Introduction and Dr. Hyman's Background

Welcome, Mark. I am so glad that you agreed to be part of the Amazon Neuro Immune Summit. I have immense respect for all of your work and all that you've done.

I'm sort of what I'd like to have you do is introduce yourself and explain why you're an expert in mercury and heavy metals and their impact on the brain.

Thanks. Thanks so much, Terry, for having me. I'm Dr. Mark Hyman. I'm a physician, focuses on functional medicine. I helped established START the Center for Functional Medicine, the Cleveland Clinic.

I have my ultra wellness center in Lenox, Massachusetts. I am an author and I'm also very active in policy work and have a food fix campaign designed to transform our food policies.

And also the host of the doctor's pharmacy podcast, which talks a lot about functional medicine and related issues. Great. Now, Marc, let's talk a little bit about your healing journey, because like me, it was your personal transformation that taught you so much about mercury and its impact on the brain.

That's right. Yeah, for sure. I when I was young, I ate a lot of tuna fish sandwiches. I had feelings and I lived in China, which I think topped off and ended up being in, you know, the most polluted city in the world where they have 10 million people using coal, raw coal to heat their homes in the winter caused a major source of atmospheric mercury and I had an air filter, cleaned it out every day and ended up breathing and all of a sudden from the concentrated Beijing air and that I ended up getting mercury poisoning.

And I didn't know until I came back and there was a trigger that happened where I actually had some stomach bug or something happened, and all of a sudden my system collapsed and I went from riding my bike 100 miles a day to barely being able to walk up the stairs.

Personal Mercury Poisoning and Health Collapse

I'd be able to see 30 patients and not take notes and know all their medical history at the end of the day and be able to dictate it and not be able to sort of remember where I was at the end of a sentence.

So I had a real massive shift in my health at 36 years old and didn't know what it was. I developed quite fatigue syndrome, had severe cognitive impairment, couldn't think function depressed, couldn't sleep severe myalgia, elevated CB ks digestive issues, immune issues, autoimmune stuff going on.

And I didn't know what it was and, and it was took me a couple of years to sort through it. But then I did a challenge test for heavy metals and found I had extremely high levels of mercury.

I think my post challenge test was after the Asian challenge was 187 or something, which is just off the chart. And you know, you get worried if people are over 20.

So that's how I began the journey. And then I had to learn how to, you know, work on myself, to detoxify myself from heavy metals, to work with my patients and and the rest is kind of history.

So you went from great health, this abrupt decline. How rapidly did that happen? Was that one day? Like one day it was like little. I was fine. The next day I was like, What's going on?

Something is. Shifting. Yes. Yes. And like, my gut was kind of went out of whack. And I don't know what it was exactly. Maybe it's something. Maybe I got some.

Some bug in a lake I was swimming in in Maine I don't really know. Yeah. And and that to severe Sebo we didn't even call it that back then and severe digest type issues and then everything just started collapsing and I and within a very short time I was, you know, practically debilitated.

And I look at myself, you know, now and I look at pictures of myself then and it's like I just looked worse than I do now. I don't think I look bad, but I think Indians are so sick and so awful.

And then I'm curious, once you began to piece things together and you're working on your healing program, how long did it take you to get back to good health?

Well, here is the problem, Terry. I you know, this was like almost 30 years ago and most of medicine was in its infancy. And and, you know, I didn't have all the information, tools and knowledge that I needed.

And so it took me a long time to reset my system and uncover layers of other things like Lyme and mold and everything else that was sort of going on at the same time.

So I would say it took me five years to start feeling better and figuring out how to do this. And then took me probably ten years to fully recover and I would say I still maybe have a few residual symptoms from it.

But, you know, I think I had to be more careful of my energy management or I used to go to go, go, go. But I think, you know, it really took a long time.

And I think for now, when I see work with patients, I can get them better much, much faster because I know exactly what to do, though. But, you know, it's parallel.

I made dramatic. It was a long time for my recovery as well. There are parts of it that went very fast and parts of it that take a long, long time. I'm still tinkering and you know, I'm very excited because I've I've finally gotten well enough that I can jog on my treadmill.

Amazing. And so truly, truly, so remarkable. So for the listeners, for everybody with M. S. in neuro immune issues, what mercury are a risk factor? Are there other heavy metals that that we should be thinking about?

Yeah. I mean, you know, we're it's really the cumulative toxic load. So I think, you know, mercury suit and letter, the most significant for severe, you know, cognitive problems, you know, in children that might it's certainly with A. D. D.

and behavioral issues and violence and cognitive impairment on many levels. I think it's natural autism. And and so I think we we know across the spectrum page from that all the way to Alzheimer's that there's severe consequences for exposure to both light and mercury.

I think arsenic is is also potentially issue there may be other sort of metals that come to play here and there, but I think those are the big ones. And what are the sources?

So you mentioned Mercury. Mercury from coal. Yeah. Where else can this come? Well, yeah. So so mercury is is ubiquitous in our environment now. I mean, really, it was buried in the ground.

It was, you know, basically either from volcanic eruptions that happened and kind of put up these big plumes and then bring down mercury on the earth.

Or it would come from now coal burning, which is where we've taken out of the earth all this mercury. We burn it and it goes the atmosphere. So we don't have you know, we call that acid rain.

Heavy Metals, Environmental Sources, and Fish Exposure

We had heavy metal rain basically in every single water source in the world is contaminated where you go into the

Arctic Circle or you go to Antarctica or you go to any remote river in America, Montana, they're all completely contaminated with with heavy metals, lakes.

I mean, the EPA says that there's no single body of water, lake River in America where it's safe to eat the fish. So I think yeah, I mean, it's not in my opinion because of the levels of mercury, I think.

I mean, mercury goes into the oceans. It's taken up by the algae. The little fish eat the algae, the bigger fish, it's a little bit of fish and it goes on up the food chain.

So fish consumption is a huge source of mercury exposure. Also dental fillings and other one I think is, you know, some controversy about that. But, you know, there's a way to really look at the speciation of mercury and whether it's inorganic or organic.

Methylmercury is obviously from fish where it's an organic is from direct coal exposure pollution or from fillings. And you can see based on someone's blood test what their levels are.

And, you know, we can remove the feeling you see go down and we see it impact your health. So I think that there's a controversy about that. But I if in my mind there really, really is a I think the other thing we see is, you know, led and led is a big factor.

And it's it's in a lot of the soil. It's been you know, we had leaded gas with leaded paint. And so it's sort of a lot of background still in there. It doesn't go away.

It doesn't dissipated and dissolved. And so whether you're, you know, having vegetables grown in soil that might be contaminated or whether you're, you know, exposed too often household things that we do, like leaded glaze on plates, leaded crystal glassware.

I've seen people very sick from this stuff. So I think, you know, those are the main source of arsenic comes from chicken, rice and pressure treated lumber mostly I think chicken this method to the grain that went from getting mold mold on it the the rice is just sometimes and actually takes up arsenic from the soil is natural arsenic groundwater has a lot of arsenic in it sometimes fish, but it's shellfish.

I don't I don't think that's such a big issue, though. So I think I think we have really a lot of exposures and some of us, for better or worse at detoxifying.

So we need to make sure we we kind of understand our own bio biology. So I sort of think listening to all this, I'm I'm wondering should we be eating fish?

Do we need to not eat fish anymore? Well. Honestly, I every time I have a bite of fish, I worry. And I think I tend to do things to help my body hocks, fried fish.

I'll often take a kiloliter afterwards. And and I think there you know, there's a company that I found recently that called Zootopia, that fish. You can go to their website and they basically have a process of aquaculture that's basically regenerative agriculture.

So the fish are very clean there. There's very, very, very low levels of any toxins or metals and they're incredibly tasty and yummy. It's quite amazing and they're sourced from around the world.

So there's, you know, different kinds of fish. You might be used to some that you might not be, but it's a it's a powerful model for sort of reclaiming fish into our diet.

So I do think that illustrating sardines or anchovies or small mackerel is. Really small fish. So that's called sea topia. Yes. Utopia, dead fish. Okay.

I got to check that out. It's really quite the fish too. So. Yeah, me too. Yeah, definitely. To check that out. Should we

be filtering our water filter?

Absolutely. Absolutely. I mean, I think we should all have, you know, water filters in our house. Tap water. I mean, it's just and Philadelphia just said that they shouldn't drink the tap water because there was some contaminant chemical spill.

And I think most tap water is pretty full by the chlorine fluoride or lots of wastewater contaminants are 38 wastewater contaminants and the average tap water that include everything from medication to environmental chemicals and pesticides to heavy metals.

So I think filtering water is key air also. I think if you live in an urban environment or where there's a lot of industrial factories, some plants, coal burning plants, I mean, your your risk is really high.

So I think having an air filter in your house is really important. Let's talk a bit more about water filtration. Do you have thoughts about what type of filtration we should be using?

Yes, sure. I think, you know, the reverse osmosis is the one I typically use. I think it goes for us multiple filters that actually helps to, you know, correct a lot of the problems we see with water.

So I think it's really important to do that now. There's other there's others like the Berkey filter, there's carbon filters, there's other things that can be very effective.

So I'm not opposed to those. I just think we need to be making sure we have really clean water. It's tricky. And then you obviously need to take minerals and things to actually help replace some of the things you remove.

But I think as long as you're having a mineral diet and actually taking minerals, that's good. So a reverse osmosis, I've put that in my house. So yes, I completely agree.

Now I see some water treatment systems that also do this are clean water. Do you think that's a useful additional step or not worthwhile? I think, you know, yeah. I mean, I think we want to be more alkaline and I think we eat a plant rich diet.

If we don't eat processed foods instead of sugar, we're going to be more alkaline in general. You can measure urinary you should be like probably about six and a half, maybe seven.

And you know, if it's under five, that means you're more acidic in the other. And you can do that with a strip you buy from the drugstore for your urine.

I mean, basically urine strip. And and so I think, you know, I'll clean water. I don't I haven't seen overwhelming evidence that it makes that much of a difference.

But I'm not I'm not against it.

Water and Air Filtration for Reducing Exposure

Okay. Okay. Let's talk about the air filtration systems. What do you think there? Well, I think HEPA filters are really important. There's something called the air doctor, which I like, which is a really well made HEPA filter that filters mold and carbon of particles.

And particularly in your bedroom, where if you have allergies or have issues. So that that's a smaller you could just put in your bedroom or you could get we've been able to add a ultra filtration system to our air conditioning and heating system.

So I just have that changed every few months and that's worked out pretty well. Yeah. And so would you would it be fair to say that for perhaps the majority of folks with M. S.

and immune symptoms, that heavy metals may be part of why they've developed some cognitive issues if. I mean, honestly, Terry, I think, you know, there there are some really big factors that are driving kind of neuro immune and neurodegenerative and neurocognitive issues.

Everything from autism to ADHD to Parkinson's to Alzheimer's seems to all of the things that we kind of worry about. And I think that, you know, the gluten is a huge one.

So leaky god, gluten is a huge one. I think sugar is the biggest one in some resistance. And I think, you know, in environmental toxins, infections, obviously like Lyme and tick infections, those can all be play a role.

But I think, you know, on a very short list of differential diagnosis, you have to include environmental toxins and particularly heavy metals. So basically, from my perspective, there isn't a patient that I see that doesn't get, you know, weight and blood pressure and a heavy metal challenge, you know?

Yeah, I think it's to me, it's like it's like a CBC or a chem panel. It is the most fundamental, one of the most fundamental things to deal with screening patients for future risk and for current, you know, things that are driving their, their or health.

And, you know, mercury is sort of like gluten. You know, it can cause a myriad of symptoms and diseases that, you know, people ascribe to other things.

But but it's a huge it's a huge factor. And I don't mistake taking that diagnostic test on any one of my patients because it's so it's so important. Now for people who are listening to this, who may be seeing their neurologist, and they go to them and say, look, I want to be screened for blood and mercury.

What kind of tests should they be asking for? Because I because I'm betting their conventional neurologist will like well, we don't need that. We know you have M. S.

We know you have whatever the neuro immune condition. Oh, God. Well, I think that this is so frustrating, honestly, Terry, because most doctors that get no training in environmental toxins except for acute toxicology, most doctors don't know how to diagnose that or including how to treat it.

So I think most doctors say, well, let me check your blood levels, so I'll check out blood level and they'll look at that and that's fine. The whole blood levels are heavy metals are are useful for current exposure, but they only detect current exposure.

So if you, for example, like tuna fish for ten years every day and then you stop fish for a year, your blood level would be zero. And so that does it.

And you know, that doesn't mean you have maybe metal stored in your body. So that's not really the best thing. I think urine testing is done by doctors.

They'll do a 24 hour urine test, but that only looks for acute exposure. So if you're an industrial you know, an industrial accident or work in a factory, you have a high level of exposure.

You see an increased urinary excretion. But the only real test that I think is valid for looking at your body burden is that heavy metal challenged. That's where we take a chelating drug like the MSA.

You take a loading dose and you basically like your urine for 6 hours and then send it off to the lab for an analysis. And that'll give you a really good idea of what your your body burden is.

Now, sometimes it doesn't all pull out because it's stuck in there. It can fluctuate over time. And you have to learn how to interpret these tests. But it's a really important test.

I think there's also tests that look for speciation of mercury.

Testing for Mercury and Heavy Metal Burden

So you can do a blood, hair and urine test that looks at it's called just tried test and that looks at the level of methylmercury from fish in your blood as well as where inorganic mercury from fillings and pollution and then also looks at your ability to detoxify them and through urine and other other methods.

So you get a good sense of if you're good or bad, detoxify. And so I think, you know, those are the most important diagnostic tests looking at mercury.

So as I'm listening to this for for everyone who's out there listening M. S. and neuro immune, you can try with your conventional doc, with your primary care doc, they are likely to not understand how to investigate this as thoroughly as possible.

And so finding some more with some functional medicine testing to investigate it and then help you deal with that. Yeah, that would be super helpful. Yeah.

What are the things that people can do right now in terms of reducing exposure or beginning to improve their ability to clear these toxins? Yeah. So I think in terms of reducing exposure, I think the number one thing is to only eat small little fish or fish from a company like CW, where there's just super low levels of metals, sardines, macaroni and cheese, herring.

I think even salmon has fairly high levels of mercury, believe it or not, even lower than tuna and swordfish. But eliminate all those I to make sure, you know, you filter your water with reverse osmosis.

Three Ideally get an air filter if you're going to live in an urban environment for I would say to also look at your potential lead exposure such as, you know, your your dinnerware, your glasses.

There's glass plates or, or crystal. You're going to be exposed at high levels. So if your hobby is like, you know, stained glass making high levels of lead, so you'll be aware of those things.

I think as far as arsenic, you know, making sure your you know, I think wine in particular, American wine is treated off. There's often pressure treated lumber in the soil they used to kind of for steaks.

And that pressure, she remembers, full of arsenic. And that can get in the wine leaks or not. I think chicken that was the only pasture is chicken as far as water filter.

The water. And I think those are you know, if you have a pressure treated lumber deck, that's also an issue potentially. So I'm going to be just aware of these things that kind of reduce your exposures.

Wow. Well, there's a lot that we can be doing. Is there anything that we that we can do to improve our ability to clear mercury and lead? Absolutely. I've written a lot about this.

And I you know, people can go to my go to Google and go Dr. Hyman and Mercury. I know all the articles are written, but I did time great link about how to treat it.

And in terms of lifestyle things you can do diet is plays a huge role and you talk a lot about this caring about certain foods as as medicinal foods that can actually activate different enzymes and pathways.

So the cruciferous vegetables should be a staple broccoli, collins kale, cabbage, Brussels sprouts, all that stuff. At least a couple of cups a day, a couple of day at least.

I think garlic and onions are also important. Cilantro people have gotten really amazing results by juicing, cilantro and having lunch produce every day to get their metals down as a detoxification strategy.

So that's another kind of nice tip. I think upregulated a lot of the pathways that we need to boost glutathione. So we

need to make sure we're probably properly boosting those with the right kind of protein, like whey protein. Also things like and as you know, siskin lipoic acid, we need extra selenium zinc which activates refining, which is a really important intracellular enzyme that actually helps mobilize metals out of the cell.

We need to make sure we're methylated properly to help. Also, many of the detox pathways are recycled through.

Detox Strategies and Recovery Advice

The science will be B12 fully B6 when we make sure we're taking binders, whether it's, you know, alginate or silica are the kinds of things that bind the metals in the gut when they're excreted.

So drinking a lot of water, sauna is really important. So exercise, all those things are really key to help mobilize your detox pathways. And it's just, you know, a fair bit.

I've written about it. You can go check in more detail. Again, anyone who's listening, I hope you get the core message here that Mark's just given us is there's so much that we can do that we can add to our self-care routine.

Now, I don't think you have to do everything all at once, but you can look for a trusted physician with whom to work who can help you add a detox program step by step, you know?

So there's a lot that we can do with supplements, with food, with sweating, with what about detox baths and doing thing with clay baths or an Epsom salts bath?

Yeah, absolutely. I mean, I think for me, Epsom salt baths are great. It's one of my favorite things since just for Lifestyle Hack and Night to Sleep, magnesium is important.

It helps you to relax us in our nervous system, but also Epsom salt has got magnesium sulfate. Sulfur is the building block for glutathione and I think we need to boost our sulfur intake and so we can do that transdermal as well.

I think it's a great way to help protect you have a sauna so like that Epsom salt baths. Great yeah I am with you. Right, right there with you and again if he has a problem and Epsom salts bath to the temperature that feels good for you super helpful do you have any preference opossums or dead sea salt.

I think Epsom salts pretty good. I don't know. It's okay I've I've I've gone back and forth and I've done some of both. Now have you done anything with clay masks or a clay bath? Mark I do.

There's some sometimes we do that. So I think that's another factor that I think people can potentially use clay to help draw things detoxifying, that's for sure.

Yeah. And it's as a fun activity putting on a clay mask. I've done that with my family. We have lots of fun with that. Very, very interesting fun activity.

Do we have to worry about if we put a little bit of clay in the bath? Is that a problem with your sewer or septic system? That's a good question. I know.

I know. Yeah, I know. It might get up, but I don't know. I don't really know. I tell people that if if you're going to do that, it better keep it very, very dilute.

And if you're going to if you have a private septic system, I would just do a clay foot soak instead so you can avoid that particular risk. I've seen some people do brush their teeth with clay and do take the clay by mouth.

What what's your thoughts on that, Mark? I mean, yeah, I mean, I think people can do all kinds of stuff. I don't think those are the most important things.

I think that when I mentioned in terms of diet and exercise, you know, the nutritional support and the supplements and potentially even chelating agents are really important.

Are absolutely the most helpful. And, you know, if you are going to pick one thing that people could take from our conversation, what would be the one action you'd like to have them do?

Well, I think, first of all, I think it's important to realize that there's, as you've shown so well, Terry, that these problems are treatable, that they're not treatable in an effective way with conventional therapies, but using a functional medicine approach, they're very treatable.

So it would give people hope. Second is, I would say you really want to be focused on reducing your exposure to all environmental toxins and breaking of your body's ability to detoxify.

Environmental Working Group has a great website EWG Talk to look at where you get exposures from household products can hear products, your food, everything else.

So I think it's a great, really important guide for you to sort of look at how to reduce your overall toxic exposures. And then, you know, lastly, I would say, you know, to make sure you can really focus on get ready for the intake and exposure of heavy metals from fish is a big one in fillings and light is less of an issue, but mercury is definitely a huge issue.

Oh, this is brilliant. This is absolutely brilliant. Now, Mark, where can people. Well, I have a couple questions. Can people come see you and your team? I do.

I see patients. Yes, we do. We have a clinic. The ultra wellness center in Lenox, Massachusetts, received it from all over the world. And we have a great team of five physicians in the whole health support team.

We have a team at Cleveland Clinic also two by ten positions, the Center for Functional Medicine there as well. And, you know, you can find me online.

Doctor Time.com on social media. It's Mark Hyman. And then obviously my podcast is Doctors Pharmacy. You can listen to me there and you want to trouble finding me.

It is wonderful. And certainly if you have a complex chronic health problem, Mark and his team are just amazing resources. Yeah. Thank you. Mark. Thank you so much.

This has been an absolutely fabulous. Thanks, Terry.