Introduction to the Biology of Trauma

The body has a trauma response even to things that are not emotional or psychological. Welcome to this interview on the Biology of Trauma Summit 3.0. I'm your host, Dr. Aimie and were talking about the trauma disease connection here.

And when we look at the trauma response of the body, what it actually is, is an intelligent design of the human system to survive, which means that it will be stronger than our logic will system.

So if you've ever found yourself doing things that you have promised yourself never, ever, ever to do again, that actually was your trauma response that overpowered your logic in that moment.

So what exactly then is the trauma response? Because we're going to talk about things that cause a trauma response in this interview that are not emotional, that are not psychological.

Let me share a graph with you that I've created to help what I use this was to actually help myself understand what my body was experiencing before I actually knew that this was my trauma response.

And then later I had language around it. Now there are three stages of the autonomic nervous system. I'm not going to go into those right now. I teach a whole masterclass on that.

But we have this response that happens where our autonomic nervous system goes into a trauma response, which is down here at the bottom. And it's a low energy state.

And this is where conditions like autoimmunity, like chronic fatigue and like chronic pain exist. We're going to talk a little bit about chronic fatigue today.

A little bit about chronic pain. And chronic fatigue is one of those things that for whatever reason, at that time in our life, it overwhelmed our body and it was either too much, too fast or too little for too long.

And I guarantee you that by the time that we have a trauma response happening, it's likely both of those reasons there are things happening in our life.

There are things happening internally in our biology, whether infections, toxins, micronutrient, deficiencies that are just too much too fast or too little for too long.

So when we recognize that, oh, my goodness, I think that I've had this trauma response, or maybe you recognize that you are living chronically in this trauma response, which is many people.

So you're not alone. You come to realize that it's not just going to be the emotional tools, it's not just going to be the psychological tools. It's not just going to be the therapy that you need to help your body come out of a chronic trauma response.

You're going to need some biology tools. And this is what I teach. Those professionals have become a biology of trauma professional.

Dr. Hymanu2019s Chronic Fatigue and Root Causes

I share with them this lens of the biology of trauma framework that I want to share with you now. Because first of all, we need to recognize the trauma patterns.

So what I just showed you how much time is a person spending in that trauma response versus how much time are they spending in the stress response or in the parasympathetic response?

We need to understand what we're working with to then be able to jump to the next step, which is what are the reasons, what are the factors, what are all the contributing factors to those trauma patterns?

And it's never just one thing. It's always a multiple contribution from different factors. As we will discuss in this interview, everything from biochemical imbalances, mitochondrial compromised brain inflammation, attachment and neurodevelopmental gaps, toxins, nutrient imbalances, hormone imbalances, GI dysfunction, inflammation.

And so once we understand the reasons for what is driving the trauma response in keeping us stuck in that, well, now we can move to repair tools because if we know that, hey, the biochemical imbalances is driving this, guess what we need to bring in tools that will address those biochemical imbalances or the mitochondrial compromised or the brain inflammation or the toxins, whatever it is for you.

And again, there's usually multiple things because the trauma response actually brings on a lot of this, and this is what keeps our system stuck in a biology of trauma.

So then what's the solution? What are the tools out? Well, there is a clear path forward. And I have put together the three essential elements. We're going to talk a lot about the biology piece today because we're talking about functional medicine.

So functional medicine is one of the biggest biology factors for being able to address a biology of trauma. But it's not going to be enough. And we have to do somatic work.

We have to do the narrative and the parts work, and these three feed off of each other. This is why I start everyone with a 21 day journey, which is a somatic practice.

I lead you on a journey into your own autonomic nervous system, teaching you how to become the expert in that so that you then can start to do so much of these basic somatic exercises, not needing to rely on anyone else.

And in the process, guess what has happened? And this is why I start people with that 21 day journey with the somatic work, the 21 day journey people are experiencing, a 26% decrease in daily physical pain, 28% decrease in G. I issues, 28% decrease in sleep issues.

So we're seeing that somatic work is not just a trauma therapy. Somatic work is actually changing our biology. And then when we add the biology piece and we start to work on the toxins or in this interview we're going to talk about mercury overload, then guess what?

That opens our capacity up to do more somatic work. And so it's they start to play off of each other in a positive way rather than creating the vicious cycle and spiral that it has so far in our life or in the lives of those that we care for.

So I'm so excited to have this conversation. And my speaker for this interview is none other than Dr. Mark Hyman, and he hardly needs an introduction.

He's been such a leader in the functional medicine space. He's a practicing family medicine physician, an internationally recognized leader, speaker, educator and advocate in the field of functional medicine.

He is founder and director of the Ultra Wellness Center, founder and Senior Advisor for the Cleveland Clinic Center for Functional Medicine, a 15 time New York Times bestselling author and board president for clinical Affairs for the Institute of Functional Medicine.

I'm so glad to have him here. And I will just say that if you are lost in terms of what I just said, you can head to my website trauma healing accelerated dot com, and there you will find these guides and resources.

And in fact, let me just pull that up for you really quick. So if you come here to my website, let me show you where you can find those guides resources.

Recovery, Resilience, and Stressors

Scroll down on this home page and you'll come to resources and here you will see a guide on the biochemical imbalances that I mentioned, the essential sequence guide and the steps to identify and heal trauma, which is where I walk through this trauma response and how you can recognize if this is something that is stored in your body and what to do about it.

And with that, let's jump into this interview. Dr. Hyman, you've had some unique life experiences, and you've blessed us with sharing that with the world in your writings and with the work that you do.

What were the lessons learned for you coming out of your experience with chronic fatigue? Oh gosh, that's a very big question. It could take me about two days to answer that question.

I think, you know, I was. I think even that is one of the lessons learned for me, right? Like there's no simple answer. It's not just, oh, well, this one thing caused chronic fatigue.

It's it's a amazing so it really is a lot of things. I, you know, I developed chronic fatigue syndrome at 36 years old and struggle for many years trying to figure out what was going on.

And through the help function, medicine was able to actually nail it down to mercury poisoning. But there were other layers Lyme disease, BCR, muscle toxicity, that kind of the works.

And it's typical that we see dysfunction medicine practitioners. It is not often one thing it's many things and not to mention the fact that I was going through a divorce, I was a single father and having to deal with all that and a new job and just kind of holding the whole world up and and that really made my whole system collapse.

And for me, I learned many things. One was to sort of rightsize my life and, you know, pare away the things that were were not really serving me or my health.

And to really focus on functional medicine as a pathway for me to heal myself. And then subsequently led to my career as an educator, teacher and practitioner of functional medicine.

So it really sort of shaped the whole course of my life. I also sort of learned how physical stressors meaning infections, toxins, allergens, the microbiome all actually create a biological stress.

They can be things that mimic the same response in the body as psychological stress. And and so that was interesting to see how, you know, my adrenals and my hormones and everything became dysregulated as a result of these physical insults.

So that atmosphere of very powerful insight then and then, you know, there's layers of learning. You know why, you know how I dealt with my life and other things that I've learned later.

But I think those are the big lessons that came out of the chronic fatigue episode that I had, which was long, a long period of my life that it took me, you know, probably about a decade to fully recover from.

I had my chronic fatigue around 31. So your story has given me a lot of hope over the years. And actually that's how I found functional medicine too. So I thank you for for that as well. Yeah.

And I think that many people can relate to that feeling of having the weight on on our shoulders, feeling like we're carrying everything in it and it's too much.

And especially as we think of chronic fatigue, we really have to choose wisely what we're going to spend our

energy on because we literally don't have energy for everything that we do.

And what was that process like for you of realizing that like, I don't have the energy that I used to have and I've actually got to choose which things and where to spend my energy.

And how did you choose to spend that energy? Well, I mean, the time was pretty easy. I mean, all I could do was work. And and luckily at the time, I had a job where I didn't have to work that hard.

I worked at Kenya Energy or three days a week. I was able to go down and kind of take care of myself. Over lunch, you get a massage or a sauna. It was the perfect job to have chronic fatigue, and I focused on my kids and the work I had to do to support my family and my own health.

And that was it. And I spent a little time with friends, but it was it was a very inward time and very focused time on my own healing and that that was tough.

And as I've sort of learned how to restore my vibrancy and health, I, you know, can take on a lot more and have a lot more resiliency. And you know, it's not necessarily about always, you know, creating more restricted, restricted life.

It's about actually understanding how to create health and how to really shift your biology so you're more resilient and can manage more and stress. Resilience is a really important concept.

So now I can I can do a lot of things and I am not bothered by it and I can be happy and feel good and highly functional. So speaking of the biological resilience, you then go on and have a back surgery.

In the last few years. And I had one when I was 32 and then I had one about about three years ago. And there is a span of years there where you were able to really build your health and I'm sure go into this last back surgery with a much better biological resilience.

But what was that experience and what were what were the lessons learned from that? And that was stuff. I have not had luck with back surgery. I had a bad complication the first time.

The second time, which should have been a very simple procedure, ended up being a very serious complication with, you know, a real hemorrhage into my spine and a big bleed and hospitalization and complications.

Mental Health, Trauma, and Longevity

So it really forced me to kind of and this was during COVID, actually, and it forced me to kind of double down on my own self care and, you know, eliminate anything that wasn't essential to my own healing and recovery and end up, you know, going to Maui for six months and just staying still, not moving and doing rehab and working out and riding my bike and getting enough sleep and really doubling down on my own well-being, which was a really important time for me because I hadn't really ever done that as an adult.

Isn't that interesting that we can go through life decades and not really give ourselves that time? And as we look at adversity in life, stress, one of the things that you teach so beautifully in functional medicine is this idea that not all stress is bad.

Like there are stressors that actually are healthy for the body and are positive stressors. And then we can look at when those stressors become too much and and the different types of stressors.

So from your framework and what you've learned, how, what, what types of adversity, what types of stressors and how much of that actually contributes to our overall health and actually will help us live healthier, live happier, live longer.

Yeah, good question. So I think one of the things that I learned as I sort of dug into more and more of the research

around longevity and health and resiliency is this idea for misses.

And as I was researching my book Young Forever, it really was clear that this is a fundamental biological concept, which I had known before, but I didn't really get on a cellular level, on a mechanistic level, on a pathway level, how it actually works.

And so for me, this is basically a stress that doesn't kill you, that makes you stronger or so, for example, heat stress or cold stress, if you stay in a sauna for too long, you're going to die of heatstroke.

If you stay in a cold plunge too long, you'll die of hypothermia once the kind of right amount of stress that will activate your body's own healing system but not overdo it.

So resistance training, exercise, you know, and high intensity interval training, fasting or restricted eating phytochemicals for these compounds in plants that are hermetic hypoxia therapy, hyperbaric oxygen therapy, ozone therapy.

These are all mimetic therapies that create a bit of a stress in the system, but then cause it to rebound and become much more resilient. And so we become very soft, I think, you know, we eat all the time.

We don't have to move our bodies at all. We can get a car, we can order. You know, Uber eats basically telling me where our apartment or houses are. We don't want to.

And and so these are really critical things to understand that, you know, we can't actually build resiliency unless we create these little stresses in our in our life.

And so I think that's it's really a key biological concept that people can use to upgrade their health and create more physical, emotional, psychological and even spiritual resiliency.

But let's go back to that time in your life. 36 years of age, hit with chronic fatigue, don't even really know what's wrong yet. Figuring that out. What what of these things that you just mentioned might have been stressors that now are helpful to your system and build that positive stress.

And back then might have just been one more thing that your body couldn't have handled at that time with the mercury poisoning and all all of the things that I mean together.

I mean, certain things are just stressors or not or misses like mercury or Lyme disease or, you know, those are these are not positive stresses no matter what level they are.

So I think, you know, I think that that there wasn't really anything in that time that I could have forgotten, oh, this was a positive stressor. It was just it was just unfortunate circumstance that that led to my exposure to huge amounts of mercury when living in China.

And that forced me. Now, I would say that that adversity did did force me to, you know, really aggressively pursue a different way of thinking about health and medicine.

And let me to to drive, you know, myself deep into the study of functional medicine and systems biology. And that and that adversity has sort of resulted in everything that has happened in the rest of my life, which is I'm being able to actually have a career that is meaningful, that has purpose, that, you know, brings me so much abundance in terms of the satisfaction of doing good for people and helping people who suffer for from things that that have answers but they're not getting.

And, you know, it's really, you know, that that kind of adversity led to eventually a positive effect. But it was it wasn't good at time. And at that time when like the cold therapies have have helped you with that.

Yeah, great question. So interval training been helpful? Yeah. Pretty much. It's interesting because, you know,

when I look back, the only ways I would get momentary relief and I mean momentary maybe if 10 minutes, half an hour, an hour or maybe a couple of hours or things like hot yoga, soreness, a cold plunges massage isn't exactly adversity, but maybe I can say that those are the things that would give me a little bit of relief.

But short of that, it was 24 seven for a long time. So those those actually therapies can be really helpful. But it wasn't until I dealt with the root cause because, you know, no matter how hot and cold therapy can fix you, if you have mercury poisoning or Lyme disease or mole or much other stuff, so.

And so for someone else who's in that process of the fatigue, haven't yet figured out all the pieces. And so still having at least some symptoms. How from your experience, how might you guide them in terms of knowing what things to bring in that that might be helpful and how to navigate that process of experimenting to see is is this is this something that's going to be helpful for my fatigue or is this actually going to be something that my body can do well with when it's good?

But right now, it's it's not. Like I think the things that are universal are helpful no matter what. Right? Getting enough sleep, meditation, breathwork yoga.

Hot and cold therapies. Ozone therapy. Hyperbaric oxygen therapy. These are all things that can help create resilience. And in no matter what state of health you are in, they can help bring you forward in your progress.

But unless you you deal with the root causes, whatever they may be, whether it's mercury led, you know, Lyme disease mold, the list goes on allergens, if you're eating gluten, no amount of, you know, in your celiac disease, no amount of hot and cold therapy or, you know, exosomes or peptides or ozone or anything else is going to matter.

So you've got to really be, you know, religious and almost fanatical about aggressively looking for root causes. And I think cause not cause, because it's often way more than one thing.

So I think that that said, I think all these other therapies can be very helpful in anybody's journey. And as you have brought kind of all the systems of the body and what it means to be healthy for for you, especially with your with your book on longevity, what would be those things that you say?

These are the things that are also most important for one's mental health. For one's emotional health. Mm hmm. Many of these word trauma we're talking about is a different level.

Functional Medicine and Healing the Brain

And I think, you know, all of us are victims of trauma at some level, whether it's macro trauma of sexual abuse, physical abuse, emotional abuse, or whether it's just more micro traumas, you know, not being seen as a child or loved or your parents being not attentive to you.

Or maybe it's, you know, the micro traumas or just living in the 21st century with the horrible polarization and the threat of nuclear war and climate change and global destabilization of our economy and the air threat and social media, I mean, it's all of it, right?

So I think I think we all experience that. And I think building a psychological resiliency is really important. And, you know, there are traditional ways that have been done through therapy and those can be helpful.

There's, you know, life coaching, which can be helpful. But I think I think for more the serious trauma, the PTSD, the depression that follows, you know, from trauma, you know, there's a whole medicine in the psychedelic movement around medical therapies with psychedelics for severe and serious mental illness, including PTSD, depression, anxiety, you know, you know, end of life anxiety and fear.

There's it's really quite a remarkable body of literature that's emerging that it validates this as a therapy approach to help people deal with with past traumas, which allows them to become more free and alive and and actually happy.

And how do you see the relationship between mental health and longevity, your emotional health, your mental health and longevity? Just for think it's critical.

I mean, it's critical. I mean, we talk about diet, exercise, sleep, stress, all that. But it turns out I think one of the most powerful levers is our social connections and our community and our sense of meaning and purpose and belonging.

And in areas the blue zones I travel, you know, researching my book Young Forever, I was sort of sort of struck by the ways in which they took care of each other, ways in which they formed.

Lifelong friendships and connections were the way they were all an integral part of this community and that sense of belonging and that. And they took time for it and they hung out together.

They talked. They built a life that was a lot slower and more intentional. And I think that that's one of the sort of missing pieces in our overall health equation as well as our society.

And I think the more we double down on that, the happier and healthier we're going to be. So to wrap up, what would be the what would be what you would want to see of functional medicine coming more into into play around just the general public's mental health and emotional health as it relates to to not only living long, but living long and happy.

Yeah. I mean, I wrote a book about 15 years ago called The Ultra Mind Solution, which was focused on how to fix your brain by fixing your body first. And I think there's a whole renaissance of of of psychiatry and mental health that is recognizing the importance of nutrition, metabolic health, the microbiome and sort of the biology of mental illness, not as a sort of chemical imbalance of neurotransmitters, which is kind of ridiculous, but as things that we actually can deal with, like insulin resistance or food sensitivities or challenges with a leaky gut and environmental toxins and infections and anything that creates inflammation in the body will create mental illness.

And I and I think there's a, you know, movements now to look at ketogenic diet for certain severe mental illness for schizophrenia. Chris Palmer, Harvard, wrote a book called Brain Energy, which is all about mitochondrial health and how we achieve that through ketogenic diets with severe mental illness such as bipolar disease and schizophrenia and others, which we really thought were mostly untreatable or maybe just manageable, or as we're seeing complete cures.

So I think you're going to be kind of, you know, a marriage of both, you know, nutritional and metabolic psychiatry with trauma treatments, which are through psychedelic medicine that are going to transform our mental health landscape and actually improve the mental health of our whole population, which is right now in a pretty sorry state.

Yeah. Especially coming out of the pandemic. It's been a mental health crisis and I think that functional medicine is in a unique position to provide some solutions and tools.

Yeah. Yeah. So last question.

Closing Thoughts on Earlier Healing

Looking back over your life, looking back over your life, what are things that you would have done differently earlier on for your own mental and emotional health?

Right. Question. I mean, I think I would have really looked at my own childhood upbringing much earlier and the patterns that it caused in me and the traumas that it caused that led me to make life choices that weren't good for me around relationships and other things.

So I think if, you know, if there was a world of psychedelic medicine back then, I would have loved to have participated in that and and psychedelic assisted therapy as a way of actually healing a lot of these old wounds and traumas that informed a lot of my life.

And now I feel free of those, too, the work I've been able to do since then. But I think the you know, that would probably what I would recommend and prescribed for my 20 year old self.

I love it. Thank you. Functional medicine was something that changed my life and so I'm so glad to bring this piece in. And that's what I love doing now is bridging the worlds of functional medicine and trauma therapy because of how I see it affecting the stored trauma, the autonomic nervous system, and being a way to actually accelerate our healing journey.

Thank you for joining me for this interview. Don't forget that you can purchase all of these recordings, that you can have them available, watch them as many times as you want or watch them for as long as you want, since you get to keep them after the summit.

I'm your host for the summit, Dr. Aimie, and I will see you on the next interview.