Introduction and Speaker Background

Welcome to this episode of the Mycotoxins and Chronic Illness Summit. I'm so happy to have with me today, Doctor Kelly McCann. She's a friend of mine and a colleague.

And, Kelly, how do you introduce yourself to our audience? Thank you. I'm so happy to be here today. I think we're going to have a great time. A little bit about myself.

I am a medical doctor. I did medical school at Tulane University in New Orleans. I got a master's in public health while I was there as well, and then went on and did a dual residency program in internal medicine and pediatrics.

I had a brief stint in Oregon and got sick, and then decided I needed to do more training. So I went to Arizona to dry out after being in Oregon. And, worked with Doctor Andrew while at the Arizona Center for Integrative Medicine.

So I was one of the residential fellowship fellows in that fellowship. And then went on and did functional medicine with IFR. I trained with Doctor Walter Cronin and environmental medicine trained with Shoemaker, and, Patricia Kane learning about fast vertical Colleen.

And then more recently I've been, learning a lot about mast cell activation from some of the greats like, Lawrence Efron and many other doctors. And so, that's where I am now practicing.

In Southern California, I have a practice there. It's a private practice, and we see very complicated medical patients, just like you guys do. Very exciting. Thank you. Yeah.

Thank you for being here. We always have so much fun on our interviews and in our conversations. So you're doing a massive summit of your own coming up.

When does it start, Kelly? Yeah. So that will be, in the end of August, beginning of September. So August 27th through September 4th. That's with, health means.

So you can look for that, upcoming. Fantastic. So, yeah. I'm excited. So let's start talking about mask. So then why not let's one of my favorite things to talk about.

I love it. So so let's talk about what mast cell activation is. Kelly, would you like to start by telling our audience what it is? Sure. So for those of you who don't know, mast cells, mast are part of our immune system and they are the part of our immune system that fights foreign invaders.

And they're born, just like a red blood cell. And then they, make their way from the bone marrow to different sites in the body where they live, the rest of their lives.

And those sites line the areas of interface between ourselves and the outside world. So they line our upper respiratory tract, our whole GI tract, lungs.

They're on our skin. They're in our brain. General urinary, urinary tract. So like bladder. So when they perceive foreign invaders, they can, they're filled with all these chemical messengers called mediators.

And when they perceive a threat, they will dump out their mediators and cause an inflammation reaction. Yes. And so the big the big buzzword right now is histamine.

And and I love that you talk about all these mediators because often people think it's only about a histamine reaction. But we know that mast cells have a repertoire of a thousand mediators.

So so when our muscles are, are flaring, it's not just histamine, but it's a thousand other.

What Mast Cell Activation Is

So people think that they can just block the histamines and they wonder why why they're still having these symptoms. Also because there's a thousand other chemicals out there that are flaring.

Exactly. System. And I love how you talk about how they're there throughout our whole system. And so people say, but I don't have I don't have runny eyes and a runny nose.

I don't have hives. So I don't have mast cell activation syndrome. Let's talk more about that. What what kind of, symptoms do you see in people? Kelly. Yeah, a ton of symptoms.

So everyone is unique. And we now understand that the mast cells and this is not a genetic disorder, but there is a genetic component to it. So people have a predisposition and then they can develop, changes in some of the genes over time.

That cause a variety of different presentations. So people can have fatigue, they can have brain fog, they can have chest pain and palpitations. They can have a ton of GI symptoms, anything from heartburn, reflux, bloating, gas, diarrhea, constipation, you name it.

The GI tract is often involved. People can have bladder issues. I have a lot of young women in my practice who have menstrual issues. Uterine spasms and, pain with menstruation.

People can have neurological symptoms and psychiatric symptoms as well. Anxiety, depression, mood disorders. And then, of course, that all, common brain fog that people have.

Really? Yeah. And I think, Nafisa, we missed a little step. So, yes, I mentioned that the mast cells are everywhere and everyone has them. But when when people have mass cell activation, that's a different situation.

So our mast cells are built to fight foreign invaders and toxins. However, some lucky people get their mast cells, to the point where they're triggered all the time.

So that's the activation part exactly. Yeah. Right. Right. Where they those mast cells, are hypersensitive. And so they will dump those chemical mediators at things that they shouldn't necessarily be reacting to, like, eating a food that normal people would have an okay time with these, sensitive people whose mast cells or hyperactive will dump their mediators and you get an inflammatory response.

And so it's an abnormal, activation of these cells as opposed to a cancer where you have too many of those mast cells. And that's very, very rare. Probably 1 in 10,000 people have that.

So, most people will have this activation issue. Right? So mast cells are guards in our body and they protect our bodies from invaders. So, so when there's a perceived threat virus, a bacteria, a parasite or even an allergen, the mast cells are activated to release the chemicals to protect our bodies.

So it's like, a normal response, a normal inflammatory response that's supposed to be transient and it is transient and most people. But then when there have been lots of insults to the body and Kelly, we'll talk about this in a minute to when there's been these insults to the body, then the muscles are in a hair trigger, and that's when they start to dump all of these different chemicals throughout the different states of the body, where they line, and hence all of these symptoms across the board throughout all of our symptoms.

They're all of our systems. That is right. And so muscle activation syndrome or mast cells being on a hair trigger is a secondary, a secondary issue. And there's these primary issues that that cause this to happen.

Let's talk about what causes this. I bet there's a lot of people out there saying what that does sound like me. I've

got dry eye issues and I have brain fog and I have genital urinary symptoms, and my muscles and my bones hurt.

Sounds like me, right? Yeah. Good question. So it's a bit like peeling an onion sometimes trying to figure out what infections can can be present that will trigger this for people.

And of course, the name of your summit is Chronic Illness and mycotoxins, and certainly mycotoxins and molds from water damage. Buildings are some of the most, Most common triggers for people.

I see that a lot. But then in terms of infections, Lyme disease, of course, and the co-infections that come with Lyme disease, such as Bartonella, the BSE, I mean, I think Bartonella is probably one of the biggest triggers for mast cell activation, along with mold and micro toxin exposures.

But there are other ones too. I don't know about you, but I'm seeing a lot of tick borne relapsing fever in my patients. Very common here in California.

And are looking at a plasma, bbca, as I mentioned, the Rickettsia species, I do think that sometimes Epstein-Barr and some of the viruses can trigger mass or activation in people as well.

Symptoms and Triggers of Mast Cell Activation

I agree, I'm seeing all of that. In fact, I'm seeing a whole myriad of these infections in people while the tick borne, infections that you just mentioned and a high viral load also seeing it in in long haul Covid as well.

Yes, that's a big one. And I'm actually seeing long haul Covid mimicking, chronic tick borne illness. And you know, I really I mean, I know the research is ongoing, but I really have a suspicion that the people who end up with long haul Covid have these underlying infections and they don't know it.

And the by the Covid virus will then trigger mast cell activation. And thus they have this presentation of chronic fatigue and all of these chronic symptoms, disorder.

Nomi. So that part symptoms, the postural orthostatic tachycardic syndromes that are very common, with mast cell activation as well. So for those folks with long haul Covid, you know, I, I really would encourage them and I'm sure you're doing this to, to look for these underlying infections to look for mold exposure, because those are the predisposing factors that I think are tipping them over the edge.

Right. That's exactly what we're doing in our clinic. So taking a step back and saying, okay, what what could be causing this. And so we're part of the long haul, Covid group with that Dr.

Bruce Patterson. And so we're giving them the medications that that are appropriate. But oftentimes we're saying, wait a second. These medications are not working.

Why is that? So we're taking a step back, and we're looking at them the way we do our typical patients with complex chronic illness, stepping back and saying, all right, let's cast a wide net and, and make some diagnoses here.

And sure enough, there's always, not always, almost always chronic infections in the background that have been there or subclinical infections that that means the patient didn't know that infection was there.

They didn't even have symptoms of it, but it was an infection that was quietly there brewing. And then the the inflammatory cascade from from Covid or any other infection that came along causes flare and inflammatory cytokines and a flare in mast cells as well, to bring it back to mast cells and mycotoxins.

We're seeing people with mold and mycotoxins illness have Covid long haul, right? Right. There's a couple analogies that I really like that I think are helpful for people.

You know, very simplistically, if you've got your immune system here and these infections are being suppressed by your immune system and you're asymptomatic, and then you get Covid, what happens?

The immune system, in some ways, very simplistically, maybe gets suppressed. And now these infections kind of flourish, you know, it gets suppressed when you've got all these, this cytokine storm. Right.

So that's one analogy, our visual that, that helps people kind of conceptualize these issues. I also use the analogy of standing on the edge of the cliff.

So you know what? You're standing on the edge of the cliff, but you don't know how close to the edge you are, and you get Covid, or you move into a moldy building and bam, you fall off the edge of the cliff, and then you know, and then our edge that, yes, right until it's too late.

And then you're down at the bottom of the cliff and we have to haul you back up. And, you know, kind of fascinating when I look at my patient population that I've been working with for a long time, I have to tell you, I have very few long haul Covid patients because we've been doing all the work.

They're not, you know, teetering at the edge of the cliff. It's true, when our patients get Covid, they're fine because we've been treating those infections.

We've been treating the the underlying issues. But for treatment for a long haul is the people who have not been our patients, new people, I'm sure with you too.

Yeah. Right. Yeah. It's very interesting. I can count on one hand, actually, maybe three fingers. How many long haul Covid patients I have amongst my patients that have been patients for a long time.

So yeah. Vaccine injury. So I'm not seeing vaccine injury amongst my patients who are so sick. They do just fine with the vaccine. I believe I don't have the proof.

I don't have the data. I wish I did right, right. So these are this is speculation on our part. I want to make sure to our audience. But I believe that my patients were so sick with so many infections, so many environmental toxicants, muscle activation syndrome, flaring, autoimmune disorders.

They get the vaccine, they get Covid, they're fine. The people because they're being treated, because they're being treated. Yeah, yeah. So what's the whys.

Go find a good functional integrative medicine doctor who knows chronic illness and get yourself checked out even if you're feeling okay. I mean it's I don't know.

Oh I have goosebumps as we're talking right now. Go look down. Whoa. We're all standing at the edge of the cliff right now. That's the thing. We're all there because we're in a global trauma.

We're in a global pandemic. We're all there. So we need to, you know, do all the things that we can do to bolster our immune systems and reduce our inflammation and reduce our exposures.

Yeah. You know, this is obviously things that have not been talked about in the wide media, like, we should be eating really healthy, cleaning up our diet, losing weight, exercising, getting good sleep.

I mean, all of those things that we know, as practitioners to recommend to our patients. And then hopefully our broader audience will start to be, taking, taking stock of and really implementing is, eating organic, eating grass fed, avoiding those, chemicals as much as possible, making sure that their homes don't have water damage and leaks.

And if they do, addressing them so that, the total load is not too great. So this is a concept from environmental medicine where we talk about the total load.

And what I mean by that is everything that we've ever been exposed to from the time that we were born, when mom gave us all of her toxins, all those things are in our bodies, whether that mom gave us, you know, infections or toxins and then everything that we've been exposed to up until this moment is part of our total load.

And I, I like the sink analogy where, our bodies are a sink and the drain and the size of the drain is our capacity for detoxification. And the bigger the drain, the deeper the sink, the more we can handle.

But if we have a really shallow sink and a really narrow drain, we can't handle a whole lot. And those those folks are the canaries in the coal mine. When they get too many environmental chemicals or mold exposures or infections, they're going to overflow.

And that overflow is, you know, what we've been talking about mass automation not feeling well, long haul Covid, all of those things, all of that. And so I think that the shallowness of the sink or the depth of the sink and, and how large the drain is, has a lot to do with our genes and our, our environmental triggers.

So we can look at people's, genes of detoxification or genes regarding inflammation or regarding cognition. And so it's like the, the environment causing certain genes to express us epigenetics.

So people do have I love that analogy of the sink in the drain.

Long COVID, Chronic Infections, and Environmental Load

But because people do come into the world with with different sizes, sinks and different size of drains, and so then what goes in into the sink is also different, right?

Okay. The different chemicals add that to the genetic predispositions and boom, you have a chronic illness or not even and and and all of that. Let's talk about the pen and tell the audience, okay.

Okay. So I can't claim that I came up with this, but other colleagues, including Andy Maxwell, who's a pediatric cardiologist in Northern California, a coined the term pen tad and what was happening was that my colleagues and I were starting to see that there were, conditions that overlapped with mast cell activation.

So in people with, connective tissue disorders such as hypermobility or Ehlers-Danlos syndrome, they have a greater likelihood of developing mast cell activation because of the lacks connective tissue.

And those folks also tend to have more dysautonomia. It's very fancy term, and it really means that the autonomic nervous system, the system, the the part of our nervous system that lets us breathe and not have to think about it, that digests our food, that regulates our temperature, blood pressure, heart rate, that system gets out of balance and out of whack.

And one of the most common manifestations is what we call pot or postural orthostatic tachycardia syndrome, where when people go from lying or sitting to standing, the heart rate jumps and they don't feel well.

So that's one form of disorder. Nomi. There are other forms, too, like an inappropriate tachycardia or orthostatic intolerance. That's when the blood pressure drops when you stand up.

So that's part of the Penn tad. And then the other aspects of penthouse, which we see really commonly autoimmune conditions, which is rampant, and probably don't have to tell your audience about autoimmune conditions, but Hashimoto's, rheumatoid arthritis, lupus, celiac disease, inflammatory bowel disease, etc..

So those are your autoimmune conditions, which are really common in the penthouse. Patient. And then lastly, gastroparesis, excuse me, gastroparesis is going to be when the stomach is not, appropriately emptying, emptying.

And so it's kind of sluggish. And that causes a lot of GI symptoms. So that's the pen tad, but on top of a pen Tad, we also have kind of surrounding conditions which tend to show up in these folks too, like leaky gut, like tethered

cord, like rough, restless leg syndrome or Sibo, chronic fatigue, menstrual issues, PCOS, anxiety and depression, pans and pandas, things like that.

So these clusters, when we think about the pen head, patients, it really starts to make a lot of sense. And the literature is, is just now starting to come online and recognize that there is overlap in many of these patients, you know, 30, 40, 50% overlap in some instances.

I see all the time in our practice. I mean, the patients have all of these symptoms of the pen, and I'd say 90% of our patients do. And so how do we make this better?

The patients might be wondering that. Right. Okay. So I have all of this going on. I have pots, I have legs, ligaments, I have GI issues, my stomach empty.

I have mass cell activation. Some of them don't even know these terms, but they might say those of us, those of you listening today, you might not know these terms, but you might say, oh, all right, food sits in my stomach for a really, really long time.

Or, I, I sometimes I get these flares of illness and then, I feel like I'm about to sprain my wrist when I'm picking up a frying pan. I can't even do that.

Or my heart starts pounding, and I don't know why. And I've been to the cardiologist, and the cardiologist says I'm fine, and everybody says there's nothing wrong with me.

So, you know. How do you start to address this? I mean, I believe that there's a lot of information out there on the internet, and patients kind of empower themselves.

Your listeners can empower themselves, to do some more research. But then probably the most important thing that they can do is find and, an educated practitioner, functional medicine doctor, naturopathic doctor who understands this, you know, probably not somebody right out of school because, the level of complication is it requires, a practitioner with experience, somebody who's been around and seen these patients and taken care of them because it is really challenging not only to just make the diagnosis, but then to know how to move somebody from a place of being very ill to a place of wellness.

And that takes a lot of effort. And it's many moving parts. Yeah, it takes a lot of effort on the part of the doctor and the patient, their families. Yeah.

So when we're treating you for for these issues, you're a moving target. And so your treatment plans need to move with you. We need to watch you like a hawk as we're treating you and absolutely the doctor needs to have experienced not only that, but even experienced doctors, whether they are natural doctors or functional medicine trained MDS.

We're not taught this. We're not in medical school. Even then, I affirm it. No. All right. This is graduate level, practitioner work. And so, you know, I can put on a plug for ISI right?

So we belong to an organization called the International Society for Environmentally Acquired Illness. I s e I I c I for short. And this is an organization that I really perceive to be graduate level training because we recognize that mold and chronic infections and environmental toxicants can all play a role.

And, you know, as you know, our conference is coming up in May for practitioners. And we are going to be addressing these issues of hypermobility and muscle activation, dysautonomia.

So hopefully, if folks are looking for practitioners, they can go to the ICA website. And those practitioners will start to be the ones that, that you can turn to for help with these complex chronic illnesses.

Yes. So ISI educates practitioners. Yes. Who, you know, who have an interest. So this really has to be a passion

for a doctor to to get the extra training.

The Pentaid Cluster and Related Conditions

Like like both you and I have had. Kelly, we've done so much outside of medical school to be at this place where we can help these patients. I'm just so honored to be on the board of I, you know, where we can help educate newer doctors or doctors who are seasoned doctors, but newer to this, right?

Yes. Me too. Yes. So they can just go to the ACA website, right. To look up doctors who are straight. That's that's exactly right. Right, right. A good resource for your listeners. Yes.

So so we talk about how we might, start to work with folks like this. Let's talk about it. Okay. Well, oftentimes we're doing things simultaneously. We're trying to help with addressing the individual symptoms that people have to make them feel better.

You know, it's a really hard and overwhelming to think about having to do detox and, you know, killing treatments and, all this other stuff all at one time.

So, you know, the practitioners are really working and I, you know, work really hard to educate, and simultaneously calm things down. So with our mass, our patients in particular, we can't dive in to treating Lyme or sometimes even mold because they're so sensitive to things.

This is an important topic because people come in sometimes they might already have a diagnosis of Lyme disease. A lot of them do. And that's the only thing that's been diagnosed.

I've got Lyme, I've been on antibiotics for 2 or 3 years. It's just not working. Can you find another way to treat the Lyme? I just want to go for I just want to treat the Lyme.

And I say, you know what? There's a reason it's not been working. It's because you're sensitive to everything. You've got this immune dysregulation, you've got this hyperactive immune system.

And a week in a week and a dampened immune system simultaneously. We've got to calm that down before we can come in and kill the infection. So I know we need to kill those infections, but not right now.

So let's take a step back and prepare you for this, which is what I think you're talking about. Absolutely, absolutely. And that preparation looks different for different people, of course.

But, when we're talking specifically about mast cell activation, I do find that, you know, there's so sensitive sometimes they can't even take regular pharmaceuticals because they react to the inactive ingredients in the formulations.

You know, when we look at the in the pharmaceutical industry and we look at all the inactive ingredients, there's a lot of crap in there. And patients will often have adverse reactions, not to the pharmaceutical itself, but to all of the junk in it.

We can't. There's the colors. Yes. The excipients. You know, there's oftentimes gluten and dairy and corn, derived products in dyes, in, in those medications.

And so sometimes we have to do compounded versions of those which are much cleaner. And sometimes we even can't give much. So, then that's where we look at coming down the limbic system and the amygdala, and working with the vagus nerve again to help bring more regulation to the body so that it's not in fight or flight.

All the time, hypervigilant and reactive. So I want to backtrack for a second. So, so, so when we when in the audience now so when we give you, when a doctor like Kelly or I.

Okay. So not not you're not, you're not, not a doctor who's not seasoned in this, tries to treat your mast cells. I'm saying try because you might be reacting to even compounded medications from the pharmacy compounding pharmacy.

You might be reacting to herbs. And we know. All right, let's let's step back and we're going to treat your nervous system. We're going to treat your immune system simultaneously.

Before we can even treat your mast cell or that part of your immune system, we have to treat the nervous system right. In acupuncture, it might mean, limbic retraining.

It might mean doing, Annie Hopper's dress or or Doctor Gupta's dress. It might be, working with, with a healer or a body worker. Very, very simple treatments to calm your nervous system down.

And then we'll come in and we're going to give you some herbs or some compounded medications and see how you do. You might need to take a small amount, but usually once we we we calm your system down, your nervous system, then you can start to handle the herbs and the medications.

Right? Right. I have, a couple of patients that they're often opening up capsules and taking like a quarter or an eighth of the capsule, and they can tolerate that.

But if they took the whole capsule, they'd have problems. So slow and steady is the name of the game with many of these folks, whether that's the pharmaceuticals or even the herbs.

Finding that more of your sensitive patients are able to tolerate the compounded pharmaceuticals more than herbs the first time around? Oftentimes, yes. Yeah.

I mean, yeah. So I use a lot of compounded antihistamines, and compounded low dose naltrexone. I use that a lot to, for people, compounded quite hard often, which is only available as a compounded medication.

Unless it's an eyedrop. And so yeah, I do like he taught often in Crumlin for folks. Yeah. And using those single ingredients with no additives, and excipients is a very, it's much safer way to go from most, most mass all patients.

Right? I love the container thing because it, it stabilizes the mast cells themselves. And the Crumlin is particularly for the gut. But I also see that it helps the general urinary system a lot as well.

Right. Right. And it's so interesting because you know we think we're just blocking the mast cells. So Crumlin for the audience. The Crumlin is an oral medication that you take that literally acts as a barrier between the what you're ingesting, what you're eating and the mass cells which are lining the gastrointestinal tract.

And so it's taken before meals and before bedtime. And it can absolutely. How many GI symptoms. But when the mast cells dump, they're mediators that the mediators have a systemic effect, meaning the mediators can affect different regions of the body.

And so fatigue could get better. Your skin could get better. Brain fog can go away. And it's really fascinating how a local, medication that doesn't really get absorbed, the box mast cells can have a systemic effects.

Right? These are the things we see every day. There might not be enough literature on these things, but we're talking about what we see in clinic. Correct? Yeah.

And I love that you and I see the same things. I mean, it's more it's more proof or more validation rather. Right? Yes, exactly. So tell me about phosphor.

Tell Colleen how you use it in your practice. Sure. So phosphor total calling is really not a mass cell stabilizer per se, but it is one of the things that I love for so many things.

So, if the audience would envision a cell from cell biology, on the outside of the cell, there are what we call phospholipids.

Treatment Strategies and Nervous System Regulation

And on the inside of the cell, remember we have that lipid bilayer. So on the outside is where a phosphate little coating lives. And so it's got a head group and a tail group.

And it creates that, that lipid bilayer of every cell in the body. So this is something that we obviously make because we have to we have to make ourselves, and those little tails are mostly omega three and omega six fatty acids.

And when we use phosphates so choline as a supplement, it has this regenerative capacity, I think because what it's doing is it's healing your cells. So here's my visual that I use with patients.

If my pen is a toxin and my fingers are the cell, when you take phosphate or choline, it literally pulls out the toxin or infection or the, you know, the abnormal cell and it heals the cell.

And so we're only as healthy as our cells are healthy. So if we take phosphates and are calling, it starts to allow for better, healthier cells, all the time when you're talking.

Because what you so what you're telling your patients the same thing I tell them, I give them the same visual. Here's a cell, here's a toxin in the cell.

And pull it out. And you said, this is it's, Yeah. So yeah. Love PC. And the thing that's so amazing about it is it works for everything. So it works for mold toxins.

It works with chronic infections like Lyme disease and Bartonella, which are intracellular infections. And so it's going to help heal that. It helps with, environmental chemicals, heavy metals.

And there's actually literature, that show that it mobilizes heavy metals. Which is really cool. And foster total choline is very, prevalent in the mucous membrane.

So 90% of the phospholipids in the gastrointestinal tract are phosphates, choline. And so we take it orally. We're really working on healing our GI tracts too.

And so many people have leaky gut as a component of their illness and phosphate. So calling is really essential for healing that in fact, there was there were several studies where they used phosphate turtle choline to heal ulcerative colitis.

Ulcerative colitis would be, you know, on the spectrum of leaky gut to inflammatory bowel disease. You know, it's it's full on, ulcers in the, in the gastrointestinal system.

So much more severe form of leaky gut, if you will. And phosphates, it'll choline by itself orally was able to heal the the intestinal lining. So cool.

And with mast cell activation, I think it's getting at the roots that are triggering it. And so that's why I'm using it. And, you know, so as with everything that we're talking about, when we start, working with our mast cell patients, we start low and slow.

Maybe I'm using, like, a 16th of a teaspoon every couple of days. And then some people can tolerate it really well. And can take, you know, several grams a day, which is great.

But, you know, for those sensitive people, little teeny tiny bits until they're able to tolerate more is wonderful. And then IV forms of phosphate alkaline are just magic because they bypass the gut, they bypass a lot of the mast cells.

I don't think we have many mast cells right in our veins. So you put the PC right in the veins and and it's really, really helpful, particularly for brain fog and our mobile patients.

So I love hospital colon I do too. Yeah we use a lot of it now. Some people when they get phosphate it'll choline. It backfires. They're not able to handle it.

So I love it for all the same reasons that you do. And then you I'm sure you see this in your practice as well. What I'm about to explain. But I want to I want to mention it to the audience.

There are people who have phosphate Hill coli. They have a festival calling IV for the first time, and they feel worse. They're exhausted. They just want to sleep the whole next day or the whole next three days.

Maybe they get a headache. Why is that? I think a phosphate IL choline as as the paint that goes on the house. So now if we're going to paint a house where the wood is already crumbling and deteriorating, it's just not going to work.

So we need to sand off that wood first. So first it'll clean and good at that. It happens with the same patients. They can't tolerate that. And I think of these as the end products of our detoxification pathways.

And so a lot of times we need to shore up these patients cofactors of detoxification. They might need minerals first. Right. Because if you don't have a mineral status that's adequate, then no matter how much we try to pull metals out of your system or other toxins out of your system with phosphate, it'll choline or glutathione or even have you met alkylation agents?

Those toxins are just going to recirculate it. So timing is critical. A lot of pigments. We know you're talking about it like it's the best thing on Earth.

How come it's not for me. But that's why it just it just means there's other steps that we need to take before you're ready for it. And when you're ready for it, it's magic.

Right? Exactly. Yes, I do see that. Fortunately not not. And not everyone has problems with it. The vast majority of people are able to tolerate some form, and so, yeah, definitely have to go back with those who can't tolerate it in order to prepare them for it.

Certainly. Yes. It's very similar to the people who are not able to tolerate methyl activation treatment directly. We have to take other steps back before we can go to the place where the patient wants to go, or where, or we in our heart even want to go because we want to see the patient move quickly through treatment.

But sometimes it's slow because we have to do a lot of preparatory work to have you ready for for the big guns, you know. Exactly. Yeah, yeah, yeah. Kelly, what do you feel like nobody's talking about in the subject?

What would you like to say that that maybe this is spoken about enough? Gosh. Well, good questions. I mean, I do think that we haven't really touched on AEDs, and so we can touch on some hypermobility issues, which, you know, is not anything that I learned in any of my, you know, so this isn't stuff that people talk about at eyelids, which is the international alignment associated diseases societies.

Certainly not. The Institute of Functional Medicine, and The hypermobility is, is not really recognized by most of our conventional colleagues either.

I had this epiphany one day. I was sitting with a patient, and, you know, she has Lyme and she we've gotten her, you know, mostly better. And she had a lot of, like, allergies and sensitivities.

She was allergic to latex, so she couldn't have latex bras and all that. And she was telling me about how when she, you know, she's in her 70s, and she was telling me about how when she had her son, she, her back went out and she stood up, and she made this motion about how her back went out when she was pregnant.

And I was like, oh, my God, you have Aids. My ball went off of my head just the way that she moved. And I could see the wax, the laxity in her muscles and joints and and, it was it was astounding.

And, and since that time, you know, and she had had osteoarthritis. She had had two knee replacements at that time. And when, when we made this discovery, she was able to go back to her family and say, hey, guys, like, I think we have this.

Hypermobility, Prevention, and Closing Advice

And it was true. All the family members were hypermobile. One brother had an aneurysm, the other one had a detached retina. And, you know, just all of these things that that hadn't really been identified and pulled together.

So for her and for our listeners understanding, if you're hypermobile that your joints are more delicate, that they need to be protected, that there are ways of moving and exercising, that before before all the damage gets done, that we can really help preserve that.

You know, so people who can do party tricks with their joints and like, put their, their leg behind their head and things like that is great party tricks, but it sets that person up for degenerative joint disease and chronic pain.

If something happens and they get too much damage or they move into a moldy building or something like that. So I think that, you know, it's not just the hypermobility that I wanted to talk about, but really how awareness and education is so critically important for, you know, like preventive medicine or not really doing enough preventive medicine.

I agree, and these are the people who love to do yoga, but they might not like to, do strength training. And they love that they love their yoga because they're so good at it.

But we need to tell them. All right. Also, I also do some strength training to, to to get some stability around joints. Now, I bet a lot of them are wondering, wait a second, what is what is a moldy building or what is getting an infection have to do with my joints?

So I will stop for a minute and help them understand this. So when we have an infection, it's not usually one infection. Usually it's a myriad a myriad of infections.

When we have a toxin, it's not just one toxin. It's usually many metals. Many other toxicants, we measure them, we test for them, we see them. And then we know that this combination of toxins and infections causes inflammation in the body and circle back to mass cell activation syndrome and causes that as well.

So mast cells tenderize the ligaments. Inflammatory cytokines are going to cause inflammation around these ligaments. So you really have lax ligaments.

And now we're aggravating them. And that's when the patient usually walks through our doors. Right Kelly. Like right. Like so. So that that's how the hyper mobility piece is connected to everything else.

We've been talking about. Yes. I also have this visual in my head that the spirit sheaths, the little organisms or even the mycotoxins. When there lax connective tissue.

So imagine that our connective tissue is supposed to be, you know, tightly woven. And now it's more lax. I mean, there's some spaces in there for little organisms and, and whatnot to infiltrate and so they can get into the tissues much more easily than somebody who doesn't have that lacks connective tissue.

You know, line loves connective tissue in the nerves. So all, all the, all the more if you have lax ligaments. Yeah. And even if people have lax ligaments and not these infections, the micro traumas of repeated actions of repeated like, like behind the head, kinds of yoga positions will damage those joints.

And that leads to osteoarthritis down the line. Yes. Yeah. Okay. Thank you for your great interview. I always have so much fun. Is there anything else you want to say to the audience before we say goodbye to them?

I would just encourage you all to stay true to yourself. Know that what you're experiencing is real, and if you're not getting the answers that you need, keep seeking the practitioners who will help you out.

Because there are practitioners out there, and it may take a few, and it may take, you know, a village to really figure out some of the more complicated folks.

But there are answers out there and there is healing available. Absolutely. Thank you. You're welcome. Nafisa, thank you so much. Had a great time. Thank you.

We'll talk soon. Okay. Bye bye. Hey.