



Your Functional Medicine Expert®  
Jill Carnahan, MD ABHM, ABOLM, IFMCP

## [#58: Dr Jill Interviews Dr Lyn Patrick on Toxic Metals and the Immune System](#)

### **Dr. Jill** 00:11

Hey everybody! Thank you for joining us this afternoon. I am so excited today. Gosh, Dr. Patrick and I have busy schedules, but she's someone that I just always like to make time for. [She's] a colleague, a friend. We've been working together in these many fields of functional medicine and environmental toxicity for many, many years. And I just have such great respect for the level of science and quality of information that she brings to our field.

### **Dr. Jill** 00:36

We're going to talk about heavy metals, toxicants, and all kinds of toxins in relation to the immune system because that's such a relevant topic for our last year and in general. I think you'll really, really enjoy the content. I want to be sure to also mention that we have a conference coming up, the Environmental Health Symposium. I think that's the second weekend in April. Is that right, Lyn?

### **Dr. Lyn Patrick** 00:58

That's correct—the 15th through the 17th. Dr. Jill and I will be moderating. And Dr. Jill is going to be speaking. Not only speaking, I think this is the first time that we've had you on the Environmental Health Symposium, where you're just free. I mean, it's your brain for free. People get all the wisdom, knowledge, clinical experience, and guidance that you have. It's just going to be an open Q&A. You're just going to be answering any questions relating to immunity, metal exposure, toxicant exposure, and co-infections. So I think that's going to be one of the highlights of EHS.

### **Dr. Lyn Patrick** 01:37

Honestly, I'm really glad it worked out that way. I think that we need more of that. We need more "Just tell us where you're stuck, healthcare providers, and we will give you some guidance." So I'm really looking forward to it. As well, we have some surprise... I don't want to call it a surprise guest because it's a conference. They're speakers. But I found this gentleman. He's a pediatrician in Hong Kong, Dr. Paul Lam, who has been treating... Are you ready for this? He's been treating pregnant

women, detoxing them for metal toxicity. He's been treating infants and children who have really serious clinical conditions and reversing them by identifying and eliminating the metals in their bodies. He's been doing this for many years. I've known Dr. Paul. I think I met him in 2012. And he's just the kindest and wisest gentleman and a really humane physician. So he's going to really guide us through some cases that, I think, will help us all. He also treats adults with metal toxicity. So I think that'll be great.

**Dr. Lyn Patrick 02:52**

We have Dr. Larry Palevsky. I don't know if you know Dr. Larry, but he's one of my best buddies. He's a pediatrician in New York. Dr. Palevsky has been identifying and addressing immune-related problems in children for his entire career as a pediatrician. He's also going to give a very factual medical literature-based talk on vaccines that I've heard before. But this is an update that is mind-blowing because we're really going to get to look into the science behind vaccination. So I think that'll be wonderful.

**Dr. Lyn Patrick 03:30**

Dr. Anne Marie Fine and I are going to do a day-long introduction to environmental medicine from a brand-new perspective. Jill, we've never taught this way. So here's what we've done. You know how we're always just like factoids, factoids, factoids? Just drinking out of a fire hose. It doesn't work that great.

**Dr. Jill 03:50**

Yes, we like it sometimes. But yes, it's just not so practical.

**Dr. Lyn Patrick 03:53**

I know. So here's what we've done: We flipped everything and said, "So what if this patient walks into your office—and here is the neuroinflammation that they present with, the neurotoxicity, the autoimmune disease, the cardiovascular disease, the obesity, the diabetes, or the infertility—how do you address toxic exposure from that perspective? What are the most likely toxicants? What are the most likely metals, solvents, pesticides, and phthalates? And how can you judiciously address this? And then, what are the treatment interventions? We'll see. But I'm hoping that that'll be just easier to learn, it'll stick better, and that everybody can become aware of the exposures that are related to these conditions. So I think that's going to be fun. That's going to be really fun. More stories. More patient stories, because that's

how people learn, right? So speaking of, do you want a patient story?

**Dr. Jill** 04:54

Yes.

**Dr. Lyn Patrick** 04:54

Okay. Many years ago, I had a nurse come in who had peripheral neuropathy. That's numbness and tingling in the hands and feet—stocking glove [neuropathy]. It was constant for her—this constant numbness, tingling, and pain in her hands and her feet. Interestingly, unfortunately for her, she worked in a law firm that did what? Environmental toxicant medicine. She had gone to her neurologist and she had said, "I don't know. Do you think this could be related to arsenic?—because I've heard in my work at the law firm that arsenic toxicity can cause this." And the neurologist said, "Probably not, but I'll test if you want to." So he looked in her blood—which is the wrong place—for arsenic. He didn't find any and he said: "Absolutely not. You don't have any arsenic toxicity."

**Dr. Lyn Patrick** 05:49

So somehow, she found her way to me. And I said, "Well, let's look in the right place, which is in the urine." And sure enough, she was loaded. She had a fascinating story. She was working as a nurse, but when she went home, she was helping her husband build a deck out in the back. And they were using what is called CCA—that's the name of the treatment—wood, which is outdoor wood. It's treated wood. And the way that they treat it is that they soak the wood in copper, chromate—not chromium(III) but chromium(VI), which is toxic—and arsenic. And that's why it's so heavy, right? So she was working all summer helping her husband build the deck. It was raining. And she was not so great at wearing gloves. So she was absorbing this arsenic from the wood from her hands into her body. And we know that's possible.

**Dr. Lyn Patrick** 06:48

There are a lot of playgrounds across the United States that are built out of this CCA wood that are a danger to children because when it gets wet, not when it's dry, you can actually absorb some of that arsenic into the palms of your hands through the wood. Not only that, but she had arsenic in her water supply. She had a well, which is the greatest risk for arsenic. And her neurologist, of course, just wasn't oriented that way. That wasn't his orientation to ask her if she had checked her

water for arsenic or if she had any exposure. She knew that the CCA was exposure, but he had convinced her. So anyway, what we did for this dear woman was test her water. She just hadn't done it. She had pretty high levels of arsenic.

**Dr. Lyn Patrick** 07:42

And for 108 million people in the United States of America, their arsenic levels are over the allowable legal limit for arsenic in drinking water. That's a lot of people. And we have a really serious problem. Our infrastructure isn't that great in terms of getting arsenic out of the drinking water supply. And regulatory agencies are not that good at actually punishing or fining municipalities that can't regulate their arsenic levels. So this is a multi-stage issue and a multi-layer process.

**Dr. Lyn Patrick** 08:20

So at any rate, she was able to get just a good old reverse osmosis water filter. I'll talk about that later. That got the arsenic out of her water. We gave her some methylated B vitamins, selenium, and SAME. I think she ended up taking SAME. All those things are really good to help the body process and eliminate arsenic. And [she took] methylated B12. That was the other thing. And her peripheral neuropathy resolved. It took a while. It took a couple of months because, as you know, that's damage to the nerves and the nerves have to heal. So it's not like taking ibuprofen for a headache. The nerves really have to heal.

**Dr. Lyn Patrick** 09:08

But I've been thinking about this quite a bit because I just did a podcast on arsenic and how huge a problem it is. It's the number one toxic metal in the United States, as per the Centers for Disease Control. The Centers for Disease Control have a list of 200 toxicants, all of them based on how likely you are to get exposed to them and how sick you may get. They have a formula where they put those two variables together. And arsenic comes up [at] number one. And the World Health Organization has actually rated it right up near the top.

**Dr. Lyn Patrick** 09:49

The good news is that this is something we can do something about. It's coming from somewhere. It's either coming from our drinking water or it's coming from our vegetables—which is the highest source of inorganic arsenic; that's the poisonous kind—in our environment. Why? What do you think? Multiple-choice

question. The reason vegetables are the number-one source of arsenic is because of pesticide exposure. Number two—listen to number two: Biosludge application to conventionally grow—

**Dr. Jill** 10:28

That's what I was wondering. The old term for that was manure—in the farm.

**Dr. Lyn Patrick** 10:33

Well, now, guess what? They don't use manure. They use something that's legally called biosolids. Do you remember the Clean Air Act and the Clean Water Act back in the '70s? Way back in the '70s, corporations that produced things that they no longer could burn into the air or throw into the water thought: "Well, what's left? The soil." So they enacted all this legislation to allow the application of what are called biosolids to agricultural soil. They throw a little zinc, a little phosphorus—you're a farm girl, you know all this stuff—pot ash in there and sell it as fertilizer. Unfortunately, there are no good regulations that prohibit high levels of arsenic, cadmium, and lead—those are the three biggies—in those biosolids. So the plants will take them up and they end up in the plants.

**Dr. Lyn Patrick** 11:31

This is just one great big commercial for doing what? Eating organic food, because you can't use legally used biosolids in organic agriculture. So when people say, "Oh man, I just don't have the money to eat organically," I'm like: "Well, this is not a good thought but have you thought about how much it costs to have cancer? Have you really thought about the cost of having cancer?" And nobody thinks about those things. Cancer is extremely expensive. Having an autoimmune disease is extremely expensive.

**Dr. Jill** 12:06

Even the detox protocol that you took her through for three to four months is extremely—

**Dr. Lyn Patrick** 12:11

Right, Exactly. But she was willing and ready and absolutely 100%—

**Dr. Jill** 12:18

What a great thing that she had enough exposure to her law firm to know the

questions to ask. And I just encourage you listening—if you're a practitioner, you probably are in the functional or in the greater realm—if you're a patient, don't take these answers if you feel like there's something more. Keep searching because often there are underlying root causes. And again, I come from conventional training and we're not taught to really dig deep and look for things like arsenic. So this is rare.

**Dr. Jill** 12:46

And now you know why I love Dr. Lyn Patrick so much. She's so knowledgeable on these things. And I always learn more when I'm talking to her. You guys are going to love the conference. We're going to have this and so much more. The main topic is on toxicants, toxins, heavy metals, etc. So we'll talk a little bit more about those. And I love the speakers that you bring as well. I want to highlight that. If you guys want, anywhere you watch this video, you'll see a link below to look at the speakers and the schedule. You can sign up anytime. It's online so you can be in your home in your pajamas and watch it. Tell me the days; is it on Friday and Saturday?

**Dr. Lyn Patrick** 13:25

Thursday, Friday, and Saturday. Yes. And your friend and mine, Dr. Neil Nathan, is going to be there talking about the cell danger response, mold, and metals, which is something that, as clinicians who look at exposures, we're taught to look at one at a time. We can barely wrap our heads around just one toxin. But the reality is, and you know this, that all of our sick patients are usually exposed to multiple things—not just infections like Lyme and co-infections or mold exposure—[such as] metals and solvents, pesticides and phthalates, and the whole ball of wax. So looking at that whole ball of wax is really an art, and I think Dr. Nathan is very skilled in being able to do that.

**Dr. Jill** 14:17

I do, too. And if you haven't heard about cell danger response, stay tuned. Come to the conference. I think this is one of the most monumental... It's Dr. Naviaux's work. And this is basically one of the underlying mechanisms that explain so much of our chronic infection and toxic load. Sometimes I'll do the overview lectures. But I always just think really simply with this toxic load and infectious burden. I would say nearly 100% of my patients with chronic illness have some weighted balance of those two. My job as a clinician is to figure out what's in their bucket, what's in the infectious load, and what's in the toxic burden. But the best thing—and I'd love your comments on this, Lyn—is if we think about that bucket and patients.

**Dr. Jill** 14:57

Just like your patient with arsenic, her toxic load was increasing and the immune system was decreasing because of that. Maybe infections were involved too. But the main thing for her was that overload of arsenic. But we don't always have to know every single last toxin in the bucket, because a lot of times these generalized principles... There are different mechanisms for removing lead versus, say, another type of toxin like Chaetomium, or mold. However, [with] detox in general, there's a lot of commonalities. Then, when we go into naturopathy, infrared sauna, hydrotherapy and Epsom salt baths, these things are universal. The great thing is we can take 80% of our detox and it applies to the whole toxic load. Any comments on that? Because I think clinicians, if you're listening, patient or clinician, toxicants, toxicity, and environmental toxic load could be overwhelming and very pessimistic. But I feel like it's not that way.

**Dr. Lyn Patrick** 15:48

Well, the good news is... I want to use a specific example. You are very familiar with the study that Dr. Steven Genoist did. He looked at a very small sample of patients who were sick and then some were not sick and he put them in a sauna. Then he actually looked at what came out in their urine and what came out in their sweat and he looked at what was in their blood. What he found was that the ability to sweat... It doesn't have to be fancy. Dr. Jill, I have helped so many people get better. If they didn't have access to a sauna or couldn't afford to buy a sauna, I had them go in their bathroom with a little space heater, shut the door, put a towel under the door, and literally sit in their bathroom for an hour and sweat. And they got better. So it's kind of a universal technology.

**Dr. Lyn Patrick** 16:46

And I think this speaks to your point: In those folks who were able to sweat, what he found in their urine and their sweat was increased levels of metals like cadmium. [It's] very hard to get cadmium out of the body. [It's] a very common toxicant because it's in those biosolids. It ends up in our food as well as in cigarette smoke. But he also found that bisphenols, which are a common plasticizer in our drinking water—they can be in our polycarbonate bottles, they're in the canned food, they're in our cosmetics—levels were also really strongly elevated, as well as aluminum. We can sweat out aluminum, right?

**Dr. Jill** 17:31

Oh, and aluminum—that's a huge problem. I was consulting with some doctors in India and their patients, and in 100% of the cases—I don't know if it's because of their cookware—I was finding such high levels of aluminum.

**Dr. Lyn Patrick** 17:44

Where is it coming from?

**Dr. Jill** 17:47

Well, I suspect that their cookware might be an issue. I don't know for sure, but that was my biggest suspicion because they all had common types of cookware. And again, I don't know that I for sure know the sources, but it was so common. And I think in the US as well. In fact, when I do a heavy metal panel in Labcorp, Quest, or whatever lab, aluminum is not typically included in there. And I will actually add that now. Is serum or whole blood the best way [to test] for aluminum? Or would you test it a different way? What would you do?

**Dr. Lyn Patrick** 18:17

I have been so conflicted about this that I invited one of the global aluminum experts, [inaudible]. So Chris Shaw is coming. Christopher Shaw from the University of British Columbia to talk about his research. He's a neuroscientist, and he's done quite a bit of research on aluminum. But this is a big problem because we don't have good tests for aluminum. We just don't. So I wish I could give you an answer, but I don't think there is one.

**Dr. Jill** 18:48

That's how I feel, too. I'm like, I'm not sure which way to go for now. I'm doing the blood sample but—

**Dr. Lyn Patrick** 18:52

Hopefully, after EHS, you and I will be updated on what really is the best test. But to get back to sauna... So a sauna is also a really good way to eliminate some pesticides. We can actually get organochlorine pesticides. Those are the legacy ones that are in our fat. And 99% of us have DDT metabolites in our fat. It's just that it's our diet. We probably inherited some from our mom.



**Dr. Jill** 19:20

And the half-life is so long that we can't really—

**Dr. Lyn Patrick** 19:24

The half-life—that's a hundred years to get it out of your body. So we have to help [with] that process. Just by itself, we're not going to do it. So that's one of, I think, the beauties of using those potentially low-cost technologies. Of course, not everybody can handle a sauna. Folks who are really environmentally ill or who have POTS—postural orthostatic tachycardia syndrome; that's where you get dizzy, and when you lay down, your heart rate goes up—have difficulty and need to be very slowly accustomed to sweating.

**Dr. Jill** 20:02

Like you said, a space heater in the bathroom—I have recommended that too. And even on the other spectrum, a couple of companies make sauna blankets—the little cubicles that you sit inside—and then, of course, the full-blown ones. But those can range from well under \$1,000, which is still a cost, but they're much more affordable now. And a space heater in the bathroom is still a good option.

**Dr. Lyn Patrick** 20:24

You know, it's just sweating. It doesn't matter how you do it. A lot of the doctors that I train ask me, "Well, isn't far infrared really the only way to sauna?" It's not. In that study that I was just mentioning, Dr. Genoist actually compared an infrared sauna to a radiant heat sauna. He found that the level of excretion in the sweat was equivalent. The level of excretion in the urine was equivalent. So it doesn't matter.

**Dr. Jill** 20:51

With some of the new infrared near and far, I'm suspecting there might be some healing properties, like maybe increased collagen production with the near-infrared. But if you're just focusing on detox, which is the majority of our patients, then, like you said, just getting them to sweat. What about people who don't sweat? What would you say about them? To me, that's a big issue.

**Dr. Lyn Patrick** 21:11

What I learned from my mentor, Dr. William Ray, who was a cardiothoracic surgeon who practiced environmental medicine for forty years, is that those people have dysautonomia. They have an imbalance between their nervous systems—the

sympathetic and parasympathetic nervous systems—that prevents sweating. So the treatment protocol for dysautonomia... And by the way, those folks are also environmentally exposed. That's how they got that problem in the first place. It can be treated and addressed.

**Dr. Lyn Patrick** 21:44

And, of course, let's just take an example: If somebody is in a moldy home, it doesn't matter how much you put them in the sauna. Until you get them out of the moldy home, they're not going to sweat in the sauna. So you have to remove them from all the toxins they're exposed to. But once you do that, [I recommend] very short periods in the sauna. Five minutes is useful. Then they can work up to 10. I had a patient [where] it took him a year to be able to tolerate an hour of sauna. But the man got better. And he was very, very ill. So that's the standard protocol for folks who don't have the ability to sweat.

**Dr. Jill** 22:18

Yes. I'll have them turn on the sauna, get in at 100 degrees, and stay for three minutes. Actually, I'm sorry, I set it to maybe 130, but get in at 100 so that it's just slowly rising in temperature. By the time they're at three minutes, it might be 105. And then the next time, they go to five minutes. So what happens is that, over maybe 10 to 15 minutes, they start to get to the top temperature of 130. Then, as they start to get there, they can go up to 30 minutes. Once they get to 130 for 30 minutes, they can go a little hotter.

**Dr. Jill** 22:47

I usually have them no more than two or three times a week at that very low temperature. And if they have that evening or the next day, sequelae where they don't feel well and they've overdone it, they take a break. They go back to lower doses. I always give tri-salts or electrolytes with the sauna. I often give binders after. I like to use clay, charcoal, or zeolites for metals. [Do you have] any comments on those little protocols or tips for sauna?

**Dr. Lyn Patrick** 23:12

Absolutely yes to everything. I think electrolyte replacement is absolutely necessary. In our clinic—I'm no longer there—we have an environmental sauna. So we control the temperature. And we do really keep it under 130. In gyms, sometimes those saunas are way too hot.

**Dr. Jill** 23:31

Oh, they're terribly hot. And people go in there for 45 minutes and I'm like, "That's a stressor on the body." I think of it as a cortisol response. If you get too high, you're actually making the stress response worse. You're making that sympathetic overdrive worse. So I agree. As long as you're sweating... And you can do that at 130 very easily.

**Dr. Lyn Patrick** 23:49

Right. Actually, what I learned in my environmental medicine training was that there are two types of sweat glands. One is specific for ammonia and water and the other is specific for releasing some of the lipophilic toxins. The higher the temperature, the less active those important fat-releasing sweat glands are. They actually get turned off at high temperatures and you're just releasing water and ammonia.

**Dr. Jill** 24:17

Which is worse because then you're going to be dehydrated. So that makes a ton of sense, Lyn. I've never heard it explained like that.

**Dr. Lyn Patrick** 24:23

So a low-temperature sauna is a medical sauna. We rarely ever go over 130.

**Dr. Jill** 24:25

So let's talk a little in our last five or ten minutes or so about the conferences on the immune system. That's been the hot topic, of course, with our pandemic and everything. People are worried about the immune system. For decades, you and I have been talking about the immune system. This is nothing new. Let's talk a little bit about the basics of how toxicants, toxins, and heavy metals affect the immune system. Do you want to give us just a little, tiny overview on that?

**Dr. Lyn Patrick** 24:51

Sure. I think it is probably helpful to go back to arsenic because arsenic is something that, as we now know, 108 million people are drinking from their tap water. And while we're on that subject, a simple reverse osmosis filter will get the arsenic out of your tap water. Charcoal is not as reliable, but reverse osmosis is very reliable. So arsenic is a specific immune-suppressing metal. Those effects have

been known for decades. One of the things I think is interesting is that arsenic decreases macrophage function. So we know that macrophages are like the garbage men and women of the immune system. They go in and they will literally take the garbage out. They'll surround the garbage and remove it either through the lymphatic system or sometimes back into the blood. So one of the things I've learned is that in COVID, macrophage function is very important.

**Dr. Jill** 25:54

We forget that T cell-mediated immunity, right? People are talking about B cells. No, no, no. Actually, T cells are more important.

**Dr. Lyn Patrick** 26:04

And arsenic also suppresses these cells, called natural killer cells. So natural killer cell function is very important in actually attacking viruses directly. We need robust natural killer cell function. And again, when we're looking at viruses and cancer cells, by the way, innate immunity is the key. That's what we need. So I think we can say the same thing about mercury. It has a suppressing effect on natural killer cell function. So does lead. And all these things are in cigarettes. It's not that I would ever smoke a cigarette anyway, but now that I know what I know about what's inside of cigarettes, I can't. Somebody would have to put me in handcuffs to get me to smoke a cigarette.

**Dr. Jill** 26:53

Well, let's talk real briefly because a lot of kids are vaping now or adults. But it's the same thing, right? You're not losing the risk.

**Dr. Lyn Patrick** 26:59

[There are] higher levels of metals in vaping than in regular smoking. There's nothing safe about vaping—nothing. It's more addictive than smoking cigarettes. Yes, absolutely.

**Dr. Lyn Patrick** 27:15

Back to immune function. I think that we are at this place with COVID where there's a fork in the road and we've got to go one way or the other. We can't hang out at the junction anymore. We have to make choices about how we live, how we spend our money, and how we take care of our bodies that go down that left-hand

or right-hand side, whichever one it is, to robust innate immunity because we don't have any choice anymore.

**Dr. Lyn Patrick 27:50**

And I don't want to talk about the vaccine because it's so political. But one thing I will say is that I heard a vaccine developer lately. You may have heard him talk. He said one of the potential risks with the vaccine is that it may allow for more variants. So those variants will affect those of us who may have chosen not to be vaccinated. So it's everybody now. It's all of us. We all have to make very conscious choices about innate immunity. Avoiding metals and improving metal excretion is, in my book, one of those choices. We actually have to choose that.

**Dr. Jill 28:31**

I think, Lyn, if we had to have a takeaway of what to do in this era and everything, we must start choosing to do daily detoxification things. I've always told people 21-day detox, 30-day, January 1st... That's great. No problem. But if you are not choosing... I practice what I preach. I know you do as well. I choose every single day to do things like [use the] sauna, [use] charcoal or clay, eat clean, all organic, or drink purified water. And you've heard me say clean air, clean water, and clean food. Some of these things do not have to be incredibly expensive or difficult. It's very simple because what we put in our body protects us from accumulating that load. The types of food that we eat, the type of water we drink, the air quality, using air filtration systems, Epsom salt baths, infrared sauna, and a space heater in your bathroom—for these things, you have to make a choice every day.

**Dr. Jill 29:25**

And you do have to choose. Unfortunately, in this century, we must choose to put some of that in because if we don't, the load is so great that we're all going to be overcome in some way by it. And I don't mean to be fatalistic, but I've realized—I'm sure you've seen this too—that 10, 15 years ago, when I started seeing functional medicine practice patients, it was a thyroid disorder and three months later they were well. I never see that anymore. The complexity level is 10 to 100 times greater than it was even in one or two decades. I believe that the hidden elephant in the room, which was one of the titles of our conference, is the toxic load.

**Dr. Lyn Patrick 30:03**

And I just heard, just for everybody, Shanna Swan, who is one of our renowned...

She started looking at this long before anybody else even cared or knew back in the 70s. She has just written a book. And I'm so sorry that I don't have the title of it.

**Dr. Jill** 30:19

At the end, we'll add it.

**Dr. Lyn Patrick** 30:23

One of the things she says, and this just came out in an article, I think in the New York Times, is that her estimation based on the literature is that by 2045, the male sperm count in the world globally will be zero.

**Dr. Jill** 30:37

Wow. Is it called *Count Down*? I think I found it. By Shanna Swan, PhD.

**Dr. Lyn Patrick** 30:44

Yes. She is one of our renowned, really beloved, and very well-respected researchers in the field of endocrine disruption. She was the one who found that pre-exposure to phthalates in the womb, prenatal exposure to phthalates, altered the anal genital distance in boys, which meant that the actual distance between the genitals of an infant boy and the anus was changing. And that is a bad thing to happen. There are a lot of reasons why it's bad, but it is a bad thing to have happened. So for the last almost 30 years, she has been on the bandwagon about this and continues to publish. And she's just wonderful. But that's the reality.

**Dr. Lyn Patrick** 31:26

And the thing, Jill, that you and I both say is [that] knowledge is power. So we can take this knowledge and implement things in our lives that we can incorporate into our daily routine. I do a sauna. I try [to use the] sauna every day. I don't have to do it for an hour. I just do it for 15 minutes. That's okay. I feel so much better and I sleep so much better.

**Dr. Jill** 31:49

Yes, the same thing. I just pick and choose. And there's no obligation, but it's part of what I value, which is my health. I just really believe we have to teach our patients to choose to value, maybe taking 20 minutes a day to some practice. Again, I use an Epsom salt bath every single night that I can. It's just so powerful. It's so simple. So

cheap and easy. And then, like you, I sleep better. So there are these things you can incorporate.

**Dr. Jill** 32:17

Obviously, wherever you see this video, you'll see links to the conference and more information. As you can see, what I love [about] Dr. Patrick is that she really brings some of the best and brightest brains and researchers. She's always looking for: "Who is the expert?" And then, "Let's get them to the conference. Let's get them to speak." And I don't know of any other higher-quality organization as far as the types of people that you're going to see. And sometimes the level of knowledge is pretty amazing. But also at this conference, we're going to have some really practical ways. Like you heard, I'm going to do a live Q&A. I've never done that before at the conference, but I'm so excited because it's going to be really, really interactive. So you literally get to bring your questions and I'll be there and just be able to answer them in real time.

**Dr. Lyn Patrick** 33:00

Great. Yes. The Environmental Health Symposium—I'll see you all there. Jill and I will be moderating. We'll be introducing and listening to some pretty amazing doctors and researchers.

**Dr. Jill** 33:11

Awesome. Well, thanks for your time today, Lyn. We will talk in a few weeks!

**Dr. Lyn Patrick** 33:16

Okay, great. Thank you so much. Dr. Jill!