Introduction to Dr. Christiansen and Functional Medicine

Welcome back to the Reverse Alzheimer's Summit. I'm your host, doctor Heather Sanderson, and I'm thrilled to have Doctor Margaret Christiansen with us right now.

She's an institute for functional medicine faculty member for the past 14 years. And Doctor Christiansen first became interested in functional medicine 20 years ago when trying to solve the riddle of her and her family's complex health challenges.

Unbeknownst to her at the time, they were consequences of severe toxic mold exposure. She became intimately familiar with chronic fatigue, fibromyalgia, autoimmunity, and the hormonal, neurological, and psychiatric consequences of unrecognized bio toxin illness.

A board certified Ob-Gyn for 23 years, her initial boutique functional medicine practice has grown into the Carpathia Collaborative, a large multidisciplinary functional medicine practice based in Dallas, Texas, covering the full spectrum of complex chronic disease.

The practice provides 360 degree functional lifestyle and nutritional medicine and includes an onsite teaching kitchen, yoga studio, and education library that also serves as the site for community learning events.

Doctor Christianson is passionate about her about educating her clients and colleagues about root cause, whole systems medicine, most recently as the host of the highly successful Toxic Mold Summit.

Thank you so much for sharing your time with us today. Doctor Christiansen, thanks so much for having me. It's a good topic, so I can't wait to dive in.

Can you just start by telling us what bio toxins are? Well, Heather, bio toxins are small, fat soluble molecules that end up getting inside the layers of our cell membranes and also our mitochondrial membranes.

Now, many people watching the summit probably already know that our mitochondria are a little tiny organelles inside the cells, inside of our cells, and they generate energy.

So when you have those poisoned or blocked or falling apart because you've had exposures to lots of little tiny, fat soluble toxic molecules, it can really create a problem.

So some of the bile talk, the common bile toxins that we deal with, people certainly probably know about heavy metals. Pesticides also are fat soluble.

And then they'll get in there. Some infectious agents, including viruses and even things like, Lyme, and, an area that I deal with a whole lot is, toxic mold.

What Bio Toxins Are and How They Affect the Brain

And so these are mold mycotoxins produced by, molds that grow in water, damaged buildings. And so how do those impact cognitive function? Well, that's a great question.

So, unfortunately or fortunately, whatever way you look at it, the the nervous system in our bodies and, particularly in our brain, all of our nerves and neurons have thousands and thousands of mitochondria.

Purcell. So if you have bio toxins that are disrupting the function of the mitochondria, and contributing to chronic inflammation in the nervous system, including in the brain, then, it's one of the things that, significantly impacts, cognitive function.

You and I were talking just a little bit before we started that. Again, one of the major ways that we can have, impact on the brain is actually through our sinuses.

So if you are living in areas with high air pollution, for example, and, and, or again, you're breathing in, toxic, moldy substances, it inflames the sinuses.

And right behind our sinuses is our brain. And, and in particular, certain organs in the brain. So it can really create a lot of neuroinflammation there, as well as many just, bile toxins also disrupt the gastrointestinal function.

And we certainly know, you know, leaky gut, leaky brain, those two things are intimately connected. So when you disrupt the, your ability to both absorb nutrients as well as get rid of them and detoxify through the gastrointestinal tract, you're also going to end up impacting brain function.

When you start to think about these bio toxins, it's really like they they impact every system in the body, right. Because if you're impacting the gut, if you're impacting the brain, then you're impacting hormonal systems just like what your family was experiencing.

It pops up as all types of symptoms. And it's part of why it's so hard for conventional medicine to treat. How do we prevent exposure to them? You've certainly convinced me that it's a good idea to do that.

Well, there's kind of there's kind of four things that I, that I talk about in recovery from, bile toxin illness. And also we can say this prevention.

So I talk about clean, clean air, clean food, clean water and a clear mind. So in terms of on the prevention side of things, you know, we can start by, using things like air filters in our homes, air filtration in our homes, and then not using any toxic substances like, fake air fresheners and those plug ins and that, kind of those kind of things.

Also being wary of really any new products they off gas, you know, rugs and carpets and cabinets. Depending on what they're made out of, can off gas a lot of stuff.

So, indoor air quality is often much worse than outdoors. The, like I said, the cleaning products that we use bleach and, and a lot of things like, you know, Lysol, whatever, they, they're, they're kind of toxic substances.

So there's lots of substitutes available to not be exposed that way. As far as, you know, things like heavy metals and, that's, that's a whole nother big ball of wax.

We can talk everything from, dental and I believe you have a dentist speaking as well. As, you know, vaccines can be a source of heavy metals. Again, depending on the air quality, where you live and the water quality where you live, that can be, problematic as well.

So, you know, and then having some mindfulness about, again, a house or a building that you're going to move to or work in, you know, does it have a history of having had water damage or, you know, exposures?

And unfortunately, it's extremely, extremely common.

Preventing Exposure: Clean Air, Food, Water, and Mind

So, but I would just say for, you know, at a personal level, you know, getting a high quality Hepa filter, for every bedroom, in the house. And if you, if everybody's sick in the house, then have some, with lots of different symptoms.

And then somebody that in one person is not affected at all. And you still in the, in the dog is sick to think think about again what is the air quality in the house like.

And is there a possible mold exposure. How might we know if we've been exposed? I think you just kind of

mentioned that it's like unexplained symptoms.

Even the dog is sick. Maybe one person isn't affected when there's this mismatch. That can point to an environmental exposure. What other things can come up that might make you want to consider that?

Well, you know, again, what, what we deal with is a lot of, what I deal with here in this practice. And a lot of those of us who are on the front lines of environmental medicine often we're seeing these chronic, chronic, complex illness clients who've been sick for many years and going for doctor, doctor and often have mystery illnesses like chronic fatigue syndrome, fibromyalgia, pot syndrome, etc. but it like you said, bad toxins can affect every single system in the body.

And so for some genetically it may turn on their autoimmunity. So any of the entire range of autoimmune diseases, whether you're looking at Hashimoto's, you know, thyroiditis to to Crohn's disease, again, you can there can be a bio toxin component, you know, particularly, I think, from some of the gut stuff from infections.

And then, again, I had mentioned psychiatric is super, super, super common. Again, your brain is on fire and your nervous system is on fire. So and if your guts on fire too, then all that's going to come out in anxiety, depression, you know, bipolar, schizophrenia and, you know, from the whole range from autism to Alzheimer's.

So, you know, you're talking about Alzheimer's on the summit. But, you know, I want people to think about Alzheimer's. You know, what autism is, is sort of Alzheimer's.

And a little kid, and, you know, schizophrenia is the same thing. There's these are neurodegenerative changes that are happening from chronic inflammation in the brain.

So, and we have, we have we have that awareness and understanding. We can start very early to, to impact that. So, you know, neuropsychiatric, neurodegenerative diseases, those are all autoimmune, a lot of hormonal imbalances.

So in women, we'll see things like severe, PCOS or, bad intimate roses and infertility issues all can be triggered from because of having, bio toxin exposures.

And then, we, talked about some of the can in the neurodegenerative autoimmunity, cardiovascular. That's the other big area. I knew I was missing something.

So with men, we're more likely to see things like hypertension and cardiovascular dysfunction, and things like erectile dysfunction, prostate issues, again, depending on, what's impacted.

But certainly all the hormonal systems and the communication systems in the body can be affected. And then detoxification mechanisms, are markedly affected, which contribute to any disease process.

And by the way, when you talked about prevention, the one thing, the major thing that I forgot to mention in preventing exposures, is our diet number one, number one thing, start with organic food.

People have no idea what has happened to our food supply. And, and particularly what it means that something is genetically modified and covered in roundup and has had, genetics in it that have been compromised or changed to actually trigger autoimmunity in us.

You know, the Covid outbreak is, is a, stellar example of, abnormal and abnormal gene and genetics in an organism that has triggered a whole lot of different problems in the body.

But as we as we accumulate these toxins, we basically lose resilience. So whether it's Covid 19 or a stressful event or whatever it is that comes our way next, we are more likely to succumb to it if we have this high toxic burden.

And so the goal becomes then one that preventing new exposures. But then how do we get them out successfully?

Because this is a little tricky, right? That you and I both work with Doctor Nathan.

And you can do this too fast. Yeah. So where do you start? Yeah, well, and let me just make one other comment, because I know you have a lot of different experts talking on the on here.

But again, one of the, the big things that we see in neurodegenerative diseases, such as Alzheimer's, as well as just any kind of the chronic illnesses that we're looking at, is this overlap of sort of three circles when you have the traumatic brain injury, patients who have had some kind of head, neck or spine injury and it doesn't necessarily have to be a concussion, but, and, and we have I've kind of had plenty of gymnasts and cheerleaders and pole vaulters.

I've never had a concussion, but they've had repetitive injuries in the head, neck or spine. And then that alone traumatic brain injury we know, causes chronic neuroinflammation, in the, in the brain.

And again, we can see, dysfunction in the mitochondria. With that, chronic stress and or PTSD, is another kind of circle that, that we, that we look at that can really impact again, brain function.

Because if you leave your limbic system in your brain, that's your fight or flight center in your brain that kind of runs everything unconsciously. If it's stuck in the on position all of the time because you've experienced traumatic events as a child, what we call aces, adverse childhood events, or again, just major traumas along the way.

Signs of Bio Toxin Illness and Systemic Symptoms

Or I mean, just look at right now, we have an entire country that's been traumatized, you know, in the past year and a half, entire globe, with the Covid epidemic, you know, on top of, you know, lots of other things.

And, you know, then you talk about relationship losses, whatever. Many, many, many of the clients that we see as well have PTSD just from being in the conventional meds systems, in conventional medicine system, going from doctor to doctor, doctor, doctor, everybody telling the crazy there's nothing wrong with them, or here's another pill.

And there, you know, in 15 different, prescriptions. So, so PTSD and stress causes neuroinflammation, traumatic brain injury, of any kind can cause neuroinflammation.

And then the bio toxin exposure, whether that is heavy metals, Lyme infections, toxic mold, pesticides, petrochemicals, all of those, that in and of itself can cause neuroinflammation when you put those three things together.

That's a lot of the clients who we end up seeing, and a lot of the clients who end up having rapid cognitive decline or challenges and or psychiatric system issues and or autism, because you put all those three things together, too, with vulnerable genetics, it doesn't clear toxins.

Well, then then that's that's where we're seeing the clients we see. That sounds like a recipe for chronic illness. Yeah, yeah. So how do you start getting them out?

How do we create solutions for these patients? That's really good. And you're going to have doctor deal breeders in speaking to, a lot of this as well.

Again, the first thing we do, what we start with is improving the quality of the gastrointestinal tract, and healing, working on healing. What we in doctor talk called increased intestinal permeability.

And the way folks know it is, leaky gut. Although, although we're seeing that now in conventional medicine now they're using that term. Wow. I can even believe it.

But, yeah, leaky gut, leaky gut, leaky brain. So we need to start with working on healing the gastrointestinal tract and then opening all of our drainage systems as well.

So making sure the lymphatics are really, draining as well, before you start really ramping up a lot of detoxification protocols. So we have a lymphatic circuit that we have folks to use, of their lymphatic hose.

There's synthetic specialists out there you can see do some cranial sacral work as well to help, especially if you're doing brain folks, that really help open those, lymphatic channels.

So you need to get the kidneys working. Well, lots of water going through the gut, working well. And then gently, you start, regulating detoxification mechanisms.

And we do that again both with diet and nutrients. And there's a specific nutrient that I'll be talking about this called fast vegetal calling, that can be, utilized to help that.

So, you know, that's what we do. And then we'll go after and start, you know, kill protocols on, things like candied or yeast overgrowth. Again, if you have a chronic infectious illness such as Lyme or any one of its co-infections or, possibly some viral illnesses along the way, then there's protocols that we can use for that, as well, things like I. V.

ozone and, and there's botanicals and, but there's IVC, which we're going to chat about, so, there's just a stepwise way that we need to need to do it.

And then, I use some advanced therapies also with, neural peptides, that you can, utilize to sniff and to, to help again decrease, brain inflammation and encourage new growth.

And then the, the really, really important piece is to learn how to exercise the brain to create new neural pathways. And there's a lot of ways that that can be done.

I know you're going to have doctor that's crazy. And speaking to that, I have, one of, Doctor Crossing's proteges here in my clinic, Doctor Lila Doolittle.

So she does a lot of the brain exercise, work with eyes and and certain patterns and things that you watch and do. And, and I would have to say ballroom dancing, is also one of the really important things, I think, that can be utilized, to help, help the brain.

So there is, there are stepwise ways that we first heal the gut, help to upregulate all the drainage mechanisms in the body, and then upregulate detox and then go after kill and then go after really rebuilding the nervous system in many different ways.

Beautiful. So with that, you know, part of the conventional medical system is very much trained. Us to say, all right, I have a symptom. Give me a pill and make it go away.

And what you're describing is a much more comprehensive approach. So how do you help patients kind of recalibrate their expectations around how quick they might expect results?

Well, you know, that's a great question. Because we certainly know that, for example, none of the Alzheimer's drugs really do anything. They don't really work very well.

And, you know, I'm just, you know, teach folks about you have a sort of this toxic bucket that has gotten full and is spilling over. And the idea is not to put a lid on it with medications is to open the spigot at the bottom, to start to drain that, and then to identify, what Doctor Brett is and causes the 36 holes in the roof, to you have to identify all the different components that we're working with.

How much stress, how much toxins, how much nutritional deficiencies, you know, again, how many hormonal imbalances. So this is a process that takes, you know, you didn't get here overnight.

This is a process that that takes, you know, quite a bit of time. And you're looking at, you know, probably a minimum if you're working with somebody who's got, you know, cognitive decline, you know, a minimum of 12

months to, to kind of turn things around.

Although you can see, depending on their symptomatology, you can you can see much quicker responses.

Stepwise Detox and Nervous System Recovery

But, you know, in terms of getting to a point where you're really laying down new neurons and creating new pathways, you know, you're probably looking at at least a year and then a lifelong process of staying, you know, staying in the lane of, creating healthy neurons and and not trying to treat what's already, you know, been damaged, you know, using medications that aren't particularly effective.

I don't know if you ran into this in your practice, but certainly as summertime approaches, I have a lot of patients who are starting to feel better, and all of a sudden they start taking on way too much.

So they're having burgers and beers occasionally, and then they're going on trips and they're, you know, it's summer vacation and they're feeling a little better, probably also because of more sunshine.

And all of a sudden we're we're two steps back. Where do you say as people start to feel better, you know, this is a great thing. And yeah. Do you have a way?

Well, again, I tell folks, you have to continue on your protocols at least six months after you start to feel better, to continue the same things that we're doing.

Because, yeah, all of a sudden. Yeah, you're we're starting to get some things working, but you have to actually solidify that. And, we certainly know that there's a lot of science behind how the neurons grow.

How long does it take them? How long does it take to recreate new pathways? And, you know, again, many folks, by the time they come in to see you or I have had many, many years of, feeling, disrupted.

So I, you know, I generally sort of say, you know, at least three months per year of you're not feeling well is, the minimum. And it's going to take. Oh, that's a nice calculation to offer.

So yeah. So you mentioned a little bit about bio toxins disrupting the gut. Are there other mechanisms by which they do they impact detoxification. Oh absolutely.

And specifically you know, toxic mold. One of the things that does it really, impacts the, glutathione synthase pathways. And so you can actually make up a mock up directly, cause direct impact on some of the detoxification enzymes, in our body that that's one way of the heavy metals can do the same thing.

But what happens is with many of these bio toxins, they're getting trapped inside the cell membrane layer. So it's, it's helpful to, for folks to understand or know that our cell membranes, as well as all the organelles inside the cells, including the mitochondria, are made of two, two layers of and on the outside, where my hands are is the water soluble layer of, phospholipids.

And on the on the inside, what you have is this layer of sort of like olive oil that should be, flexible and moving. And then, sitting in the cell membrane or in the mitochondrial membrane are receptors.

They're kind of like floating around like potatoes, across the cell membrane. And they are they receptors work like our eyes or ears or our, you know, our mouth as, telling, telling the inside of the cell what's going on on the outside of the cell and vice versa.

So if you get these bio toxins, which are fat soluble, trapped in this lipid layer, in the phospholipid layer, you go from having olive oil to having like lard in there.

And so it stiffens the cell membranes. It stiffens the mitochondrial membranes. And you can't get oxygen and

nutrients in. And you have a difficulty getting toxins and energy out or whatever it is that the cells trying to produce, you know, if it's in the gut is going to be producing digestive enzymes or hydrochloric acid or something.

If it's in a if it's in your ovaries and you're going to be trying to produce hormones, you know, if it's in your bones, you're trying to lay down new bone.

So you're going to disrupt the function of the cells. You neurons are making neurotransmitters and they're not working. So, there's, bio toxins can it can act at multiple different levels, either direct toxicity to the cell membranes or it triggers, autoimmune responses so that in the whole, the whole body becomes can become involved with that.

It disrupts energy function, as well. And and then you can have an allergic response also again, an immune system, response. So some of the toxins particularly we're speaking of mold and mycotoxins suppress certain parts of the immune system called the innate immune system and suppresses that part.

And that's the part that actually goes after things like viruses and cancer cells and abnormal cells. Our immune system, our innate immune system is kind of like, I it patrolling, all the time and identifying invaders and trying to get rid of them.

But if that part is not working and the other part of the immune system is called the adaptive immune system, that part is working overtime. And that's the part that makes antibodies and cytokines.

So I think everybody's learned about what a cytokine is since we've had Covid. You get over activation of antibody production and cytokine production and forgetting to look for the abnormal cells and for the, for the invaders.

And so this is what makes us much more susceptible to things like infections, to viruses, to Covid, to Lyme, to, other things. So if you've got a high bio toxin burden, you are more likely to have some of those other things going on.

And so, yeah, and just this big imbalance. So part of the other piece that we're doing is helping to bring this back into balance. They bring up the innate and bring down the adaptive.

A lot of my patients don't realize that cells that, commonly used medication in the autoimmune world is actually micro toxin in pill form. Right. So not only are these things, effective immunosuppressants, when they're in the environment, but like, they're so effective that the pharmaceutical companies put them in pill form and give them to people who have overactive immune systems.

And of course, that's not like the process that we want to be, you know, supporting. We want to support health, not, like you said, just putting a lid on that.

But I think it illustrates just how destructive those mycotoxins can be. Yeah. Well, so step two, I think, I believe it is a form of mycophenolate acid, which is one of the things that we test for, Michael, phenolic acid is it can be produced by a lot of very nasty toxic moles in water damage buildings.

And, you know, to your point, Michael, phenolic acid is actually used in people who are getting bone marrow transplants. They use mycophenolate like acid to knock out somebody's immune system entirely at very high doses.

To wipe out their immune systems. And then they give them somebody else's. They do bone marrow transplant.

Managing Expectations and Healing Timeline

So these are toxic substances and many of the mycotoxins to have been used in chemical warfare. They have severe neurological, consequences. And why, why, why they've been used.

So I think that that's an important point. I'll also bring up antibiotics. Many, many antibiotics are mitochondrial

toxicants. Our mitochondria actually look like little bacteria.

And the role of antibiotics is to poke holes in bacteria in the, in the, in the, the wall of bacteria. That's how many antibiotics work. And the antibiotic penicillin, for example, is actually derived from the mold and is psyllium.

And so if you had a bunch of Penicillium growing in your house and, and you're, and you're producing some of these mycotoxins that are coming off of it, it can be one of the reasons, again, you're having a lot of upper respiratory issues, a lot of chronic sinus infections.

Everybody's got allergies. The kids have sort of strep throat and ear infections. And, you know, everybody's got a little A. D. D.. Mom feels tired all the time and crabby and her periods are all off.

Dad's super irritable and he's got erectile dysfunction and is pissed off, you know, so his blood pressure has gone up, and the. And the dog is coughing and having diarrhea.

So there you go. You know, it really does start to make sense when you break down these mechanisms. Why having a moldy home or being exposed to these toxins can show up in different people in different ways.

And it can be really, really confusing, both for the patient, you know, the people suffering, and then also for the doctors as they go and see different specialists.

And no one's really putting it all back together the way you are in your clinic. So tell me a little bit more about cell membranes, mitochondrial membranes and neurons, what they're made of.

And I think this is a gorgeous segue into talking more about fast little choline, which you've already teased us about a little bit. Yeah. So again, you know, we talked about that, that, that double, layer of this of the cell membrane.

And, is water soluble on the outside. And then it's got these lipid tails and those are called phospholipids. So 80% of the outer cell membrane is made up of phosphate, little choline and in the mitochondria you also have fast digital calling on the outside cell membrane and something called fast digital and ethanol amine on the inside of this the cell membrane.

There's also other ones phosphatidylinositol pulsatile serine. So, again, you can utilize, fast little choline, both given orally as well as, IV, along with some other nutrients to help, both work on detoxification pathways and actually wash out these toxic substances, as well as rebuilding, again, our body naturally produces phosphate will clean out of, out of many, you know, many different precursors.

But when you've had overwhelming disruption in your, cell membranes in the body and in different detoxification mechanisms, utilizing, nutrients like phosphate, gentle choline can be very effective.

And, but it takes it takes a while for acetylcholine has an effect on the liver as well. It, it helps the, it helps to kind of, produce more bile and flush the bile, out.

So it's a good way again to, to carry toxins out. So we use it both in for detoxification, help with the cell membranes as well as for rebuilding, cell and mitochondrial membranes.

How Bio Toxins Disrupt Detoxification and Cell Membranes

And then when you're using it orally versus by IV, what kind of different benefits do you expect? Well, again, you know, I've you can do things a lot faster and you can use, you know, pretty significantly higher doses.

Again, you have to prepare somebody to be able to do that with them. You have to prepare their gut and their liver and all that. So, but certainly for any kind of neurodegenerative diseases and seizures and Ms..

And, Parkinson's, that can be very I mean, again, a lot of time, those underlying causes are these bio toxins,

whether they're infections or moles or heavy metals or, you know, pesticides and plastics, whatever it is.

So we can utilize that orally. It just takes longer. But there's other components of that, of the protocol. And in the past, now it's known as, lipid lipid membrane therapy.

It's been called the PK protocol over time. After Patricia Kane, who's the brilliant, cell biologist and scientists who started working with, with tiny, tiny babies, preemies, and, you know, that's how she started her work in this area and, how to how to help their nervous systems, rebuild and really pretty amazing.

So at the end, we can certainly talk about the beneficial role for, women who are pregnant and be able to use positive calling to help with good brain development.

So, there's other components to this. You, also use something called butyrate. Butyrate is produced by the normal healthy bacteria in the intestines. It helps to nourish and feed the lining, the intestines.

But it also butyrate helps to break down those what are called very long chain fatty acids. Those those lipid rafts inside the cell membranes can be broken down, using butyrate.

And then oftentimes we're using glutathione, which is both orally and or i.v. And, and it's precursor called and acetylcysteine glutathione is a potent antioxidant and detoxification agent.

So it helps to wash things out. And then you need some kind of binders, to bind up the toxins as they're coming out. So they're not recirculating. And then what, Doctor Cain talks about are different.

Toxic chaperons, including bile salts and things like Tucker. Those are things are things that we can utilize all as part of the PK protocol, along with a clean diet.

Lots and lots of, fluids, liquids, and particularly with that, have minerals and electrolytes in them. And you can, you can get rid of heavy metals without doing ki lation by using a postural calling.

That's phenomenal. So the different mechanisms that work here, when I think about using PCA and good assignment as well, I think of them kind of, Chris Shade, who we both know, who works a lot with Mercury Detox.

He calls it like push and pull and or elimination and mobilization are the other words that we use. And first of all, Colleen is is certainly more in the category of that push.

It pushes it out of the cell or mobilizes it. And so I think what you're speaking to here with making sure there's binders on board, preparing people in advance, making sure that we're not pushing more than we're pulling, we're not mobilizing more.

And then we're eliminating and really getting out of the body versus just out of the cell. That's that's absolutely right. And, you know, I can tell you, I mean, I have a lot of clients, too, who've seen other, you know, good functional medicine practitioners and all that who may just not have had quite as much experience.

And, the critical piece is you have to prepare the body appropriately, or else you are pushing way too fast. And particularly for example, doing things like I work for heavy metals, that never should be the first thing to do.

However, in my book and, so, you had to kind of be careful which way you do things. Yeah, absolutely. So what makes PCC particularly important for the brain?

Well, again, you know, it's, what, 9 pounds of fat sitting on top of our heads, hair, and fat soluble membranes and and trillions and trillions of mitochondria.

So, utilizing, and also something called acetylcholine. So choline is, is the, is the, the backbone that is sort of the fatty lipid piece of this. And acetylcholine is a neurotransmitter.

So depending on how long the lipid the lipids are is if it's really short then it's a neurotransmitter called acetylcholine important to help in memory.

It's incredibly important as well. And then you and then the cell membranes themselves and the neurons themselves. And then, you know, hopefully somebody also spoken to myelin in myelin ization.

So myelin also has a whole bunch of fast little choline in it. So myelin is the insulating sheath that's around all of our neurons. And in many areas the brain, they have the white matter that has a lot of myelin there.

So a lot and a lot of toxins get trapped in the brain. And and then if you've had a lot of chronic sinus inflammation, then you have a lot of gut inflammation going on, and you have toxins and inflammation, chemical signals crawling up through the vagus nerve, up into the brain.

That's, that's why, we can see so many problems from behavioral issues to cognitive decline and then neurodegenerative diseases, all really caused by some of the same underlying.

Sorry. All caused by the same underlying, challenges. So, that's that's how it can be very beneficial.

Phosphatidylcholine, Butyrate, and Glutathione Support

At the same time, I'm, I'm using that for particularly for somebody who's got some cognitive decline issues or traumatic brain injuries. I'll use nasal peptides like RG three or BPC 157.

Also to stimulate, new neural growth and tastic. Are you using Sealink or C-Max at all? I have not, which one? Stealing or C-Max? There's some of the other neuropeptides.

No, I haven't, I haven't tried those yet. I just, I dabble a little bit, but those are the two main ones that I use and also VIP. There's no basso actives and tests on peptide.

Very useful again for turning on, mitochondrial DNA. Yeah. There's so much exciting stuff happening in the peptide world, and especially with the intranasal ones being so close to the brain.

Yeah, yeah. So you hosted the Toxic Mold Summit, and, you know, I'm thrilled to be hosting this summit. I'm curious that you can where am I going to be in a couple of years?

What are the few nuggets that you really took away that have impacted the way you practice just by hosting experts in this field? Great question. I think that the work by ENT doctor Donald Dennis was just mind blowing in terms of understanding the site.

The again, the role of the scientists in in psychiatric disorders and neurodegenerative disorders and again, ways to approach it other than another round of antibiotics.

And he does some amazing work using nasal antifungals. And and actually you're getting the sinuses in, in a surgical procedure, that are just, amazing.

And he's also developed a lot of things around the whole, world mold, mold toxicity. So, you know, I definitely I learned that, I spent a lot of time, both with Doctor Lila Doolittle, who actually works here, and, Doctor Suzanne Garza, who is a an amazing, amazing, integrative neurologist who, again, really, really learning a whole lot about the limbic system and how limbic system ends up, perpetuating a lot of dysfunction and the need for getting that under control.

And that was actually Annie Hopper's work as well. And now and then we have Ashok Gupta also doing a lot of work around the limbic system retraining and how important it is for to be able to use our conscious minds and our conscious brains to override some of these chronic signals of distress.

And distress dysfunction. So, I think those are, kind of, you know, three main areas of, that were important, learnings. And then your background in women's health.

And as an ObGyn, I'm curious, when would you say we should start preventing Alzheimer's? Like when does that when does cognitive function sort of begin?

Well, prenatally, you know, before you get pregnant? I would really suggest that, both women and their, you know, and their spouses, undergo some, you know, detoxification protocols and assessment and get on really clean diets and clean up their air quality.

Just all the things that I said clean air, clean food, clean water, clear mind. Because we know that there's a lot of epigenetic impacts to, on our on our genes.

So epigenetics means it's not our it's not it's a means above the gene. It's not our genetics and self. But if we have things in our environment that end up sticking to our genes and impacting the way they express themselves, then that can lead to everything from autism.

Again, you know, that whole that whole spectrum of, challenges, including Alzheimer's. So I would say, you know, starting prenatally by really, trying not to get pregnant until you've, you know, really clean things up and make sure that your nutrients are really top notch and all that during pregnancy.

Again, you can, take fast digital choline and, and that can help to boost your, your child's, you know, brain development. And, that's a pretty amazing Patricia Kane, as I mentioned, she, you know, a lot of these teeny tiny preemie babies.

Who would you would otherwise would normally have grown up to be severely blind or cerebral palsy or, you know, significant cognitive challenges. So many of the babies that she's taken care of were just absolute miracles.

And that's because she had she was giving moms is very high, high a lipid diet, a very clean lipids and lots of basketball choline and, and their breast milk would be like cream coming out and giving the to the babies.

And, you know, just even to feeding the babies with this, which was pretty amazing. So moms can safely take it during pregnancy. The quality of the fast food, the choline, is absolutely imperative.

There's a lot of crap, crappy stuff on the market. A lot of it is, you know, is soy derived, from non-organic sources. So there's really only two companies that I would recommend using.

And that would be, body bile and membrane health and membrane is a membrane, you know, as sources for the fossil fuel calling. Yeah. And for IV, PC as well, or you making sure that it's not.

Yeah.

Neuropeptides, Summit Takeaways, and Early Prevention

So the IVC that I, that I utilize it actually comes through from a company in Switzerland and again, there's a lot of compounding pharmacies that say, well, we can make positive or choline.

But, I wouldn't, I wouldn't trust it. There's and again, people, you know, people who have sort of heard of this but never really done any the training behind it, they don't understand that you can the, the type of phosphates or calling that you get from a pharmacy or whatever, those lipid chains, those lipid banks on them, it can be completely different from from what actually you need and what's bioactive.

So it makes a huge difference in some of the compounded ones can create a lot more side effects. And then when you do the IVC are you doing it where you draw the blood out, exchange the blood, and then push it back in?

Or are you doing it in D5? W we do. We do. You can do direct I. V. push. It depends what you're trying to do along the way. You can do direct I. V. push.

We we do it, mixing with the d5 w and then we chase it. I mean, you have, you know, ivy butyrate drip first and then some PC and then some full and ACC acid and B12.

And there's a there's a whole way to do it. It's a whole beautiful dance. And so I would for any practitioners who are listening, or any, you know, clients, you know, send your practitioners really to its neuro lipid research.org.

And and is that picture cans website. Yeah. That have this. Yeah. So that's her, that's her website. And they and they have all the trainings and membrane Health also runs a lot of the trainings now and that's her new company.

And so it can be very helpful and very useful. Very helpful. That's what we're about. You know, you shared with me the story of how you came up with the name Carpathia Collective.

Collective collaborative, collaborative, collaborative. And it was just such a powerful story. Would you mind sharing with our listener? Yeah. The Carpathia was the ship that picked up the survivors of the Titanic.

So, we have the Titanic of Western medicine that's just treating the tip of the iceberg and not really looking at the underlying causes of the problems.

And we are foundering, because of it. So we have sort of the functional medicine approach of the, the Carpathia and, and many of the other practitioners out there who, are picking up the survivors, and, you know, we're using a whole different approach that gave me goosebumps twice now.

It's just so neat to hear you are so passionate and so sincere in your in your just desire to help people get well. And I think probably a lot of that comes from your personal experience, your family's experience, and then it shines through in your practice and all of the teaching that you do.

That's all true. Thank you so much. Yeah, absolutely. Thank you for sharing your time and wisdom. How can our listeners find out more about your practice and and all that you have to offer?

Sure. Well, I can we were at the, Carpathia collaborative.com, and that's a big mouthful, but you can probably find me in my brand name. The other thing that, that, I'm part of is mold detox diet.com doctor Gail Clayton and I, she was on the Mol summit.

She is an amazing, amazing. Former pharmacist. She's a has a doctorate in clinical nutrition. She teaches a nutritional biochemistry. She is very, deeply involved in the autoimmune system and, understanding.

And we have an advanced practice module for, clinicians and, caregivers to teach people about the what happens to the immune system. And with bio toxin exposure, particularly, you know, a lot of mast cell.

I didn't mention mast cells. That's a huge thing. That'd be Marcel's and histamine release. And as you both you and I know that very common underlying a lot of challenges.

So we you know so mole detox Dicom we have a section both for lay clients, for, you know, lay people to learn how to talk about, do all the things that I've mentioned clean air, clean water, clear mind, clean food and, and then we have the section there for advanced practice.

So if you, you know, want to take a deep dive and understand and learn how to actually apply some of these principles and, to utilize some of the things I talked about, the advanced practice module, it's good for clinicians.

Phenomenal. Thank you so much for all that you're doing for your patients and educating other providers, but that we can all just be helping more and more people, rescuing them.

Thank you so much. It's been such a pleasure. You're so welcome.