Opening: Cellular Detox and Nutrient Uptake

A lot of times the issue is not what's coming in. It's, you know, is your body able to properly utilize, absorb, transport, etc., these nutrients. There's a lot factors that determine that.

Sometimes you've got bugs and things that are, uh, stealing the nutrients, sometimes you got cellular inflammation, preventing the, um, the uptake. I think cell membrane integrity is huge.

So when you have low cellular voltage or low cell, cell-membrane health, then your cells are basically on lockdown. They're not letting toxicity out and they're no letting nutrients in because they are in this lockdown state.

So by raising cellular voltage, you're allowing the nutrients and you allowing to toxicity out. Then of course the question is how do you raise cellular the voltage?

You want to, that could be anything. There's specific devices and technologies, but then really it's removing the things that are draining you on a daily basis so your cells will naturally start raising their voltage and opening up.

Welcome back to the Think Well, Age Well podcast. I am your host, Dr. Heather Sandison. And I'm delighted today to be diving into a topic that comes up so frequently in conversations around brain health, chronic illness, and aging well, but not in the conventional world.

This really is pretty specific to our naturopathic integrative functional medicine world that we're talking a lot about detox and toxins, especially in the environment.

Modern life is exposing us to a staggering number of chemicals, heavy metals, and other environmental pollutants.

Introducing the Detox and Zeolite Conversation

From the air we breathe to of course the food that eat, And a lot of people are now discussing and wondering how are these exposures affecting long-term health, particularly brain health?

And what can we realistically do about it without feeling overwhelmed in the process? My guest today, Jeff Hoyt, has spent years exploring and understanding the detoxification strategies and tools we can use that are aimed at helping the body remove toxic elements more effectively.

Jeff is the founder of Zeolite Labs, where his work focuses on the use of zeolites. This is a naturally occurring mineral known for its unique binding properties, and I use zeolate in my clinical practice all the time.

Jeff's work really centers on questions around why do toxins accumulate in the body and how do we enhance the natural detoxification processes? And how might certain compounds especially help support that process?

So we're going to dive into the science, the controversies, and the practical considerations around using zeolite as a detox tool. Jeff, thanks so much for joining us.

Welcome to the show. Absolutely, Dr. Heather. I'm really looking forward to it. Thanks for having me on. So I think I want to start this conversation, just pointing to the elephant in the room, around the feeling of overwhelm by this idea that we're surrounded by toxins.

From your perspective, I wanna understand, how did we reach this point? But how do we navigate this feeling, of either throwing our hands up and being like, well, we can't do anything about it.

And being proactive, kind of understanding that it's there without the overwhelms piece. How do you navigate that with people? Yeah, no, great question, because it can definitely be overwhelming because just all the information, we're in the Information Age as well with all this stuff, you know, that mercury does this to you, and aluminum does to this you and, glyphosate does it, it's kind of scary.

But the thing to consider is we do have an element of control. Some things we cannot control, like some of the external sources of toxicity, but we should be focusing, or in my opinion, best to focus on what we can control And so the two things with toxicity, one, it's yes, we have this external source, right?

What's coming in at us. But when it becomes problematic is when the external is greater than what our body is able to handle and process and excrete. So we can work on, you know, getting healthier in a number of different ways so our bodies in the better position to the handle external sources of toxicity.

And then we could also take, different, We can utilize strategies to remove some of the things that have potentially stored in our So there's basically more room to receive some of the other stuff coming in.

But yes, I mean, of course, avoidance is going to be important, but it's not something we should be obsessing over because then we get the emotional mental stressors.

Managing Toxic Overwhelm and Common Exposure Sources

And, you know, we, sometimes the stress of being exposed to a toxin could be even greater than the actual tox in itself, right? The toxic effect of toxins.

So we want to, just understand that, yes there is external sources of toxicity, But there are things that we can do about it and we do have some level of control over our health.

Yeah, when it comes to reducing exposure, because I do think that's important, right? An awareness around exposure. We can stop those exposures, not all of them.

But working in this space, what are some of the most common sources of toxic exposure that most people don't think about? Yeah, so I think what people do think about, or at least what I do, is food, water, air.

So just everywhere, right, what's coming in. I thing one of the big ones is actually, you can count this in the air, the electromagnetic toxicity, like EMFs.

Right, I personally don't use Wi-Fi, everything's hardwired, and then you have these signals coming from cell phone towers, from all these different sources.

That's an under-looked aspect, which is becoming a little bit more considered at this point, but it's not necessarily that those Fields accumulate in the body, but they're kind of stressing out the.

Body and preventing the, body from effectively detoxing some of the other sources of, you know, the environmental toxicants and manmade things and heavy metals, etc.

In terms of physical elements, I think the most overlooked aspect is actually the internally produced toxins and the recycled toxins from within the Because we're so focused on what is coming in from outside that we don't recognize that most of the toxicity that were exposed to on a daily basis is actually coming from our own bodies, right?

Because our bodies are, I mean, just by design, we are naturally producing waste products that are very toxic. And if our body are not in the health, as healthy of a state as they're going to be at some point, then we're not able to clear these things as a healthier person would be able too.

So for example, you have like ammonia, which is just a metabolic waste product. It can build up, it can go to the bloodstream, It could go into the brain, and it could be very toxic.

There's metabolic products, there's microbial waste products. These are kind of regenerative toxins that are new every day. If we have microbials imbalance, this could cause from heavy metals or other issues as well.

But if we have these microbial imbalances, then they produce waste products, which include ammonia and other things. And now you're just adding to this, you know, regenerative daily dose toxic burden.

eating all organic, I'm in this very clean lifestyle, and doing everything right, but I still have these signs of toxicity. And it might not be about what you're doing right now, it may be what happened 10 years ago or 15 years and this is just a process and it takes time to get stuff out of your body.

So for example, let's say you have accumulated mercury that is in your liver. And maybe this was from an exposure from, you know, amalgam fillings in your mouth from 10 years ago.

Even if they've been removed, do you still have a residual mercury and some of the other compounds in you liver? Now, as your liver produces bile for, fat absorption and whatever else it does, the liver carries toxicity.

The bile carries, toxicity from the lever into the small intestine. And the body is designed to recycle bile, right? So up to 95%. So let's say you have mercury in your liver.

Now you release bile for fat absorption after a meal. That bile contains some mercury that comes into your small intestine. It basically poisons you in the small intestines that recirculates right in pterohepatic.

So gut liver recerculation. And now you've recycled that mercury. So sometimes, you know, some people will go on a sauna or they'll do something to stimulate bioflow.

Maybe it's eating a fatty meal and then they feel absolutely awful. And one of the potential reasons is because the liver is toxic from previously stored toxic elements and that toxicity is being released in the bile.

Then it is like you had this toxicity that was kind of inactive and now you've activated it. Right. So now it's in the body's processing center. It's being attacked potentially by the immune system.

That's causing an inflammatory response, except now you feel terrible. And then the problem is if you don't get most of that out, it just goes back to the liver and the process repeats, repeats and repeats.

We've got recycled toxicity. we've Got metabolic waste product toxicity, we have got microbial waste. These are all sources of toxicity that are coming from within our own bodies.

and then we look at the external sources. so that all makes up our daily dose of toxins. What kind of what we're exposed to on a daily basis. Yeah, I'm so glad you bring up this metabolic waste.

It's like, it's normal to have toxins in the body. In fact, that's why we have five organs that deal with getting them out, right? That there's this very natural, normal process for creating.

Every cell metabolizes, so has that waste product that you're describing. And our body naturally gets rid of it, unless it doesn't, and that the problem.

That's when we start to recycle. So I want to switch gears. I mean, we could talk, this is one of my favorite topics of conversation, right? We have our among juries is what we call them in naturopathic medicine or five organs of elimination.

You know, what you described that enterohepatic recirculation. This is the reason it's so important to have a bowel movement every day. It's so important to sweat every day, to move these toxins out of our body, not just to mobilize them, but to actually eliminate them.

So we could talk about that, I'm sure, for days. And I want our listeners who are not familiar to understand what

exactly zeolite is and where in this process, you know, we've talked about like the cellular process with the bowels, the bile.

Internal Toxins, Recycling, and Enterohepatic Recirculation

The bile is that toxic sludge that the liver makes that goes into the gallbladder and then gets spit into. the Bowels to be eliminated. So there is a process, detoxification, you know, it starts in the cells, there's toxic buildup, or maybe it's starts on the gut when we consume it or on skin when it comes in or when inhale it into the lungs.

But where on this, where in this body does zeolite act? What is it? Yeah, absolutely. And I think the first thing too, that I always like to clarify, which you basically just mentioned is it's, you know, the body is a detox machine, right?

That's I, think a lot of people, or maybe some people are pushing. It's not about the supplement. You can't rely fully on any supplement to do all the work for you.

it is about getting healthy enough so your body can naturally function at a higher level, Right? The healthier you are, The less detox support you need because your bodies working better.

Maybe the more, You know the sicker you the more support you need at this time in your life because you additional support to excrete these things from your body.

But like you mentioned, there's the foundational. So there are a bunch of approaches to detox, and it's not that one is better than the other. It's about finding one that works for you at the time of your lifetime.

And zeolite is a little bit of a different approach because it is binder. Zeolites is negatively charged natural mineral and binds to the positively charged toxic elements in the gut.

So essentially, that's beneficial because a lot of the other methods of detox are designed to stimulate the release of heavy metals or toxins from organs or from the liver or wherever they're stored, taking them from kind of storage where they are not active.

And when they're not active, they are not causing as many short term problems because they were hidden from kind of the cleanup crew of their body. They're causing less inflammation, less short-term issues, but more long-term issues.

I put the bodies really more focused on short terms survival over long term. So that's why the body may prefer to actually keep mercury, which is highly neurotoxic in the brain.

opposed to having it trying to detox it, where then the immune system is tacking it. It's causing inflammatory reactions and all sorts of issues. So that's where some people, you know, get these metals accumulated in organs and they just stay there because their body is not willing to let go because it would be too stressful on the way out, essentially.

There's approaches that kind of mobilize these things from tissue and then there's things that are like bind. So zeolite is in the classification of a binder, but you know we've got charcoal, we got clays, and we have pectins.

There are a lot of great binders out there. Zeolites are in that classification. It stays in GI tract, it binds to heavy metals and binds environmental toxicants like glyphosate.

A BPA, it binds to mycotoxins. It's even been shown to bind to radioactive materials. it was used in, you know, Chernobyl and nuclear events actually to clean the water supply of nuclear waste.

So it's been showing to buy to those that binds, to the metabolic waste products, ammonia, binds it to urea. Binds to a lot of different things. so it is kind of a broad spectrum binder and it working in the GI tract and what sets it apart from a of other binders is its selectability, if that's a word.

Like, we call it the binding affinity. Is that what you mean? Like I know for different mycotoxins, We use different binders and zeolite is one that we use for, I use it for.

So for okotoxin we used colesteramine, works really well, a resin. But like for gliotoxine, saccharomyces boulardii, which is a yeast. And for the others, zeolite works really well.

So like for trichotocines, xerulonones, aflatoxins, we noticed that zeolate works particularly well, so is that what you mean is like that binding affinity that there's specificity to what it attaches to in the bowel?

It's what I was trying to say is it's more about what doesn't attach to. Oh, interesting. Okay, say more. On the specificity aspect, I think the advantage of zeolite is that it's so broad spectrum.

It's not that its really focused specifically on one thing, it binds to a lot of things. So it can be used in combination with these other more specific binders.

But then one of the benefits is it is not going to be binding to the essential nutrients and causing the depletion like a lots of other things may especially if used long term.

So it's kind of considered a smart binder or a selective binder, opposed to the more traditional binders. Because like when you have things like charcoal and a lot of these clays, they're indiscriminate in their kind binding.

They just kind go and they mop up the mess, which the net effect is generally positive because when there's toxicity, you want to grab it. But taking those things for an extended period of time, especially at higher doses, could potentially start stripping some essential nutrients.

There's some other issues associated with it, maybe constipation, et cetera. where the zeolite generally doesn't have those issues. And one is because it works by the swap mechanism.

So it's a cage. Most of these things just adsorb toxic elements to the surface, where zeolate can do that as well, but it has this cage structure, kind of like a honeycomb, and it traps things inside, which makes it a more secure detox.

But how it trap them is by a swap mechanisms. The zeolyte cage has potassium, sodium, calcium, magnesium, these electrolytes, And when it comes across a heavier element, like a heavy metal, then it trades the electrolyte that it has in its cage for this heavier elements.

So it's more of a swap. If it come across an amino acid or a vitamin or something essential, it leaves it alone because it already has the thing that has a stronger affinity towards.

That's what makes it a selective binder. It's a broad spectrum, but it is smart in that sense. So would people expect to like, is this also an electrolyte if you have some heavy metals or is that pretty negligible in terms of the amount of potassium and sodium that you might be getting?

If you've ever felt like your body is carrying a little too much of today's toxic load, this sponsor is worth knowing about. ZeoCharge is a supercharged zeolite powder that acts as a smart binder, meaning it helps bind and remove unwanted toxins like heavy metals, mycotoxins, and metabolic waste without stripping away essential nutrients that your body actually needs.

Zeolight is naturally occurring mineral with a unique page-like structure and negative charge that attracts positively charged toxins from food, water, air, and even internally produced waste.

The goal is simple, help to calm the storm in an overworked system by reducing the toxic burden. Yeah, it's going to be a lower dose. I mean, if you're taking a lot.

I mean, I personally take like 60 grams a day of a powder, my powder. So, and I'm not recommending anyone do that, but I've been doing that for 15 months and before that I was doing 30 grams per day.

But not necessary. It's kind of overkill, that's just what I do. At that point, it probably is a little bit of an electrolyte supplement. Still, you never know how much of the actual electrolytes are going to be swapped out because it depends on how much toxicity is encountered.

A lot of it will just pass through the system still intact if it doesn't. So it's not like you can't calculate the amount of potassium or anything you're getting from it.

It is trace amounts, but it is nice because when you do bind to a toxic element, you are basically trading an essential nutrient and it goes to the binding site of the toxic elements.

And you're certainly not being exposed to something negative, right? Like what you are getting through that process is a little potassium or a sodium or little mineral.

What Zeolite Is and How It Works as a Binder

So you described this honeycomb structure, like a cage-like structure. And, you also often emphasize the particle size. Can you speak to that, the size of these and how important that is and what, how that matters biologically?

Yes, so and so one of the main advantages of zeolites over some of The other binders is just the ability to micronize it and that's the micronizing is reducing particle size, the Ability to Micronize It to the levels where the surface area is greatly enhanced.

So basically, think of surface Area as binding capacity. And when you have a lower surface, area, or you Have higher surface areas, you'll have more binding Capacity.

so there's way more Binding capacity with properly micronized zeolites, generally then there are going to be with the clays and the charcoals. So there's just going be a lot, just more binding capacity.

You need less of it to get the same effect essentially. Plus there is different properties. Zeolite is this big mineral, like it looks like a big rock when it's mined from the earth.

And that's the other thing. We're talking about naturally occurring zeolite here. There are synthetic forms of zeolate. Zeolites is a class of mineral, so it's not just zealite.

What we're, what I'm talking, about is clinoptilolide zeolyte. So the clinoptilolate is the form of Zeolyt. Where does it come from? Where is it mined?

It's mine. There's there's mines all over the world. And there are different sources of zeolite. They have different percentage of cleanup to let some are mixed with other forms that are not good.

there're toxic forms of Zeolites. So there is zeolate is just a mineral, there a bunch of naturally occurring types. and because it has such unique properties, they've synthesized it as well and used it for all sorts of purposes.

But those I do not recommend because they It's basically there. Those are synthetic chelators and they act differently. They don't have the same properties, but it clean up till a light is the form of zeolite that's been studied for human consumption.

That's the one that has been shown to be safe. So that is what we use. And we've got, you know, that that, That is one of the most of supplements. You have this, big mineral you start with and then it goes through a bunch of different manufacturing processes, hopefully, depending on the company.

But it starts as this big rock. And then you have to reduce the particle size. So that's the micronization and a lot of the, um, the finer the powder generally, The more surface area and the more binding capacity there is, but you don't want to.

Reduce the particles size too much because then potentially you start destroying the cage. And so we want keep these cages intact. That's where it's, it can be a little bit tricky.

The way I look at it is if you, have a powder and it truly gritty and its grainy, It's probably too large of a particle. All right, you heard it from Jeff here first, size does matter.

Yes. So detox strategies. I think understanding zeolite, like where does this fit into like an overarching detox strategy? Yeah. So it can be used in a number of ways.

It's a tool in the toolkit of a functional practitioner or well-informed individual dedicated to improving their health. I like to consider it kind of foundation.

In general, I think binders are just very important. And it's really about finding binders that are working best for you and your specific needs. And, you know, if you're, on a binder and you just getting incredible results, probably continue on that binder type of thing, especially if doing testing and seeing improvement in biomarkers.

The thing is, a lot of people are not able to tolerate bindings, are able not to take them long term because of some of the negative issues associated, such as nutrient depletion, constipation, and just not being able tolerate them for one reason or the other.

So that's where, alot of times zeolite stands out because people can take it longer term, and a lot of people need to take it longer-term as they're on these detox protocols and healing protocols.

And also it can be taken at higher doses. We can talk about that in a bit, the dosing paradox, but I think a lotta people will need much higher dosage of binders than they are able to tolerate.

They're not able tolerate the therapeutic dose of a I do want to come back to people who are like too sick to detox, which would mean starting, you know, starting low and going slow.

But let's first go to say like a typical kind of toxic person. They know they've had some mold exposure, some micro toxin exposure. Maybe they have a little bit of heavy metal exposure they'd been eating tuna or something, and maybe they've got some chemical toxicity, some glyphosate, BPA, triclosan, something.

You know, they got a shmattering of the very typical, pretty common toxins out there. What do you think about dosing binders? Yeah, so I think the binding is a different approach to detox than the other methods because the point of a binder is to reduce the stress load on the body, right?

Most detoxes like the homeopathic remedies, chelation, even bitter herbs, all these things which I'm not saying are bad, they automatically add stress to the system short term because they're taking deactive toxins or inactive toxins and they are putting them into the bodies processing center.

Now they're kind of active and they are being processed and if it overflows your cup, your stress threshold, you could get symptoms where binders are designed to remove toxicity from the cup opposed to going in and ripping something out of a tissue or stimulating the release.

So different approaches. It works really well in combination sometimes. For someone that, yes, if you just ate tuna or something, it might be a good idea to take a binder with the meal to try to bind to some of that mercury and some the toxicity in the fish and in food, right?

So you can be used like that. It's gonna bind whatever toxicity is currently in your GI tract. So if you are just exposed to something, so like, I tell people, they say, when you take it, we'll take you when your most symptomatic or when You think there's the most toxicity.

So, if your symptomic after a meal, and maybe that's a sign of, you know, toxic bile, then take 30 to 60 minutes after meal to try to bind some of that toxicity in the bile.

maybe take it first thing in the morning, right? So I think it just depends. But it can be yeah, it could be used in combination with other things kind of as a push catch method, or can used as the standalone, which I kind call catch and release.

So you can if you're doing another detox protocol, let's say you are taking bitter herbs, And you're maybe doing that three times a day. Take the zeo charts and zeolite after, you know, 30 minutes after because you are pushing stuff out.

That's kind of like crusade, right? Crusades approach like push-catch. You push toxicity out of the liver, then you catch it with the binder to mitigate the stress.

Now, I think for sensitive individuals, what might be better is to reverse that and do catch push. So you catch toxicity with the binder first and then you take the push agent because sometimes when you do the pushing agent first, it kind of tips you over on the stress threshold and you start getting the immune reaction and, you know, more histamine response and etc.

And if you're a sensitive individual, You might not be able to tolerate that approach so you can reverse it. And if you're really sensitive, I think just starting with the catch might be even more effective where you are just binding.

You're reducing the toxic stress load and then your body will start naturally releasing toxic elements as it wants to. So it's really encouraging the body to detox.

It's not forcing detox, it is working with body's natural processes. And the healthier you become, the faster your natural detox process. So when you becomes sick, your body slows down.

Bioproduction, it slows, down, limp flow. You stop sweating. Sometimes you get constipated, right? Your body actually stops detox, or doesn't stop. It slows it down and detox to protect you because it doesn' want as much circulating toxicity because its causing those strong immune responses and inflammation.

As you get healthier and you're able to tolerate more circulating toxicity, the body will naturally increase the methods of elimination because then your body can handle more.

So it doesn't have to store as much in tissue. Just by taking an effective binder, I kind of call it a detox accelerant because it binds and then you body has more energy to start detoxing on its own.

Yeah.

Particle Size, Source, and Quality Considerations

So clinically, the way that I tend to explain this to patients is with that catch, think of a baseball in a catcher's mitt, right? And that's the binder.

The binder is the catchers mitt. And what's happening is you're avoiding what you describe as enterohepatic recirculation, if in the bowel you've got toxicity.

What we want is for that toxicity to be eliminated during a bowel movement. And if it's not because of constipation, so you go more than 24 hours without a bowel movement, then that enterohepatic recirculation happens.

And the bowel's job is to absorb. So those toxins, you know, nutrients and toxins. The toxins that your liver has already processed, put into bio, they're now getting reabsorbed, taken back to the liver.

Another liver, has to take out yesterday's trash in addition to today's And so I think what you're describing here is that what ZLA is doing is it's that catcher's mitt that makes sure that the trash gets out to the curb, right?

It doesn't sit there and accumulate in the body. And when we think there's also this, and you know, jump in here,

Jeff, if I'm like getting this wrong, or if you have a different analogy that works well.

when you explain this, but the other concept to be aware of is the gradient, right? So as we get rid of toxicity in the bowel, well, now the liver can release more toxins into the bowels because there's not as much in there.

And now that the livers can released some into bowel, there is less in liver and it can come down the gradients from the bloodstream. Now that blood stream can pass all those toxins off to the liver, well, now the cells can start moving more toxins out of the cell into the bloodstream, right?

And so using, as you mentioned, I was almost about to mention Chris Shade in this, he's the one who kind of came up with this push catch. I like your catch and release as well.

But so pushing toxins outta the sell is, we also call it mobilizing. So you're gonna temporarily increase, will hopefully temporarily, for people who I think are too sick, my patients included who are, either have mast cell activation, they're very, very sensitive.

If you add like a glutathione or anything that's going to actively push toxins out of the cell, you're going increase circulating toxicity and symptoms with that.

Whether it's brain fog or histamine reactions and itchy skin or Fatigue, achiness, all of these symptoms can go up before they get better. But when you have a gentle catch and release where you're just pulling things down the gradient, the body tends to be able to catch up and do better and you mentioned like as you get healthier, I think a big part of getting healthier is reducing the toxic burden.

Right? Just getting those toxins down. But I love that catch and release, right? You're catching it with that glove is how I imagine it. You are catching with the glove and then you are getting it out of the system.

So, binders help with getting toxins out the bowel. Can you talk about the role of liver, the kidneys, skin and lymph, lungs when we're thinking about a general detox strategy?

Yeah, absolutely. So it's I mean, everything's working together because those are the body's, you know, ways to get toxicity out naturally. And then I think the key to an effective detox is to Get all of those systems working better.

Me personally, I'm kind of a simple guy. I try to keep things as simple as possible, the least amount of supplements, et cetera. So I personally don't target specific like, okay, we're going to do, you know, kidney support liver, like directly target each thing.

And, face one, detox phase two, lymph drain. Don't do all that. Just unclogging the machinery kind a step one. Then the body has more energy and then it can use that energy for whatever it wants.

Because you've got a certain amount of energy that's used for everything, and let's say 20% of that is going to detox, we'll call that detox energy. And if you're not as healthy, maybe you are using 95% percent of your energy on microbial waste or something else, you have 5% on detox.

If you can bind to some of this other stuff that clogging up and taking up space, taking energy, Now you go back up to 20%. You're detoxing four times faster on your own.

You haven't specifically worked on any specific pathway. It's just that you have more energy in your body uses that energy to do what it wants to. So kind of what I learned a lot about detox during our case studies program.

Because we prior to launch of zeolite labs, we did a case studies program just to, you know, make sure zeo light actually worked, but sure it was safe, makes sure It worked etc.

Using Zeolite in a Broader Detox Strategy

And one of the main tests we use was the illegal scan, which is a tissue level or have a mental tissue-level heavy metal analysis. So it looks at the level of heavy metals in the tissue of your hand and So we were able to show that our zeolite was actually able reduce all of the 15 metals tested for from the tissue level and in theory from organ level because as the levels rise on this tissue test that means they're coming out of somewhere else, they are coming into the tissues and then they drop and they kind of cycle back and forth and it's kind cyclical pattern.

With all these tests, the levels never just go straight up or down the cycle. But what we found is just by binding in the GI tract, it was encouraging the body to start letting go of heavy metals from tissue.

And it is very interesting because the buddy did so in a way that it wanted to. So the Buddy would group certain metals together. So out of the 15 metals, sometimes you'd have, so essentially the way I look at it, when the levels go up on this test, they're coming out organs into tissue, general tissue.

So my three levels of detox really quickly, level one is active toxicity processing center, which is GI tract and gut, or GI Tract and bloodstream. Level two is general Tissue, Which is going to be just general, you know, tissue throughout the body.

level three is gonna be deep storage. That's going be like more organs and deeper level stuff. So I think when the level goes up on this test, the metals are coming from organs, level 3 to level 2. And then when they go down on the test that's when you're going from level two, general tissue, into the body's processing center.

Then there's a cyclical effect so the levels go up, down, up down and the bodies will group metals together. So sometimes you'll have aluminum, gadolinium, mercury and lead going up.

while the other 11 metals go down and then you test a month later. The other level 11 medals went up and gadolinium lead, mercury and aluminum went down.

And then they cycle for patients to see. Yeah, it takes a lot of explanation, but I treat the test I do every 30 days of testing. So it's basically like a challenge test, But the levels don't move very quickly on tissues.

You can't do it like after a day. So you know you do a baseline test you take the zeolite for 30 days you retest the metals used to go up indicating your dumping metals from tissue then the next test the levels come down and what's super interesting it just shows you the innate intelligence of the body is when the level is dropped they usually drop to the exact same level they started like sometimes to fifth or sixth decimal point of specificity on this test.

So it shows you that there's kind of this threshold of what your body wants to deal with in tissue, and then your buddy starts dumping stuff, it becomes stressful.

Then the body says, okay, let's slow it down. Now let us excrete it. And then it repeats and it repeat. So that's where detox is up to the buddy, ultimately not upto a supplement, because even if you take the strongest synthetic healer during the world, And it goes into an organ, if your cell, If your Buddy does not want to let go of that metal, It's not going to go.

right, because the body is doing what it's doing to protect you short term. So that's where some of sometimes fighting against the buddy with certain detox methods can backfire.

If the Buddy doesn't want to detox and some people I think they think 30 toxin but maybe they're not detoxing, especially the deep level stuff because deep like binding and the guts easy detox in the liver is easier because you can you Can always push more bile as long as you're, you know, getting it out and effectively, removing it, but then the level to Detox with general tissue is not that difficult, but when it comes to level three, like deeply stored mercury in the brain and things, it's a little trickier because the body has to want to let it go.

And in order for it to wanna let go, generally you have to reduce the toxic level of level two and one to make room, kind of that downstream effect. Otherwise this mercury just gets stuck there.

So a lot of people we tested in case studies as well, a few people had had their mercury and Malcolm fillings out for 20 years, and they still had super high levels of mercury silver.

And the tissue level and they're like, well, you know, I had these things out. I've been doing all these detox protocols. It detoxes a little bit. If I think it's simpler than people think, but also it a bit more challenging because I.

A lot of times it is up to the moral of this is it up the body. The body doesn't want to detox to some extent, it will not detox the deeply levels, the deep deeply stored stuff.

But if it doesn't have the support, if doesn' have either the nutrients or that gradient that's created or the capacity, right? If you have toxic burden plus infectious burden, plus stress and you're sleep deprived, then a nutrient deplete, like you.

The body doesn't have capacity to do it, but every cell is designed to detoxify, as we started with, right, where every cells designed, to metabolize and detoxified.

But you need the right fats around the cell in order for that to happen effectively. You need that downstream gradient, you needed enough glutathione, B12, all of the components of that.

Some people report really strong reactions when they start detoxification protocols, both good and bad. What do you think is actually happening during this and how should people kind of think through and navigate these experiences?

Yeah, so what I always tell people, in an ideal situation, if you're effectively detoxing, you want to either feel nothing or you wanna feel better. That's an idea situation.

That's not always going to happen. It's always doable. But when you feel worse, it's a sign that there's more, you know, level one circulating processing toxicity than what your body wants to deal with.

That is why your bodies telling you that. There's. More than it wants. To deal. With. that's what the symptoms are. Now, sometimes these symptoms. Are unavoidable.

But if you can avoid them, then that's going to be ideal. So someone that is kind of at max capacity in their daily dose of toxicity at their threshold, some people can actually experience detox reactions every single day without even being on a detox protocol because there's more toxicity than their body can handle.

They're actually experiencing detox reaction. That's kind the same. What would that feel like? It could be headaches, it could irritability, joint pain, whatever you're prone to.

Acne, mast cell activation syndrome, EMF sensitivity, a lot of things without even doing anything. When those individuals take something to mobilize toxicity from tissue, They generally feel way worse because they were already at max capacity.

They were actually over maxed capacity, they have exceeded their capacity then they've just added a bunch of stuff and now their body doesn't, it wasn't even able to handle what it was working on before.

Detox Reactions, Sensitivity, and the Push-Catch Model

So now there's an increased level of inflammation, increased mast cell activity and you know, all this stuff. And it's, that's I think not a situation where you want to fight through it because, or especially not long-term because sometimes it takes a long time to reset from those situations.

it can also cause a lot of tissue damage, right? Like you've spoken to this concept of the body is trying to protect you, our work is in dimension Alzheimer's and Alzheimer is associated with misfolded proteins like amyloid and p-tau and phosphorylated tau.

These are They're associated as like the evildoers, right? They cause Alzheimer's, but they're there to protect you. And I think when we have this idea, well, why isn't the mercury coming out?

Well, because the body is attempting to protects you from it. It's keeping it stored. I mean, many people notice this, you know, with all the GLP ones out there right now, and a lot of people losing weight, they go through kind of this detox reaction.

Have people say, generally inflammation comes down. But if you're going too quickly, not only do you have the risk of like muscle wasting and other things, Literally, I have a good friend who's an obesity medicine doctor.

She uses a ton of GLP-1s and she puts everybody on medication to prevent gallstones and kidney stones because as you lose weight quickly, you are getting rid of a lot of toxicity.

You're mobilizing fats. Your metabolizing in a really different way. People will talk about thirst that they didn't have previously. And so I think that I use that as an example because it's a way to quickly mobilize when you're losing fat.

quickly, whether it's through ketogenic diet or fasting or GLP ones, right? It doesn't matter. But you can have this, like the keto flu, I think is this rapid detox as you mobilize it at the cellular level.

Now, the smartest thing I worry about thin toxic people more than overweight toxic because the smartest thing the body can do is put that toxic burden into adipose tissue or into fat cells so that it's not in your thyroid, it is not your ovaries, not the brain causing a neurotoxic neuroinflammatory response or a thyroid disease or infertility or whatever else might come up with toxic exposure that has an impact on our health at an organ function level.

So I think that concept that you've eloquently spoken to is like, the body's trying to protect you. That's its job. It's doing a great job, sometimes it's almost doing too good of a job especially as we realize, oh, a toxic burden is contributing to my overall health burden.

So how do we get out of that, right? And binders are a good first step. I would also, you know, just I'd think add to that that like drinking plenty of water Making sure your body can flush through all of the natural detox processes, making sure you're hydrated, make sure having bowel movements, you have lots of good veggies that give you that liver support that you need, that your sweating regularly, whether it's through sauna or exercise and maybe even moving lymphatics and then exhaling, detox breath work can be super, super helpful.

But I think binders are an easy way to reduce burden on the liver, burden in the bowel. enhance the conversation around zeolite. So I want to go back to the zeolate dosing paradox.

And I know that this is a really important part of the conversion. I wanna be sure that people understand it because there's this sort of risk, you know, of detoxifying too quickly, but then there is also like the underdosing.

What if we're going too slowly? We never catch up. Talk about the Zeolites dosings paradox and what are the tangible things that you can do to make sure they're getting the right amount?

Yes, but the two most important things with zeolite is getting the right quality and the correct quantity, right? So, the quantity is the dose. So with most things, especially sensitive individuals, you know, mast cell activation line, that spectrum, they're just automatically going to take everything and microdose it or titrate from low to high because they just don't want to overburden the system.

Generally with Zeolites, it's the worst thing you can do. So, the paradox is that higher doses are gentler on the system than lower doses. Why? And there's like a 40-page document on zeolitelapse.com going into all of the mechanisms of action here, but the baseline theory is 10 milligrams of zeolit is more likely to cause a detox reaction than 10,000 milligrams.

Essentially, well, one, I would say I don't think zeolith was ever designed to be taken in a microdose. one milligram,

two milligrams, 10 milligrams as microdoses.

You don't see anyone trying that with activated charcoal. you don' see no one trying with clay, I don think, generally. No one is trying it with pectin.

These things are all in powdered forms. Zeolite, for some reason, people thought, well, we need to start micro-dosing it. And then all these companies started producing micro dose products, which can be problematic for a lot of people.

So essentially what happens is when you take zeolites, it has a lots of properties. One of those properties is biofilm disruption. That's one of the mechanisms here.

When you take any amount of zeolite, you go in, just stir stuff up. You kind of make a mess, right? Because through binding, so many things are attached in the body.

When you bind to something, things get stirred up. If you took a little bit, you've basically made a mess. Now your body has to clean up this mess, so the net effect of the binder actually could be an addition of stress on the body and symptoms.

And people might think, oh, this is good. This is detox symptoms from deep level detox, but usually it's not. Usually it is actually just from stirring up things in the GI tract causing immune reactions and you're not even getting to the deeper level of detox and your buddy has clean-up the mess It's the opposite purpose of a binder, which is to reduce stress.

Let's say, that's 10 milligrams. That's a, let's, say you took 10,000 milligrams, 10 grams. Yes. It, it's just a couple scoops of powder. Not that much.

You just sounds like a lot when I say it in that term. you take, you know, ten grams, two scopes of zeolite powder, now you've gone in, and you still go in and make a mess.

And you stir stuff up. But now, You have extra binding capacity, extra zeolate cages available to help clean up the mess that it made. So then the body doesn't have to do all the work.

So, then, the net effect is usually a reduction of stress. I want to talk about the biofilms a little bit, just because clinically I always think if I'm going to add a biofilm, I better have a bit of bug killer in there.

So like some oregano, garlic. I mean, as long as people… Mimosa, you talked about parasites, so like maybe a mimosa pudica, like something to help keep that bug burden down if we're going start taking the biofilms off.

Do you consider that? Yeah, let me give one more example on the dosing, because I don't think I was that clear. And then I'm going to address that because that's super important.

So let's say you have your processing center, which is your gut. It's holding a lot of toxicity. 100% is the max you can handle of toxisty from your daily dose.

That's food, water, air, external sources, that internal production, metabolic waste, microbial waste.

Supporting Elimination Pathways and Detox Capacity

Recycle toxicity, et cetera. After you hit 100%, that is when you get symptoms. So that's where some people have symptoms every day. Some people get symptoms when they mobilize toxicity.

So let's say you're at 90%. So you are not symptomatic, but you take zeolite, and it goes in, it kind of stirs things up, And it adds, you know, 20 units of, 25 units to toxicity, or 20. You went from 90 to 110, now you getting symptoms, because it added stress.

If you were at 20, And you took the zeolite, you don't get symptoms because you had more room to receive the toxicity. That's why some people are more sensitive because their cup is a little bit fuller.

Now, if you're at 90% and you take a tiny bit and it reduced it by 5, your at 85, it added 20, and your still overflowing. If you were at 90 and you took a bunch of zeolite and your reduced it from 90 to 10, now your body has more room to receive all of the byproducts of detox.

And that could be through, you know, increased limp or, biola, dumping toxicity from tissue, whatever it is. So the key is to bind to as much stuff as possible in the processing center and then have room.

To receive the stress that inherently comes from detox If that makes sense. Yeah, absolutely. It makes a ton of sense! So it's the opposite. So with most detoxes, the more you take, the more stress it adds, because you're adding to the cup when you mobilize toxicity.

With zeolite and other effective binders, The more the stress you are reducing, Because the most you removing from the cups, so they're opposite approaches.

That's why the reverse titration works, cause you reducing stress, not adding stress. And, you know, I want to talk about balancing detoxification with rebuilding and nourishment.

How do you think through improving nutrient status and overall resilience? Because we had just kind of mentioned this potential bug burden, like, You know I think toxic burden and infectious burden.

And we're sort of balancing that, getting after both of those things, especially in chronic complex cases. But nutrient studies and over all resilience are also an important part of that conversation.

So how do we weave that in? Okay, so nutrient status, and then I'm going to go into parasites, too, because everyone's always interested in parasites and it's interesting.

But essentially with nutrients, you've got what's coming in and you got, what happening to the nutrients once they're inside your body. A lot of times the issue is not what is coming, it is, is your, body able to properly utilize, absorb, transport, et cetera, these nutrients.

There's a lot factors that determine that. Sometimes you have bugs and things that are uh, you know, stealing the nutrients. Sometimes you've got, cellular inflammation, preventing the, um, the uptake.

I think, cell membrane integrity is huge. So when you have low cellular voltage or low cell cell, membrane health, then your cells are basically on lockdown.

They're not letting toxicity out and they're, not let nutrients in because they are in this lockdown state. So by raising cellular voltage, you're allowing the nutrients and you allowing to toxicity out.

Then, of course, the question is, how do you raise cellular footage? You want to, that could be anything. There's specific devices and technologies, but then really it's removing the things that are draining you on a daily basis.

So your cells will naturally start raising their voltage and opening up. metals are competing for space with the central minerals. So you've got this mimicry going on.

Essentially, let's say you have an overload of lead in your bones or in you body that competes for a space of calcium. If you had more lead, the calcium might not be getting to where it needs to go because there's a placeholder there which is lead and that could be problematic.

ionic mimicry where the body will actually hold on to toxic metals as placeholders for minerals. Although they're toxic, they can still be utilized for cellular purposes.

So that's one of the reasons the buddy doesn't let go. You're not getting the nutrients, so your body's holding onto metals. That's why sometimes taking proper mineral supplementation from food can help you detox because then your buddy can start letting go of metals because it has the proper nourishment.

But sometimes you need to actually remove the metals first for the minerals to be absorbed. Right. And there's kind of two trains of train of thoughts there, but yeah, you've got competing metals.

You've, got, aluminum and silicone, You got lead and calcium, cadmium and zinc, mercury and selenium, and iodine. you got all these things when you have the heavy metals, that's a perfect example, Mercury and Iodine, right?

Amalgam fillings, a lot of times people end up with hypothyroidism, Hashimoto's, or some sort of thyroid issue. And not to mention, of course, all the brain stuff, which you're an expert in, because you have these amalgams and the mercury goes to fat, and then the closest fat is going to be the grain and thyroid, generally, right?

So you get an accumulation of mercury. If that's displacing or messing up the utilization of iodine, that is gonna be highly problematic for a thyroid.

Well, yeah, we usually think about like the bromine fluoride, the halogens being a really big issue there.

Dosing Paradox, Nutrient Status, and Cellular Resilience

Yeah. I mean, it's absolutely, but if the thyroid is messing up the iodine, then you don't have proper iodide and then, you're not going to be able to naturally detox the fluorines and the Bromines, and et cetera.

So sometimes, that's more of a downstream or I think a lot of the issues are actually mercury. And then when you get the tests for all the other stuff, the stuff shows up because those deficiencies are from the mercury toxicity, messing up the iodine, et cetera.

Oh, interesting. So that's why it's always tricky because we find what we test for, but sometimes that is not like the actual route. And it is always hard to say.

But yeah, there's direct, you know, displacement of metals, minerals, just the metals themselves causing oxidative stress will deplete minerals because when you have higher levels of oxidated stress, the body has to use its antioxidant resources to fight that.

So you're using up your glutathione, using your SOD, your using-up your vitamins and your lower levels. Just by reducing oxidant stress from moving metals the vitamin levels just go up on their own without supplementation.

Right, yeah. You just have less nutrient requirement. It makes perfect sense. So Jeff, I ask everyone, and you are younger than the vast majority of my guests here, but at this stage in life with what you've learned so far, what brings you the most joy?

I think that. My personal mission statement is love God, live love, make a difference. So, you know, love god, and love others is a good one. But that's, so that is my personal Mission Statement.

And then my professional Mission statement, is meet the need in wellness. I think those kind of tie in, right? So just doing other things to help other people, more blessed to give than to receive.

so I'm thinking of helping other, people and right now I am helping people with health. That's what brings me to fulfillment right know. Really adding value.

Yeah, wonderful. And in terms of healthy brain aging, what are you doing personally outside of zeolite? What are committed to personally so that your brain ages well?

Yeah. Absolutely. So I mean, I do take a lot of Zeolites more than I need to 60 grams a day. And then I try to keep it simple. I live in the forest. So, I mean, not everyone can do that, but I do live an acreage in a forest, don't have Wi-Fi, really clean water, just really kind of simple lifestyle in that respect.

And I'm really big into EMF mitigation, so protecting myself from radiation through avoidance. Then also, you know, use different technologies for harmonizing and blocking.

All sorts of stuff. Yeah. A lot of technology. I like, I liked different therapies, but getting back to nature, some of the simplicity, detox, proper food, water, EMF mitigation.

Yeah, amazing. Jeff, this has been a fascinating conversation. So grateful for your time. Toxins and detox, I get so fired up and excited about it and it can feel really complicated.

But I think today you helped unpack some really simple things that we can be doing and how we feel empowered around these environmental exposures that can accumulate.

And also some of the why of how challenging this can be for people to navigate. So strategies like binding agents, like how that can play a role, but also how we can use dosing and high quality products to make sure that, you know, we're getting the best outcomes possible.

I really appreciate this discussion because it's a reminder that detox isn't just about a quick cleanse or something short term, but it is really about understanding our daily exposures and supporting the natural innate systems of elimination and then making really thoughtful choices and using the tools to reduce our overall toxic burden over time, not about just like a week long detox.

So I want our listeners to take away that while we can't avoid every toxin in the modern world, although Jeff's doing a good job of reducing his. We can become a lot more aware of where exposures come from and take practical steps.

So Jeff, thank you so much for sharing your perspective and the work that you're doing in this space.

Personal Wellness, Mission, and Closing Thoughts

Thank you for doing the worked that your doing. It really helps us better understand the complexity, but also the simplicity and how we put the pieces of this puzzle together.

Absolutely. It's a team effort. Thanks for everything you're doing and had a great time. Wonderful. If you have found this episode helpful and today's conversation interesting, please share this with someone who you think might benefit.

Until then, think well, age well. We'll see you next time! Thank you so much for listening to the Think Well, Age Well podcast. If you enjoyed today's conversation, please take a moment to subscribe, leave a review, and share this episode with someone you care about.

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Until next time, keep thinking well and aging on purpose.