



Top Takeaways: #267 Detox 2.5 with Dr. Kelly Halderman

1. Phase 1 of detoxification takes toxins to the liver and makes them more reactive.
2. Phase 2 of detoxification then takes the toxins, puts them through glucuronidation, amino acid conjugation, glutathione and sulfation, and methylation, which makes them water soluble.
3. These water soluble toxins include indigenous toxicant such as old thyroid hormones or fat soluble vitamins, histamine, xenobiotics, and exobiotics, that can be toxins, heavy metals, and other things that need to get out.
4. When Phase 2 toxins are ready, they enter the bile, which sends them to the GI tract for expulsion.
5. Detox 2.5 is the door that toxins go through to get into the bile.
6. If the Detox 2.5 door is shut down due to inflammation, toxins will re-enter your bloodstream, causing fatigue and brain fog.
7. When beginning the process of detoxification with her patients Dr. Halderman first starts by looking at the sources of inflammation, whether it is physical, chemical, emotional or microbial.
8. Phase 2.5 involves three things; toxins moving into the bile, the bile salt moving into the bile, and putting more phosphocholine into the body.
9. Dr. Halderman recommends Sulforaphane, TUDCA, bitters, and artichokes to help stabilize the transporter so the bile salts will get out.
10. Wendy recommends rotating detox products to prevent symptoms or food sensitivities to them.
11. Dr. Halderman is a big fan of restricted eating, giving your gut a break by inducing autophagy which helps open the 2.5 door.
12. Taking binders is extremely important when beginning a detox protocol.
13. You can learn more about Dr. Kelly Halderman at drkellyhalderman.com
14. Or go to her Facebook page [Dr. Kelly Beat Lyme](#)

Wendy Myers: Hello everyone. My name is Wendy Myers. Welcome to the Myers Detox Podcast. You can learn more about me and all about heavy metal detoxification at myersdetox.com. Thanks so much for joining us today on the show. We have Dr. Kelly Halderman and she's an expert in detoxification. She's a medical doctor and integrative functional medicine practitioner who's going to be talking to us today about Detox 2.5. So Phase 2.5 of detox, that's where your liver is making bile and producing enough bile. We're going to be talking about what negatively impacts your Phase 2.5 detox, supplements you can use to optimize Phase 2.5 detox, and how to open up that detox pathway so you can more successfully detox and not experience detox symptoms like people typically get, like headache and fatigue and brain fog, that can happen if you're not detoxing properly.

Wendy Myers: Toxic metals are one of the biggest contributors to fatigue. My name is Wendy Myers and in my decade of research I have discovered that toxic metals affect mitochondrial performance. Your mitochondria are little cells powerhouses that make your body's energy. And toxic metals like arsenic, aluminum, thallium, and cesium, those poison enzymes that produce energy in your body. These toxic metals are found in your air, food, and water. They're everywhere. They're unavoidable in our environment today. Everyone has them in their body. But the question is, what metals do you have and at what levels? Click the link below to take my quiz to evaluate your level of heavy metal toxicity.

Wendy Myers: Our guest today, Dr. Kelly Halderman, MD, completed a family practice medicine internship with the University of Minnesota, has a naturopathic medical degree from Kingdom College of Natural Health where she is the current Academic Dean of Students. She holds certifications in methyl genetic nutrition by the Nutrigenetic Research Institute and certification from the American Functional Neurology Institute in functional neurology and neural feedback. She is a researcher for the Nutrigenetic Research Institute and sits on the board, and she is currently working on completing her board certification in clinical nutrition, and has certification in plant-based nutrition from Cornell University. Her interests include cancer and chronic Lyme, of which she has personally experienced and beat, and she does consultations for those interested in optimizing their health. You can learn more about Dr. Kelly at drkellyhalderman.com. You can also go to drkellybeatlyme.com.

Wendy Myers: Dr. Halderman, thank you so much for coming on the show.

Kelly Halderman: Thank you so much for having me, Wendy.

Wendy Myers: So why don't you tell the listeners a little bit about yourself and why you are so focused on detoxification?

Kelly Halderman: Sure, so not that long ago I was practicing medicine. I, myself, got really sick. I started to have neurological symptoms, migraines out of the blue. It was chalked up to stress. I knew it wasn't just stress and that being that fatigued and having these new symptoms was definitely something was going on at the root

cause. In medicine, we're really good at covering up symptoms, but not so good at getting at the root cause.

Kelly Halderman: So when it was me, and when I needed to find out answers, I had to step away from traditional medicine. I was actually given a diagnosis of MS and told to get my affairs in order and go spend time with my children. And that just didn't cut it.

Wendy Myers: So traumatic.

Kelly Halderman: Yeah. And I got a naturopathic medical degree, and I started using things such as nutrition, which I never learned anything about, and optimizing gut function and detoxification to help claw myself out of that sickness that I was in. And I am 110% recovered. And what I went through taught me what we're going to talk about today because optimizing Phase 2.5 detoxification is really one of the biggest things I did in my health journey to get where I am today.

Wendy Myers: Yes, so let's talk about what that is. So what is your definition of Detox 2.5?

Kelly Halderman: Sure, so let's start off by talking about detoxification in general. So, we all know about the Phase 1 detoxification and that's taking those toxins, just for simplicity terms, let's just say taking them into the liver, the workhorse of detoxification, and we're going to make them a little bit more reactive. We pass them over to Phase 2, where the goal of Phase 2 with glucuronidation, amino acid conjugation, glutathione and sulfation, methylation, is to make them water soluble. So you have these toxins that your body has made water soluble and they can be indigenous toxicants such as old thyroid hormone or fat soluble vitamins or histamine and things that just need to exit out of your body. Or they can be xenobiotics, exobiotics, and that can be toxins, heavy metals, things that just need to get out. And the strategy is when the Phase 2 products are ready, they go into the bile. The bile is mostly water and then they're put into GI tract and they end up in the toilet.

Kelly Halderman: Well, Detox 2.5 is the door that those toxins go through to get into the bile. And imagine if that door shut. Imagine if 2.5, the door that the toxins get out, is shut and they can't get into the bile and they can't get into the toilet. What was happening to me, and the way I figured this out is that, well meaning practitioners were putting me on Phase 2 up-regulators, Phase 1 up-regulators, but my door was shut and they were going back into my bloodstream and I was feeling horrible and I was gaining weight and I thought I was opening up my detox pathways. I was given methylfolate, but nothing to address the door. Nothing to open up the 2.5 door. So that's how I stumbled upon it to begin with.

Wendy Myers: Okay. Great. So how do we open that door?

Kelly Halderman: So, basically 2.5 is shut down by three main categories. Number one is inflammation. So, if you have a ton of inflammation going on in your body, your

door is closed. Your toxins can't get into the bile and out. So that's where is start. And you have that wonderful interview with Dr. Jay Davidson. He's one of my favorite doctors around. And he talked about this being where we start. This is where we start. We don't start with pounding Phase 1 or pounding Phase 2 or killing parasites or killing Lyme or killing whatever you need to do because if the door's not open, it's going to go back in your blood and you get brain fog and I don't feel good and Herx reactions.

Kelly Halderman: So, the first step is have a practitioner or someone that's clinically trained to know the signs and symptoms of inflammation because it can be a little bit misleading just because you don't have an elevated CRP doesn't mean you're not inflamed. Just because you don't have an elevated homocystine doesn't mean you're not inflamed. There's other subtle things such as febrifugine elevated over 350 or your white blood cells are off or you're RDW is off.

Kelly Halderman: So, I published those on my website for patients to bring to their doctors to help. I like to give information just for free to say, "Here. This is where we start. How do we know if we're inflamed? How do we know if our 2.5 door is closed?" Well, there's a lot of symptoms like we were just talking about where if you're not getting those toxins out, it can be that you just can't lose weight. Our fat is designed to hold our toxins. So, if you're having problems losing weight it can be just, well, we have to open that 2.5 door.

Kelly Halderman: So, again, inflammation. I talk about this with my patients every single day. Physical, chemical, emotional, microbial. Over and over again. Those categories are going to drive inflammation. So, it's not just take this pill, you won't be inflamed anymore. We have to go over the physical. So is there any interference fields in your body? Is there anything where the EMF is affecting the physicalness of your body? Do you have an old injury that hasn't been healed? Are there scars? Emotional. Of course, we have to take in account emotional things because they can keep us from what we need to get to in our health journey. And then microbial--

Wendy Myers: That's a huge overload factor in physical health issues, emotional.

Kelly Halderman: Right. And I've seen people where they heal the emotional piece and their not inflamed anymore. And 2.5 doors open. And, toxins are getting out and they feel great. So, we're always, every appointment, we're going back to how's the physical, chemical, emotional, and microbial? How the physical, chemical, emotional ... They know if by heart. Okay, Dr. Halderman. We're gonna go over this again. So, with your work, I am such a huge fan of your work, Wendy. Your programs, your education, what you're doing. That is one of my favorites out there. And so, you understand really intricately that the chemical and the microbial and how all that works together and all these facets. But if someone is repetitively exposing themselves to chemicals, that's gonna cause inflammation and shut the door. So we don't start off with just hammering them with things to up-regulate detoxification. We start by addressing, "Are you drinking water

that's full of toxins? Are you brushing your teeth and doing your hair and all that with all kind of chemicals?" We start there.

Kelly Halderman: And then more of a practitioner role, I think, is teasing out the microbials. That gets tough. You know, parasites, Dr. Jay Davidson talks about that. Is it Lyme? All kind of things, but we really need to focus in on those and go back to those to get the door open, the 2.5 door open. I also would say that the gut, if you have endotoxin running around in your bloodstream, it shuts the door. So let's say we're working on all those PMEC's and then we neglect the gut, which nobody does anymore. I just want to make the point that if your guts not right, your 2.5 door will be shut. The LPS will get in there, and your toxins will be ready to go, but they'll end up back in your bloodstream. So, that's such a foundation. Such an important thing that we are constantly, constantly working on.

Kelly Halderman: And then, another thing is bad estrogens will keep that door shut. So everybody in office gets the DUTCH test. Some sort of urinary hormone test to make sure that we're not missing that.

Wendy Myers: Yeah. There's so many bad estrogen that are in our environment. I mean, I just think it's impossible to avoid them with the plastics and the petroleum based cosmetics and perfumes. And there's so many petroleum-based products that people use or are exposed to, they're in our water and they're really impossible to avoid.

Kelly Halderman: Right. So, that's why it's almost more imperative we keep that 2.5 door open and now we keep flushing things out. And, I'm a big fan of infrared saunas. And, really, I leave it up to my patient, but there's a lot of things that I think are really important because we just do because we live in this toxic environment that we're kind of stuck with.

Wendy Myers: And so, let's talk about how does a person know if they're Detox 2.5 isn't working very well? What are some of the symptoms?

Kelly Halderman: Sure, so one of the big things that stuck out for me was that when I was put on things that up-regulated Phase 1 and Phase 2 and that can be a lot of different things. But, let's just take for example glutathione. So I started to take the glutathione. I feel a little bit better, but all of a sudden, I'm like, "Oh, this is almost backfiring on me." Because if you imagine that the door is shut and then the toxins, they need somewhere to go because the hepatocyte, the liver cell, is sending out SOS signals like, there's a bunch of toxins in here and they don't have anywhere to go so they go back in your bloodstream. So, bad reactions to detoxes. If you have trouble losing weight, it can be the issue of not being able to get the toxins out because, again, I need this fat to protect you. I need it to harbor the toxins. It can be a history of SIBO and I know we're gonna talk a little bit about the bile component of that.

Kelly Halderman: So, the bile keeps the GI tract nice and acidic so that we have the proper microbial environment. And if you don't have that bile flowing, if the 2.5 door is shut, that's gonna predispose you to SIBO. So, SIBO and SIFO are one of the things where I go, "oh, you have a history of that. Your 2.5 is probably broken. We need to really help support biophysiology and that's where I learned a lot from Dr. Eric Balcavage who was a presenter at [inaudible 00:13:23] and he talked a lot about bile and I kept going, "Bile? I mean, really? I mean, bile." You know, that's important, I guess, for fat. You know, You have my fat soluble vitamins in, but I was so wrong. You know, thyroid physiology, cholesterol metabolism. Again, it has influence over the migrating motor complex of our gut.

Kelly Halderman: So, constipation. If you get 2.5 right and you get the bile flowing and everything out, I've seen constipation ... people who've done everything for years, all of a sudden it's gone. So, again, if biophysiology has to play a role in all those things I just said, cholesterol, and thyroid and gut motility and gut integrity, then really, it's kind of hard to say, "Well, your 2.5 it's a very inclusive diagnosis ... It's not even a diagnosis, but you can say that I would say that almost everybody that walks through my door, and Dr. Eric will say this too, has problems with biophysiology for one reason or another. Or it can use some work.

Wendy Myers: So, tell us how do we open that door? How do we get our bile flowing again and increase bile production, maybe thin the bile out?

Kelly Halderman: Sure. So, one of the components that goes along with Phase 2.5 is phosphatidyl choline. It makes the bile flow. And so, you've heard of, "Oh, I have sludgy bile." Or people with gallstones or people who've had their gall bladders removed. And I had mine removed at 20 and I think my problem with looking at my genetics was that I wasn't ... my PEMT gene, it encodes for an enzyme that helps your body make phosphocholine, live homozygous and all three of the alleles. So I don't think I came to the table being able to make that phosphocholine so that's a very important piece in keeping your bile flowing. I like to use phase angle BIA to kind of see what the integrity of my patients membranes are because phosphocholine is one of the three things that you're every single cell in your body is made of is phosphocholine.

Kelly Halderman: So, for me I use a lot of phosphocholine because I want to make sure that bile is flowing. I also use things to support the physiology of making bile salts. So, I'm a genetics person, so I like to just look. It helps me get a better idea of who is this person. You know, where may they have some pitfalls in their physiology? So, I looked and this is kind of how I discovered 2.5 as well because my SIBO patients, they keep coming back in, and they'd go get treated, and they'd come back in. And I'm like, "What is going on?" Well, I discovered that their ACAD genes that help make bile salts, they weren't necessarily really good at that. So that all starts with the acetylcholine.

Kelly Halderman: And I know that's a lot of biochemistry. I do have an online class that I taught with Dr. Eric Balcavage and we have this online class if you'd really like to learn

the nitty gritty of some of these pathways and that, you can go take that. And that's on my website and we can mention that later. But making the bile salts is super important. So, I'm a fan of TUDCA. There's some really good studies on TUDCA and using that and people who may not be able to make their bile salts very well. And those are the things.

Kelly Halderman: And then, cut your inflammation. So, keep working on the physical, chemical, emotional, microbial. Keep pounding at that. I love Sulforaphane and TUDCA will help stabilize the transporter so the bile salts will get out. So those are some of my top tricks. And then, bitters and artichoke. That can help push that bile through.

Wendy Myers: Yeah. Any bitter foods, they help to make bile, like coffee. I like coffee. It's my favorite bitter food.

Kelly Halderman: Me too, right? So medicinal. It's so delicious, and medicinal.

Wendy Myers: And you can use lemons and beets and all these things help to ... that are bitter. Bitter foods help to increase bile flow. And, so let's talk a little bit about Ox Bile. Are you a fan of Ox Bile to help to increase bile flow?

Kelly Halderman: So when I was first ... when I first started to get savvy about bile, I thought, "Well, I don't have a gall bladder. I should probably try and support that." So, I used Ox Bile and I did well on it for a while, but what I noticed is that I started to get some hypothyroid symptoms. And what I found through, again, asking my brilliant friend, Eric Balcavage, I'm like, "What was going on there?" And he recites the PubMed study off the top of his head and he brought to my attention that Ox Bile can actually increase the enzyme that converts T4 to T3. So, first of all, you can have hyperthyroid and then can burn that conversion out. So, I'm more a fan of using the TUDCA at this point than using the Ox Bile, but again, when the rubber hits the road, you're end of one, you can see how you do with it. And it's dose-dependent to you, so ... that's how I feel about that.

Wendy Myers: Yeah. And it's wise to change things up. If you start with Ox Bile, which is very readily available, you can always switch up to something else. It's good to rotate products so you don't develop symptoms or food sensitivities to them. So, let's talk a little bit about, you mentioned a few genes associated with Phase 2.5 Detox. Or there any other genes that you want to talk about or did we review all of them?

Kelly Halderman: Sure. So, the one that I didn't mention is, again, for review. So, Phase 2.5 is three things. It's the toxin moving into the bile coupled with the bile salt moving into the bile. And then thirdly, the phosphocholine. So, you got to get all three of those right. So, we talked about putting in more phosphocholine whether it's from your diet or whether it's from a liquid or a pill. Getting that adequately

resourced is very important. And then we talked about making the bile. So, we just talked about that.

Kelly Halderman: So the third would be that toxin through what's called the MRP2 channel. And, MRP2 channel for those who have their genetics or excited about it as I am, it's called the ABCC2. It's called the ABCC2 and that gene will code for that. I get so excited I lose my headset. So, it'll code for that and what's really interesting is I find in my practice ... when I discovered this, I went, "I'm going to look at my worst detoxers and I'm going to see if they have snips in those." Because I think of it as do they have a little, tiny door? Do they have snips in it where they're not born with a very big exit strategy, right? Or do they have a big door? Well, I went and I look and sure enough, my worst detoxers who, everything I did seemed to backfire, had a tiny little door so the MRP2 channel was already mutated. It was already mutated and it was already small so when I put them on things it was just like, you can only get so many people out of tiny little door with the toxins. So, we slowed things down. We used things to help stabilize the MRP2.

Kelly Halderman: And I will tell you that caloric restriction of 35% of calories. So, if you reduce your calories down by only 35%, you will stabilize your exit strategy. You'll stabilize that door. So that's really important. I'm really a huge fan of time restricted eating. I think that's giving your gut a break. Inducing autophagy. I really like that, but I also like it because it helps with Phase 2.5. There's a study that St. John's wort can also help stabilize that, but again, talk to your practitioner. Make sure that you're not on any other medications. Don't try some of these things. I'm not giving medical advice. I'm giving you the study that showed that. But that can also help stabilize. And also could TUDCA can actually stabilize the 2.5 door so you can get the toxins out better.

Wendy Myers: I'm a big fan of the intermittent fasting, too, because I think that people do need to give digestive systems a break. And, evolutionary, people did not eat three times a day. They were eating once in the morning before they went out to do their agriculture or farming or eating maybe again when they got home or just had one meal a day. And that's how the majority of the world lives. And that's how our bodies were designed to consume food. And, really, there's a lot of benefits in that as we know.

Kelly Halderman: Right. Absolutely. You go ahead.

Wendy Myers: Oh, no. You go ahead.

Kelly Halderman: I was going to talk about how you and I share the desire to bind the toxins once they hit the GI tract. And I think that's something in your work I think that you're such a forward thinker. Because I think a lot of practitioners go, "We're gonna drill home Phase 1 and Phase 2. Or we're gonna do some killing." And the door's closed. Or the door is little and then they don't bind. They don't use things to bind what's coming out. So a lot of the time that you, let's say, you successfully get those toxins into the bile and the bile flows into the intestine, there's a lot of

Enterohepatic recirculation. There's a lot of that with mercury, for sure. We both know that. And aluminum. So, the insurance policy is using really good binders in there to keep those toxins that your body works so hard to get them in there, that you really want to have those end up in the toilet. You really do.

Wendy Myers: Yeah. And just eating vegetables is a big one. Eating tons and tons of fiber is an amazing binder, but also taking modified citrus pectin or even just fruit pectin works, too. People are sensitive to modified citrus pectin. And, there's so many great binders on the market. There are different kinds of silicas. Not all silicas are made the same. There's all different types of modified silicas that attach themselves to different toxins. But lots of different types of choices on the market.

Kelly Halderman: I actually designed one for ... it was basically for myself because I was so tired of grabbing the activated charcoal and grabbing the Chlorella and grabbing, grabbing, grabbing. Until my patients are like, "I can't even do this. This is just the binding part." So, I made a comprehensive binder with and without Chlorella because that can be a little bit more with the mercury, it can pull a little bit more, where it's an all-in-one. So, it has sodium alginate, it has Bentonite clay, it has the activated charcoal to really try and bind the gamut of what's coming out through the bile and into the intestines. So I'm definitely a fan of binders.

Kelly Halderman: I really do think that's one of the main things that I did when I was fixing my 2.5. I was getting rid of Lyme. That was my underlying root cause. I had Lyme. And I was actually binding, starting to bind and push my bile. That was really important in my recovery.

Wendy Myers: Yeah. That's great that you have a binder because there's ... everyone has to use a binder, preferably before they start any kind of detoxification. Just kind of prime ... priming your body to start absorbing all kind of toxins. We need all the help that we can get. And there's so many good ones out there. Bentonite clay is amazing. The charcoal you said the most comprehensive. That's what they use in hospitals to bind the toxins and it's very, very comprehensive. And so, there's so many amazing choices, but it really is the number one thing that people have to do if they're doing it considering or doing any kind of detox program or infrared saunas or what have you. It makes all the efforts and expense you are going through, in time, worth it because it helps to improve your detox efforts.

Kelly Halderman: Absolutely.

Wendy Myers: So, talk to us about some of the things that you do like when you're working with patients and what kind of things do you offer in programs and things like that.

Kelly Halderman: Sure. So I like to start definitely with that things that spur on the inflammation. So, I cover the physical, chemical, emotional, and microbial. I like to cover all

those bases. Again, because I know a lot of practitioners kind of shy away from the emotional, but we know that definitely can keep people's health in jeopardy. So, physical, I make sure that their EMF is tidy as it can be. I have them shut off at night. And there's varying degrees of the VGCC's, the voltage-gated calcium channels. How much do they need to be protected? Some people need to protect them a lot and so, I love magnesium is a natural calcium channel blocker. So, everyone gets an RBC Magnesium. I just posted a video on my Facebook page about how important it is to be on the right amount of magnesium to get your RBCC, your RBC Magnesium levels in the right spot, the sweet spot. So that's so important. I know your listeners know all about that.

Kelly Halderman: And also, under the physical I make sure that injuries, scars ... I'm a really big fan of Dr. Naviaux's work. In his later paper, the cell danger response part two, pretty much is about interference fields. And I've really taken 2019 and I'm starting to think, "Well, what do we got to focus on this year?" And the interference feels really resonate with me. The body becomes disconnected from areas because of scars and things. And so, I've always been a big fan of lasers and so, that's something we employ in the clinic is using lasers. Chemicals, so we do our best to educate our patients. I think number one, doctors should really take the time to figure out what their patient's putting in their body. Their exposures. We have to really make sure their lessening that in this toxic world. Even just as simple as changing out your personal care products. That's something that no one's really thought about. They just reach for some of these things they are always reaching for and it's like, "Well, did you know that that has this chemical and that interferes with this?"

Kelly Halderman: So, we start with that and then, again, emotional. I love Annie Hopper's DNRS. I love that work. I love, and I personally do the brain tap, Dr. Patrick Porter. They're using articular therapy and light therapy. It's something that I as a Type A person couldn't sit down and meditate, but then now I have my brain tap and I can just sit.

Wendy Myers: You really want to reduce stress. We're like, my brain just won't shut up.

Kelly Halderman: Right. I know you get it. Exactly. So, the brain tap, it's like it's meditation for those people who have a hard time sitting because it's very interesting. You get to listen to that. So, I do that. I encourage my patients to get a brain tap and use that. Microbial, definitely, that could be a whole talk of itself with the microbial. And where do you start? And what do you do? But I think that, again, any microbial issues is gonna start with the drainage. So, the drainage for me is opening that 2.5 door. So, we talked about that. And definitely ... I don't have a cookie cutter approach. Everyone's a little bit different. Some people come with stacks of labs like ... And I'm like, "Well, clearly we don't need one more lab." We don't. That's not your problem. Your problem is not a lack of labs.

Wendy Myers: Sorry. A lot of times it's very simple. Like they just need to start doing like a coffee enema or they need to add another supplement. Like a phosphocholine or get that bile flowing. It can be a very simple solution. Everyone can start

taking a binder without consulting a doctor. You are a health care practitioner. You can start doing little things on your own regardless of your health condition.

Kelly Halderman: Right. And there additive. Their cumulative. I think that's what this year I'm really trying to emphasize. There isn't really one thing. Right? I mean, biophysiology is really important, right? It is bigger than any just one thing, but it's not this one pill usually. It's a combination. Like how did you get to this point? Well, let's lessen your stress and then maybe, yeah, let's give you some phosphocholine. But I think everything has to be done in tandem and really taken approach where the patient feels honored. The person feels honored and they feel like someone's listening to them for not just trying to put them on another medication or something else, you know? I'm a firm believer in protocols like yours. The detox protocol you have, I think that's extremely important so I will send them over to your camp to get education.

Kelly Halderman: But, yeah, I think that the crux of what I do is really try to flesh out all the pieces and how it's affecting them as a whole person.

Wendy Myers: Yeah. And it can be very complex when there's so many different areas or places where people can have a bottle neck where they're not able to detox because of ABCDEFG, and this genetics or their diet or inflammation or EMF. Some of these are different things you kind of have to look at and address. And so that's why it's good when people are thinking of detoxing, especially if they are very, very ill or have had trouble detoxing, you need to work with an experienced doctor or health practitioner that knows about detoxification and can help you kind of navigate the pitfalls of detox.

Kelly Halderman: Definitely.

Wendy Myers: So, tell us where we can find you and learn more about your work.

Kelly Halderman: Sure. So my website is [Dr. Kelly Beat Lyme](#). And I post lots of educational videos on there. I also will post papers and things that you can print off and show to your doctor. I put the full gamut of the inflammation labs. I write papers about what I'm doing. I also have a link to the upcoming class that we have. The online Phase 2.5 Detox class. So that was taught by Dr. Eric Balcavage and I earlier this year. It's a deep dive into this stuff, but it's meant for practitioners and for the lay person because, like what we just talked about it's not rocket science, right? It's really just a couple of modifications.

Kelly Halderman: And again, I made the binder from professional health products that's PHP, LTD. They've been very kind to me and they really sat down and understood the science. They're very knowledgeable. And I also made a 2.5 product and that has artichoke and bitters in it and phosphocholine in it. So, it's just things that are supporting. You hear people going, "Detox is dangerous." Well, not if done properly and not if you're supporting the pathways and if you're decreasing the

inflammation. And I'm obviously on [Facebook](#) and all the Twitter handles and everything like that.

Wendy Myers: Well, thank you so much, Dr. Kelly, for coming on the show. I really appreciate this deep dive into that aspect of detoxification. It's so, so important to be tending to Phase 2.5 Detox. So, thank you for coming on the show.

Kelly Halderman: Thanks so much, Wendy.

Wendy Myers: And, everyone, thanks so much of listening. You can go to my website myersdetox.com to learn all about how to detox every aspect of your life and please take a couple of minutes to review us on [iTunes](#). Just go to itunes.com and leave us a review. It takes two seconds. It will help so much for people to find us when they're searching about detoxification. Thanks so much for listening and joining us. And, I'll talk to you next week.