



Top Takeaways: #274 How Environmental Toxins Can Mess with Your Microbiome with Lara Adler

1. Lara Adler believes that it is the duty of health professionals to address toxicity in this day and age, especially because toxins are the number one driver of disease.
2. Metals and chemicals act on every component of our metabolic function in our body.
3. Many people still believe that our body can detox on its own, but we did not have the synthetic chemical exposure that we have now back in the day.
4. 98% of people have glyphosate and 93% of people have BPA metabolites
5. You can do graph overlays of the uptakes of chronic disease with the uptake of toxic chemicals introduced into our environment, and they will mirror each other.
6. At the end of Obama's term we had the update of the toxic substances control act, which was the first time in 40 years that our primary piece of legislation regulating chemicals had been updated.
7. The rest of the world has surpassed us in chemical regulation including China and South Korea.
8. We're seeing rates in autoimmune diseases, thyroid conditions, childhood weight issues, ADHD, learning disabilities, autism, and allergies sky-rocket.
9. In order to use detox protocols that work at their best, it is important to practice avoidance, to reduce exposures to toxins.
10. Perfluoroalkyl substances that have been contaminating everyone's drinking water have a half-life of 3.5 to 8 years, meaning it can take 8 years for the human body to rid itself of these chemicals.
11. We can experience lower gut bacteria, leaky gut, and other health issues that affect our microbiome.
12. Health issues that can result from gut dysbiosis are hormone imbalance, insulin resistance, metabolic issues, thyroid problems, PCOS, neurodegenerative disease, anxiety, depression, brain fog, cancer, etc.
13. Exposure to chemicals can change the gut's microbiome in different ways, causing the gut to have difficulty breaking down other chemicals depending on how the gut has been altered by previous chemicals.
14. The more toxic you become, the more difficulty you have detoxing the same chemicals.
15. Glyphosate can deplete glutathione in our body, the powerhouse detox enzyme.

16. Arsenic, found in much of the rice we eat, can poison enzymes that transports triglycerides out of fat cells, making it more difficult to lose weight.
17. One way to reduce arsenic exposure while eating rice, is to cook it like you do pasta, where much of the arsenic is drained out in the water it was cooked in.
18. BPA is another chemical that can greatly affect the microbiome, so much so, Lara signs her restaurant receipts by holding them with a napkin
19. Many of us drink water contaminated with chlorine, which can affect our gut bacteria and lead to colorectal tumors.
20. There are 91 regulated contaminants in our drinking water, but hundreds more, so it is important to find out what water filter is best for you and your water.
21. Learn more about toxins with Lara's Tools for Teaching Toxicity Course at Laraadler.com
22. On Lara's site you can find lessons about water, obesity, a 5 month certificate course, and also a new course that's coming out soon!
23. You can also find her on Instagram@environmentaltoxinsnerd
24. Lara asks everyone to become part of the toxicity conversation.

Wendy Myers:

Hello, everyone. My name is Wendy Myers of MyersDetox.com. Thank you for joining the Myers DetoxPodcast today, where we talk all about toxins and tips and tricks on detoxing, reducing toxin and congestion and all kinds of ways to detox your body and your home.

Today I have Lara Adler on the show, and we're going to duke it out about how to detox your environment, reduce toxin ingestion, how toxins affect your gut microbiome and your immune system and cause leaky gut and talk about some politics too, regarding the unleashing of toxins into our environment, how our government is not protecting us like they should. Lots of really good, juicy tips on the show today and how toxins affect your body's metabolic function, even some talk about how toxins cause weight gain and prevent weight loss as well.

I know so many of you listening to this show are worried about your heavy metal levels. I created a very simple quiz at MetalsQuiz.com so you can test your metal levels. You can see, based on the questionnaire, if you have low, medium, or high levels of heavy metals in your body based on your lifestyle habits, so go to MetalsQuiz.com to take the two-minute quiz and learn what you can do to reduce heavy metals in your body and the resultant health issues that they cause, many of which we talk about on today's show.

Our guest, Lara Adler, is an environmental toxins expert and educator and certified holistic health coach who teaches health professionals about the links between environmental chemicals and chronic health issues. She teaches everything from weight gain and diabetes to thyroid disease and infertility so they can better support their clients and patients. She takes a practical, real-world approach to dealing with toxins that is informative, accessible, and actionable.

Lara also guides her students on how to seamlessly integrate this topic into their practices and to leverage their education to distinguish their work in their fields. She's taught thousands of allied health professionals like health coaches, nutritionists, acupuncturists, chiropractors, and women's health experts from more than 20 countries around the world in her online courses. She's a member of the Naturopathic Association of Environmental Medicine, the American Holistic Health Association, and a founding member of the Health and Wellness Business Association. You can learn more about her and her courses on toxins at LaraAdler.com.

Lara, thank you so much for coming on the show.

Lara Adler: I am so thrilled to be back. It's been a while, but obviously we're doing the same stuff, talking the same important information, so I'm happy to come and talk to your audience.

Wendy Myers: Yeah, so for anyone listening, Lara came on the show a few years ago to talk about obesogens, which are chemicals that make us fat. That's a really, really good show if you want to revisit that. I think it's number 43. Lara, why don't you just tell us a little bit about yourself and your background and how you started teaching about environmental toxins?

Lara Adler: Actually, I think I have even an updated version of ... There's a new dimension in the story since I was on here last that is pretty interesting. I didn't start out in college being interested in this topic. This was something that found me. I was always interested in health and nutrition growing up, which is legitimately not a cool thing for a kid in high school to be interested in nutrition, but I never said I was cool. I was just interested in nutrition.

I didn't really consider it something that I would pursue professionally, it was just something that I was passionate about. I really dove into all the books that I could get my hands on literally through high school, through college, after college, so for 20-plus years now, and thought it was to be really fascinating.

Eventually I made my way through to this realm of holistic health coaching, and I was like, "Ooh, there is an opportunity to serve people and to have a business in this space talking about this thing that I love," at the time which was nutrition. It was really after that process that I stumbled into this world of environmental toxins, so my clients, the health coaching clients, were coming to me for weight loss. It was actually through this discovery of resistant weight loss that some of my clients had that I was like, "What am I missing here? I'm a new health coach. I don't want to seem like a chump that I don't know what I'm doing. Let me figure this out."

Wendy Myers: I'm laughing because that's how I found toxins also, was I was having resistant weight loss. I went to the doctor. "Doctor, what is wrong with me? Please fix

me. Help me." Then I found all these health issues I had and that led me to heavy metals and chemicals as the underlying root cause.

Lara Adler:

Yeah. Here I had gone through health coaching school at the time, which was a year-long program. I'd spent the previous 15 years reading about health and nutrition, and at that time, I was like, "Wait a second. Why is this the first time that I'm really hearing about this connection between toxins and health?" At this point, this was basically in 2010, so nine years ago, and there was just not that much discussion about this and there was ... Nowhere in my health coach training program was there discussion of toxins, none of the health practitioners that I was surrounded with knew enough about it. They were like, "Yeah, toxins are quote, 'bad,' but what does that mean?" That really is what pushed me down this path.

Now, the funny story or crazy surprise was two years ago I went back to the east coast, where I'm from, for my father's 80th birthday, and I was poking around in my bedroom from high school, which is what you do when you go back to your parents' house, is you look at all your old stuff and you're like, "Wow, I was a dork." And I found the old ... This plastic box of index cards, which was how, in the '90s, we wrote our high school papers, was we had to have our index card as our references. I was like, "Oh, cool, I wrote this paper on veganism," because I was a super vegan at the time.

The first card that I pulled out was a reference to ... It was a quote from a book talking about how a lot of people are adopting a vegan diet because they're looking to avoid toxic chemicals that are in the environment, and it was dated 1992. So I was like, "Oh, I guess in a way this topic actually has been on my radar for a lot longer than I realized."

And it's just something that I'm really passionate about, and that passion is really fueled by both the grand injustice that exists in this realm, it's not okay that people are being exposed to chemicals that are unregulated or under-regulated, and from a professional standpoint, I really think it's not okay for health professionals to be not addressing this piece of the puzzle. At this stage in the game, it's a non-negotiable. Dr. Joseph Pizzorno is one of the ... I think he's the founder or one of the founders of Bastyr University, says that toxicity is the primary driver of disease.

Wendy Myers:

Yes, the number-one primary driver.

Lara Adler:

It's the number-one driver of disease, and so for ... I just think it's the elephant in the room. It's the biggest missing piece of the puzzle. There's a dozen ways we can say it, but it's just such an important topic, and I'm thrilled that within the short amount of time that I've been doing this there's people who've dedicated their whole life to doing research in this field, but in the nine, ten years that I've been in this space, the landscape around the conversation around toxins has completely changed.

You know that because you've been witness to this conversation evolving, first from your own experience with mercury toxicity and now everyone's talking about toxins and detox. So that's the silver lining to this big, dark toxins cloud, is that awareness is really increasing, and that's key.

Wendy Myers: Yeah, and I loved what you said about that it's really irresponsible if you are in the medical field, you're working with patients, and you're not looking at toxins or heavy metals and chemicals as an underlying contributing factor to people's symptoms and diagnoses. I absolutely agree with you. It's totally irresponsible, because we know that these metals and chemicals act on every different component of our metabolic functioning in our body.

Lara Adler: Yeah, and I recognize that within certain types of medical professions, specifically ones that are still within the traditional insurance model, they just don't have the time to go there. But really, the allied health practitioner, the holistic practitioner, any type of practitioner who really has the ability either through the design of their program or practice or through other people supporting people in their practice like health coaches, like nutritionists, like lifestyle consultants, that can help take the hand of the client or patient and really guide them on making these really necessary lifestyle changes to reduce our exposures.

I think that a lot of people still lean heavy on the whole concept of, "Oh, our body detoxes on its own naturally. We don't need any of that detox stuff." I think that might have been the case 80 or 100 years ago, but 80 or 100 years ago we didn't have the kind of synthetic chemical exposures that we have right now. We don't have people that had 98% of people with glyphosate or 93% of people with BPA metabolites. Those things didn't exist, and so it's silly to think that our physiological capabilities to handle these toxicants, these chemicals, would have changed in that period of time. So they haven't, and we just don't have the ... Our bodies don't have the capabilities to handle what we're throwing at it. It's a miracle that we're all alive.

Wendy Myers: Yeah, yeah. Look around you. Look at your computer and this microphone, your cell phone, the rings. Everything is made of metals, and there are so many chemicals being unleashed into our parks and in our food and into the air, and these things get into our bodies. They're being unleashed into the environment, drugged up as the metals from mining sites and then get into the atmosphere at unprecedented levels, and so these toxins get into our body and the air, food, and water.

More and more people are becoming aware of and starting to pay more attention to environmental chemicals. Can you give us some context into why this is such a big deal and why it's critical that we all start thinking to reduce our exposures to toxins?

Lara Adler: I think what we've just been talking about is it. We're all exposed. No one is not exposed. Zero people are not exposed. There are certain populations in the

world or in the country that are less exposed. There was an interesting article, this was probably published in 2012 or '13, and I don't remember what the publication was. It was one of those Slate or Vox or one of those type of online places. The article was talking about a very small subgroup population in the United States that had extraordinarily low levels of compounds like BPA and phthalates in their bodies.

Wendy Myers: Oh, the Amish? Was it the Amish?

Lara Adler: It was the Old Order Mennonites in Pennsylvania Dutch Country. The title of the article was, "Want to Avoid Toxic Chemicals? Drop Out of Modern Society." I would share that with my students, because I was like, "Ha ha, this is funny," and like, "This isn't true. We don't have to go to that extreme. We don't have to adopt that lifestyle. I'm sure that many of us who are in this space long for the opportunity to perhaps go live in a yurt in the middle of the woods to get away from all of this.

Wendy Myers: I do. That's where I'm going.

Lara Adler: Sounds great. Take me with you. But I think that the ideas that we ... We are all being exposed, and when, as practitioners, just or as people, we're looking at the rising rates of chronic illness, we see that these ... You can do overlays of graphs of the uptick of chronic disease and it almost completely mirrors the same uptick of the introduction of a lot of these chemicals into the marketplace.

Wendy Myers: Yes, and these chemicals are getting introduced by the thousands every year, untested, no protection from the government, no protection from the EPA. No one's watching what these corporations are doing.

Lara Adler: No, and not only ... I wouldn't say that no one is watching. I would say those that are watching aren't watching well and I would say that with the current administration that we have, it's becoming even larger of a problem, not smaller of a problem. We can steer back to toxins, away from politics, but at the end of Obama's term, we had the update of the Toxic Substances Control Act, which was the first time in 40 years that our primary piece of legislation regulating chemicals had been updated. So that's just a good example of how absurd our approach is to chemical policy, and there was a period of time in America when America, the United States, was the leader in the groundbreaking environmental laws and laws regulating chemicals, and the rest of the world has surpassed us.

There are places like China and South Korea that have even more strict chemical policies than we do here, and we think of China as being this place where all the terrible things are made. They're only made that way because they're made to the specifications that American companies ask them to make them. So some of the products that are manufactured in Chinese factories aren't even allowed to be sold in China because they regulate products differently there.

The bottom line is that we're seeing rates of autoimmune diseases skyrocket, thyroid conditions skyrocket, childhood issues, everything from weight gain to learning disabilities and behavioral problems, ADHD, autism. We see upticks in things like allergies. This is very likely related to exposure to toxins, including things like glyphosate, so we're seeing rates of heart disease, of diabetes, of breast cancer, of cancers in general.

We're seeing this big uptick, and I think that there is a falsely comforting way that cancer statistics, for example, are often spoken about. They talk about, "The mortality rates are dropping." Great. That just means that people are living longer with cancer. It doesn't mean that the incident rate is decreasing, and in fact, for some cancers the incident rate is increasing.

So the reality is that it doesn't matter what kind of chronic health issue somebody has, whether it's eczema or an autoimmune condition, which is an autoimmune condition or infertility or Alzheimer's or any kind of neurodegenerative problem. There is a component of this that is linked to environmental toxins. We can't hope to treat or address or heal from these issues if we're not addressing these exposures that we're getting every single day.

For me, like I was saying earlier, it's a non-negotiable, and I just think that we're all exposed every single day. As dark and gloomy as that sounds, the good news in the change and awareness that I was mentioning earlier, the landscape has changed, means that consumers are driving the way that our products are being manufactured. BPA-free didn't exist, not that that's a good option, but BPA-free didn't exist until moms found out they were in baby bottles and put up a stink.

10 years ago, you couldn't find natural skincare products that didn't cost a fortune that weren't buried in the back of some crunchy, dusty health food store. Whole Foods wouldn't be everywhere. There's this big, global trend where people are demanding more transparency in the products that they're using, and so it's this convergence of, "We're fed up with being sick," and "We're starting to take a closer look at what's in our environment and what we're finding we're not happy with and so we're demanding change." I think this cauldron of activity is really exciting, because it means that things aren't going to stay this way.

Wendy Myers:

Yes, and we can't really control so much about what corporations are unleashing into the environment, but we can control what we put in our mouth, what we put in our body, what we're spraying around our house and spraying in our yard. We have to be thinking about these little choices that we're making every single day about what we put in and around our body. That's what I love about what you do, is teaching individuals and practitioners about making better choices and teaching about toxins, because this I really, truly believe that the people that are paying attention to metals and chemicals and preventing ingestion and detoxing them are going to be the people living longer, healthier lives medication- and disease-free.

Lara Adler:

Yeah, completely. Completely. And I think that the key here is that we start with avoidance. I just posted something on Instagram recently that if your hand was in a pot of boiling water, you wouldn't leave your hand in the boiling water and then treat it at the same time, you'd take it out. It's a very obvious reflex. But we don't do that when it comes to this idea of being exposed to toxic chemicals or having toxic chemicals in us. Practitioners often jump towards the sexy detox, moving towards the detox phase, and consumers are conditioned to want that because we want quick fixes, because that's what we've societally been conditioned to want and expect.

But the most powerful step that people can take is not those detoxification protocols first, in order to get those detox protocols to really, really work for us. We have to focus on avoidance first, and that's really why I chose, in my business, to teach avoidance behaviors, to teach practitioners what I call the what, where, how, and what now. What are they, where are they, how do they affect us, and what do we do about it? How do we engage with people around reducing these exposures that are just filling this bucket?

When we have compounds that have half-life in the body of years or decades, we have to stop adding to that. These PFAS chemicals, these perfluoroalkyl substances that are now contaminating everyone's drinking water, that everyone's been ... The Devil We Know documentary on Netflix, I don't know if you've seen that yet. It's excellent. These are chemicals that have a half-life in the human body of three and a half to eight years, so it takes eight years just to reduce one exposure, for example, or one volume of this compound, by half, and we're bringing these chemicals in faster than we can get rid of them, so in order to help facilitate excretion and removal of these compounds and contaminants, we really have to focus on avoiding them as much as possible.

Wendy Myers:

Yeah, and people are becoming more and more aware of the importance of our microbiome when it comes to our overall health, and so we can experience lowered gut bacteria, leaky gut, and other health issues that contribute to the demise in our health in various ways. What are some of the overall effects that result from toxins affecting our gut health?

Lara Adler:

I think another way to ask that question is, "What aren't? What isn't?" What isn't, because it's easier to list the things that aren't. When we look at things that result from gut dysbiosis, it's everything from hormone imbalance, insulin resistance, metabolic issues, that's weight gain, diabetes and obesity, autoimmune conditions, endometriosis, infertility, thyroids, PCOS, then you've got neurodegenerative diseases like Alzheimer's and Parkinson's, things like heart disease, allergies, asthma, learning disabilities.

The big ones, anxiety, depression, brain fog, and chronic fatigue, cancer, of course, all of these things are associated with gut dysbiosis or an out-of-balance gut microbiome, and all of those things are also linked to exposures to environmental chemicals. There's a lot of overlap with the topic of chemicals and gut health, and there's actually this really interesting bidirectional

relationship where toxins, in essence, can interfere with our ability to break down other compounds in the gut.

So we've got toxins affecting gut, and then whatever is the profile of the gut bacteria in our microbiome can actually determine the toxicity of compounds that we're exposed to. So two people can be exposed to the same compound and because of that gut bacteria difference, one person might be more highly affected by that same exposure because of the way the gut microbiome has altered the body's ability to handle that chemical.

We can't just look at the health of the gut and we can't just look at toxins, we have to really look at them in tandem, because they are very, very directly linked in the way that they behave, so we know that a lot of the environmental chemicals that we're exposed to, glyphosate for example, arsenic, act as antibiotics in the gut, so they wipe out our gut bacteria, but there's also been research that shows that arsenic-exposed rats had a decreased ability to detox arsenic so the exposure actually interferes with your body's ability to eliminate this very same chemical.

Wendy Myers: Yes, yeah. That's a very good point, because people don't realize that the more toxic you become, the less ability you have to get rid of these toxins, because mercury will poison enzymes that detox arsenic. Mercury is a big, big factor in preventing detox of other metals. Your liver gets congested, your other detox pathways become messed up in various ways, and so as time goes on and you're not doing something to drain the bathtub, so to speak, or detox your body, the less and less ability you have to detox.

Lara Adler: Yeah, and I think what's interesting to me, when I was going back and looking at the research on this, is that this is not all new information. There was a 1980 research study on rodents that found that rodents that had been dosed with antibiotics had significantly more mercury in their body tissues including the brain, the liver, blood, skeletal muscle, and they excreted less than rats that were not exposed to the antibiotic. That's another example of what we were just talking about, but that research goes back to 1980, before this explosion about gut microbiome and all of that, so it's just going to show that this has been on this discovery path for a while.

We've come to this head with this explosion of research in the area around gut health that's been happening in tandem with this explosion in research and environmental health, and I think they're now just starting to really pay attention to the overlap, which I think is so important. So when it comes to the gut microbiome, I know that obviously we want to be optimizing our nutrition, we want to be making sure that we're having pre- and probiotics, but that's not enough if we're not also addressing the toxic exposures that we're getting every day.

Wendy Myers: Yeah. See, that's not enough to just take a probiotic.

Lara Adler: No.

Wendy Myers: What are some of the examples, you mentioned a couple, of toxins that we're exposed to that dramatically impact our gut health and even promote leaky gut?

Lara Adler: Yeah, so glyphosate is numero one here, because we're all exposed to glyphosate to some degree and like I said, glyphosate acts as an antibiotic in the body and disrupts the microbiome in the same way that an antibiotic would, and it can actually lead to the depletion of glutathione in the body. Glutathione is our primo superstar detox enzyme, and so if we're being exposed to compounds that are depleting our glutathione levels, that in and of itself can explain part of why we're having a harder time quote-unquote "detoxing" and clearing these chemicals out of the body. So glyphosate is certainly one of them.

Chlorpyrifos, which is one of the most commonly used herbicides, 93% of people tested by the CDC have metabolites of this pesticide in their urine, another example that we are all exposed. There's been research that shows that low doses, low-dose exposure similar to what we would be getting in a normal exposure scenario, either through residues on food or in drinking water, because this herbicide is often found in drinking water, that chronic low-dose exposure in some rodent studies have found that there's a decrease in the good type of beneficial bacteria that we need in our guts and an increase in inflammation and gut permeability.

So that right there might be ... If we're having 93% of people that are being regularly exposed to this compound, this one single compound that could cause intestinal permeability, and then we look at all the other compounds that we know of that can similarly cause intestinal permeability, it's no wonder that we have autoimmune conditions that are skyrocketing, it's no wonder that we have chronic inflammatory conditions that are off the charts and that pretty much everyone has something.

Wendy Myers: Yeah, the immune system malfunctions. Your immune system, a big part of it is in your gut. You have immune cells in your gut. We've got to take care of our guts. It's amazing, when you start eating organic food, your amount of pesticides in your body go down dramatically.

Lara Adler: Yeah. There was a study that was looking at farm workers who were applying pesticides and herbicides to crops, and they were measuring the oral microbiome, which I was like, "Now, that's a really interesting study." They found that the oral microbiome would shift seasonally in tandem with the seasonal application of these herbicides. So that's just like, there's just so many points of connection that we have.

Triclosan, which thankfully is no longer found in our ... This is an antibacterial agent that used to be found in hand soaps and hand sanitizers, it's still found in

a million other places, so we're not off of the books, we're not in the clear for that, and if anybody works in a clinical setting then their hand sanitizers still use triclosan or triclocarban or any of the other compounds that are deemed ... These are actually deemed as pesticides, classified as pesticides, and there's been a fair amount of research looking at triclosan and how it affects the microbiome, again, because it's an antibacterial and people will use it topically on their skin.

There's research, again in mice, most of the research that we have is in mice and rodents, that found that exposure to triclosan caused that same gut inflammation and it increased issues with colitis and led to an increase in colitis-related cancers. So we have tons and tons of these examples where we've got these small associations or small connections and what I find fascinating is that when we're looking at this laundry list of all these chemicals, it would be bad enough if we were just exposed to one.

Like I said a moment ago, we're exposed to hundreds and hundreds of chemicals, so no wonder we have all of this chronic inflammation, chronic gut issue, chronic immune system issue, as you were saying. As I mentioned earlier, arsenic is a metal, it's a really, really, really common drinking-water contaminant, it's found in our rice, it's found in ... There's interesting ways that we can deal with that, to reduce arsenic levels. It exists, people freak out.

But that's actually a really big concern in the gluten-free community, because the gluten-free folks will use rice and rice-based products as replacements. So there's a big potential uptick in exposure to arsenic-contaminated rice, and there's over 100 million people worldwide that are drinking water that's contaminated with arsenic. Arsenic is a carcinogen, it's an endocrine disruptor, but it also degrades microbial biofilms, again, leading to gut permeability, i.e., leading to leaky gut.

Wendy Myers: I had a lot of arsenic from eating chickens, from eating conventional chickens.

Lara Adler: Oh, right, yes.

Wendy Myers: It's in the chicken feed. If you're not eating organic chicken or organic eggs, guess what? You're eating a boatload of arsenic.

Lara Adler: Yeah, and when it comes to the rice, I think people get really confused about the rice issue because for the most part, it's not not necessarily a chemical intentionally that's been added either as a pesticide ... At least here in the United States, a lot of our rice plantations are grown on what were former cotton plantations, and the cotton plantations used arsenic-based pesticides way back when.

Arsenic is natural, so can be naturally-occurring, so it just lives in the soil. It's not going to break down into anything, because it's arsenic. It just so happens that

rice has an affinity for arsenic. It pulls it up out of the soil. It's like a hyper-accumulator plant where it's going to pull that up and it just so happens that rice does that. But depending on where that rice is grown ... If your rice is coming from southern United States, that's where we had a larger quantity of cotton plantations, but we don't know that, because when we go to the store to buy our rice it doesn't tell us that it came from this farm in California versus this farm in Mississippi.

Wendy Myers: Yes. When I eat white rice, also, because a lot of the metals, the arsenic, accumulates in the bran primarily. It can be in the endosperm in the white rice as well, but I completely avoid all brown rice products as a result of that, and Indian rice. India, big problem with arsenic in their water, and what they're watering their crops with, so I avoid rices from India. I stick to the California rices.

Lara Adler: Yes. Yeah, same.

Wendy Myers: The Lundberg, those I feel good about.

Lara Adler: Yes. The other thing that's interesting about what's happening in India, actually Bangladesh is a bigger problem than India specifically, but they have some of the worst arsenic contamination in their groundwater ever and it came out of this humanitarian effort in the '80s to try to dig these deeper wells for the people in Bangladesh who didn't have access to clean water, and all we did was tap into that groundwater where there happens to be, from a geography standpoint, a higher amount of arsenic in the substrate in that deep area where they were drilling wells.

So we came in to try to solve one problem and just created a bigger problem for them, but it is a significant health issue that has an enormous toll on human life out there in Bangladesh, but we're not devoid of that problem here.

Wendy Myers: Yeah, and a really interesting arsenic fact I think everyone would be really interested in knowing, because I know I was, is that arsenic will poison enzymes that transports triglycerides out of fat cells so you have a harder time losing weight and melting that fat if you have arsenic toxicity and high levels of arsenic, and mercury, because mercury poisons enzymes that detoxes arsenic. So those two issues compound each other.

Lara Adler: Yeah, so I think that we're seeing a ton of this. One of the ones that's interesting that's new in this space is the research around BPA and that BPA is now linked to inflammatory bowel disease, all sort of colitis and Crohn's disease, which is what? Chronic inflammation of the digestive tract.

So we're just seeing the same types of effects from all of these exposures, which is why we can't just say, "I'm going to deal with this." A, we can't just quote-unquote "detox," but we also can't selectively say, "I have a BPA-free or I drink

out of glass so I'm good," but people ignore their laundry detergent and their household cleaners and their personal care products. We got to do all of it as much as possible, caveat, without driving ourselves nuts.

Wendy Myers: Yeah, yeah, totally.

Lara Adler: Because stress is toxic.

Wendy Myers: I know. When I met the teller and they're like, "Would you like your receipt?" because there's BPA in the receipt, I'm like, "Ah, no." I run away.

Wendy Myers: "No, I don't want my receipt. I don't want to touch it and have that BPA soak in."

Lara Adler: Yeah. No, I've had more than one, when I sign receipts, like at a restaurant, I usually put the napkin over the top of the receipt just so that I have some traction to sign the paper, and I have had multiple waiters be like, "Why are you doing that?" because it's a very intentional move. I'm like, "I'll explain it to you, but I'm so sorry, you have to touch these things all day."

Wendy Myers: Yeah, yeah. I know. See, ladies and gentlemen, all the little tips and tricks you're learning to be a little bit neurotic at home and abroad? It's very important.

Lara Adler: Yes, and I didn't even give you my rice tip, that if you cook rice using the pasta method, which is ... Normally, when people cook rice it's like two cups of water, one cup of rice, and all of the rice absorbs the water. If you cook your rice using the pasta method, which I've always done mostly because I'm lazy and I burn my rice, so this was the way I figured out to not burn my rice, is I just put a ton of water in a pot and whatever rice I'm going to cook, and then I just test it, and when it's done I drain it.

When you do that, you're actually draining a lot of that arsenic out in the water so it doesn't reabsorb back into the rice. Consumer Reports did some testing on this when the arsenic story broke about arsenic in apple juice and arsenic in rice products a number of years ago, and that's one of the methods that they had found to really significantly reduce the arsenic level in rice. So that's just how I've always cooked my rice. Again, because I'm notorious for burning my rice, but the upshot is it allows me to not worry about the rice that I eat. One, I'm choosing rice from California, and two, I cook it in that method so whatever arsenic might be present in there is at least going to be dramatically reduced.

Wendy Myers: Yeah, and also, if you're cooking rice in a rice cooker, guess what? That's a non-stick coating that is toxic as well that's getting into the rice. That's not doing you any favors. Or you could just not eat rice and just avoid this problem altogether.

Lara Adler: Yes, or you could just not do that and have a sweet potato instead if you need some carbs.

Wendy Myers: Exactly.

Lara Adler: Yeah, there's so much here that ... We could even talk about chlorine in the drinking water. Like, hello. That's in the drinking water to kill microbial bacteria, and then we're consuming it, and guess what? A large portion of the weight of our bodies is microbial bacteria.

Wendy Myers: Yeah, you're drinking pool water. Guess what? That's destroying your gut microbiome.

Lara Adler: Yeah, so there is some research that indicates that people who drink chlorinated water, which is a lot of people, have increased risks of colorectal tumors that are attributed to this altered gut microbiome through the consumption of chlorinated water which is killing off all of that good bacteria that we need to thrive and to absorb the nutrients that we're eating, and I think that as consumers and especially as practitioners, as we're shifting towards cleaning up our diets, we want to make sure that our bodies can utilize those nutrients, and we do that by making sure the gut is okay, and we do that in part by cleaning up our toxins.

So it's all connected, and we can make that same analogy with 100 other different scenarios not just related to the gut that if we want to do this then we have to do this, and in order to do that we have to do this other thing, and that other thing is always going to be cleaning up the toxins.

Wendy Myers: Yeah, and you talk a lot about water. You have a lot of information on your web site about water and water filters and cleaning up your water, because that is a huge, huge source of toxins. Even if you're drinking filtered water, a lot of people aren't drinking properly-

Lara Adler: Yeah, it's the right kind of filter.

Wendy Myers: -properly filtered water.

Lara Adler: I have a whole course on that, because after years of getting questions like, "What kind of water filter should I get?" or "Is this the right water filter?" I was like, "Can't answer this question for you in a one-line statement, because the answer is always, 'It depends.'" It might be a great water filter, it just might not be the right water filter for you based on where you are, and someone two miles down the street might need a different type of filter because their water is regulated or run by ... A different municipality oversees the water treatment plant there.

So you've got all of these different variables, but yeah, we drink water every day, all day. It's so important that that water is clean and free of these chemicals, whether they're altering our gut microbiome or leading to obesity or leading to fertility issues or hormone imbalance. The Clean Water Drinking Act

only regulates 91 contaminants, but there's hundreds more in there than what are regulated, so all those other ones are technically there, quote, "legally."

Wendy Myers: Yeah, it's funny. I saw Erin Brockovich, who's a big water safety advocate, hawking a water filter system. That's so awesome.

Lara Adler: Yeah, I know. I just saw that. I just saw that.

Wendy Myers: Erin Brockovich-approved.

Lara Adler: Hey, and if that's ... She knows her stuff more than most, especially when it comes to water, because she spent her career fighting for clean water. And it's not the best fit for everybody. People say, "Is the Berkey great?" Well, yeah, but I used to live in a 600-square-foot, one-bedroom apartment in New York City. A Berkey was not for me, because I had 24 inches of counter space. Where was I going to put a Berkey?

Wendy Myers: Yeah, and there's so many different types of toxins in the water. I have uranium in my water here in southern California, and a typical water filter, not going to remove that. So that's my problem, and a lot of people in the southwestern United States have uranium that causes weight issues and cancers and blood sugar regulation issues, so I had to get a filter that removes that. A lot to be learned about water filtration. And the Brita filter, not cutting it. Sorry, guys.

Lara Adler: No. Sorry, guys.

Wendy Myers: So where can we learn more about your work and the so many courses that you have related to toxins and reducing your exposure? Where can we find you?

Lara Adler: On my web site, which is just my name, LaraAdler.com. I've got a number of courses, like I said, one on water, I've got a class on obesity, I've got a five-month certificate course that I teach every year, I've got a new course that's coming out, and people can find me over on Instagram. I'm on there @environmentaltoxinsnerd, which is my handle on Instagram. People can come say hi, and for practitioners that are listening, whether it's through my courses or anybody else's, get fluent in this conversation. Get fluent and comfortable and confident and articulate in communicating about these issues to the people that you serve, because I think it's so important.

It's like the rising tide lifts all boats idea here is that when we have this mass of people that are aware of what's happening in our environment and that are starting to make different choices at the retail level, consumers have tremendous buying power and we have the ability to completely shift the marketplace. So the more people that we can get out there making changes, the faster that this change will spread to people who maybe don't know about it or can't necessarily afford to be making all of these changes, and I think that's

important too, because this issue around toxins is not just a health issue, it's a class issue, it's a social justice issue, it's a race issue.

There's so many different layers to this topic, and I'm a big fan of just, get it out there, start talking about it, get people to start making changes. This is the work that you do every day, Wendy, so I tip my hat to you for doing this and I'm sad that it took your own health challenge to bring you here, but the upshot is that you get to help all of the thousands of people that follow you and listen to your podcast and who are just part of your community, so you're part of this rising tide, and I'm grateful for the work that you do.

Wendy Myers: Yes, you too. I love talking toxins, just like you do. It's such an important thing to be talking about, because like we've said, all these different metals and toxins affect every different metabolic function in our body. Every different symptom, every different diagnosis one could receive, there is an underlying metal or chemical exacerbator or an outright underlying root cause of those symptoms and diagnoses.

So if you're a health practitioner listening, you need to be taking courses to educate yourself and your clients to reduce toxin exposure in your environment and in their environment, your clients' environment as well. It is just such an important thing to know, and Lara has all these different resources for you to learn just that. So Lara, thanks so much for coming on the show.

Lara Adler: Thanks, Wendy.

Wendy Myers: Everyone, thanks so much for listening and tuning in every week to talk toxins and to learn about how to detox your body and environment from metals and chemicals. We'll be back next week with more toxin talk. Thanks so much for tuning in. Talk to you soon.