How To Combine Ancient Wisdom With Modern Neuroscience For Lasting Health Transformation Transcript

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Introduction and Guest Background

Welcome to the Chronic Inflammation Summit. I'm your host, Doctor David Jokers. And today my guest is Mel Hopper Koppelman. She is the program director at Synthesis Health Lab.

You can find that website, Synthesis Health Echo. And she is the go to expert for people who've tried everything to heal their chronic illness, but keep hitting dead ends by addressing the overlooked factors in their nervous system.

She helps patients achieve a 50 plus percent reduction in symptoms without endless supplements or constant lab testing. She has two master's degrees and 15 years of clinical experience, and Miller's pioneered a revolutionary approach that combines Chinese medicine, functional medicine, and developmental neurology.

Her methods have helped thousands of patients recover from conditions like chronic fatigue, autoimmune disorders, and fibromyalgia. When conventional and functional medicine have failed again, you can find her at Synthesis Health.

And we're going to go into this interview. It's really great. We're going to talk all about how to combine ancient wisdom with modern neuroscience for lasting health transformation.

You guys are in for a treat here. So let's go right to the interview. Well, Mel, great to connect here. I know you've got lots of experience working with clients all over the world, helping them reshape their health.

But I want to know your story and how you got into natural health to begin with. Sure. Yeah, there's sort of two phases to it. The first is, I mean, like a lot of people who find themselves in natural health, I had my own health problems that I was struggling to resolve, the kind of tried and true ways, and it culminated with, me going to India after college.

And when I was there, I was there volunteering for six months. When I was there, I contracted amoebic dysentery, and it was not treated properly. So I was kind of in and out of hospital and doing all these things, taking all these antibiotics.

And the long story short. So I end up developing a chronic infection. So for two years I had dysentery, which I do not recommend. And so I really had to figure out how I was going to get, well, you know, and it wasn't it was it was tricky, really.

And I was going to industrial medicine and, it was around that time that I was working with, with a Chinese medicine practitioner and realized that it was really helpful and also with nutrition because my digestion, it wasn't great as a kid, but it was trashed at this point.

And so, I really had to figure it out. The, kind of the separate the wheat from the chaff in terms of, dietary advice, because most things like it made me sick and I had to go lie down.

So that was how I ended up, I, you know, studying Chinese medicine. And then I went for, the second degree in nutrition and functional medicine and combined those, for quite a while, very happily.

And then the kind of the next phase of it was that when I, I was living in the UK for about eight years, and when I moved back to the States overnight, my system crashed like I woke up and I could barely wash the dishes.

Personal Health Journey and Training

My whole body hurt. I had no and it was like someone had pulled the plug. And because of my previous experience and my clinical training and my clinical experience, I was like, we will figure this out.

It's going to be okay. Like, we will figure this out. You have you have all the best tools. And I'm now seven years later and I can say I'm healthy again, but it's taken me all of those seven years to kind of try more of what I already knew and that not working too well, and then retraining, and learning basically new ways of dealing with the reality of people who are sick in modern times, where it's very complex and it's not often as simple as simply changing your diet or refining the mold.

It's really, you know, and when it is that simple, that's great. Sometimes it is. But for me it was like, okay, you know, my starting point was with a decent diet and a clean environment and knowing how to meditate.

And none of that was good enough. And so it prompted me to learn, a lot of neurology, developmental neurology, to completely retrain in Chinese medicine, really focus on first principles and to train in how to work with real people in the real world who have lots of things going on.

Yeah. Thank you for sharing that. And yeah, with chronic illness today, it is complex. A lot of people want to think. I mean, we want to simplify it. A lot of people want to think.

It's just make some dietary changes, you know, address potential nutrients, nutrient deficiencies. Right. And something simple like that sleep better.

And for many people, they do get better when they do that. But there's a lot of these complex chronic illnesses out there that they've been working on that they've been trying that and they're just not seeing, you know, the results.

And they're still struggling and suffering. And, you know, you really have to unwrap. It's almost like unwrapping an onion. Right. And so you got to really get to the root causes and figure out what's going on.

I know in functional medicine, we say, you know, if there's five nails in somebody's foot and we pull out three of them, they still have foot pain, right?

And they're still two nails. Technically, they've gotten better, right? We remove three of them, but they don't feel any better. And so that's one of the big things.

So now you have your first principles. Let's talk about that. Where you start when it comes to these complex chronic illnesses. Yeah. Well the first principles it's interesting.

It's it's a lot of the understanding comes from looking at Chinese medicine, because Chinese medicine is basically describing first principles. And they're not kind of specific to Chinese medicine because they just exist.

And whether you acknowledge them or not. And I think a lot of them come from looking at nature because we are part of nature. And I don't mean that in a sort of hippie dippy kind of way.

I mean, we just are, you know, that's where we come from. And so by understanding fundamentals, we can really separate, you know, what's working well from what's not working well.

So, for example, if you have five nails in your foot and you take out three of them and you feel the same, how do you know that you're 3/5 of the way there versus just going in the wrong direction?

If you feel the same, we need better ways of getting feedback. So a lot of the first principles really come from things that you can observe yourself, just by looking out your window.

The analogy I usually make is like, you know, I know people in my life were really great gardeners. And so they can go out, let's say, into my back yard and look with their eyes, and they know a lot about what they would plant and what they would not plant.

They can see where the sun is going. They can see where it's draining. They can, they know where we are. So they know about the rain levels. And they would get all that information really just by looking.

And if you don't know anything about gardening or horticulture or nature, you'd be like, how did you do that? Like, what kind of witchcraft is this? But it really is just alert skill of kind of simple observation.

That pretty much anyone can do. And we can do this with, you know, I encourage everyone to learn this skill for themselves, for themselves because, you know, functional medicine is great in many ways in terms of the improvements that it makes on the industrial medicine model.

Like this is really good. There can often still be, maybe, perhaps too much of an emphasis on the microscopic, sometimes that microscopic information coming from lab tests can be very helpful.

Sometimes we can get over focused on it. So if we go back to our garden, you know, if I forget about what I can see with my eyes and only do a soil sample and base all of my decisions on that, I'm probably not going to do too well in my gardening adventure here.

So the same thing with people, you know, we can you can look at your complexion. What's like growing on your tongue? What does your poop look like or smell like or how is it come out?

How often do you do it? What is your, p look like? You know, if you're not sleeping well, well, tell me more about that. Is are you waking up in the middle of the night?

Are you having trouble falling asleep? And all of this is giving us, kind of very clear information about the ecosystem that we're working with. And when we work with people on that level, we can we often have a lot more leverage, than when we work with, like, individual nutrients.

And so these first principles are looking at things like, you know, light, dark, damp versus dry, hot versus cold. That's kind of the, the basics of it.

And like kind of gases, you know, air. So, it's, it's cool because it's very much backed up in the literature. It explains very well what we see on a lab, but we don't always have to go to the lab to get that information.

We can see a lot of that information with our eyes. So you like to start with kind of a Chinese medicine approach, looking at different body types or different, doses.

I think it's called I don't know if that's already Aveda or Chinese medicine or if I'm getting that wrong, but, but you're kind of looking at putting people into kind of groups of, characteristics.

Yeah. That's right. So, Doshi is from innovative, but we've got similar ideas in Chinese medicine. I mean, even like something kind of simple, like for example, one question that I ask people when they're coming in, you know, clinically starting the process is, is it easier for you to gain weight or lose weight?

Right. And so not to say that that tells me every single thing about them, but this is like a large, broad brush type of question that tells me that kind of in general, your your body decides to do different things under stress or under certain nutrient requirements.

That would suggest that you may want a different approach. Right.

First Principles and Clinical Observation

And and not that, I mean, we don't pin everything on that one question, but it's just one idea that when you're looking when we're talking about things like inflammation, it doesn't differentiate those people.

You know, a lot of these questions that we have, you know, don't differentiate something as simple as that. Yeah.

Yeah. That makes sense. And you're looking at their tongue and you're looking at different characteristics about them and around them.

Yeah. And and I'm teaching them how to look at their own tongue which is really cool because you know again we don't want to hyper focus on anything. But if they if someone can see, that when they eat certain foods, for example, they get kind of like frosting on their tongue and that's connected to them feeling like garbage.

Now, and they know what to do about that then. Now, I mean, this is really helpful. This is very, very useful. You know, it's very empowering. Yeah. For sure.

Now, you talked earlier about brain development and how a lot of these issues can, can, can start in early childhood as the brain is developing. Can you go into that in more detail? Sure.

And this is multifaceted. This is like one of the my many like, moments in the last, you know, that second part of my journey, where I, you know, during that time I considered myself pretty, knowledgeable about treating autoimmune conditions.

I'd had autoimmune conditions, I had treated plenty, and I considered myself knowledgeable. And I was studying, neurological development with Doctor Robert Melillo, who I would say is like the foremost expert in the world.

And, and in one of his lectures, he mentioned the fact that, the left hemisphere of the brain plate of the cortex amps up the immune system and the inflammatory response, and the right hemisphere calms it down and dampens it down.

And I was like, Now I'm like today, years old, but two master's degrees. Having treated all these people and not knowing that that's a foundational aspect of how our system is working.

This isn't like just a, like kind of this minor detail that you might pull out at a pub quiz. This is really important. And I thought, oh my gosh, like, I don't know anything.

How am I interpreting these lab tests if I don't know something like that? And so, what follows from that is, you know, we have a left brain and a right brain and we should really be thinking about these as, like, two brains, like we have two eyes, you know, we have two kidneys.

And they're connected, of course. And life is good when they work well together. Just like when your two legs work well together. Life is good. And when they don't, you know, it's more challenging.

And so what often happens, as we are developing is that when we are in utero to about the age of two, the right hemisphere of our brain is preferentially developing.

And that's to do a lot with, connection and attachment and nonverbal cues and taking it all in. And then around the age of two, two and a half, the brain development shifts over to the left hemisphere and we get more verbal and we say, no individual eating.

And, we're, trying to impart our will on our environment. Right. I have four young kids, so I've experienced that. You say, you know what I'm talking about, right?

Yeah. Yep. And so what can happen is that that the rates of development can be kind of too fast or too slow, leading to certain patterns of problems. So if the, right brain doesn't develop enough or we switch over to the left hemisphere too soon, you end up with certain traits like, you know, some maybe like a little professor who's reading really early, who's very verbal, but maybe is clumsy.

And that situation doesn't, often self-correct. So what's supposed to happen? As I mentioned before, his right brain develops in the left brain develops, and then they come together as a coordinated whole.

But one of the main functions of the higher levels of the brain is actually to inhibit lower levels of the brain and each other. So if you get one side that's kind of taking, that's growing kind of faster than peers, you end up with gifts and things where they're kind of better than, average at, but also deficits.

But then the kind of things down the line of that is one they don't have access to a brain. That's why talking well together. But also when it comes to chronic illness, this can be a foundational cause, because if you have a right hemisphere dominance that's coming down your immune system, this can lead to lingering chronic infections that you can never get on the top of.

So you're kind of always sick, and it's kind of just smoldering. And the the on the left side, if you have like a very left hemisphere dominant, this is very inflammatory where you can't turn it off.

So these are like kind of like, you know, kids that will spike huge fevers or have these huge histamine things or these, these conditions that are now being looked at like, pan pans and pandas, pediatric.

There's like this brain inflammation basically, which is really heavily associated with a left hemisphere dominance. So that's one big thing where, as I say, it's not a detail.

And it's something that, you know, I know your listeners can follow what I'm saying. It's not rocket science either, but it's very important. And the other thing that goes along with this is that when we are developing in utero and in our first like six months to, let's say, a year of life before our brain is developed and we can do conscious movements, we have these, reflexive movements, brainstem survival movements that are going to allow us to do things like feed for mom's boob and rollover, and, you know, call for help if, if we're, if we're scared.

And so as we're developing and our motor systems developing, and our sensory systems developing, then in the brain is developing on top of this, we develop like a tree.

Right? So like, the, trunk is coming up from the root, and then we crown. So as the brain, the higher brain levels are developing, they're going to come down and inhibit these primitive reflexes.

And so what can happen is that that process doesn't happen. So you will find children and adults who still have retained primitive reflexes and may not be aware of it. And there's an increasing awareness of retained primitive reflexes.

When we're talking about kids, the sensory issues we need to be looking at, all kids studies are showing that nowadays in, you know, in classrooms of seven year olds and eight year olds in like a healthy population, almost all of them have some retained primitive reflexes.

And that's directly associated with behavior and skill acquisition, but also for adults. You may have had a very successful life and done all the things that you wanted to do.

And, you know, I know business owners, people are married who have kids. It's not it's not some sort of intellectual disability. But you may have retained primitive reflexes that are at, you know, an unacknowledged or unexplored route of chronic health issues.

And it's not going to matter how much vitamin D you take or like how mold free or dyed it, your, your environment is or what your diet is because that development is not going to or the self-correct on its own.

It needs to be addressed. And so I feel passionately that everyone should be assessed for it because it has everything to do with adult health, with healthy aging.

And it's a noninvasive exam that takes less than ten minutes. And for people who are chronically ill and they're kind of going crazy, they are looking everywhere for answers.

It's not to say that this is the cause of everyone's problem by any stretch of imagination, but to me, it's like a

foundational question to ask and assessment to do, to see where you're at, and to address, when appropriate.

So you're looking for these, these, primitive reflexes and what, what are some of those reflexes that you're looking at? Yeah, sure. So, one there's a big one that's a big, quality of life, alter something called the Moro reflex, and that's an infantile startle reflex.

So that develops, in utero. And then it should integrate, like, four months. But if you have a retained moro. So to explain the difference, if you, if you're, like, kind of developed in a really strong, great way, if someone opened the door right now, I would just kind of calmly look around because I live in a safe neighborhood, you know, it's probably not going to be a threat.

Brain Development and Primitive Reflexes

So I'm just going to be alert and respond. But if you have a retained moro reflex, you don't have that option. If you're like, you know, it's like adrenaline dump, and you might be able to recover, you might be able to hide it, but it's not under conscious control.

So if you're going through life, you know, on your show, you talk a lot about modern stresses. It's really important to be aware of them. But also, you know, and resiliency. Right.

But it's a difference if you ever retain moro is not you cannot help if a loud noise causes an adrenaline dump versus for you to go, oh, like what was that noise?

You know. So that's one of them. But another one would be that's very commonly retained something called the asymmetric tonic net reflex, which is a bit of a mouthful.

But this is one that it helps us during the birthing process. So we're going to like turn her head and move our arms, but it's also going to help us roll over.

It's also helping to train our close up vision. But when that's retained, it means that like when you move your head, this brainstem reflex is firing that shouldn't firing.

So it's very hard to have a healthy neck and shoulders as an adult if that's firing when you move. And again, it doesn't matter how many Pilates classes you go to or how good you try to have your posture because it's not under conscious control.

And having those motor patterns firing as an adult isn't consistent with optimal musculoskeletal health. Yeah. So those are some, some interesting things.

So having people you like to assess people's reflexes to see if they are still in a primitive state or if they've, basically matured over time. Yeah. That's right.

I mean, it's it's an objective, noninvasive window into brain function. So, if you test an adult and they have these and there's a number of reasons why, one is that they've never gone away.

Another is that they've had a head injury. So that's called a frontal release. So if I, if I damage this part of my brain that's inhibiting them is no longer inhibiting them.

So that's a good assessment that people should have post-concussion. And then the third possibility is that, either that they're older or they have like neurodegeneration.

And so that, you know, front part of their brain is now getting smaller. So it's not to say that, you know, oh, 100% of times an adult has it, but what it what I can say is that it's never normal for an adult to have it right.

And you don't want that finding there. And it's again, it's a noninvasive objective window into brain function, which

is, which is great cause it's going to tell you things that, you know, if you, you know, I see people who've had really fancy scans and all sorts of things and not assessed this, and it's, the exam, you know, it's doable.

I teach people how to have their nonmedical partners do this exam on them and record it. And it's it's life changing information. And it's addressable.

Yeah. It is the gag reflex, associated with that as well. The gag reflex. Some people have a really strong gag reflex. Other people have, you know, you know, a lesser existent gag reflex.

Yeah, 100%. So, you know, by the time that I was assessed, actually, I had no gag reflex, but just kind of showing where I was functioning neurologically, which was which wasn't great.

The gag reflex was not a primitive reflex. It's one that you want to continue throughout life. So, it is helpful that if something weird is in the back of your throat and it's not food and it's not going down, you want to get rid of that.

But that's, you know, another sort of related area which isn't so much specifically about development, but more about neurology in general, which is looking at your cranial nerves.

And that's kind of how I segue where I, I became aware of the importance of brain development and integrating retained primitive reflexes. And then I was like, well, now that, you know, I still had a gap to where, I still didn't have great energy.

I still was having weird visual issues. So then the next phase is was looking at, functional neurology. And, and this was an approach that was really developed a lot to work with athletes rather than primarily sick people, but something like, you know, looking at a gag reflex, again, this is noninvasive.

This is not rocket science. This is, you know, everyone you know can learn how their body works and, you know, I like, for example, I don't know how cars work.

So, like, if I drop my truck off to be looked at like I'm at the mercy of the mechanic. But I don't think anyone should have that attitude when it comes to their own body.

I think we should really learn a bit about how it works. So looking at a gag reflex, even looking at, you know, your tongue strength left and right or, you know, your sensation on your face, left and right, all sorts of things that, you know, we don't want to over focus on any one detail, but if you learn how to put it together, you can do really high leverage things to change the trajectory of your health.

And, understanding a bit about how the I think, you know, the nervous system to me is a foundational system, and it's one that is still, from my perspective, just to specialize so that, you know, either people maybe who have, a neurological diagnosis like Parkinson's or M. S.

or head injury or a neurodevelopmental diagnosis may be starting increasingly to see certain people. But then if you comes to someone who has autoimmune, chronic fatigue, Lyme locals, brain fog they go through, they may go through this gantlet of practitioners who never have their brain in a logical health, assessed and address which to me it's really it is really upstream of all of the lab tests of all of the hormone levels of, of all of these things.

And, I'm not going to kind of make the same mistake and say it's only the brain. It's not, you know, but it's, a really high leverage, an important place to look at and not skip for overall health.

Whether you're sick and want to get better or you're well and want to perform much better. Yeah, that makes a lot of sense. And with the gag reflex that's very much associated with the vagus nerve, cranial nerve ten that travels from the brainstem down, you know, into all our major visceral regions or heart digestive system, into our palate, in our throat.

And so that gag reflex can give an indication of what's happening with the vagus. And I know that that's one of the

things you really look at, the vagal paradox.

Can you explain that in more detail? Sure. So, the vagus nerve is getting increasing attention, which is great. So, like, you just explain, it's a nerve that comes out of our brainstem and kind of goes, like, almost everywhere through all of our organs.

So it is important. And so it definitely wants to get that deserved attention. There are certain distinctions that are being missed, though. We're getting a little oversimplified.

So, I'll, I'll spend a couple of those. So one is that, people are increasingly familiar that we have this, fight or flight nervous system, the sympathetic nervous system that helps us run away from the tiger, and the parasympathetic rest and digests.

Right. And that's, mediated, you know, 75% is coming from the vagus nerve, but we, actually has two starting points for that vagus nerve. Right? So, if we look at evolution, which is very helpful because it tells us about development.

And when we get sick, we kind of evolve in reverse and we develop in reverse. So it is it's a useful map. The, the vague the, it's called the dorsal vagus nerve, which is coming from the back part developed first.

So the first thing that we could do is animals when we were under threat was stay very still and like useless oxygen and just hope that nobody noticed us.

Then we developed a sympathetic nervous system that would allow us to run away or fight. And then we developed what's called the ventral vagal system.

That would allow us to maybe like, make jokes and, let me know or find help from community. So it's a more socially mediated, mammalian, more recently evolved part of the vagus nerve.

So one, really important distinction in this, you know, vagal paradox, which was first discovered by researchers, doctor named Steven Gorgeous. What led to him, creating, the poly vagal theory.

So poly just means many bagel vagus. Right. Is that when we are more relaxed in parasympathetic, our heart becomes more responsive to what's going on.

And especially when our breathing, with our breathing. And this is measured with something called heart rate variability, which a lot of people are increasingly looking at on their wearables and getting interested in.

And so it's the part of the nervous system that allows us to slow down, especially from stress. But we can also if we need to slow down and it's an emergency, we can also slam on the brake.

And that's like a very different way to slow down. That will also raise your heart rate variability. So that's the vagal paradox. He discovered this when he was looking at, neonates.

So like newly born babies who were in the NICU, the neonatal intensive care unit. And what he found was that, he was measuring heart rate variability, you know, on like a ticker tape with, like, these huge machines in the 1960s.

And as the infants were kind of their situation was worsening and they were going down the development ladder at a certain point when they were kind of in a very dangerous territory, their heart rate variability would go up, which was paradox.

And that's how he came to realize and discover and eventually really demonstrate very thoroughly that that was coming from this more primitive dorsal vagal, contribution, which is basically like our last option is just don't sit here and do nothing and like, lower our heart rate and our respiration and hope for the best, which is completely the opposite of thriving and being calm and connected.

And so, this is really important because a lot of well, first of all, I think it's just important for really understanding what we're talking about in that we don't have two levers, we have three levers.

And also that a lot of people who are chronically ill fall into this category of not being too inflamed, but rather not being inflamed enough. And they may be in a dorsal vagal shut down, and their doctors and practitioners are telling them that they're nice and relaxed and their blood pressure is nice and low and, you know, their heart rate nice and low, and they're just getting completely missed.

And it's because the model does need to zoom out a little bit to account for reality, because it's not just 1 or 2 exceptions. This is, I would say, is a rough estimate for chronically ill people.

This is about 30% of them. So it's not an insignificant, perspective. But these are the ones who do not get better for following the blanket advice. They often can do worse.

Yeah, a lot of times these individuals have exercise intolerance. They really can't exercise. You know, thyroid shut down like they're cold all the time.

You know, they have no energy, can't get out of bed. You know, a lot of these types of issues. So this is going to be their kind of stuck in this dorsal vagal tone basically, where it's more freeze immobilization.

And that's kind of their, their stress response. Yeah. And there's a little bit of a distinction as well, between, freeze and feint. So, you know, I, where we live, we have lots of deer, and our dog likes to chase them. Right.

And so if you have a deer that freezes, they're going to have a high level of sympathetic. So their heart is going to be racing and they're going to have that vagal break applied.

So they're completely still heart racing. Completely still so high sympathetic high dorsal versus a fainting goat, which I don't know if you've come across these or I think I don't know, I think they're funny.

Never think stress they faint. Right. And that does not have high sympathetic tone as low sympathetic tone. And so again, I think it's wonderful what's happening, in general with humans and in health that we're really exploring these things.

And I just think that these distinctions, are important. And another aspect about it, going back to first principles is this idea that, we have we have cycles, right?

Daily cycles. We have, an annual cycles. And so our metabolism and our physiology change in summer and winter and inflammation is actually like, a big amplitude of, of normal, regular, healthy summer metabolism.

Vagus Nerve and Dorsal Vagal Shutdown

And what we're talking about here with the dorsal vagal shutdown response when you're cold and your thyroid is shut down, and all of this, is like big winter that, you know, one stress response is to run away and have anxiety and, turn red and all this stuff.

And another response to anxiety. I'm sorry to, to stress, like, let's say there's not enough food or whatever it is your brain might decide, okay, well, we're just going to go into hibernation mode and just wait until things get better.

And that's a really risky strategy. It's, you're in a better situation, objectively, all things being equal. If you're if you are able to run away from your response versus turn into a rock and it takes usually longer to get better.

From there, as I say, like I'm in between like seven years, figuring out what I need to do and what order, because it's a little bit simpler if you're inflamed to become uninviting versus if you've shut down to kind of reboot, which often involves becoming inflamed in the process.

And now you have to deal with all the stuff that you had dealt with and then come out, on the other side. Yeah. So to summarize that we want to have really good balance between our sympathetic parasympathetic nervous system.

Sympathetic should be activated when we're exercising, when we're performing Ng or doing something with, you know, it's more intense. But for the most part throughout the day, we should be more in that rest digest kind of higher parasympathetic tone.

If we're stuck in that higher sympathetic fight or flight response for for a long time, we can revert our parasympathetic response into this dorsal, motor pathway, and lose that ventral pathway to where we are.

We'll be frozen, immobile in a sense, and not not able to, to really engage effectively in life. And so what are some of the things what are what are some of the ways that you look at this?

Are you looking at blood pressure? Are you looking at like orthostatic blood pressure when people are sitting and standing, or are you looking at pupils.

How are you assessing this? Yeah, totally. You can get a lot from a good history as a starting point. And, one thing I'll mention is, there's increasing amount of, information understood about the role of early childhood, stressors and traumas on adult health.

And, the more they measure this in something called aces Adverse Childhood Event score, and the more aces you have, actually, the more likely you are to be in a sort of metabolic shutdown, which is interesting.

And I want to be clear, you can you can still be a functional person, like you can be in this shut down state and stage and still be able to drive your kids to school and work.

It's just hard. It's not pleasant. And you'll have other signs that things are. But I don't, you know, you or you may be in bed, you know, either way.

But I want to be clear that doesn't necessarily. These are mode survival modes. But so the history is one I, I like love your suggestion of an orthostatic test because it's dynamic.

It's telling you how you respond to, a change in posture, which if again, if we're going to evolution in development is actually one of the biggest distinctions between being an adult animal and the human in like everyone else is that we walk on two legs, right?

So other animals don't do that and babies don't do that. So if we, are struggling to adjust from sitting to standing, then again, that's, a good window into how is your system compensating and that was one of the issues that I had.

I had something called orthostatic hypotension. So whenever I would stand up, my blood pressure would, would crash. And and again, that's going to like, you know, that puts me into a different category of what I'm going to do clinically versus someone who stands up in their, heart rate, skyrockets.

And they have, pots and that sort of thing. Yeah. What should what should normally happen when you're to take somebody's blood pressure sitting down and they go ahead and they stand up, you take it again, what should the normal response be?

It should go up slightly, go like five beats, maybe up to five. 2 or 3 pressure. Yeah. Yeah, something like that. Something like that. So basically, you know, we don't think about what a miracle it is that we, we can do that, which is great.

You know, there's like enough to think about besides that. But ultimately, if you're sitting in order to stand up and keep your brain perfused, you have to completely change gears.

So it should go up slightly. If it's going up a lot, that's a problem. If it's not going up, that's a problem. If it's going

down, that's a problem. Oh yeah, I confused heart rate and blah.

I said beats, but heart rate should go up slightly. And also blood pressure should go up slightly in order to drive more blood from our feet, you know, basically up into our brain because we're going against more gravity that way.

And so that should be the normal response. But there are a lot of people where and what happens in somebody that, you know, is, is in that stuck in that dorsal vagal tone.

What what happens there. Yeah. So when you're in a dorsal vagal tone and this is related to being in a hibernation state. So we can think about this. Right.

First principle. So hibernation what's the posture for that. It's lying down. And so your physiology is optimized for lying down and everything's trying to that's where the fatigue comes from.

It's trying to modify your behavior to get you to lie down. And so and so that, so that's yeah, that's exactly what happens. And the other, distinction that I realized relatively recently that I think is super important and one of the most overlooked causes of a lot of these issues, perpetuating despite changes in diet and nutrient supplementation and, you know, trying to heal a leaky gut and all these things, is something called sensory mismatch, which can also lead.

It's. Yeah, it's a main cause of these, blood pressure issues, which is to say that in order to move well through the world, we have certain systems that need to be, working well together to kind of create our reality.

So we have our visual system, our the stimulus system, which is telling us about where we are in gravity and our body. And what can happen very, very commonly is that the vestibular system, maybe it's like a little bit off.

So maybe, you know, between left and right, it's like not quite calibrated. And so it's telling slightly different the different story about our movement than our eyes.

So this is called sensory mismatch. The brain does not like that because it feels that feels unsafe, like we're not doing a good job of predicting our environment.

And so when that gets bad enough, then it will create this behavior modification symptoms like fatigue, pain, vertigo, anxiety, and things like that to basically get you to lie down because it really does not want you to fall because you're, you know, it's like dangerous.

Your brain can hit the ground and, and all these things. And another thing that contributes to, sensory mismatch is problems with interception, which is your ability to sense your own body state, which is one of the, one of the big contributions of the vagus nerve.

So it starts going wonky and we're not gagging and that's offline because we've been inflamed so long and, and all of these things, then the body basically is like, I feel like you'd be safe lying down right now.

I don't know. And so again, this is like another really yeah. Overlooked issue. But that will definitely, affect how well or poorly we adjust our blood pressure to going sitting to standing.

Because maybe I go from sitting to standing and probably what was happening with with me when I had this issue. My eyes are telling me one thing, and my vestibular system is telling me something else, and it's not doing a good job of fine tuning the the all the things that need to change for me to keep my blood pressure up or raise my blood pressure when I stand up.

And this is super, super common, in, in people who are having these ongoing health challenges. Yeah, really good to know. So looking at overall vagal tone, really important, obviously you start by looking at you know that that assessment Chinese medicine type assessment of the body and looking at health history and applying all of that.

Now, are you also using labs when you're looking at at patients? Yeah. So I went very deep into lab testing. I did a master's degree in functional medicine.

I've always been interested in biochemistry, and I kind of have a long sort of family lineage of doctors and chemists. And when I, when my system crashed, I went in that direction, and I did more and more training and more and more labs and, you know, doing these really long panels and, looking a lot in PubMed and I, I thought I could kind of decode the whole thing.

And I got to the end of the rainbow and the gold wasn't there. I realized I had to come back out. So I went from running was, you know, I think reasonably common in many functional medicine practices, which is doing kind of lab based supplements, to really getting very, very good at this clinical observation and teaching patients how to do it themselves.

And the labs are supplements are. So, people who do my program do not have to run additional labs. They often have labs that I can help them interpret.

And the other thing is that the deeper I got into lab testing, the more I realized that they are there are problems with lab testing and how they are interpreted, and they're layered, and there are many to the point where it's like, you just it's actually a big crisis that they are not saying what a lot of people, very well-meaning and intelligent, believe that they should be saying to the point that I'm really relieved and grateful that I can guide people this way.

And, you know, occasionally lab tests will be very useful. But it's it's always held at arm's length. Yeah, it's good to know you can't really base everything on labs.

Assessment, Labs, and Treatment Strategy

And labs are just one way that, you know, one tool in the tool bag of looking at what's happening in somebody's body when you do it, when you do run labs or look at labs, what are some of the biomarkers you like to look at?

Well, a couple things. I mean, one is, you know, I'll give you an example of a recent one where I said maybe this would be a good idea is, you know, someone who was going through this step by step process, making a lot of progress with a lot of things was I looked at her tongue.

It was still coated and, And she changed her diet. She was, you know, going through these steps and it's like it's her energy. It improved and her digestion improved and so on.

But digestion was still a little bit off. And I was like, you look like you're being re-exposed to something. You know, let's talk about mold. You know, have you had your house this as from old, your car, your workplace, that sort of thing?

This might be useful. And so she she ran a urinary mold, test and found that she was she was positive. So now that directs our our focus and attention to identifying the source of that, because the tools that we were using would have cleared it already if the exposure was in the past.

And so that was useful information. In terms of markers, I like them if they are helpful for the patient. So for example, they treat a lot of practitioners as well.

And so one came in and her primary goal was to improve her thyroid markers. Right. And in the past I had all these like thyroid support and supplement thyroid focused stuff.

We just had the lab over there. So great. And we just went through the process, you know, looking at things in terms of hot and cold, damp and dry, that sort of thing.

And then like great, retest it, see where it's at. And it was perfect, you know. So that was very useful because it's it's important for the patient's own confidence, you know, that that it feels risky to ignore things altogether.

We but we see these things self-correct. And it's not that we wouldn't. I'm not saying that you never addressed what you see, but if we can do the kind of basic, broad strokes present first and see what resolves on its own, then if it hadn't resolved after a few good tries, then we could get a little bit more detail.

But like, that's one of my, kind of rules of thumb is that, that looking at things in that detailed, reductionist way, it needs to be earned. We need to look at the big picture and address that thoroughly.

And if that's not sufficient, then we can look at it reductionist. But I find that that's very rarely necessary. Yeah, sure. That makes a lot of sense.

Now, what are some of the key health strategies that, that you see move the needle for a lot of people? The main thing, honestly, because most of the people I work with at this point have been around the block quite a few times.

So the main differentiator is really learning how to organize tools into a sensible order of operations and go step by step. So I'm a bit like the general contractor.

So I'm not like, oh, you know what? You know what you need. You need a new roof. Like because some people do and some people don't, you know. But I can tell you that you want to look at your roof first before you start replacing the carpet, because if you have a leaky roof and that's just going out of order.

So we're going to ask everyone about their roof first. And if you don't have any problems, then great. Proceed. But but most people in my program for this metaphor do because they have chronic fatigue and fibromyalgia and like mold and mold and all the things.

So we kind of already know that. So the main thing is teaching people how to organize their inputs, how to go in a step by step process, and evaluate things rather than any specific, supplement or herb or gadget or modality.

And it's really it's revolutionary because it helps people understand, let's say they tried something that they had heard a lot of really great things about, and they're like, this made me worse.

But if they can understand exactly why that might have been going out of order for like, for example, if someone has, fibromyalgia like symptoms and they've got like a chronic Lyme infection, your body's really trying to, with lowered circulation because it doesn't want it to spread is trying to to sequester it in its tissues.

Now, let's say you go for a massage, right. That makes sense. That should feel good. And then after the massage, you get this huge flare and you feel like hung over and you can't move and you're like, what did I do wrong? Why?

Well, it's it's because, you know, you basically your body is trying to one thing and, you know, remove things from circulation. And you went for the massage, which is totally, reasonable and understandable.

And now you release all this stuff into circulation, and now you're having to deal with it and you're feeling worse. So the answer there is about order of operation.

That massage might be helpful for you later. And you can test that. And so that's what is really it's not one thing that's changed the needle is looking at things differently and looking at processes rather than inputs and tools.

Yeah that's great. And so you work with people with all different types of complex chronic illnesses. And they can find you at Synthesis Health AE so just synthesis health all one word AE and how how does somebody go about working with you or working with one of your programs?

Yeah. So we, we have a group. It's funny, a lot of people think they don't want a group. And then once people come in, they realize how helpful and important the group.

I'm kind of one of those people to. I considered myself an introvert, and I'm like, I don't, but it's it is really helpful. So you can come into the group as you can apply to be a free guest.

I read all the applications and just check that you're kind of a good match for the group, and then you can come in, and you're in a group with current members who are actually going through the program, and you can see how I, address their questions, address setbacks because those happen, and things that come up and, you can ask me any questions in that time.

And there's also you get access to like a whole lot of material kind of explaining this way of thinking, it's just a bit of a different way of thinking.

And then after that time, after, you know, usually 2 or 3 weeks, people have a pretty or soon people have a pretty good idea if they want to commit to a longer term process.

And then they can apply to be an annual member. Okay. Great. And you're doing like weekly calls with them. What are some of the perks of being a member? Perks being member?

It's actually all asynchronous. So basically so in the, in the group, you ask me any questions, you'll get a pretty speedy response. And, you know, back when I was doing functional medicine, 1 to 1, it's like if you had a question in between appointments, unless it was something really quick, you would just have to wait months.

That's the question. So, that's a big thing. You, you get access to all the program material. It's all prerecorded a lot. A lot of people have brain fog, memory issues.

So it's a really helpful thing. And, you know, when people ask, you know, I, I'm committed to growing with my, my clients. So, you know, if people get to a certain stage and then they have a question, I the program grows with them.

And then, you know, just access to tools that I have found helpful. I have a little store where people can get discounts, but, I it's important to me to not be tied into any specific talk or brand.

It's more about helping people to evaluate what's going to be useful for them. Yeah, that makes sense. So they can find out about your group group coaching plans.

Just go to guys, go to synthesis Healthcare Co so you can learn more about Mel and her group coaching programs. And it looks like you're doing great work, Mel.

And this is this is, really fascinating. And I enjoyed the conversation. Any last words of inspiration here for our audience? Just, you know, it's similar to the message that you tell your audience, which is really that, you know, we we are designed to heal and, you know, you can get better.

And there's so much there are times when we need to say, like an expert intervention, but most of the time, if we learn the principles and learn how your body works and what to do, you really can.

You know, you should feel empowered to be able to take over, you know, take care of your own health, learn how to grow your own health as a skill, and live a really great life.

I think people who listen to your materials, you know, feel that way. And so it's really about giving people the framework so that they can really make that work.

Awesome. Well thanks again Mel. Guys, check out our website Synthesis Health Echo and we'll see you on a future show. Be blessed.