committed suicide.

He had played baseball or played, wrestling and was in football, but never had head trauma. He had these micro traumas that were additive. And so what happened was he left the video before he, you know, took his own life, in which he explained how he was feeling and no one in his family knew.

No one knew. So what's happening out there is a lot of people have had traumatic brain injuries, like I had six head injuries that were only retrospectively did I look at them as being of significance.

I never had loss of consciousness. I never had the bell rung kind of thing. They were taps or they were situations, you know, jumping out of a plane or, you know, preparing for parachuting and stuff like that where you injured yourself, but you got up, brushed yourself off and went back to work.

And that's where we totally ignored. How about this? How about a tough delivery? How about bicycling when you're a kid or learning how to walk before one, you always fall.

And how about skateboarding? Or roller skating or skiing? Or on one of the Joe Rogan's we talked about snow. Not snowboarding. What's it called? Do, the, spin the water, the, Oh, the skiing over the snow.

Is that the vice that is wavering between the wave and the wave? Right. I think it's so many names for the wave runner. And from constantly hitting the water that.

Yeah, I just started working with, the boat drivers for the, for the, what is it, this Navy Seals, and they now have a multitude of problems. They weren't, shot at.

They was all with the fast boats and the pounding of the waves. A couple of them have been thrown off the boat. And these people developed symptoms. Okay, what about just like, repetitive inflammation from, like, alcohol use?

Could that lead to, traumatic brain injury or horrible. So, like, alcohol use or marijuana? What about marijuana? Some people say marijuana doesn't do anything.

You know it. God put it on the Earth. It's a plant like any sort of substance abuse. And I will. God put the hemlock in poison ivy. So, you know, cocaine and all sorts of stuff.

Mushroom? Yeah. I hear you like mushrooms that'll kill you and all sorts of stuff, but. So any sort of substance that is going to change, like the chemistry of your brain multiple times, could be considered a traumatic brain injury.

What about like. So I was actually talking to my staff about this today. We have a girl and we know something's going on. We actually did a Dutch test on her.

And so I know she's got some significant adrenal issues, which didn't really show up in her blood. Interestingly, and she's got some, some different symptoms.

And so we were talking about I think there's probably some trauma involved, whether it's current trauma, whether it's abusive, whether it's mental. You know, I mean, there's all sorts of trauma.

But what about like long term, you know, nagging self-talk or long term, you know, just that feeling of like, just fear. You know, a lot of people have this feeling of like, where am I going to get food?

Do I have enough money to get food? Or, you know, we just have this negative self-talk that we tell ourselves all the time just because significant trauma as well.

Absolutely. I was on the phone with, a neuroscientist, Ph. D. psychology at Baylor University. She had called because of a project that was, peripherally involved in with, bringing psychedelics to Texas and having the government pay for, for the, program at Baylor.

So we talked and I said to her, well, after we talk, real nice lady, really nice. And I said, you know, I'm a New Yorker. I don't believe in PTSD. Now, PTSD is, you know, post-traumatic stress disorder, which everybody says, oh, so, you know, TSD will cause you to have depression, all these weird things happening to your mind and so forth.

And I don't believe in it. And I won't go into the deep story. I just stay on the superficial. So when I said that to her phone goes dead and I don't believe in PTSD, phone goes back.

She's in charge of the Department of Defense, Veterans Administration at Baylor's for this area. And then she comes back to she says, why? I said, tell me everything you know about frack talking.

She pauses and she says, frack talk. And she's got this beautiful Texas twine, you know, twang. She says, frack talking. I said, yeah, tell me everything you know about frack talking.

She says again, frack talk. And I said, yes. Tell me what you know, she says nothing. Well, it turns out that when you're under stress, chronic stress, no physical zero physical trauma in your entire life, but you're under psychological stress from bad living environments, fear in the battlefield, whatever the situation is, frack talk and stops being made.

And when frack talk and stops being made, the immune cells that we talked about earlier, the microglia that are responsible for releasing cytokines, start dumping inflammatory cytokines.

And when you start dumping inflammatory cytokines, you get elevation and free radicals or oxidative load that leads to the proxy nitrate that leads to loss of serotonin and melatonin.

And it kicks up another chemical, which is called kind of ironic acid, which comes from El Tryptophan and Doctor Takemura in Tokyo in the Psych Institute.

Their research shows that this kind of Rennick acid is probably better associated with major depressive disorder MDD major depressive disorder than serotonin is.

We've been seeing in the literature since 2001, 1617 we're English studies. We're showing that serotonin does not always correlate with depression. You can have high levels of serotonin and have depression.

You can have low levels of serotonin, not have depression. So he believes that this secondary chemical called kind of runic acid is the cause. And that is generated when you have proxy nitrite stopping the conversion of l trip the thing to serotonin, melatonin.

So what happens in these cases of real PTSD where you can go and say they've never had head trauma? Nothing whatsoever. Last year, I did a project for the Department of Defense and, now Department of Health and Human Services, and it was to show them the science comparing PTSD to TBI.

So I sent out an invitation to 250 of our veterans, and they had 72 hours to respond to keep it random. And 79 of them responded that, the majority of the group had a diagnosis of PTSD by the Veterans Administration, and then a smaller group had pure TBI.

They had already been in our program for a year. They all had the same testing, the same treatment, and they both had the same benefits, that 77% improvement.

And it turned out that the group that was given the ESD diagnosis, when I went back in their history, they all had a traumatic brain injury where they had concussions.

Some of them had repetitive head injury. So the VA DoD in their records really didn't look at it. Why? Because it happened either prior to their enlistment or after their enlistment, or they ignored the minor traumas that they had, the subconcussive traumas that they had while they were enlisted.

The subconcussive traumas are probably best illustrated in our 50 caliber gunners. These are guys that are on Humvees with the 50 caliber machine gun.

That's what they're doing. They're basically, you know, the majority of them weren't around IEDs, but there were enough that were. But, from that kind of repetitive micro traumas that will create.

So you're saying that you don't believe PTSD is a real thing because really what it is is they've had repetitive, stress, you know, they've had this sort of trauma, trauma, inflammation, basically repetitive inflammation.

You know, if you use the word trauma, but inflammation, yeah, it's a physical. Well, the difference is there is something called traumatic and non-traumatic head injury.

Okay. Injury has a physical force or transfer of energy from the outside to the inside through the skull. And then you've got the ones that have non-traumatic, which are the ones you already stated.

People with medication, chronic stress at living environments, alcohol, finesse derived rest, right? There are specific medications that will cause the instigation or the initiation of the inflammatory pathways in the brain.

What about statins? Do you think statins cause issues with long term mental? I know, I know, they do with thyroid and I know that they do with glucose.

But what about you know, they're supposed to be anti-inflammatory. But do you feel like I have a lot of people who start statins and they get pretty significant brain fog?

Yeah. Well. There are articles about the use of statins and traumatic brain injury for what you just said. It can lower some of the things like interleukin six one of the inflammatory cytokines.

But the most important thing is the fact that 25 to 30% of the dry weight of the brain is based upon cholesterol, and cholesterol is important for neurons and also for synapsis.

So the quality of the nerves and the quality of the communication between nerves. This was in the lecture I gave, which was called Alzheimer's disease Understanding a Hormonal Treatment Protocol.

So I went through basically how important cholesterol is for every one of the cells in the brain the neurons, the oligodendrocytes, the glial cells, the parasites, they all need cholesterol for their cell membrane, as well as a fuel or a substrate to convert into hormones in the brain, like prednisone alone, alo, quick, mean, alone, pregnant, die all these very, very important hormones, which in a lot of the testing packages that are out there, they don't include.

And one of the areas that is not really looked at is the relationship between DHEA, prednisone alone, progesterone and cortisol. So when we hear doctors who focus in on cortisol, if they don't look at DHEA and find the pregnant alone Steele syndrome, they miss the mechanism by which the body has turned on a switch to try and, save survival mode with the pregnant alone Steele syndrome.

Very important in terms of those hormones. Insomnia. Almost 100% of our, veterans who have been exposed to blast trauma have insomnia and depression. You check the pregnant alone and the progesterone level, they're low or non-existent.

Which brings us to an issue. You started the conversation about hormonal changes. One of the greatest fallacies in our interpretation and the training that we receive for hormones is you've got a hormonal or a chemical that normal range is 10 to 90.

If it's 11, what is the doctor? Traditional doctors say normal. It's fine. It's it's fine, it's okay. It's lower lying. But you're in the normal range.

Well, what we've found in the past 30 years of the work that I've been doing, 43 years total in medicine, 30 years in this area, 31 almost is that 50th percentile to the 75th percentile of the laboratory range is where you get the therapeutic benefits, not the first quartile, the 0 to 25%.

It's going up to the 50 to 75. And in the case of multiple sclerosis, Parkinson's, Alzheimer's and dementia that we've reversed, it's by bringing them to 75 to 100 percentile.

And this is most of the work that I work in how to read. And then you're you're talking about for gestation and pregnancy and levels and you're talking about in men as well.

Correct? Correct. Our blood test 28 points exactly the same for males as females. Why in a woman, estrogen and estradiol are two of the key ones that we look at.

Well, it turns out that men also produce estrogen in estradiol. And it just so happens that the Framingham study, Framingham Heart Study that people in Massachusetts, they found that if estrogen is higher than estradiol, that it increases your risk for diabetes some 40, 50 to 93%.

So we check these hormones in males because it's the same thing in males and females. In fact, the lead article from Framingham study was in men having higher estrogen.

The estradiol increased the risk significantly for diabetes. So we just yeah, estrogen also increases your risk of developing breast cancer as a woman if you have a higher estrogen than estradiol level.

But I've been reading articles about this and I've been talking to some men about this recently, about men who have significant insomnia and have no progesterone, giving them like tiny doses of progesterone.

And they think I've lost my mind. And I'm like, well, you know, you're calling me. I haven't lost my mind. No. Have you been using Pregnant Alarm? I do use some pregnant alarm.

I do probably not as much as I should, so I need I want to get this list from you of all the labs you do. Because now I'm intrigued. Now I do check pregnant.

Pregnant alone with Dutch testing, right? But I use pregnant women a little bit. I used it a lot more in 2020 2021. I kind of fell off of my radar. But I do know that progesterone.

I mean, you can change a woman's life with progesterone. But then I found this information. Actually, my good friend doctor D was telling me about this.

And so I was reading about it, about progesterone in men. And I mean, it makes sense. Yeah. So to tell you that the cost parameter and the perception parameters between pregnant on progesterone, pregnancy alone for a year supplies $80 for progesterone, which is through a prescription, can be about $1,000 a year.

And what I do I work in molecular chemistry and molecular biology.

Hormone Testing, Treatment Ranges, and Functional Medicine

So we know that when you ingest a fat soluble, hormone, like from just a pregnant woman, that it gets absorbed, it passes in the blood brain barrier and there are studies showing how it converts, gets absorbed in the gut, goes through the blood brain barrier, gets into the brain, gets converted to allow pregnant long which is the key pregnant long progesterone or precursors for the alo pregnant alone.

And there's a pharmaceutical drug out there called Zoo Rosso, which is about $100,000 a year, $34,000 for the medication. Then you have to go to the hospital for 30 hours a month to get it.

I'd be enthused. You might have seen it for treating postpartum depression, but the added benefits are anti depression. Anti-anxiety improve sleep because premium on progesterone.

Now a pregnant woman what do they do. There's synaptic genic free radical scavenging neuro regenerative on one side. And on the other side it increases Gaba production and you ask the question about marijuana.

Well, it turns out that why people develop, resistance to marijuana, they need more and more and more is because CBD for the CB one receptor, which marijuana goes to, turns on.

When you turn it on, you increase the needle on production. And what does pregnant long do? It blocks the CB one CB yeah, CB1 receptors so that you need more marijuana, more delta nine THC CBD to get the beneficial effects.

So in fact the literature has articles where, you know, not only helps you to detox from benzodiazepines, the volumes and so forth, but it also blocks the effect of marijuana.

So if you have people who are on marijuana and they want to get off of it, quick needle and works out of the guy that for 35 years smoked a joint for breakfast, a joint for lunch and a joint for dinner for 35 years, six months on is on one of our programs.

He calls up and says, doc, I woke up this morning. I had no cravings for marijuana. I said, is that good or bad? Because I wasn't going after that. And that's what led me to start researching how it works.

So pregnant woman. Phenomenal. I don't use progesterone. We did a study on 5 to 10mg at nighttime of progesterone, oral capsule or liquid sublingual to help them with sleep if they were insomniac, but it turned out that cheaper and less, you know, problems with, taking progesterone.

They would take it 80 bucks versus $1,000 a year. And the science there to show that it gets absorbed and gets into the brain five times more, 4 or 5 times more in the brain than the circulation.

So two points, though, if you're if you're listening to this and you're a woman on hormone replacement therapy and you're on estrogen and you have a uterus, you have to take progesterone.

So don't stop your progesterone because you don't think it's helping you sleep. So just caveat number two though.

Pregnant alone. So what dose of pregnancy it's it's like a hundred at bedtime.

How much are you giving people. I start off well I look at the range that they have. And if they fall into the first or second quartile, it's 100mg. They fall to the third quartile, which is the 50 to 75 percentile.

I'll give them either 50 or 30. There's a side effect, very rare. We've got, you know, 10,000 patients. We have maybe 5 or 6. That developed a really weird symptom that took me five years to find the article.

They developed, like they were on speed. A paradoxical response because, pregnancy alone has 100 times more. Gamma. What is it? The Gaba response 100 times stronger Gaba response.

So it's sedating, but they were bouncing off the wall. Turns out that in these rare cases, there's crosstalk between the excitatory neuron NMDA, receptors.

So we rarely see it, but it does occur. It's a good thing to know. So you don't think that's crazy. Yeah. And so these are people with insomnia, right.

You're not saying that every single human needs to take pregnant. And it's just if you're having a lot of issues with sleeping, this is one of the things that you can look at. Okay.

For Joe, also for jetlag, better than melatonin if you use milk, I don't I don't love melatonin at all. I like creatine actually. Creatine for jet lag.

But you hydrate. Yeah. So honestly what I found is if you take like 15g like prior travel. So three scoops a couple days prior to travel on your day of travel.

And when you get somewhere, especially if you're changing big time time zones like my sister lives in Australia, here to Australia, 15 hours here to Thailand.

That helps with jet lag, but I've never tried the pregnant alone so I would do that. I would say hydrated helps too and tip for people traveling long distances like that.

The best thing you can do to is fast while you're traveling, right? Because you don't want to fill yourself with a bunch of crap and alcohol that makes your jet lag worse.

I think that's like getting on the plane and passing out. Not the best plan. Yeah, but with all the reserve stuff I have on board, I wake up at 6:00 in the morning in Thailand and start working in the hospital at seven.

Yeah, I've worked in Southeast Asia since 2006. Yeah. So yeah. That's okay. Yeah. So yeah. So this is also fascinating. So you know, going back to like the mood and the anxiety depression.

So I see so many women unfortunately men to to have debilitating anxiety and depression. And so now you're making me think like in these people where we get their hormones optimized.

I'm huge at insulin. I'm, you know a big CRP like, but in these people where I get all this stuff optimized and they're still having issues, I really need to be trying to figure out where the trauma came from.

And you said it can not only be traumatic, but non-traumatic. And so I'm now honestly Doctor Gordon, like terrified as to what's going on with the world.

Because if you really think about it, non traumatic brain trauma, like it would be hard to say that a lot of people haven't experienced that. If you're on social media, if you watch the news, if you you know what I mean.

Like we're just the hardest on ourselves. And so all this truth about like negative self-talk and self meditation, you know, meditation, mindfulness, all these things really is something that maybe should be brought to the forefront of

not only medicine and education, but just education for people.

Right? Like, you know, I'm wrong on sleep and diet, but what you're telling me is kind of blowing my mind because I have patients. I'm thinking about my head right now that I, you know, I know they have a pretty good lifestyle.

I know I've cleaned up their gut. I know we've done a lot of these things. And so it just could be some inflammation in their brain that's causing a lot of these symptoms, mood symptoms, things like that.

Absolutely. Also deficiency of pregnant women. If you check the pregnant loan on every single one of your patients, you will start seeing a pattern between their lifestyle.

Meaning what exposures they've had and their levels. I mean, I can predict, generally speaking, in a veteran coming in to us, just looking at their history, there's a paper they fill out that tells me, you know, that they were exposed to blast.

They shot this. They shot that. You know what? What they were exposed to. And then you find that their level of premium was so low, it directly correlates to their ability to sleep.

And that's because of the effect on Gaba. Another benefit of breathing alone and how we've helped with dementia is that pregnancy alone up regulates acetylcholine in four different major areas of the brain, and acetylcholine is what is the major focus for Alzheimer's. Why?

You know, they get the cognitive because you lose the key neurotransmitter. So pregnant long upregulated. And there's a study that came out where 11.2mg snorted into the nose.

Causes immediately to have an increase in acetylcholine with clarity of the brain. Then we have certain peptides that upregulate the brain's functioning.

So can you take this? Sorry. Go ahead. Yeah. Something called C max or in the silk Max or IRA 290. You know, some incredible peptides out there that we've used had designed hack to do that.

Is De Hexa one of them that increases in a single colon in the brain as well? I don't know about that. I haven't gotten to it, haven't used it, you know, very good.

Yeah. Just Max, does, brain derived neurotrophic factor area to 90 drops the inflammation in the brain. You know, there are a lot of ways of doing it.

The cerebral lysine for Alzheimer's, but it comes from pork brain. And if, you know, you don't eat pork, you know, it's okay if you're out, you know. So tell me this.

Can you take pregnant alone and progesterone? Let's say you're a woman, you know, menopausal, postmenopausal. You can do 100 or 200mg of progesterone with pregnant alone.

You know, our our protocol for women. My daughter Allison takes care most of the women because in my military it's so many more males and females. But I do have women. Yes.

We put them on to, progesterone because pregnant alone serves a function. And pregnant long converts to pregnant dial, which serves a function in pregnancy alone, also converts to progesterone.

So a lot of times we can get the progesterone through the pregnancy. Not always. So we do give them, progesterone in a cream and all our, all our delivery systems are vaginal for our women, with the, H. R.

With the HRT protocol project we started in 2006 was, interval agile. We get to use lower dose and we get to mix all of the hormones together. And it works very well for, you know, dyspareunia for vaginal.

What is it after for and for, prolapse? Because the broad and round ligaments of the uterus are sensitive to, testosterone and estradiol. So they can tighten up.

So in tightening up, they can bring the uterus back up. So neat stuff. Yeah. So besides estradiol, estrogen, progesterone, pregnancy alone. You and I were talking briefly before, you know, insulin, cortisol.

All right. All the hormones. Right. Is there another lab that I'm missing? That's like a must get, lab? I'll send you the list of what we do. And the only thing is that, the software that I wrote over ten years does in 28 point by 28.28 to 28 power interpretation.

Because, you know, there is an intimate interaction between when you elevate growth hormone, it influences prolactin, prolactin denies you hormone. Growth hormone will accelerate the conversion of T4 to T3.

So if you have, you know, low selenium, low iron, you'll get more reverse T3 and get the low T3 syndrome. So it's understanding the software understands how to do the interpretation at a level that we as humans, it's kind of tough to do.

You know, I've been doing it for 30 years and I just put it into software, into our algorithms for the software. So yeah, you know, we can make arrangements so you can play with that software and you can see what it is.

We have 123 centers and 8 in 12 countries that are using it. We have five more countries coming up. Australia we're working with now with the military there in New Zealand, Malaysia, Philippines, Thailand and yep.

Malaysia. Yep. That's it for. Yeah. That's fascinating. I would love to look at that because I do understand a lot of that being an endocrinologist. You know I get a lot of that reverse T3 growth hormone.

How growth hormone affects, you know, insulin and a lot of different things. So I would be fascinated to look at that I'm sure. Yeah. I that you're, you're a little bit outside of the traditional endocrinology world because most endocrinologists think that reverse T3 is insignificant.

No no no no. Yeah. I had a lady today whose reverse T3 was seven and I was like jumping up and down excited because it started at 23. And it was because actually she had excellent she had an iron deficiency.

She had a, a ferret in deficiency. She had a B12 deficiency, like, you know, all these deficiencies. And she had a gut issue and so we had to clean up her gut.

We had to clean up her, you know, all of her micronutrients so that her, her labs or her hormones could actually convert. But I was so excited. I saw a reverse T3 of seven today, and it's been a long time since I've seen a reverse T3 in single digits, so I was very happy today.

But yeah, no, I, I'm a little I'm a little different. I would say that, I don't know I know one endocrinologist that somewhat functional. I just met her last month, but other than that I used to say I'm the endocrinology unicorn.

Like, I've never met an endocrinologist just like me, who actually understands and believes the true functional medicine world. So I would love to look at your software and play with it.

And like, I doubt there's anything I could offer, but maybe, and the gut, like you should. Maybe your daughter and I could talk about helping you interpret gut stuff into a software, because I am so fascinated about the gut.

And, you know, this is just like my passion I love more than anything, when people come in and say, you know, you've changed my life and this is it, and you've changed my life by taking me off medications like I saw a lady this morning love her dearly.

She was diagnosed with breast cancer this year. But, you know, we changed her life with hormones. And her biggest concern was they're going to take those hormones away from me, and I'm going to be this person that I

was before I met you.

And I'm not okay with it. And, you know, I reassured her, we're not going to do that. We're going to give you hormone safely. But I love when like her, when she came to me, she was on all these medications.

She was not feeling well, and now she's not on any medications and she's feeling wonderful. And it's like, that's why you get up and go to work every day, right?

Like it's it's the most rewarding. Yeah. It's the most rewarding job. And the more you do it and the more you help people, you know, that's the reason I started this podcast.

I was so sick of hearing all this nonsense on social media and just poor education about how pills fix things and pills fix things and just take another pill.

And like, I literally was walking my dog and I got so angry in February listening to something, I came upstairs, ordered a camera. The sign behind me told my husband I'm starting a podcast.

He thought I'd lost my mind and I started talking. Started talking to people like you start talking to and putting stuff on social media because it just infuriates me that it's just so angry.

Practice Information and Resources

Like so I'm going to refer, another endocrinologist, functional endocrinologist, doctor Edley in Orlando, and we corrupted, over 15 years ago. And I just introduced him this weekend in Utah for a program that we were both that I grabbed him and he travels with me to, to Thailand.

But, he's Korean. And his family almost disowned him when he said that he wanted to go into a form of endocrinology where he would be proactive, not reactive.

So he's been doing this and has done very well. He's written books and everything. You know, I work together with peptides. He founded a clinical peptide society out of Florida.

But I think the two of you would have so much synergy because she came from the same roots. You know, I think it would be very exciting. I'll put it down on my notes to, to get I would be honored to, to be introduced to doctor Lee.

That would be amazing. So then I wouldn't feel like I'm on this island by myself. You are a unicorn and that's why I love you, okay? Because you're brave enough to stand up and say, wait a second.

Traditional medicine is not what our patients are. Our clients want. They want something beyond. You probably experienced the same, effect of Covid when, Covid hit.

And there was no resolve for those people getting, infection. They started realizing the patients, started realizing that their doctors were ineffective.

And so what happened with my population? And when we go to these meetings, you know, colleagues were saying that their population grew by two to 3 to 4 times because you had a new population of clients who realized that their traditional doctors did not afford afford them.

The preemptive, prophylactic approach to medicine instead of reactive treat me before, give me something to protect me. And this is what those of us in the functional medicine, the precision medicine outside the traditional medicine arena, you know.

Yeah. And those are the my favorite patients. Like, I have a whole program now where it's just like health optimization patients. It's like, please come to me before you're sick.

Let's look at everything you have. Let's, you know, figure out what you do have, what you don't have. And and let's optimize you so that you don't become sick.

And those are like my favorite, favorite patients. Now, I love the ones who come to me too, that are just, you know, have been to a million doctors and no one's giving them answers.

And I look at them and secretly inside, I'm smiling because I know exactly what's wrong with them. I know they're going to get better. You know what's frustrating is they no longer trust the health care system.

They no longer trust doctors. They've spent ten years telling people they don't feel well because they don't. And people have missed little simple things.

So that hurts my heart, too. And I I'm hoping in the next 10 or 20 years that there are more people coming to the good side of medicine, right? I try to get doctors.

I take care of a ton of doctors. It's interesting because a lot of people in Oklahoma City, a lot of doctors think I'm crazy, or at least they used to.

I would get like, oh, she's crazy, you don't send her patients. And now I see a lot of those doctors because I saw so many of their patients that went back to them and they actually are like, what is she doing?

And so I see so many doctors now, and I love it, but every time I see them, when they get better, I'm like, do you want to come to the good side of medicine, like the functional medicine we're all doing?

Like I tried er doctors, rheumatologist like when I see I'm like, do you want to learn how to do functional medicine? You can work in my office like try to get them all to the good side of the world, like.

Yeah. So I'm, I'm hoping that one day, one day we do that. Yeah. Well, that means that, you know, you've influenced your medical community. Your patient community out there to the point where the colleagues are starting to say, wait a second.

She's made a patient of mine, you know, and they get so jealous because you fixed them where they were unable to do it. Yeah. I just want to train the doctors.

That's what I do. I've trained thousands. Yeah. Me too. Yeah, you do, because you want to share it. Because we often learn how to deliver from our experience.

Your experience? My experience sharing the experience. How we can get, patients to a higher level, higher quality of life, you know, instead of suffering on medication, killing themselves.

My goals for 2025, I've had this goal, but I've had to put it on the backburner. So 2025, I'm going to write a book, I have a book proposal I'm working on, and it's actually going to be all centered around inflammation, like inflammation and how it causes a lot of disease.

I would love to do a Ted talk. I'm thinking about that about this as well. But my other goal in 2025 is to create some educational information for providers, because I have so many people who reach out who just want to learn, and I haven't figured out how I'm going to do it yet, but it's not that difficult, right?

Whether it's just recording myself or something, because there's so many millions of people that need help, there's no way I can take care of all of them.

You know, we were talking about this before the podcast. Like, you know, I would love to be able to help everyone, but I know I can't. And so the way you do that is by education and helping other people do it.

And there's just not a good a lot of good information for providers. So that being said, I really appreciate what you

do, what you've spent your life doing, which is finding out all this amazing information, making people feel better and then educating people, writing books and doing all these talks.

And so from the bottom of my heart, I appreciate that so much. I know your patients appreciate that. I want to ask you to let listeners know where they can find out more information about you.

I'll put all your stuff in the show notes, but I want you to kind of tell them, like, are you on social? How do they find you? And then we're going to ask you the three questions.

And then after you send me all the stuff and I look through it, we might have to have another talk because I'm going to probably have more questions. So we might have to do another part.

Two I'll make with your daughter. With my daughter you can do spend the time with her. You know, she's getting ready to give birth to her first daughter named Mia.

So if people, you know, I'm an educator, you know, at USC for a number of years, at UCLA for one year, training their docs and then I travel a lot internationally and then nationally with different organizations, Cam a forum, EMG and so forth.

But, my website is TBI help now.org. And under the science section you can find a number of the articles that I've written. Some have been published on psychedelics, on clothing as an alternative to testosterone, on projects that we've done with the military, with, Camp Pendleton in California, with the Department of Health and Human Services and Texas, project that I proposed for when I was at the, Pentagon with my partner in August, a lot of, educational issues and, media centers.

So some of the programs that I've been on, Montel Williams, NBC, CBS, ESPN, and sports and so forth is there as educational venue vignettes so that you can learn.

And then my daughter Allison said, pop, you've got so much content. Why don't you go and open up a YouTube channel? So I opened up a YouTube channel, and what I've been doing is populating it with things from little brief sections, from some of the Joe Rogan's and some of the other, podcasts that I've been on, and then started a new series called peptides for health because I get a lot of calls on, okay, I broke a bone, what should I do?

Or a tour of my shoulder? What should I do? I've got, you know, shoulder dislocation or a hip or whatever, or spinal fusion surgery. What can I do? So I started a, podcast, video there, 5 to 10 minutes each on different, different peptides.

And then I every Tuesday, every second Tuesday of the month at 5:00 Pacific Standard, I put on a private, presentation for a half an hour of a particular, peptide.

There's articles on Craig Neil on DHEA. I'm expanding into some of the, products, like we have Brain Rescue three. Over the past 16 years developed, some products which are being used by people with traumatic brain injury, migraines, seizures, multiple sclerosis.

Have a 95 year old that I spoke with yesterday. He's been on our program for two years now. He had dementia in 180 days. Six months is dementia was gone.

He's, you know, just unbelievable. He turned 95 yesterday. So we had a conversation. You can reverse these things. A 39 year old with multiple sclerosis tells his story on how he came to us and what he did.

He did the whole thing. I just incorporated into the educational aspect to it. Why did it work? So the science behind how things work, and that's what I look for.

I look for causation. So those are the best places. The, YouTube channel under Marc L Gordon and then the website TBI help node.org under the science or media.

So a lot of information and you can just pull it down. Everything is take you take it, you can download it. It's about education I love that. So let's let's ask you the three the three questions okay.

Are you ready? Don't you think. Don't overthink. First question what is the one food that's most beneficial and why? The one food that is most beneficial in life.

Well, you know what one for? That's most that's most beneficial. And why? Why is it beneficial and why? Well, people might might say water is the most important food in life, but for me, water hydration is the best.

For me is one. But if you want a real food, I'd have to go with a nice piece of, filet beef because the vitamins in it, the minerals in it, the b-complex, the, you know, the, mitochondrial.

There's some CoQ10 in it. There's, you know, just incredible creatine. There's a lot of benefits to it anyway. Red meat, I love it, I love it. What is one thing that anyone can do for their health that would improve their health?

That's completely free. So it doesn't cost any money. Exercise high impact or high impact interval training, high impact aerobic training, any kind because it increases a lot of the beneficial chemistry of the brain, like, brain derived neurotrophic factor increases.

Yeah. And I'm going to say number two. Yeah. After listening to you would just be some mindfulness like practicing mindfulness, positive thoughts like, you know, meditation, that type of thing as well.

I think that meditation, yeah, I think the world needs to really consider putting this into education in school. I don't know, making like time at work.

Like I just it's it's really sad what this world has come to as far as, like what we see, what we hear, what we think. If you just scroll through social media or watch like, you know, you know, think, okay, I had to be forced into, Twitter because I had been forced into it.

My daughter, you know, being, millennial, you know, she said it's the way to do it. Yeah. Okay. But I agree with you. I do 15 minutes, three times a week of meditation, which drops, cortisol, which drops frack talking, which invigorates the brain, has a lot of benefits.

Okay. And exercise. Yeah. And find my frequency. Good. So steak exercise. Last question. Okay. What is one thing you wish you would have known about your health 50 years ago?

That you would have done differently after everything you know now? Like one thing that you're like, man, I wish I would. I did that differently. I was 13 years of age when I got my first subscription to prevention magazine.

I'm 72, will be 72nd January. So I've been looking at alternative health since I was 13. Okay, so that was 19, 66. So 50 years, 66. I've been doing it for 50 years.

So right now I wish I would have, written the, the papers on the benefits of growth hormone, which I think is by far the best hormone ever, because I would agree, I, I would agree I take a little bit of growth hormone.

So yeah. Okay. So growth hormone. So doctor Mark Gordon thank you so much for being a guest. I'm back to the basics. This was fascinating mind blowing for me I love when I learn new things.

So you taught me a lot of new things. So I'm very gracious for that. I know my listeners will be gracious for that. If you enjoyed this episode, please make sure that you like it.

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