You’re Not Depressed… You’re Deficient (No One Told You This) l Dr. Cynthia Keller l Ep #417 Transcript

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Introduction and sponsor messages

I'm Natalie Minham, your host. Welcome back. I have a question for you. Have you ever thought about what if post-COVID symptoms like depression, anxiety, brain fog and weight gain weren't psychological but biochemical?

My guest today is incredible. Dr. Cynthia Keller is seeing a pattern that most clinicians are missing, specific nutrient and neurotransmitter depletion that's reshaping mood, metabolism, and recovery.

And the wild part, with the right patients, she's reversing it in weeks, not months. I'm telling you guys, this is a crazy episode filled with clinical pearls, clinical examples, And I want to say that if you, are listening to this and you're like, hey, that's me or that someone that I know, a friend, family.

She's giving a very generous offer to the listeners of this podcast. All you have to do is go to Alchemic Medicinals, ALCHEMICmedicinals.com and use code NatRox at checkout.

You'll get a whopping 50% off the Tryptophan Regenesis powder while supplies last. doesn't include capsules. But guys, I'm not telling you to go buy this stuff.

You gotta listen to the episode first, see if you think this is something that might help you or someone you love, and then go shopping, okay? This is not just about the shopping.

Now, this episode is brought to you by a couple of amazing brands. First is Oslo Sleep Earbuds. really fabulous product if you've got a noise issue in your surroundings while you're sleeping or if need help unwinding.

Also Youth Daily by Young Goose. You guys know that's one of my favorite face creams. Beautiful technology built into it. And new Mito Pure Gummies. We all know how much Nat loves gummies, and these are your Liphine Gummys.

All of these guys have special offers just for you. Check out the show notes below for details. Now enjoy the shell. Welcome to the show. Dr. Cynthia Keller, this is going to be nothing short of an epic conversation.

Thank you for taking the time out of your very busy life to being here. It's my pleasure. Like I said, I'm super excited. This is also the craziest time of year on top of everything.

Anyway, this is fantastic. So let's just jump in. Basically, the moment you stop believing that standard care is enough. Was there a first patient or family member that made you think, because you're a conventionally trained physician way back in the day.

But was there an event, a person, the patient, something that made you stop and say, I can't keep doing this? There's got to be a better way. I truly think that my superpower in medicine is probably care and presence and holding space.

And that's something I did. before I was a physician. I think maybe I became a Physician so people would listen to me. Like, I distinctly remember being younger and saying to parents, like, or thinking to Parents like oh, you should be loving to your children and you Should care for them in this way.

No one listened to Me. i became A pediatrician. Everyone's like what a great idea. So, You know, i think Maybe so i Think maybe i didn't change but i got to wear the robe of A physician where people then listen To me but um the way i sort of got into these other sort of non-traditional realms is that I would have a patient.

Like for instance, I treat Lyme, but I'm not a Lyne specialist. I am a patients specialist, right? So if a patent ends up with something I can't solve, then I will solve it.

And it started with GI. You know, that sort, you know I was super well trained at a children's hospital. It was like, ready to code and save lives and intubate.

Then I got into general peds and I said, wow, nobody there's no one to save. But there is. Right. And I'd have a kid with GI pain, let's say. So I would work them up, but I had none of these tools, right?

I didn't really understand. No one did. I send them to the GI specialist who would biopsy them. It would be fine. They'd send him back to me and say, this kid's good to go, But the kid wasn't in school.

The kid was good So then I had to solve it. And at the time, that was more like integrative medicine. Then early on, it became sort of functional medicine, but this didn't exist yet.

But then after I figured that out, I have that tool in my toolbox. So the next kid that looked like that, could do it, and then when the kid after that didn' t get solved with that I went and solved that.

I think so much of what I do today might be even, you know, standard of care for one of the kind of physicians you and I know.

How Dr. Keller moved beyond standard care

But, like, it didn't exist. Yeah. So it sounds to me like you, it was organic for you. It's because of who you are and how you're wired. Yes. Right. Another physician might've said, okay, well the GI guy said you were fine.

We're good. As far as I can tell, you we're fine, so maybe let's send you over to psych and see if there's something wrong with your child. Maybe it's all in their head, which is still from a place of caring, but passing the buck saying, doesn't fit in my box, didn't it fit into his box?

Let's go find another box. Whereas you're sitting there saying, well, there's clearly something wrong with this kid. What else should I be looking at?

Which is I think, you know, I'm hoping that these days is becoming a little bit more common, but I am sure that at the time you were bucking the trend.

I can't imagine that the physicians around you we're saying go sin. No, it was super uncomfortable. They were like, what are you doing? You're wasting your time.

Well, no, It's worse than that, right? It is worse then wasting our time, they think you are crazy and going to hurt someone. You know, I'm still on staff at my children's hospital, my local hospital.

But you know the more interesting actually like problem-solving things I did, the I think I made everyone nervous and I actually started out of residency in a really neat small general Pete's practice that was private.

like done really right but I had two partners and about well 11 years ago it got so uncomfortable and like the thing that pushed her over the edge was I have a book that said transdermal magnesium on it which I don't know why she thought that was the scariest you know, scariest thing ever.

And that was like her tipping point. So I thought, I have to do this different, it has to be just me. That's 11 years ago we opened this clinic. Wow. For that reason.

Because of all the crazy things you could have brought in. I'm slightly shocked. Yeah. I was already doing neurofeedback in the clinic. There was a lot of weird stuff I did.

She saw that book and she's like, I don't know what she thought that meant. But it was a bad thing. And frankly, it led you to where you are today. So overall it's a good thing, so in pediatrics, you're really watching development in real time.

I mean, that's the nature of pediatrics. What did that teach you about how chronic disease gets built years before it shows up? This narrative that nobody wakes up one morning diabetic, nobody wake up on morning with cardiovascular disease.

That's a really interesting question, actually. So thanks. Because I love kids and I loved watching them evolve. It's part of what got me really passionate about the gut.

That's not just because it's sexy to say. We're not paying lip service. No. This is a real thing because think about it. It's self, not self. The GI system, we need to accept food, but we to reject toxins or we needs to allow self and our happy microbes, then mount an immune response to the guys we don't want.

And really, it is who we are. is determined by that interface. Who am I? Who do I allow? who do i fight? And if that goes wrong, I think that that probably is the the nidus even more than genetics.

And then the other thing I'll say is that really good parenting matters. I love parents and I loved kids, and it's been a true honor. I now have kids of kids I raised.

Does that make sense? And recently, one of my nurses who didn't know the parent when she was little, but watch her parent now, she's got two kids. And she said, even if I hadn't told her that that had been my patient, that listening to her parents That she knew it was mine, just like the way that she parented.

I know it makes me want to cry. Yeah, that's like a legacy right there. Yes. No, it's true. Like I truly am the luckiest human I know. I'm so rich in that.

Yeah. And I mean, this you didn't ask this, but just like the reason I picked Peds, I knew even when I was six, don't know how, people said I would be a doc and I will help kids.

It wasn't really popular when they would tell parents what they were doing wrong when i was very small. with their children. But like I said, once I became a doc, everyone was like, oh, that's a great idea.

So I felt like there's been sort of an evolution of kids, sort the spirited kid that arrived maybe like in the 90s. And I felt strong that my job was to wayshow the parents, not to squelch them.

And that has been an honor. The reason I mention all that to your question is I think we also underestimate the importance of the emotional component.

joy component, like, and even like the positive thinking, I mean, it's not just positive, right? I can create different biochemistry with thought. I, can think like good things and my heart, you know, variability will change and that changes the chemicals that are released.

You know? It's the power you have to just like love someone and have that change their life and their health is profound. And all of us can do that, right?

Everywhere. Hey, folks, I just wanted to throw a little message in here for those of you who are sending me all these incredible questions on social media or through YouTube or even on Spotify, wherever you're listening to the podcast.

I wish I could get back to each one of your personally, but unfortunately, And because I cannot, I created, about a couple of years ago now, a membership community where I get to hang out with people just like you.

I do live weekly Q&As, almost weekly anyway. We also do have podcast guests come in to answer everybody's

questions and do presentations, you get to interact live with those podcast guests.

We will sometimes do challenges with some of the partners. Like in 2026, we have a mitochondrial enhancement challenge coming up where we're going to be testing mitochondria function.

we are going be to testing people's deuterium levels. If you haven't heard about deutereum, We've got podcasts coming down the pipes on that. And then people will be invited to follow a personalized protocol and then retest their mitochondria on the other side.

We offer that in the membership community and we do it at incredible discounts that you just can't find anywhere else. So if you're interested in hanging out with me and other like-minded people, which actually happen to include some pretty awesome practitioners and even some previous podcast guests who've come and joined the community, then I invite you to check it out on my website natnidam.com slash the dash longevity dash community or just go to natnim.

com and look for the longevity community tab at the top of the page. Click on that. and see if this is right for you. I would love to see you there and we could make 2026 our best year ever together.

So once again, that's natnidam.com. Just look for the longevity community tab at the top of the page. Now let's get back to the show. The next question I was going to ask was about when you, when did you realize relationship is not a nice to have, but a clinical lever?

And it sounds like this has been a part of you forever. Did it come from your mom and dad? Were you raised that way? Like do you think, do think you're somehow your childhood fed this and maybe you don't have to go into big detail if it's a big question, that one way or the other, either through adoption or knowing that things needed to be different and you won't So I had a really uneasy childhood, both in the home and out of the And I remember thinking, oh, these adults, man, you know, like a therapist told me later that I walked into the office when I was like, 10 and said, OK, here's the problem.

This is what's going on with this. And like this is this needs to change. and she thought I Was weird. Later, I still saw her when i was 18. She said you were so right.

You know, so I think I always I have compassion even like I can truly forgive. Yeah, I. Think everyone always does the best they can and I'm resilient.

I do think it shaped me, but I I I think you came into this world wired to do what you do, honestly. And we have far bigger topics for the audience to talk about today, but that's just from speaking with you and having this conversation.

It sounds to me that you're here for this, and that this is all about for you. So, all right, so your clinic is called, well, your Concierge Whole Family Multidisciplinary Clinic is Called, Centered in Wellness, which is a beautiful name.

What does that structure allow you to do that a normal primary care visit simply can't? Yes. So it was started because at my old practice, we used to spend an hour with each patient, which was like, you understand, like pediatricians don't get to that normally.

And with the changes in insurance from like 99 to 2010, that just got harder and harder, and we couldn't stay afloat. So it became clear to me and then also the transdermal magnesium thing.

God forbid. By the way, it works really well. I know, better actually. That's amazing. It's so crazy. Um, so I realized I was either going to have to do medicine differently or I either change the model or I was going to need to change what I wanted to do in the room.

And like, hey, I can't work for anyone. Like, obviously, right? Like I would be uncontrollable. Right. No, because even that I Um, so, then me and five of my friends here that, like my employees that I've worked with, one for 21

years, One for 14 years.

One, for 15 years like we, this is my mission is their mission. Like we this, is it. And so we thought, well, maybe we could try a concierge thing. This isn't like 2013, 2014, which is like not a thing, right?

Not a single thing at all. So but I thought, well, I wonder what will happen. And we contacted some companies and they said, you can't do that. You're a pediatric office.

We can do. That we were like, Well, let's see what happens. So we closed the other clinic and we said we'll open up and it was like three months. It was the best three month of my life because we created everything and I felt like maybe we're going to throw a party and no one would show up.

Do you know, like this is a whole new idea because we bill to know us and then we build insurance. So people pay kind of like a co-op, right? In order to want this kind medicine, I buy machines that are $60,000 that I'll never get paid off in the use of them, but our patients need them.

People sort of, that's it, and so on day 31, we filled up, day 30. And we've like we stopped counting at 200.

Building a concierge whole-family clinic

We've had a wait list forever because but also patients don't go, right? Because so it started. They don' leave. That's what I mean. Yeah. So and it's really fun.

But now I get to do whatever I want. The visits are an hour. And over the years, I now have five naturopaths that work for me. I was a pediatrician, but then we started to get to bioidentical or menopause or my parents were getting to menoppause.

So I started, I thought, well, better figure that out. That's when I went to A4M in like 2012 or whatever. And so it's just sort of evolved. I think what it allows me is to do whatever the heck I want, which is whatever I need for the patient sitting in front of me.

Yeah, that's amazing. All right. So it sounds like you don't, I don' know that we could define your zone of genius necessarily, but one of the things that you, one the areas that really been talking about has been this post-COVID area and the idea of stolen nutrients.

So you've said that COVID can steal or drain specific nutrients and that replacing what's missing can change an outcome. Just doing that, which is really interesting, right?

Can you walk us through that? Like what is being depleted and how does that show up in symptoms? Yeah, well, I couldn't be more excited because this is like I get so crazy excited about this because the body heals, you know, if you just get out of the way, right, and we have to give it what you need.

So I'm a pattern recognition expert because I am a pediatrician. Like you said, there's like developmental phases, growth charts, so I can see really quickly when something is an outlier.

And then if I see repetitive outliers, now I have a pattern, right. Then I'll have to solve it because that's what I do. So what happened was, we worked through COVID and our patients, and we took good care of them and that was fine.

It started, I had a patient who was suicidal. And I've known her since birth. She wasn't supposed to be suicidal, she should have been panicked, right, because that's who she is.

I was like, well, when did this start? Because I'm so confused. And usually I've intervened before they're suicidal, you know, like, yeah. Well, there have been signs and symptoms.

Right. We talk about that. And we find solutions. So she said August 25th. I was like what? Whoa. She said, Yeah, Iwas at the fair and I realized if I can't be happy here, then I might as well just end it.

Her life was great. There was no thing. Later, I figured out that she had had COVID. I think it was August 18th Then I went, well, that's weird, right? So for about, it was almost a year, maybe nine months, I treated her with medication after medication because I'm good at that too.

I don't love medication, but I really don' like kids who are suicidal. So it's always about picking the best choice. And then I was at a conference and I hadn't solved it.

Like she wasn't actively suicidal, She wasn't happy. I still was seeing her regularly and because I had to solve it. Right. So then I'm at a conference and it was a totally, it, was about COVID, but it about how COVID hits this or there's three receptors for COVID in the gut.

And that cell is called the enterochromaffian cell and its job is to take tryptophan and turn it into serotonin in not in the brain, to like move things along, you know, propulsion so that the virus leaves and some other things.

And all of a sudden I thought, huh, and then I though, well maybe this is a serotonin thing, maybe that's what's up with her. And then I went, oh, and like 90 to 95% of the serotonin in the body is made by those cells in that gut.

So then, I'm like, this is it. And I remembered, wait, seratonin doesn't get into the brain, right? Tryptophan has to get in to the brains. You take tryptophane in, about 1% gets into that brain and that you can use to make serotonin for moods.

Right. Well, if COVID keeps removing it, right, then like maybe 1% of less tryptophan is less Tryptofan, so what I love about my office is it's me and a bunch of people and my front staff is as smart as everybody.

We sit at lunch for an hour and we talk about cases or I teach. So I throw this out there. I'm like, let's brainstorm this. And one of my naturopaths who's so smart, he said, well, Cynthia, could we just give her some tryptophan?

I was like… I don't know why that didn't seem so obvious. But I gave it to her. Sorry, back two weeks later. You know what she said? I think this has just been a really great learning experience.

I was like, what? So I removed all her meds and, you know, she went back to life. And I thought, well, that's remarkable. So then, then I started digging deeper and deeper.

And then later, a patient came, well, actually it was her, she came back and she just wasn't joyful. This is like maybe nine, 12 months later. And I was thinking, if I were going to prescribe for you, I would try to tickle your dopamine.

I'd probably give you Wellbutrin, which works on dopamine, but I wasn t going give her meds because I had been through that before. So then I went to my group at lunch and said, you guys, Now she's not making dopamine and I was like, you know, does tryptophan?

No, because it's trypophane goes into serotonin, but tyrosine goes in to epinephrine, norepinephrin and dopamine. So I'm like sitting at lunch and one of my naturopaths says, just a second, runs into her room, comes out like three minutes later and shows for me the three cofactors that are shared in those two pathways.

And I went, oh my gosh, and they are P5P, which is an active form of BH4, that's what I meant, sorry, it's involved in methylation and then also zinc.

It's very, very expensive to give someone BH 4. So instead, I cheat in and give methylfolate just to support the methylations. That's my cheat. I'm going to say from here on that they need folate.

it needs to be methyl, but really it's BH4, I'm cheating. The best I can. And it works, so that's fine. It's cheap, right?

It is not like $100,000 a year or whatever.

So I gave her P5P, zinc, and methylfolate and her joy came back. And like, so I think what happened was, is that enterochromaffian cell is being stimulated by COVID all the time.

So, and I mean, if we have time later, we can talk about how it incorporates ourself about, how COVID incorporates itself into our microbiome. But otherwise it's just true.

And, you know, every time you go to Safeway, it gets spit on you. and even if you don't catch it, right, It hits those cells and you expose it. So there was this repetitive drain.

It doesn't have to be a big COVID event, right? It probably was. So you're talking about the spike proteins getting embedded in the, like the spiked proteins?

Getting embedded or the actual virus? The actual Wow. Okay. Also, the spikes. Sorry, is it like a latent virus, like, a lime or an EBV? Is that a little bit what you're saying?

Right. So first, with the enterochromaffian cell, it has three receptors for COVID. Now, so it can also be probably stimulated just by the spike protein.

But right now I was talking about COVID. Your Q question is that the problem with COVID is it could do a bunch of things. So it either incorporate itself, in fact, or microbiome.

So when I first heard her talk about the fact that it's a Bactrophage, which means that, you know, it supposed to infect me and then I'm supposed decide if I want to kill that cell that has it in it or, or what or fight or whatever.

But if it is in my microbiome, well, that's self. Like see, right, I have allowed those. So this is like catastrophic on a level that we could talk I cried for a whole weekend when I realized she was right, because I thought that's it.

Post-COVID nutrient depletion and mood changes

We should just burn it and start over. Like, actually. And so it can do that anyway, on a happier note. Our immune system can keep showing the spike protein.

It just goes on and on. about it can live in the gut not even in your microbiome. We have to get Robin Rose and you to play because she has so much to talk about that.

Okay so basically what you've realized and with the help of your community really because this is you know there were a group of you presenting last September on this topic and what I think is so phenomenal is there's all these We're not necessarily talking about major medical conferences here, we're talking sidebar events being put on by people like Leonard from New Bio Age, who's like, this is a conversation that needs to happen.

We don't have time for A4M to get with the program, so I'm going to bring together the four women that I know who are at the forefront, and we are going jam on stage about this.

which I think is so this is how we make progress. Yes. And it's a lot of what you're talking about. Like, you know, your brilliant and you have a staff that you can sit and play with and, and throw things at a whiteboard and say, Oh, this is what's going on.

It's remarkable. And so what we're saying here, and it's so funny because I had this conversation on another podcast recently with someone and I've said, it is like the world is now BC and AC.

it has redefined our world and whether we want to admit it or not admitted, this is not just another virus. This is a virus that has redefined human health.

And what the challenge is now, the challenges that you and your colleagues have taken on is, okay, it's here, not going anywhere. What's it doing and how do we mitigate it?

you could not be more right about how it's changed things. And it will not go back. Like, no, it doesn't sound like it. If it incorporated, you know, I like to say that my pronouns really should be we and us, me and my microbes.

Yeah, right. Everybody should. Right. So so but now it is me, and and COVID, like probably forever. And so that creates a constant cytokine cascade, both in the gut and in body and the brain.

That's why it has completely changed the landscape. It is why I cried for a week and I actually thought, well, okay. But then I put my big girl pants on and went back to work.

Exactly. You put on your big-girl panties and you said, OK, what are we going to do about this? Can I just say about Leonard? This was really neat because the people who put this on.

We had this idea that this was a big deal and like, it was not a very big conference. I think he had a hard time even getting a hotel to allow us to be there and talk about this is what I heard.

Because to my knowledge, there hadn't been a COVID discussion yet. And we weren't talking about COVID the way everyone else is talking. You know, Betsy was talking what it does to the mitochondria.

Abid was taking about what is does the vasculature. Robin Rose was talking about the research she's done on the spike protein and all this stuff. It's amazing.

And, oh, and Suzanne, sorry, Suzanne was taking about what it's been done to the autonomic nervous system. That's not popular. Also not known. Completely overwhelming.

The people who came really liked it. For the amount of work, let's say that I just put into the slides for that. Like I had said to you earlier, it's the thing I'm most, well, one of the things I am most proud of is like the effort I put in to that and it has to start somewhere and Leonard said, Let's start it here.

Right. Yeah. And it will from there, It will gain traction and amplitude, right? And maybe this conversation gets it to the next. Somebody will hear this and say, I want to host this conversations next on a different stage.

different way. To answer the first question, the depletion of nutrients that you're seeing are on the one hand the tryptophan, but in a bigger level, those three precursor molecules that are required as cofactors to make both serotonin and dopamine.

And those are, just to recap there, we can cheat with methylfolate, that a BH4. P5P, which is a form of P6, and the third one, the zinc. Which is really interesting because zinc got a ton of attention.

Because of course we all know if we get sick, we need zinc, what the thesis is, or the hypothesis, is that those three in particular become depleted by the virus.

Right, so like in short, I'll just recap that a little bit different, is that this endocrinomafian cell has three receptors for COVID. So more than anything else, it grabs it.

It uses tryptophan and a bunch of cofactors to make serotonin. But for these kids with the mood thing, and this is why it gets bigger and bigger. First, it was that they didn't have enough tryptophan to make serotonin.

Next, because these three cofactors were shared between tryptophan to serotonin and tyrosine to the catecholamines, then we couldn't make caticolamine.

But a whole host of nutrients are being depleted. It's just that I'm picking one thing at a time. And so it got bigger and bigger. You know, like at the beginning, it was really, you know with the first round of COVID, or the second

round, of the third round.

Yeah, that was the trypophane we were noticing most. And then it was like probably the next bigger ones, which was those three that you said. But then, it actually became bigger and bigger.

And it's really all of the nutrients that are being used. So then calcium is just like a whole bunch of them. I love biochemistry. And my mind is crazy.

So you should see, I actually kept sort of almost framed my thinking about this because there's like little scribbles everywhere as I figured it out. And now I know that everything needs to be repeated.

But you can like save someone from like severe mood changes or little mood change. You know, like all we've we probably treated And just like over the phone, like go get some tryptophan kind of thing.

Probably 200 people in our clinic. Oh my gosh, probably more because the mom will call and say the kid is depressed. We say, well, before you come in, do me a favor.

Do this for three days and call me. And then we said, Well, and like, could you do it too? And she will get the response that I think you saved my marriage.

I thought my husband was irritating. But it turns out I didn't have any serotonin. There's so much going on in the world right now that I wonder how much of it could just be a nutritional deficiency that you can replete for not very much money Like, I think you can even get L-triptophan at like Safeway.

So two questions is, do you think some people are more susceptible than others? Absolutely. Because at this point, i think, you'd be hard pressed to find any human that, unless they were living a very isolated life in some far-flung reaches of the planet, that wasn't somehow touched by this.

Whether they got the virus or they more inoculated, whatever. It's ubiquitous. That's the word I'm looking for. And so, but yet some people seem to be more susceptible than others.

Maybe that just depends on factors we have yet to identify and weaknesses. with chronic Lyme, why are some people bit by ticks and it doesn't happen and some do?

It's about the immune system. I think maybe fighting it. But it does matter whether or not you are having big cases, right? Like I like to say, poor Safeway, I always pick on Safeways, but like you go to SafeWay, someone spits on you.

Even if you don't get COVID, if they spit COVID into you, probably it was that enterochromaffian cell that grabbed it right? Why do we have, um, peristalsis in response to viruses?

This is on purpose. Our body is so smart, right. So that creation of serotonin creates peristasis. You know, why do you vomit and have diarrhea in responses to virus?

It's to expose it. Even if you don't catch it, You're doing that, right? And it educates the immune system, it modulates the autonomic nervous system all in the enteric system.

So I don't even care if you catch it, you are being drained. For some people, let's say it's incorporated into their microbiome, so the draining is going much faster or it is continuous.

And then, you know, like some people don't methylate as well. So there are then like other components. But I think this touches everyone to your point.

I mean, clearly COVID is ubiquitous. It's also not going anywhere. You get it. Your exposed every day, even if you don t know it, and it's draining us.

Yeah. Okay. What are the three to five patient patterns that make you suspect that this post-COVID nutrient depletion is happening even before you My sister called and I said, when I was figuring this out, like, oh, Michelle, can you go get some tryptophan?

Because I think maybe you might need it soon. And she said well, why? And I say, well have you been sad? She said yeah, because my daughter just moved away to college.

Actually, it was graduate school. No, it was college because this was several years ago. And so that's why I'm crying. I said, well, will you indulge me?

Will you take it? She calls me back. She was like, what the heck did you just give me, right? It's tryptophan, so one is mood changes. It doesn't have to be suicidality.

It sort of feels like being on your period. You have one nerve and everyone's just a little bit on it. Open up Instagram and the memes of women doing the most hilarious things.

Haven't you seen them? And I relate to a lot of them, right? Like the sound of chewing. But I think the takeaway from that is, first of all, the memes are hilarious.

We relate to them. But it's the difference between, like your sister, it is the different between sitting and crying. inconsolably because your daughter has gone through a rite of passage that frankly another parent with a different child would give the right arm for versus celebrating the fact that she's moved on and feeling sad at the loss because knowing that having her near you is never, you know what I mean?

It's almost like there's an appropriate sadness to when our children grow up. And when you're on your knees weeping uncontrollably going, like, I just shouldn't be crying.

Like, it shouldn be this bad kind of thing. Well, and I would just have to say about Michelle, my sister, just in case she sees this, she was doing it appropriately, meaning that she just don't want to be judged.

Michelle no harm intended. Nobody else knows who you are. She's amazing. But yes, to your point, it's about an appropriate or like a reasonable response.

Is this like an unexpectedly large response? Okay, so mood. Second one. Oh my gosh. It's inappropriate weight gain. And I do not know why I cannot fully express this to adult people.

But I will tell you, kids follow a pattern. I'm a patterns recognition expert. I teach my parents how to feed their kids from birth with the mantra of, you know, the parent offers healthy food choices.

The child decides what they need. I make sure they grow well. So I don't have kids who have growth problems. Right. And if you look at the BMI on a kid at about age two, it's here.

They're all right about five to six. It reaches a low point and then they start to fill out at eight. Every child from two drops their B. M. I. That's just it.

If you think about like- They lose the little puffy hands and the puffy feet. It's very sad. Yes. So I had four back-to-back three-year-olds who at their well child check, their BMI went like that.

Vertically, yeah. In a row. And I thought, okay, so in 25 years, this hasn't happened. Why now it's probably COVID? And, I was already playing with the nutrients.

I went to my lunch meeting and I said, Because they weren't changing their eating right like a three-year-old doesn't suddenly you have to chase them around anyway They're not suddenly like I'm gonna like overeat.

That's not how that works. They got other stuff to do So yeah, so I said like let me think so what creates

inappropriate weight loss, right? So I was trying to think it through I say cocaine Fen-fen things like that right without by inappropriate.

I mean not related to calories Right, but so so then I look it's catecholamines right You require catecholamines, epinephrine, norepinephrin, to take glucose up into the muscle via a transporter called Glut4.

If you do not have catocholemines then you cannot take Glucose up and you will have too much glucose and guess what your body will do? It will store it directly as fat.

It doesn't matter. And why would you not have catecholamines in this COVID phase? Well, because you're missing… They become depleted. That's right. In those three, right?

Yeah. So I gave it to them. And oh my gosh, I have chills even telling you now, those kids… I didn't talk to him about eating because that's not part of my mantra, Well, as a three year old, good luck with that.

Right, exactly. And I didn't talk about weight in a way they could understand it either. All of them came down on their own back to their native curve within a few months.

Okay, the first kid put on, it was like, what was it? It was 25% of her body weight, in like nine months, It was like, I didn't even know you could do that.

Oh yeah, she went from 40 to 50 pounds. She was, like I think she was two and a half at the time, in like six to nine months. I don't know even how you do it, right?

That's a lot.

Weight gain, thirst, and other depletion patterns

What's really interesting is that after, at first they're not eating more, and this is true about everyone, the Glut4 thing just isn't working, but then after a while they get leptin resistant, they are voraciously hungry and so like a year into it when I figured it out about this one girl who had gotten kept gaining weight, which I couldn't understand.

I was blaming grandma because grandma, I'm sure it was grandma's fault. Because she was also the childcare provider. Those chicken McNuggets. That's right.

But as soon as she done with dinner, she would ask for another breast of chicken and broccoli and whatever. And her parents were like, what the heck? That's weird.

As soon as they finish a meal, they ask for another meal. Insatiable. That is right. Adults will tell me. In adults, we call it sugar craving. I have done this in adults now too.

If they are gaining weight inappropriately, meaning they're like, I put on 20 pounds in the last six months and I'm hardly eating. I give them the nutrients, and if it was due to this depletion, often it is, they will start to come back down.

Now, kids will do it super fast, like maybe, those kids dropped back to their curve in maybe three months. It started immediately, but then they were back on their curves.

And adults, I think it takes about twice as long as how they got there. Does that make sense? Okay. Yeah. But the sugar craving will go away immediately on day one or two.

It's really amazing. And so, okay. Wow. I have so many questions about that, but I want to keep us going. So that's two. The third one is kids were peeing too much and drinking too.

That is type one diabetes. This is a medical emergency in pediatrics. You have about two weeks before they're in

the ICU with DKA. I thought, oh my gosh, I was checking everyone's urine and there wasn't glucose in it.

So that didn't make sense. I'm checking their blood sugar. And then I realized it was the same kids who had done that. Zinc, so I figured out zinc. Then I am like, okay, there must be something here.

But the anti-diuretic hormone made in the brain that goes to the kidneys, it says don't pee everything out, zinc is the rate-limiting step. So, you know, that was enough to replete them.

Yes. Because we're not talking about like, this isn't like an overabundance. We just need to not be deficient. Yeah, right. Yeah. Okay. So that would be three.

And then, you know, then it gets, they get smaller. Like some people have mass cell issues because more than they would normally because you need some of these nutrients that are in, um, that're used, from tryptophan to serotonin to stabilize mass cells or to break down histamine or things like that.

But I would say the big ones that like people should think about is if you, If you're upset or you are having mood issues or if you think everyone around you is irritating because that's often the same thing, it doesn't feel like you.

Or if your not happy because thats the dopamine thing. If your suddenly, voraciously craving sugar or your gaining weight that didn't make sense and its not normal weight.

Its weird weight, its just fat. So its like in weird places, your body changes too. So that would be the second. And the third one would, I usually ask them just sort of for confirmation, do you find your drink?

You're thirstier than usual or you're peeing more often than you usual. Wow. Ben, that's fascinating because those can be all conflated with other things.

Oh, totally. Like any woman in perimenopause, premenopausus, or frankly pre-menstrual. Right. Does it show up in men the same way? Yes, yes, totally. For guys, it would be easier because guys don't, you know, guys are men, they're not typically that moody.

They're fine, right? Maybe we know different men. I don' know. My guys were pretty steady. Mine too, actually. But I think that men don't talk about their feelings.

I Think maybe that's what you mean. Right. That's true. And so in some ways, like if you notice they were down, you might notice, but in so many ways they don t talk About it, I have to actually ask them.

Yeah, what actually just happens is usually the kid and the mom are in Oh, because that s the other thing. It's not just my staff, right? My patients are In this with me.

Like, oh, let's try this thing, educate them, and then they call back and they tell me so We make the mom and the kid do it and they're like, oh yeah, it's life changing.

And then we're just going to put it in the center of the table. We're not going tell dad why he has to take it. This is what the family's doing at dinner.

So dads are taking it, and their changing too. But I don't talk to the dads about it as much. I talk with their wives. That's phenomenal. five days, seven days.

This is not like a forever thing. I'm not about a week. You should notice a difference is what you're saying. If that's the issue, you'll notice some, a different in a weak.

It's that if you don't notice the difference in the week, then it's something else. Right. Then I didn't hurt you because you took some. What's worse that can happen.

Exactly. So what's, the most common mistake people are making trying to self-treat long COVID symptoms with supplements. Do you think, um, Gosh, our people.

Because long COVID has become ubiquitous. So what's… Right. I mean, I think maybe I'm going to be less judgmental about… Not that you were judgmential, but like…

No. Yeah…. I think that everyone is doing the best they can. And I thinks most people don't understand the mechanism of what is going on the way that maybe myself and some of my friends do.

are doing the best they can, they're just trying things, or they don't know that there's anything that could help. So I think maybe the biggest mistake would be is that they have access, this isn't really their fault, to someone who understands what's going on.

And those of us who do, I just think are starting to say it louder and louder. I, for instance, have been speaking about this topic at the conferences that I speak at for about two and a half years, maybe three years now, so now I have providers come back crying to tell me about all the lives that they changed using these things.

But you know, it's so easy. So I think maybe just we're not there yet. You know, we are in the middle of an evolution. And so I people are throwing things at themselves trying to fix.

They don't know what. I mean, I just and I thinking, you know the next question, which is about, where do you think mainstream medicine is missing the signal?

Is it the mitochondria, the neurotransmitter, or the immune shifts, microbiome? It sounds to me like it's all of it. Like they're just not looking at it and again, like, Not because they don't want to.

We're going to say this once here. Nobody's blaming anybody. Your conventional allopathic doctor is doing the best that they can with what they've got.

I think that what's happening is that we have a new set of circumstances. The landscape has changed dramatically and we need new lenses, new optics, and new approaches to really help people.

And the good news is that people like you and your friends have, you've made progress in this area. And you'll probably, if I interview you in another year, or you'd be like, Oh my God, not, You'll never believe.

We also figured out blah, blah. It's every week. Yes. it'll keep evolving. You said something earlier that it's the hallmark of the doctor who who doesn't stay stuck in their paradigm, which is it wasn't working, or I realized I got that wrong, being willing to continually learn and be wrong and build and evolve.

I would say, guys, when you're working with a medical provider, you want someone who's treating you and everything else like a Rubik's Cube, right? If I flip all the things this way, I'm going to line this row, what falls into place?

And I think that the conventional system doesn't allow for that time and space to think. And that's where you moved into your model. Right. And I think you nailed it there with time and space.

What I want to say about the MDs I know, it's the system that trained us and they don't have time. Like I spend an hour with every patient. I, I like GenPeds, they get like 11 minutes or something.

You can't even know. So I I these are really good docs who have demands on them. They don t even have the time to think. I think maybe time is probably our most valuable, just like period as humans.

What's your minimal effective data set for someone who's post-COVID and not bouncing back? I'm sorry, what do you mean by data-set? Well, so what are the metrics you need to see?

Like you have someone in front of you who is post COVID, they're just not balancing back. Yeah. what's the minimum amount of information that you to need see from them?

It sounds like just from a symptomatic perspective, that's going to twig you to say, let's try this. Are there labs that you like to see? Let's say that doesn't work.

Yeah. Is there certain labs you want to that give you more insight? Yeah, so I tend to be testing like clinically heavy because if I… Right. As this field evolves, there aren't good, great tests for a lot of this.

How do you really look at mitochondrial health? They're all expensive. You and I could talk about that for two hours, right? So it's really more about Well, back to the thing about what's the minimal thing.

If they say to me, I'm not as happy, energetic, quick, you know, sort of things like brain fog, and tired. It's all the things that we think of with long collars.

I passing out, not getting up for work, whatever. So that story for me in this setting. meaning in this, I was going to say post-COVID world, but you and I spoke before.

In the world we're in. Right. Yeah. Uh, in THIS world. Um, and everyone lives in This world right? Um then I'm gonna guess that that might be it and i'm going try a few things.

You know, i have some tricks for like if you can't get a bed in the morning and then i've some, you know and we try few thing and once we figure out what works for that patient, that got them standing again so that they can get back to their life.

And then I have to go handle COVID. That's a really big topic and you'll be having Robin on and so she can talk about that too. So I don't usually send tests for what you're describing.

I send test if I know what to do, but the easiest way I knew what try the things that worked on the other patients before them. And if that doesn't work, then I try something else.

Usually we get it right. Yeah. So it sounds to me like there's also work going, work afoot to kind of chase the bug out. Yes. No, yes. And we don't have to talk about that if that's not in your wheelhouse.

We've got lots of things in the wheel house, but that is encouraging. Robin can talk to you about V9, which is a supplement that she works. That's a bunch of polyphenols that helps remove spike protein and her data is really exciting and interesting.

I get overwhelmed at the thought of like needing to go through a very intense protocol to remove something that I know the next time you go to Safeway is going to be again.

I shop at SafeWay, so that's why I say it. And thank God there's people like Robin and the people that are doing her work, right? Because they're going solve the problem.

Meanwhile, Like I, that's overwhelming for me. And I like, I get paralyzed by the thought of that, like I have to clean everything up and keep it cleaned up.

I'm just going to like we got work to do. Well, it feels to me like someday, some protocol could be a quarterly clearance and in between replenishing those nutrients that are robbing us for when you get re-exposed.

You know, Like, down the road, It won't be overwhelming at all. We'll know, we'll have clarity and we will have strategies to do it. So in the meantime, you've linked this work to outcomes like we've talked about this, depression and anxiety.

The question was, what's your model of what is happening biologically? We've already talked this. It's a depletion

of the cofactors and the uptake of tryptophan that's affecting the catecholamines and that whole process.

For someone who's listening to this who is hearing this… I have ideas. Would you suggest? Yeah, tell us. Tell them what to do. Yeah. Why not, even if you're not sure you are grouchy, you could either ask your spouse or you can just try.

So many people say to me, I didn't realize that I thought I was just tired and run down because without epinephrine and norepinephrin, your fatigued, right?

So you don't have zest. You don' have verve, and there's no checkbox for how's your verv. Get up and go. Exactly. And people just think like, oh, it's the holidays.

Oh, my kid went to college. You know, whatever. So I think really everyone could try this. It's fun. There's so much that's not fun about COVID. Trying things and seeing what happens is kind of fun, so you can…

Before I created anything, we just had people do this, and this is easy. Ready? So tryptophan, L-tryptophane comes as usually 500-milligram capsules. So if you would just take three of those all at once, and I could go into the science about for me why it needs to be all that once.

But it competes with other things at a transporter into a blood brain barrier and it's about that ratio. So I'd rather you take them if can, sorry, all it once rather than throughout the day.

And do that for three to five days and see if something has changed.

Long COVID, treatment trials, and when to avoid tryptophan

And the reason I don't make everyone try everything, like the co-factors too, is because I can't get a lot of men to buy in. But if they feel a little better in a few days, I usually get them to take the other ones.

You have street cred all the time. Exactly. That's true because now they're like, wait, what? So then if you take a B complex, it has to have P5P and methylfolate.

I don't care which one. Sometimes it really matters to me what brand to use. Everybody needs this. So get one of those and get zinc. 25 milligrams, something like that.

Do one of each of those a day with the tryptophan. And I don't care if you give them all the same time, you know, what time of day. Oh, yeah, people are always like, oh, the triptofan is going to make me sleepy.

No, like just because you eat that. OK, that's not true about Thanksgiving. Right. That's that sugar. You're eating too many carbs. Well, and you're reading too much food.

Period. Food coma. Exactly. And you know, we do make melatonin from serotonin, but not just because there's food around. We make it, But we release it in response to diurnal, right?

So you're not going to make people sleepy during the day. I don't care what time you give it. So, and then I just say, if you noticed anything, like to Make it simple.

Now I say just try the tryptophan for a week. If you are up for trying all three, try all Three for week, If at a Week you think I changed something, give yourself a full two weeks.

then you can stop. I'm all about, like, less is more. But we have now, over time, seen that the same people keep getting repeated. And they call me back, and they're like I am depressed.

Do you remember, a year ago we did this, they are like oh shoot. They do it and it fixes it. So we've done that so many times that now I think maybe, because people go to Safeway, maybe five to seven days a month.

Why don't you just take the nutrients? Oh, interesting. So you're not suggesting people do this on an ongoing basis. No. You're suggesting they do it five to seven days, like the first week of every month.

That's right. Yeah. Days one through seven or something. Or if that's too hard, do Saturdays and Sundays or just Saturday. I don't care, some. Because it's not like I need to get you way up here, I just need you not to be down here.

And so the reason, if we do every five or seven day a month, you get here let's say, and then when you You're coming to here, you're not coming here. That's what I'm looking for.

Until you get depleted. And so is there anyone who shouldn't use tryptophan or these nutrients? Is there any one for who this is? That is a great question.

So in short, people worry about things like serotonin syndrome. Let's say someone's on an SSRI, which makes seratonin stick around longer. If that was started when they did have serotonin, I don't think you're going to give them…

Actually, you know, i'm just gonna make this simple because that's going get really complex. I think maybe if you are on an SSRI, meaning something that modulates seratonin then maybe talk to your doc before taking tryptophan.

That's like way overkill. But probably it's fine, but you should talk to your doctor. That's right. If you take it and you get all like all jacked up that day, you're like, jittery hot.

You feel like your heart is racing. Just don't do it anymore. And I would say someone who is suicidal. Um, should not change their moods without the support of someone.

So, you know, like there's a black box warning on let's say like Prozac that it can, um, create the ability to kill yourself because you get, uh, You know when you're depressed, it's not just your mood, right?

It's all like, so I can give you the energy to do things again. Yeah. If you are personally going to do this and you're already actively suicidal, why don't you get help before you take tryptophan?

But I don t think it would have been the trypophans fault, if that makes sense. But to say, so anyone on SSRI or someone who is already having suicidal ideation thoughts, suicidal.

You could think about this, but do it with someone, with your provider. That's right. Okay, great. Now, you've given people the recipe. They can just go out to Saferi or wherever or Designs for Health or Fullscript and get their nutrients.

But you also decided probably, we've now talked to you long enough to know that you are a woman who is looking for solutions and to provide easy solutions to people.

So you did go ahead and create your own product. I did. And I'm so sorry, can I go back and say one more person that shouldn't take it? I just realized.

Okay, thanks. Is that someone who, the tryptophan thing, like, The more I understand about trypophane, and the more complex it is, I like way simplified it down, right?

Because most of the Tryptophene in the body is actually used by the liver to make NAD and ATP. And in the pathway of that, you make kynurenin and other things that can actually cause more inflammation and that also the immune system makes a receptor for tryptophan when you're infected that then further perpetuates that.

So it's way more complex. But the punchline there is, for instance, Betsy gets really worried if I want to give people trypophane because she sees mostly in this setting, she's worried about mitochondria in really sick people.

Really sick It's not about replacing depletion yet. You should handle the really sick part. So if you're totally not functioning, needing plasmapheresis and stuff, that's the wrong person.

Because you will feel worse. If I give you tryptophan, you are going to use it. Right. Because there's actually five steels, like the liver and the immune system.

And so everyone will start to use it and you might make more kynurenin and quinolonic acid and those can be inflammatory for the brain. So it's not like tryptophan's fault.

It's just that the body was trying to do something and it was depleted of trypophane. If you give it back, it can do more of that. If you're super sick, we're talking about like repletion, right?

But if you take it, this is like also diagnostic, so if take my supplement and on day one you are like, yeah, no, what is she talking? I don't feel good.

Guess what? That was the cheapest diagnostic tool ever. You need to go find a real doctor, right? Because like someone who knows what they're doing about, not about tryptophan, but about COVID, because by definition, I now know that your mitochondria are in trouble.

And you need find someone that knows how to help you with that. It's like trypophane is fueling a system that can't function to begin with. That's right.

Like it's trying to fuel a broken system. that's exactly right, and it gave it the fuel. Yeah. So I would say, you know, The body is so smart. This is how I do what I, do is I trust each person's body to tell me what they need.

So we try something. I tell the patient, you know, what to look for, or what, to, tell, me, about they feed back to me. Then we learn something so if you take tryptophan and you think I lit a fire, You need tryp to fan really badly, but not right now.

You know you need to go for the order of operations question, which, yeah. You know, what's interesting to me is, and I mean, this is a very loaded question we can't possibly answer here, but so many people are on anti-anxiety and antidepressant meds now.

And if we could go back in time and look at how many of those people came onto those med's since that Big C event, Um, and because, you know, an, how many could have been fixed or helped, not fixed, but they're already on the SSRIs.

And so, I get overwhelmed by that. Because I sit there and go, wow, if we could just unravel a little bit and start over with some of these people, and it doesn't mean they can't be helped now, but I'm just saying that some people become attached or they believe this is the thing.

But the tragedy is very often these medications don't work long term. And they're not addressing the problem. Right. They're still deficient. Because it won't work well.

SSRI is a selective serotonin reuptake inhibitor. It says to the neuron, just wait two more seconds or nanoseconds before you take it. Don't pick it up yet.

Yeah. But if you don't have enough tryptophan, you have seratonin. If you do not have B6, epinephrine, norepinephrin, dopamine. So you can do whatever you want about the uptake.

But there's not enough. Like that girl, I kept changing her meds and it wasn't working. I gave her tryptophan and we took everything off. So you're right.

Those med don't work well enough, they did work to get her out of a suicidality, which is I think why people are taking them. But, you know, it's nutrition.

It's food. It is so much easier. Yeah. Okay. Can I tell you about my supplement now that I took us off topic? Yeah, tell me about the supplement because then I want to talk about infant microbiomes.

Oh, okay. Then I'll be fast. Remember I said that thing that was going to frame, so I figured out that over time, the more and more trace nutrients were getting depleted.

and I was figuring out something else. The immune system can't calm itself down now. You're getting mass cell issues, all that stuff. So I then was tired of having to solve the next problem.

I said, you know what? I'm going to put everything in one place. And I came up with it and tried to give it away because I am so busy. Right? So busy and don't think I did a good enough job expressing the importance of this, what looks like not very exciting supplement, right?

And so it sat there for about nine months. And then people are asking me about it because I'm teaching, you know, and I am like, this supplement is going to come out.

It will just be so much easier because it's got all the little things. Because then I was like you should do these things and this other thing and people were listening to me talk like what the heck.

So anyway, I came up with it and I gifted it. And I don't think I did a good enough job explaining it, so after nine months or whatever, like I just got to make this, people are getting upset with me.

Okay, well note to self. I should really stick with the recipe and the doctoring. Like the whole finding a manufacturer, do you know how many lawyers I had to get to be sure I wasn't going to lose my tush?

Not my superpower. Anyway, I'm not sure I would do it again, but I absolutely am glad that I did now. It was a labor of love, But it is created. And and in fact, so you do not have to use mine.

Like I said that before, you can use this recipe I just gave you for most of it. This works better. So this is the everything that you need from you. That's right.

My friend, Leonard, that we spoke of earlier, who put on that really awesome convention or conference, New BioAge carries it, and I carry it myself. And so you can go to my website.

We're going to go back to this. I promise you it'll be in the show notes. For those of you who want to get your hands on this stuff, remember it's a five to seven day a month supplement.

This is not something you're gonna take in perpetuity. It'll either be helpful or not be. Exactly. And could be diagnostic. So as a pediatrician, you would have thoughts and insights on the infant microbiome changes and where you think we might be heading for trouble.

You're warning about this, that it's shifted over the last 25 years. Interesting, my son was born 25-years ago. What do you feel has changed and why does it matter for healthspan decades?

It matters for everything. practicing since 99, so whatever that is now, 25 years ish. And at the beginning there of my career, most of the kids were fine and they had good skin and didn't all have asthma and eczema and could eat most foods, right?

But there was a few families, like my tough families. I don't mean that emotionally or I mean medically. complex, auto-immunity. And those moms, I was often having to take milk out of their diet because the milk protein was getting through the breast milk and upsetting their stomachs and their skin was like sloughing or whatever.

They had eczema. But it was just a few, right? And all the other docs said I So I would take it out and they would do fine. Then fast forward, it started to be more and more foods.

Now I was having to take out milk, soy, nuts, eggs, shellfish. And but then when I would do that, the infant's gut would heal and then we could put them back in.

So these are kids that went on to eat whatever they wanted because I allowed their gut to heal. What has happened over time is that without help, I don't think they heal, and I think that their I think that the long drain has probably been glyphosate.

We're about three generations in now, and while glyphasite might not actually kill human cells, it decimates microbes, specifically microbes that we absolutely need.

You know, so that's fine. Where do we get our microbes, right? Infants are sterile. They come out, they go, and they suck in mom's vaginal and rectal microbiome, we kiss them and we sneeze on them.

We start to populate them, and lactoferrin and breast milk help us educate them, like all of it. It's so beautiful, right? But so three generations ago without glyphosate, that microbiome was fine, next generation not as fine because mom doesn't have as much because she's been exposed and then it just goes on and on.

And now it is catastrophic. I would say even the families over the last 10 years, even pre-COVID, I would say to them, you're normal.

Infant microbiome decline and preconception optimization

We're not going to have to take food out of your diet. And then one of them was ending up with actual frank colitis from being fed, like normal kids. Now, I know how to fix it, so I fixed it.

So that's fine. But I thought to myself, this is a problem and people don't get it and Leonard and I were just talking about this, that I wouldn't make the case that the long drain has been glyphosate.

the kindling, right? But then the gas was COVID because COVID decimates and like, this could go into a bigger talk, but our short chain fatty acid producing bacteria, for instance, and our colon are required for successful life, I think.

And so, COVID specifically decimate those. And so, and in infants, the kind of bacteria that they need, like bifidobacter and lactobacillus and stuff, that is also being decimated, both by the long thing and the short attack.

And, so now, I don't know what everyone else is going to do. I'm really worried. That's very concerning to me. So that's partly why I teach about gut.

Yeah. What can we do? Should we be thinking about repleting some of these microbes in infant guts? Right. This is again a bigger topic than for here, but maybe I don't have the most popular agreed response to, I'm not sure Well, you know, when we give, um, When we gave probiotics, for instance, they don't actually take up shop, right?

So, so like you're using them a little bit more as a, a modulator, but I don' think people understand that. Right. So right. You know it, it's a tourist, It goes in there.

It spends some money, which like, You doesn't set up shops. Yeah. it doesn' it. Doesn't it be great? Right? so, So I think if you, know what you are doing, That can be useful in some settings, but you know when I first looked into probiotics way way, way back I did a deep dive because we were using it forever like an infants I would use it and but then I looked in the peds literature and it is like 50 50 some kids have more asthma some Kids have less asthma with it And I thought like years and years in years, and I was like what the heck well, I think it depends on who else is in the gut.

You know, it's not simple. And so what I usually use, but this might be outside the scope of what like, you need to find a functional medicine doc. That's what i want to say.

Yeah. If you could find an naturopath or a Functional Medicine doc before you're pregnant to optimize your gut health, then that would be great. In fact, we're starting a program.

I think I'm so ready. Are you ready for this? Um, we're calling it preconceived, which is, um, where we take couples a year before pregnancy, before birth, right?

Cause I couldn't take all the babies in the world, but I needed to do something. So we were doing that. We like talk about trauma. You know, you got to get rid of your own trauma first week.

Would you microbiome? We do toxin and it's for the men and the women because you would be shocked that like the exercise, for instance, in, the mom pre-pregnancy, pre pregnancy changes the metabolic health of the infant.

Well, for as they become an adult. So anyway, I think that's really the solution is that we're going to have to clean up our gut. Oh, sorry. The wit is my tagline for my company.

I'm just mostly trying to make myself or this program laugh all the time is a new position on baby making. And I just think I've so dang witty and I made mugs and giving them out to obese and mostly like right.

It's like you have to sit with it just for a second as a pediatrician. Anyway, so I think that's the real solution. I thinks we have fix the microbiomes of the women.

Of the parents. Right. Yeah. Before. But then, you know, what do we do otherwise? I thing if you've a good functional medicine doc, if have a doc who listens to Leonard and the other places where we teach, I use things like butyrate.

So I cheat. Mm-hmm. If I used buterate, which is a short chain fatty acid made by happy bacteria, that make our colon happy, make your brain happy. Make our immune system modulated and calm.

You know, it's most of the food for our gut. It makes themselves happy sets up good shop. So I, since I these people don't have good microbiome to make those, I give them the post biotic.

Yeah. And then I wait. There's peptides and there's other things, but I would say do whatever works for you. I can't give as easy an answer for this as I could for the deputation.

Well, I think the short answer is that If for infants, A, we may need to intervene on the microbiome of an infant, whereas in the past we would have said not so much.

That's right. And that's one. You need find someone knowledgeable who can help you with that. Then the second one is if you have the luxury of time and you don't accidentally become pregnant, then invest six months to a year in optimizing your own self before you Right.

Before you're growing a new baby, because that environment you are growing the baby in is going to have everything to do with that child's outcome. And of those, microbiome would be first.

Like, you know, detoxify and all of that. One thing that I want to say that's really interesting is that, Those of us like me used to know it mattered to the child's microbiome, whether or not mom got antibiotics, you know, intrapart, like during delivery, and whether not she was, the baby was breastfed, or whether it was C-section or vaginal, right?

So this is real, finally Western medicine is caught up and they talk about that, but it doesn't even matter anymore. Like truly this, those were important when like the baseline was okay, I could see a difference in those kids, now it does not matter.

I mean, all of it matters, but it doesn't change the way the child's microbiome looks. I think it might explain also a lot of what we're seeing. Absolutely.

It's almost hard to find a child that's not being diagnosed with some kind of issue, whether it's ADD, ADHD. So I think something's happening to change the way those children's brains are working.

And it has got to start there. I know. The microbiome has gotta be the place to stop for sure. If you had five minutes with every pediatrician in North America, what would you beg them to do differently?

Um, listen, take time. And that's not, they don't have that luxury. I understand, but it's important. Celebrate the child for who they are. You know, actually, this is it.

It's one thing. it takes one non-parental adult to make a child resilient. Remember, we talked about my childhood for a second. Like, why do I end up like this and other kids end some other way?

I had a dance teacher, she actually just passed recently, who took me under her wing. We would like choreograph musicals together and she made me feel valuable.

has that. And you know what, you can be that and everyone can do that, but that pediatrician meets that kid at least once a year. You said that care and love are among the most effective medicines.

Yes. Have you operationalized that in a clinic without turning it into some kind of fluffy thing? Yeah. Well, okay, so love sometimes doesn't have to be fluffy.

Sometimes it's tough love. Love is presence, time. be right. And we should all do that in everything we do, right? At the grocery store. I'm present. Not sure I am in love with the Grocery Checker, but I do have love for other humans, and so I think maybe that's how you make it operational.

Also, my clinic, the people I work with, we clearly love each other and they love our patients. And so that is when you walk in, it's kind of like cheered, you know, like Norm, because we have couches and we've coffee and tea and, parents of kids who are chronically ill or adults who chronicle ill, right?

Because we do adults too. This is a place of comfort for them. What I knew was that they give love to each You want to know the smartest people on the planet, it's the moms of kids with autism, right?

For instance, they're like mycelium, like they are networked. So put a bunch of those people in a couch, healing happens. I'm not even… That's love.

You've created an environment. Yeah. What's most common way that modern families accidentally train nervous system dysregulation into their kids and how do we help them to unwind it?

We have missed out on boredom. I love that. Period. Yeah. Right. Because when boredom is when we, it's when the magic happens, right? It's, when it is, we create.

And if we're constantly, if kids are constantly stimulated, that's not good for the nervous system. They don't know how to regulate. Their cup has to be full.

And that's not their fault, that is society. I'm not pointing fingers. This is a bigger issue than those parents, for instance. But I would say that if I had one piece of advice for everyone, it's teach your children how to do with boredom.

Yeah. And I think that that feeds into a conversation I had, I Think it was last year with the Dr. Robert Melillo, where he sounds the alarm on screens for young children, because we're losing boredom because there's no space for it anymore because, there is no age too young for a child to be a And I'm not saying this from a judgmental perspective.

There's no judgment. Like I get the world we're in. And we've been given what seems to be the perfect tool to keep a child occupied at an airport, in a restaurant, like wherever the case may be.

I think that it's rewiring children's brains in ways that we can't imagine. We're going to see it, but ways we that can imagine So, you know, we're gonna close down now and I'm gonna ask you kind of a dark question.

I mean, in the light, are you worried about the human race, do you think? I am. Like I got really depressed for a while when I was working on that conference, because the more I realized the impact of COVID on the microbiome, that like Bactrophage thing.

And like really who I am is different because there's COVID in it. Just even like identity, right? Me and them and us, and I did have this sense that this might be the time to burn it all down and just start over.

You said that. Yeah. I realized the impact I was having on my staff and my family, and I realize that wasn't helpful. And so I decided, well, okay, fine.

Well, we need you. Yeah, I'm pretty good at this. You're kind of good. But what's the thing you think is getting them? is most at risk? Is it the immune imprinting, the microbiome shifts, and the neuroinflammation, like fertility, is it something else?

Do you think that's most of risk. Yep. Um, so those are all linked, right? Like, I don't know if you've heard Betsy and Avid and, and I speak and we, um, that's right.

We all fight about who's most important. I'm the God, you know, or AVID says it's all about the heart. You know? But of course they're all links, but I would say, probably it's the gut affecting the immune system.

And now we talk about self and not self. Right. So I think autoimmunity, I and we're just getting more and more brittle. You know, like, and there's less and less life to us.

Nutrients are getting depleted, not just from the loss there, but like from inflammation. Again, I used to have a handful of patients like that, and now I think it's going to be everyone.

That's scary. So what's the call to responsibility for clinicians over the next five to 10 years? Because we're not ending this on a dark note. There's too much light.

Yeah. Um, there's way too light, way to much hope. Look at everything you've already figured out. Right. We'll be fine. If a clinician is listening to this right now, what is the called to them over next 5-10 years and frankly what can they start in their clinic next week?

So the call to them I don't even need to make because it used to be just those patients were shown in my clinic, right? But they're showing up there. So it is so ubiquitous now, unlike before where like my autoimmune patients or my pandas patients, or chronic Lyme patients who were called crazy or malingering or it's all in their head.

Those physicians that used say that about my patients are now saying things like, You know, there's this thing that can happen after infection where there is like an immune dysregulation ongoing.

You're like, okay. So I think the call has been made. And COVID has actually been great for my patients because suddenly, well, A, I had already tuned them all up so they were fine.

Because they had chronic health stuff, so I already had to write them. Right. They did fine with COVID. The call has been made. So they are showing up in their clinics and they're having to solve things that they can't solve and their going to have to go outside.

Love, boredom, clinician responsibility, and closing remarks

Yeah. I think the call is to outside what you think you know and start looking for answers elsewhere like at these little events that are happening. That's right.

Let's give people hope here. What do we need to change to feel optimistic again? We're not alone. Yeah, right. And I treat chronic Lyme, and I realized that it was like 5,000 something years ago, there was a mummy that they found recently.

He had spirochetes. in his joints and had tattoos over his joint that they were using as acupuncture. And he died at 41, I think it was, of a stab wound to the back.

So sit with me here for a second. I thought Lyme was beating up my patients. Then I realized we evolved with Lyne. Guess what? We had industrial revolutions.

We created art. civilizations, we made the typewriter, I don't know. You know, like all of that with Lyme. So, you know what, guess what? That's why I got to a place of like, okay, i wonder what we'll do with this.

And you, know I think existence finds a way at that end. I really don t know What's going to happen next, but maybe COVID was important. Like my patients with chronic Lymen they would be sad, the kids, because they'd be out of school and I'd have to give them all this meds and they were missing out.

And I would say to them, like, I know, we can pout and whine today, but then let's put our big girl pants on. I promise when the zombie apocalypse comes, you're going to be fine because you are all tuned up.

Well, they work. Right. It wasn't actually meaning that we would have this apocalypse, what we did. But guess what? I can't even know. You know, all I can do is show up.

So I think we should show. I. Think we. Should do what we can. What is that? Like change the wisdom or the courage to change to the things I? Can help me with that.

That one. Do what you can stop fretting about what? You can't and you know show? Yeah, no, absolutely. And listen, we we've figured out so much so it's been 10 minutes.

since this COVID thing showed up, right? And we've already come a long way. So I think that as long as we stay open and keep, stay curious, people, like you, we are gifted with in this world, will continue to find solutions.

You and Betsy and Robin. And you. Well, I'm just sitting here trying to shine lights in the corners to make sure that people like you get seen and heard.

So, all right. We're going to finish with four rapid fire questions, and then we're gonna tell people where to find your stuff. One test you think is overused.

Microbiome. The most boring intervention that works embarrassingly well. Love. The question you wish patients asked you on day one. That the patient can ask whatever they want.

What the doctor should do is listen. Yeah. And I usually ask the patient, if I had a magic wand, what three things do you want? Because I don't know. I know what I think I want to fix for them.

But maybe it's that they want be able to bend over and put their shoes on. That's way more important than the acne all over their face. Like, I can't no, you know?

And so it is easier for me to get the acne on their faces better or whatever if they're already able be mobile in the way they wanted, which I thought wasn't as big a deal maybe.

Maybe that's what's important to them, 100%. Dr. Cynthia Keller, I knew this was going to be a fascinating conversation. It's taken us on a beautiful journey.

Thank you for your time. Please let people know where they can find you, where do they find your magic supplement. I think you even created a code that people can use.

it, which I think is really cool. So for people who are wanting to explore if this replenishment supplement can be with the thing that turns the lights on in a different way, where do they go?

And then where did they got to learn more about you? Right. Okay. So first I'll talk about the supplement. It's my company. I'm so pleased with the name is Alchemic Medicinals.

How do we spell that? I see. Yeah. Medicinals, M-E-D-I-C-N-A-L-S dot com. And the supplement is called Tryptophan Regenesis. Love it. It's the only thing on that website.

So it comes in capsules and the powder is about to ship. So, the capsules you can get at alchemicmedicinals.com, or you get it from Leonard at New BioAge.

And both of us mostly sell it to providers. So my hope would be is that you saw a provider who had heard me speak and could help you with this. But if not, you could get that from either him or me.

Then the powder is just at me, just mine. kids, I needed to create something that kids could also have. But also it's five pills a day now. And that is a lot for adults.

So and it tastes pretty good. I mean, it was hard to make Triptophan taste good, but it does ish mostly. That you can get from my site only. and that's the one we made a code for.

The promo code is Nat Rocks. Thank you. Yeah, thank you and I like honestly did not want to be a salesman. I just want get this thing out there. So we're going to offer 50% off on the powder since I can't offer that on something that other providers sell and because that's not fair, right?

but I can do it on the thing that only I have. And so just, I had 500, my first 500 powder shipping to my warehouse yesterday. Until all 500 are gone, your people can have this code and I hope they can get their family members better and their friends better.

Yeah. Thank you. Well, I will have to see how fast we can push this episode out, but we'll do our best. Now, where else can people go to learn more about Dr.

Cynthia Keller and your work? That's a great question. So I used to try to fly under the radar, right? Because I was doing weird stuff and really upset people.

Not anymore. I know. a member of Longevity Docs and I speak for them. I'm on Scientific Board for New Bio Age that we've talked about with Leonard. So I teach through him.

Occasionally get invited other places, but my clinic is centered in wellness. And, you know, we weren't taking new patients really for 11 years, but we have found some ways I do occasionally doc to doc consults.

And also, if there's a patient I think I could fix easily and I don't think anyone else can fix it. Fix is the wrong word, help. And it's one of my things.

And I'm like, this would be easy for me. But it is hard to teach someone else how to do that. We'll sometimes take them on for six months. I can't have another lifetime relationship because I am full.

Right. but I Can do. That and so we've done that some. Yeah. Well, you're definitely going to have to start that doc to doc. No, I do, that I actually that's.

One of. My biggest passions. Because it sowing seeds, making new gardeners. Yeah, yeah, for sure. You can only be one gardener. All right, so centeredwellness.com.

Yeah. That's right. And for the powder, it's alchemic… Medicinals….medicinal. com. Medicinal, yes. Medicinals, and Nat Rocks will get you 50% off the power for as long as you have some left.

Okay. Amazing. Thank you so much. This has been a beautiful conversation. I so appreciate it. It was really fun,