



THE SPECTRUM OF HEALTH

— P O D C A S T —

Podcast Session #29

The Perils of Being Dehydrated

with Dr. Ben Lynch

Dr. Ben Lynch, author of Dirty Genes and president of Seeking Health, speaks with Dr. Schaffner about the importance of hydration. In this session, they get to the bottom of why so many people are dehydrated – and what it's costing them.

To learn more about Dr. Lynch,
please visit www.drbenlynch.com

0:00:06 **Dr. Christine Schaffner:** Welcome to the Spectrum of Health podcast. This is Dr. Christine Schaffner, and today I am speaking with Dr. Ben Lynch. Dr. Lynch is the best-selling author of Dirty Genes, and president of Seeking Health, a company that helps educate both the public and health professionals on how to overcome genetic dysfunction. He received his doctorate in Naturopathic Medicine from Bastyr University, and he lives in Seattle, Washington, with his wife and three sons. Today, Dr. Lynch and I talk about a really foundational topic, hydration. So many of my patients are so dehydrated out there for various reasons, and I thought this would be kind of a fun, profound but simple concept, and Dr. Lynch offers a lot of great insights and really practical tips and tools today. Please enjoy the podcast, and thank you so much for listening.

0:00:58 **CS:** Welcome, Dr. Lynch, I'm so excited to interview you today.

0:01:02 **Dr. Ben Lynch:** Awesome, likewise. I hear from a lot of people and read on Facebook that quite a few people are seeing you as patients, and they're pretty excited, so great to be talking with you again.

0:01:11 **CS:** I interviewed you, I think last year it was, for the Heavy Metals Summit, and we have so much to always learn from you and all the great work you're putting out for our community and our profession. I appreciate all that you do, and I'm excited to pick your brain today. I know when we looked at topics to discuss, one of them that you put out there was hydration. I know it's really foundational and seems like a simple topic, but it's really, I think, at the root at some of our patients' underlying illness, and if you're chronically dehydrated, you can't heal. So I was excited to pick

your brain on this topic today, and we'll just dive in if that sounds good to you.

0:01:52 BL: Awesome.

0:01:53 CS: Great. Well, many of our patients come to us, and one of the symptoms I often see is this frequent thirst and urination, and they're even waking up in the middle of the night to urinate. These are patients who also carry around water with them, they're trying to put electrolytes in their water, they're trying to figure it out, but it seems like there's some other factors that contribute to their dehydration. What are some of the underlying causes that you see for dehydration in especially chronically ill patients?

0:02:25 BL: It's a big one. Hydration is so fundamentally important; it's like breathing, and we just take it for granted. I think the things that we take for granted get overlooked very commonly in the clinic by both the patient and the doctor, and it could be these so fundamental things that are causing the majority of the problem. I really love looking at breathing and hydration, both.

0:02:53 BL: My grandfather always taught me, he said, "Ben, when you talk about something, you've got to always define it." So when you said "let's talk about hydration", I just opened Google and I typed "hydration definition". And it says here, the process of causing something to absorb water. That to me is a big difference from what most people think of hydration. Most people think of hydration as drinking water, but it's actually

the process of absorbing water, and that is a major, major difference because it's active, not passive. Your body has to take the water that you just drank and actually get it in the cell.

0:03:34 BL: But before we get into all that, like you said, there's many things that are contributing to dehydration, and if you're chronically ill... I see a lot of times, and I believe you as well, is that the patients are inflamed, right? And inflammation is basically fire, and it's very highly concentrated immune cells or histamine or cytokines... Or there's just a huge amount of concentration there. And then it's a lot of active components, and then a lot of water has to go into that area to reduce the concentration, so you get movement of water from one area to another, and then you can get dehydrated in one area of your body and more hydrated in another just from inflammation.

0:04:22 BL: A lot of people are overloaded from histamine, and a lot of people with chronic illness of any type have gut problems, and that could be where it started. Somebody just texted me yesterday, a 15-year-old kid, and he goes, "Ben, my friend, she's got horrible head to toe eczema, what's going on?" And I said, "Well, she needs to reduce the histamine-containing foods, and stop gluten and dairy for a couple weeks, and probably get on a probiotic." And I said, "Has she been taking antibiotics?" And he goes, "Yeah, and she still is, and has been for some time." I said, "Well, that's probably the start of it." So people have got to be looking at their guts.

0:05:06 BL: And then there's sweating at night. If you're a type of person who is in bed, and you are sweating in the evening, check to see, is your

room too hot? You sleep better and you get more deep sleep when it's cold, so that's one issue--too heavy of blankets. And another one is maybe related to Chinese medicine yin deficiency, in which you will probably tend to be sweating more in the evenings, so you need to do more calming activities throughout the day and probably at night. But sweating, generally speaking, is going to be one of those things. A lack of thirst sensation or lack of thirst awareness are things I always talk about. I talk about that in the book, *Dirty Genes*, too, that I released last year, and I want people to be aware. If you have a slight headache, and you've been fine, it's most likely dehydration.

0:06:10 BL: And then there's frequent urination. There's doctors that like to ask the question, when you drink water does it tend to go through you right away or does it stay in you for a moment and quite some time? So basically if you drink a glass of water, do you find yourself having to go pee right away? If you do, you're probably mineral-deficient or electrolyte-deficient or recycling the water through aldosterone and so on causing a problem, so your adrenals might be taxed or you're nutrient-deficient...Are you drinking too much caffeine, or having loose stools, vomiting, taking medications, drinking alcohol...those are all big factors. Did I miss any big ones that you also see, Christine?

0:06:54 CS: These are all really great factors that I see commonly, and I think I shared with you before we talked, a lot of our patients know about the bio-toxin pathway, and one of the key factors in the bio-toxin pathway is the pituitary reduces the output of anti-diuretic hormone. So some patients may even have low anti-diuretic hormone, and the experience, if you have

low anti-diuretic hormone, is that you're thirsty and you pee a lot, like you just said, but you're not absorbing the water. That's definitely a piece to the puzzle, but we sometimes give people anti-diuretic hormone, and sometimes that can help while we're correcting all these other imbalances in their body. For some people that doesn't help, and we're still battling this frequent urination and this lack of absorption of water. I think you brought up a lot of great points, and I know that we're going to dive into some more, especially around the histamine topic, because that's really a hot topic, I think, nowadays, especially in chronic illness. We see a lot of patients who are highly sensitive and have this mast cell activation syndrome picture or degrees of that, and histamine is at the root of that. I'm excited to pick your brain about that a little bit more.

0:08:15 CS: Before we go deeper, Ben, you said hydration is really a lack of absorption of water. So what are some signs that you would be dehydrated, especially if you think you're drinking water and that you're doing everything right, but maybe you're not absorbing the water as appropriately as you could?

0:08:33 BL: Well, one is...I don't know the normal times a day you should urinate. What is it, seven, eight, 12?

0:08:42 CS: Yes, seven...

0:08:43 BL: Yes, so if you're going more than that, that's an issue. Also if you're the type of person where maybe your doctor or your friend or your spouse says, "You know, you should drink some water before you go to

bed," and you're like, "Oh, no, no, no, I can't do that because I'll wake up in the night to pee." If you're that type of person and you don't have BPH, as a man, you don't have prostate issues, there's probably something going on there, and you need to suss it out. Another factor is just fatigue. You've got to really tune into that. A lot of people get tired, and so what they do is they reach for carb sugary snacks to get a brief lift instead of saying, "Oh, I need water. Oh yeah, I haven't drank any water in the last few hours," or, "I've been sitting in front of a fan or a heater for the past two hours in my office or in my room." Forced air blows air over your skin and that can dehydrate you as well, so you've got to tune in and be aware of when the last time you drank was, and get it done.

0:09:55 BL: If you get a sense of fatigue, then that could be a sign of dehydration. That is because we know how important the mitochondria are. The mitochondria, these little tiny things that live inside of our cells, they help produce energy, and they do that through oxygen and forming ATP, which is our body's energy. But the ATP doesn't just magically form energy on its own, it actually needs water to do it. So your ATP, let's say it's your gas in your car--the gas in your car has to be burned. The ATP way to burn it in your body is with water. So if you can't cleave off one of the phosphate groups, because that's what ATP is, it's adenosine triphosphate, and so the molecule of water will bind to the ATP and cut off one of the phosphates, and when that happens, energy is released and you feel you have energy. That's actually pretty cool. When I read about that, I was like, "Wow."

0:11:01 BL: Another one is, obviously, dry mouth, dry eyes. That could be other things, too, but could also be just simple dehydration. Yellow pee is a

sign, if it's not from B vitamins. Another one, is a skin turgor test is very useful, and you just actually pinch your skin and let it go. So I'm just grabbing my skin between my thumb and my forefinger right now, or the top of my hand, and I just let it go, and it bounces all the way back, except for like the last 10% of my skin takes a little while longer to go flat. It should just spring back completely flat. So I'm actually a little bit dehydrated right now.

0:11:39 CS: I'm drinking coconut water right now, so... [chuckle]

0:11:41 BL: Nice.

0:11:42 CS: Maybe it's working.

0:11:42 BL: Coconut water, because of the potassium, is great. But I started gaining weight...because I would drink one to two liters of potassium water, or coconut water a day, and I was like, "What the heck?" And then I turned the bottle around and it's actually quite high in carbs.

0:12:03 CS: I know, and there's 12 grams of sugar. I have the C2O, I guess.

0:12:08 BL: Yes.

0:12:08 CS: I don't drink it that often, but it does taste sweet when you think about it, right?

0:12:12 BL: Yes, it does, and it's from the coconut, so it's got natural carbs in it. It's not like they add sugar. It truly is coconut water, but there is sugar in there--if you're not drinking too much, I think you're good. But I tend to go whole-hog on things, so I drank a couple liters a day, and here I am three pounds extra, four pounds extra, I'm like, "What the heck?"

0:12:35 CS: Good point--I could see some of my patients, they agree, a lot of a good thing is not always the answer, I hear you.

0:12:45 BL: Yes, and there are two other signs of dehydration. If your blood pressure starts going up, you could be dehydrated. It could just be a concentration there, and that's also because of histamine. There's a famous book, I can't pronounce the guy's last name, but it's "Your Body's Cries For Water", and he talks about a lot of the higher histamine symptoms like asthma or eczema or red-faced or sinus issues, urticaria, these are all related to histamine, which we'll get into later. If you become dehydrated, just think about it, the histamine in your body is going to be more concentrated, so the more water you drink and the more water you actually absorb, your histamine concentration will go down, and you'll have fewer histamine-related symptoms. If you're exercising, and you're the type of person that gets really red in the face, and it takes you about 30 minutes to an hour to lose that red face when you exercise, that is very high histamine-related. I've had numerous people say, "Oh my gosh, you just explained me." Actually, this one patient had her genetic test done and she was homozygous for MTHFR 677, and she was doing all this exercise, and she started taking methylfolate and B12 prior to exercising, and she never got the red face anymore, so it made a big difference for her.

0:14:11 CS: That's a great tip, that's really interesting. You're already touching on it right now. I know that a big part of your work is around methylation, and it's a huge topic, of course, but really how can we look at methylation in light of dehydration? How do those two tie together?

0:14:32 BL: Well, it goes back to what hydration is, and it's the process of actually absorbing water. And where do we absorb water? Having water in our blood is great, but we actually need to have our cells hydrated as well. So you can't have your cells hydrated if the cell membrane is not strong, and so your cell membrane has to be of strong integrity, it has to have a decent wall and good structure. Most of the cell wall is actually made from what's called phosphatidylcholine, and most of the body's methylation process goes to producing phosphatidylcholine. When I learned that about 80% of our methylation reactions occurred in our liver, I was like, wow, that's pretty important, so we have to make sure our liver is healthy. If your liver enzymes are whacked, then your methylation is going to be causing a problem. That goes back to your bioaccumulation, and xenobiotics, and heavy metals, xenoestrogens, and molds--all these things can contribute to a congested liver.

0:15:41 BL: But that aside, we have to understand that methylation is this amazing process in the human body that does many, many things, including turning genes on and off. The majority of methylation is not turning genes on and off, it's actually making a component for our cell membrane. So if your methylation status isn't very good, and you're not producing a lot of phosphatidylcholine, your cell membranes are going to

be more brittle and weaker, and they're going to start breaking, and as they start breaking they go through an unnatural process where your immune system starts becoming more reactive to these components because it has to clean up the "garbage" caused by a broken cell...it's waste, it has to be cleaned up, and your immune system is what cleans it up. But anyway, I digress. Phosphatidylcholine is needed for your cell membrane. So that's one component of cell membranes...of methylation.

0:16:37 BL: Another one is something we touched on already. In order to get rid of histamine, methylation is needed, and it's the first step to get rid of intracellular histamine. The first step to get rid of histamine that's inside of our cells is through methylation, and the next step is vitamin B1 and 2 and zinc and so on. So those are two main components. And then we have arsenic, which can then mess up our energy and our metabolism, and so pumping nutrients in and out of the cell, like potassium getting into the cell and magnesium, actually has to be pumped into our cell. If these electrolytes are not pumped into the cell, then the concentration gradient of water is probably also going to change. Arsenic messes up with our energy production and a lot of other things, and it also inhibits our methylation--and arsenic is everywhere. If you're not filtering your water, if you're eating a lot of chicken, or brown rice, or apple juice, all these things are very high in arsenic, so you've got to change that up. Really, really filter your water.

0:17:45 CS: The first thing you mentioned was looking at liver congestion and looking at how healthy is your liver? Do you have any clinical pearls or just even basic blood work that you use to assess somebody's liver function? I know that there are inexpensive tests that we run all the time

looking on a comprehensive metabolic panel, looking at liver enzymes or GGT, are there any things that you really like to look at to assess somebody's liver really quickly?

0:18:28 BL: So very simply, if you eat fatty foods, are you able to do that or do you get a right-sided heaviness or tenderness, right underneath your rib cage? Or if you're just sitting here right now, does the left side lower part of your rib cage... If you take your fingers right now and you cup underneath your left rib cage and you grab your lower rib cage... Position that and then take your right hand and grab on your right side and just feel it--does your left side of your chest, underneath that rib cage on the very bottom feel lighter compared to your right side, and so right-sided very bottom of your rib cage, if it feels heavier or more tender to the touch, your gallbladder and your liver probably need some love. I'll be frank with you, my right side feels a bit heavier.

0:19:25 BL: There's no pain, it just feels more tired there for me than my left. My left side of my body seems totally fine. And also, do you have referred right shoulder pain or do you have chronic tightness in your right shoulder and around your scapula area, and the bottom part of your shoulder blade. Is your right side of your back always tight? That could also be gallbladder. Another one that I love is to look at your tongue. You stick your tongue out in the morning, do you see any hint of yellow? If you do, that's also a sign of gallbladder and liver issues. I will tell you, when I was traveling through India and I came back, I went and saw an Ayurvedic doctor. I had a really bad yellow tongue, and so I started doing panchakarma and taking these liver-supportive herbs and doing sauna and

massage and changing my diet, cutting out fats and nuts and all these heavy foods and processed foods, and I got my tongue back, and it was great. Those are some really basic ones that I like that don't require any testing.

0:20:47 CS: Those are really great tips, especially now that the ketogenic diet is such a fad...which serves a purpose, I prescribe it when it's appropriate, but if your liver is struggling and your gallbladder is sluggish, that's not going to be the right diet for you, right? Fats are essential to our health, but if you have a congested liver and gallbladder, we have to work on that first so you can get the most out of your food and so that you can actually absorb the fat.

0:21:25 BL: Great point. Yes, the ketogenic diet is all the rage. If you take a tablespoon or even a teaspoon of olive oil or coconut oil, and you react to that unfavourably, then you could have a little bit of sluggishness in your gallbladder. My genetics, for my gallbladder and my liver, are actually pretty sluggish. Not many people talk about this one particular gene, but it's called MTHFD1, and it's methylenetetrahydrofolate dehydrogenase. This gene is really important in the folate pathway, and if you have a variant in there like I do, which is actually pretty common in the population, you have a 70-fold increased risk for fatty liver. So here I was in my early 20s, already having liver-gallbladder issues. I've got a myriad of variants in my foliate pathway which predisposed me to fatty liver, so I have to be very, very mindful and careful of what I eat. I cannot eat too many nuts. I drink alcohol very, very rarely. If I do, it's like a half a glass of wine or I'll open an apple cider

without corn syrup and I'll drink like six ounces and I'm done. You've got to be very careful in tuning in, again, to how you're feeling.

0:22:53 CS: That's a great point. As you mentioned, your liver can be predisposed. When people think about fatty liver, they typically think of alcohol overuse. But in our environment these days, if you do have a liver that's going to be a little bit more sluggish or susceptible with what we're up against in the environment, you don't have to have alcohol be the trigger. It's really our environmental exposures.

0:23:20 BL: Yes, and excessive carbs.

0:23:22 CS: Yes.

0:23:22 BL: I was a carb freak all this while in my 20s. I had no clue about nutrition when I was in my 20s. I wish I did.

0:23:32 CS: It's always evolving, isn't it? What kind of diet do you follow now, if any?

0:23:44 BL: I would say, Alessandro Ferretti is a brilliant guy, and I love how he talks about diet. He's into a ketogenic diet, mainly, but I think he calls it keto-adapted or modified keto. I would say I'm more of a low-carb person. I do better on a higher protein, so if you were to classify it, I would say I'm more Paleo. But if I eat too much protein, then I get too much ammonia and brain fog and tired and fatigued. So do I follow any particular diet? No. I really tune in to what my body wants. If I have a craving for

something and it's a health food, I will eat that until I'm sufficient. For me, I do really well with beets. Beets are a tremendous food for me, and thank goodness I married a Russian woman, because there's a lot of beets in Russian cuisine. You'll see that in my book "Dirty Genes" too. So I do not adhere to any diet. I eat seasonally, so I eat more soups. I had borscht, actually, today, which is a Russian soup with cabbage and beets and other things. But no, I don't adhere to anything. I just don't eat very many carbohydrates. I do more what's called, I don't like the name of it, but it's called time-restricted feeding. I don't physically restrict myself, but I do not eat right away in the morning. I'll eat typically around 10:00 or 11:00, and I try to stop around 8 o'clock or 7 o'clock at night, so that will give me about 14 hours of fasting. I should stop eating earlier. That's something I need to do, but it's tough with the kids and their activity.

0:25:50 CS: I agree, I think the either time-restricted feeding or intermittent fasting or whatever we're calling it these days, I do think there's just a lot of great research on how that is really health-promoting and just gives our body a break from digesting so it can attend to other things.

0:26:09 BL: Yes, it's so, so important not to direct away from the topic of hydration, but if you are over-eating, if you're eating to the point where you feel full, you're over-eating--I eat until I'm 70%-80% full and I'm done. If you overeat, you have to remember what food is. Food is not just an activity, or a social activity or something that we do for an enjoyment. That's a side benefit, but eating is actually providing the nutrients our body needs in order to keep us going. Now, that seems obvious, but we forget that because you just want to make that hunger pain go away and you want to

tickle your palate, you want to get the dopamine hit, you want to enjoy your meals, but if you eat too much, you are creating a huge amount of inflammation and at the same time you are contributing to dehydration.

0:27:08 BL: So to go back to our original statement about what contributes to dehydration, I would say over-eating and especially carbs. You retain more water on a higher carb diet, but that's also inflammatory, so it's not good.

0:27:31 CS: I think the first things people see in their physical body when they switch from a higher carb diet, and maybe more of like a Paleo-type diet that they lose a lot of swelling or water weight, or inflammation in that way. I think it's a good point to make. Ben, you mentioned looking at your genetics. I know there's a lot of different ways to do that, these days. If one of our listeners wanted to figure out about their MTHFR or MTHFD1 or PMT, some of these snips that you mentioned, how do you recommend going about doing that these days?

0:28:16 BL: That's a good point and it's something I need to talk about more because 23andMe used to be the go-to. I currently recommend ancestry.com, you can get it on Amazon as well. The reason why I recommend Ancestry over 23andMe is because 23andMe has removed some of their key variants from their raw data...they're not there anymore. Why did they do that? Nobody knows, that's their own agenda, but Ancestry has them. If you have not ordered a genetic test yet and you've wanted to, order Ancestry. It's the best bang for your buck, and they don't give you any information about MTHFR 51 because that's not what their job

is. Their job is to get you ancestral information. Then you look for tools that you can take your genetic 'raw data' to...you do the test and then you can export your genetic findings out of your ancestry or your 23andMe into various third-party apps. There's a plethora of them, they're everywhere and there's more and more made every day. You've got to be careful, because a lot of these genetic reports, are over-simplifying things and they give you the false sense of security that you do not have this or that variant and therefore you are okay.

0:29:45 BL: For example, it can say you do not have MTHFR and you're fine because you don't have it, so you can continue doing what you're doing. That's false security. Another one is, let's say you do have MTHFR, they will tell you that you should supplement with methyl folate and they'll give you supplement recommendations based upon that. Any time a genetic report tells or suggests to you that you should be supplementing based upon their genetic findings, or based upon your genetics, that's totally wrong. What's also happening is these supplement companies are popping up everywhere that say, "Hey, let's do your genetics and we will customize a supplement based upon your genetics." For example, let's say your genetics are your computer...So Christine, are you using a PC or Mac?

0:30:40 CS: A Mac.

0:30:41 BL: Okay, you and I are both using Macs. I have a MacBook Pro, do you as well?

0:30:48 CS: Yes, me too.

0:30:49 BL: Okay, so you and I have the exact same DNA computer, Mac Book Pro. I've got a 15-inch screen, I think. You have a 15 inch or what is it.

0:30:58 CS: I think... Yes, I do.

0:31:00 BL: Alright, so we both even have a 15-inch screen. So our genes are looking the same, but our software and the documents that we have in our computers are completely different. I had photos of my family. She has photos of her family, she has labs of her patients, I have labs with the folks that I work with and so on, so we are different. You cannot base recommendations for my computer or Christine's based upon the computer in front of me, if the app is the problem. And so, you have to use lab findings and history in order to give nutrient recommendations, any genetic report out there that recommends supplements, or says that you have to do this or that based upon your genes, is out. So I did not want to create a genetic report out there because it was more time and more work, but I ended up doing it because I had to... And that's called strategene. Strategene stands for Strategic Genetic Analysis and is it easy? No. Does it require you to dive in and learn about biochemistry and pathways and all these other things? Absolutely. It's not an easy fix because I would be BS-ing you if I it was.

0:32:18 BL: It's a complex world, but if you want to get into it, and you start doing the work and you start learning, you could join the Strategene

Facebook group, you could watch my videos and work with Dr. Christine, and you're going to get a lot further and you're going to avoid having band-aids for your treatment and you're going to say thank you. Because a lot of what happens is people do their genetic report or the genetic testing, they run through all these genetic reports, they try to supplement protocol, they try to supplement to fix their MTHFR and fix these other genes. And after a year, they get frustrated because it doesn't work. So, skip all that.

0:32:58 CS: I'm so glad you took your experience and your knowledge and created this strategy. So when people get their raw data, and then they get this data basically translated... Do you also use something like organic acid testing or other things to help look at what is happening, to see what genes are being expressed or under-expressed? Is that a tool that you use or do you use something else just to get an idea on how to make sense of all of this?

0:33:38 BL: Great question. We're rebuilding signal.com right now and when it launches... there's a whole plethora of Dirty Gene stuff. There's The Dirty Gene Summit, which will be available again, the Dirty Gene's course which is a great addition to the book and it goes more in-depth. And then, a lot of visual, so people can get a lot of visual information. And, there's what's called the "Dirty Genes Consults." The Dirty Genes Consults was where I took individuals' strategy and reports. I looked at their genetics, and then I had them do an organic acids test as well. Then, I had them do the Dirty Genes quizzes to see how dirty their particular Super Seven Genes were... So I took a bit of history... I looked at their organic acids and I looked at their genetics as well.

0:34:31 BL: It was really, really cool to tie that all together into one. Again, it's called "The Dirty Genes Consults". But yes, I absolutely love the organic acids. There's more markers than I wish were on there. There's some markers which I wish weren't on there. But generally speaking, it's so easy and efficient for the patient to just get a quick pee test. There's no sticking needles in arms, it's just easy and there's so much information you can glean from an organic acids test and when you combine it with genetics, the right research genes--that's another thing--when you order genetic reports, you can get a myriad and plethora of garbage information that says that you've got all these variants and they're all red and are all yellow. And, you can get all freaked out. But there's no research behind them at all. So, you have to know when you order a genetic report, there's actually evidence that there's some functional variation in that particular gene that you have or don't have. That's super important.

0:35:44 BL: But, yes. The short answer is I absolutely love the organic acids. When you get your organic acids results back, take the recommendations that the lab provides, crumple it up and I throw it in the recycle bin. Because it's not that simple--you can't just run an organic acids test and see that your glutathione is low and your yeast is high and your B6 is low and kill the yeast and restore the glutathione and take B6. You have to look at the neurotransmitters and the inflammatory markers in these neuro transmitter pathways and all that. If you just restore what you think is deficient from the abnormal findings on your organic acids and you just take a supplement or 10 without lifestyle modifications, you're going to be frustrated and you're not going to get the results you need.

0:36:53 CS: I'm glad we spent a little bit of time on this because I think there's been so much of misinformation before now that this is all more accessible, which is great. People can take this information and run in the wrong direction. It sounds like you've been busy with your website. So, I'm excited for you. That's no small task, creating a course and everything else you just mentioned. So, we'll start leaning back. One thing that you mentioned regarding methylation and dehydration was arsenic. You mentioned how we're really exposed to arsenic in a lot of different areas and how water filtration is obviously a huge piece of being hydrated. What is your latest take on water filters and keeping our water safe?

0:37:47 BL: There are a plethora of choices. Water filtration is one of those things where you hear a lot of promises about how good the water filter system is, and then you trust it, and then you take the sample and you send it to a lab, and you realize it's actually not as good as they promised. But I believe water filtration is paramount because if you're not filtering your water with a water filter your liver is and so is your kidney and the rest of your body. So, you become the filter. And the problem is we're already filtering the air, we're already filtering the roundup and garbages in our food and the GMOs that are in our food and the bacteria that is all over the environment and the stressors that we have, chemicals that are on our furniture and the carpet so, we're already inundated with massive amounts of things to filter. I think, I'm 45 years old. So I'm probably what, 60% water or something like that.

0:38:50 BL: We're composed of a lot of water. So if you are not filtering, it becomes an issue. So I recently remodelled our home and I reached out to Darren Vigil of Healthy Exposures and I consulted with him. I've got this whole house water filter which is something that I've been against actually for a number of years. But we take baths, we shower, obviously, and I was like, "Well, we're wasting water for toilets by water filtering for toilets." But it's a different system, we have a whole house system and there's multiple carbon filters, and there's this tank that's as tall as I am. It's like six feet tall and it's about a foot and half wide, and it's this big black container. There's no plastic in our filtration system at all. So it's pretty cutting edge and I'm going to learn more and more about it. I just drank my first glass of water yesterday before bed and it was exquisite. It was absolutely phenomenal.

0:40:16 BL: I haven't had water that good since I've been in the mountains. So I'm really excited about it. I will be sending tap water to the lab and this filtered water to the lab. It's probably not as high as you can go. You can go higher, I'm sure. But Berkey Water Filters are pretty good. I have a Berkey system and that's what we used for a long time. But it was a hassle because you had to keep filling it up. We're a family of five so I had to fill it up three times a day. It became a hassle and it's this big thing on your counter, but the water did taste good. It was clean.

0:41:03 BL: I'm not sure how effective the fluoride filtration system is because I didn't really see any drop in fluoride when I sent it to the lab, I did have the fluoride detachments. Then there's water filters that you see that a lot of big name influencers are recommending. They asked me to promote it as well and I said, "Send it to me." They sent it to me because I didn't

want to promote it without looking at it and trying it. I don't do that. I took it out of the box, I looked at it and it was all made out of plastic. I put it back in the box and I sent it back. They said "it's BPA-free." And I said, "It's plastic."

0:41:58 CS: Yes, we're already inundated by plastic. You don't want your water sitting in plastic all day long.

0:42:05 BL: No, and BPA-free is nonsense, because it's plastic. There are all sorts of other isogenic components in your plastics. BPA-free is still plastic and you should be avoiding it.

0:42:19 CS: What are some of the things that you're really making sure that your water is free from?

0:42:56 BL: That's a great question. I forget the name of the lab but the test is actually in my garage. And now that I got this thing set up, I'm going to do it. It's 100 different things they test for and there's a list of medications on there. There's perchlorates. You've got jet fuels, you have roundup, you have chemicals. Our groundwater is just a mess. You've got fracking going on in various areas. So you can get the fracking components in the water which is very scary. According to Dr. David Quinn, he's seeing more and more people with... I forgot the name of the compound. Do you remember, Christine what he was saying about that?

0:43:43 CS: I've talked to him recently and I've seen Valium in people's waters. I've seen in their heavy metals test, uranium, even cesium. I've had a couple patients so it's a kind of not typical metals that are radioactive.

0:44:01 BL: And they're hard to get out.

0:44:03 CS: Yes, really hard to get out. I've noticed over the years, my Southern California patients tend to have higher uranium in the doctor's data test. That's related to the water supply that Southern California gets. And so, yeah, it's a big deal.

0:44:21 BL: It is a really big deal. Someone commented when I posted the picture on my Instagram. He was like, "Wow, that's a pretty high-end system. That must have been expensive." And, to me, I don't look at expensive. Yes, it is expensive but I really, really value clean water for me and my family, and our guests. I really understand the value of clean water and how important it is. I would much rather invest and spend on an expensive water filtration system--I don't care about name brand clothing, or name brand shoes, or going out to crazy fancy restaurants. I don't value that, I value health and I value feeling good. For me, health is freedom and it gives me the ability to do what I want to do on a daily basis for years and years. So by spending whatever it was, \$10,000 or something on our water filtration system, sure--I'll just work harder.

0:45:26 CS: That's a good point. I know that's a lot of money for some people of course, but when you're drinking water every day and when we

see how much money some of our patients have to spend to get well, it's really nothing in the greater scheme of things.

0:45:44 BL: Yes, I was reminded by an individual, if you go to stores like Consumers co-op, PCC or your local organic co-op... A lot of these places will have water filtration systems, where you can get water for 35 cents a gallon or so. While you're researching water filters or you don't have the money set aside yet, or you don't want to hit your credit card up with it, get a glass container and fill up your water from these places--that's going to be way better than most of the other water filter systems. That's a good place to start and it's pretty inexpensive. I definitely do not like the water delivery truck companies because the amount of fossil fuels they use to deliver is huge... even if they deliver them in glass, I can't get away from the fact that they have these massive trucks burning fossil fuels, delivering water to people's houses. It just makes me mad.

0:46:46 CS: Yes, you don't want to trade one thing for another problem, right?

0:46:53 BL: Right. At Seeking Health, we have supplement bottles and we're very, very aware of what we do, that we're putting supplements that are of high quality and high value to the consumer, but they are still packaged in compounds that can be recycled which is great--but we have things that are like foil packs for electrolytes that are not. We're always on the lookout for packaging that is environmentally friendly because here, we are talking about how important it is to filter your water and if you're buying things or doing things that are harder on the environment, we are therefore

affecting our own health by introducing more garbage into the environment. It's full circle, and we're very aware about it, as you know.

0:47:39 CS: Yes, I know that you are extremely mindful of every step of the process... When you have a business where you're trying to help a lot of people, there's so many choices right? Choices that you probably didn't even think about when you wanted to make a good form of methylated folate right? You then see all the choices you had to make. I know that you're doing the best in a really imperfect world.

0:48:03 BL: We're always speaking out... Just last week or two weeks ago, I talked to the lady that I might have a good environmentally friendly package material for our electrolyte sticks. I'm excited to reach out to that company in UK to see if we can get that over here. So, we'll see.

0:48:24 CS: Awesome. And, you just mentioned electrolytes, and I know we wanted to land on this last point. Obviously, if you're not absorbing your water, one of the best ways to do that is of course, to get clean filtered water, but also to put electrolytes in your water. All electrolytes are obviously not created equal and some electrolyte powders are full of sugar. What did you find when you formulated your electrolytes, how did you go about doing that and what do you find is working?

0:48:58 BL: For our electrolyte blend, it took me two and a half years of research. When you're introducing something like that, and you are providing it to the public, you have to really do your due diligence, and when you're messing with people's hydration, to me, that's serious. So, I

really did a lot of work on that. What I found was, in order to get the electrolytes where they needed to be, it required energy. A lot of our people and folks and patients or individuals generally across the board are tired. We live in Seattle, you live in a high-paced society wherever you are. A lot of people are drinking down caffeine or eating donuts or eating something to keep them stimulated and energized, they're otherwise fatigued. So, I just made an electrolyte with magnesium, potassium... Because magnesium and potassium are the two highest concentrated electrolytes within the cell. So, inside the cell, you need to have high amounts of magnesium and you need high amounts of potassium.

0:50:09 BL: And, sodium is outside the cell and for sodium, most of us are already loaded. Sodium is something that you could always add yourself from your own kitchen. It's pretty simple. If you want to add more sodium because you're sweating profusely, go for it. But it's hard to find potassium and the right form of magnesium is also difficult. The problem is, your magnesium and your potassium have to be in the right form. They have to be well-absorbed. That's one problem, but the other issue is your magnesium and potassium have to be pumped inside of your cell. So, just because you're drinking the electrolyte let's say, you look at the label and it has a right form of magnesium or the right form of potassium let's say, magnesium bicarbonate or magnesium malate or magnesium citrate, and potassium bicarbonate or malate or citrate.

0:51:00 BL: Let's say it has these forms in good amounts and you're excited and you drink it, and you're like "it's pure, there's no sugar, there's no food coloring." You drink it but you don't really feel any different and

you're still tired, and maybe now you got loose stools. You're thinking "What the heck?" So now, you switch, you're confused and now you're frustrated. What may have happened is 40% of your body's energy at rest. 40% of your body's energy at rest is to pump magnesium and potassium into your cell, 40%. So, 40% of your daily energy is used to pump these two electrolytes into your cell. And if most people are already not getting enough mitochondrial health, or they're chronically ill, that doesn't happen. So I said, "How can I get the potassium and the magnesium inside of people's cells, if they're so chronically fatigued and deficient and they don't have the energy to do that?"

0:52:00 BL: I said, "Okay I'm going to put some ribose in there. I'll put two grams of ribose, I'll add some creatine, I'll put taurine in there because taurine and magnesium are incredibly important. Then, I added niacin because niacin helps make NADH..." When I did that combination, it's unbelievable, the results that I give people. All the time, people just can't believe how effective our electrolytes are, and it's because we just didn't put the right forms in, we also thought about how to be able to get the nutrients inside of the cell. That has been a game changer for a lot of people. We've got them unsweetened. We have one that's completely unsweetened, it's just a pure electrolytes with the energy support. And then we have two others that are naturally flavoured, truly naturally flavoured, without any GMOs, and they do have a bit of sugar in them as well. We are removing Stevia from all of our products as well, at the moment.

0:53:09 CS: I don't think of any other electrolytes are doing that, especially the ribose, the taurine, and the creatine, and the niacin-- I know my patients

are going to ask me about the niacin in this formula,--does it create a flush or is it low enough that people don't flush?

0:53:35 BL: Yeah, for sure, it's the form of niacin that does not cause a flush, but we're also reducing it from 75 to 35 or something. So we're reducing the niacin. We've had a lot of requests from people to reduce the niacin down, so we are. I have no problem with that because 35 milligrams is still plenty. I don't see people flushing from our electrolytes. I haven't really heard it too often. Have you?

0:54:05 CS: No, I have not--my patients are so educated, so I know when I recommend this, they'll be asking me, "Am I gonna flush from this?"

0:54:16 BL: With some formulas like our B Complex Plus or Optimal Sleep, some people do flush from those. I do love the niacin form and flushing is not harmful by any means. It can be uncomfortable and embarrassing if you're in a public place but actually there's no harm with it. Over time, you should be able to withstand that level of amount. So if you take, let's say, for example, the Optimal Sleep, or the B-minus, and you take it and you flush the first time, the next day you still might flush. The next day, maybe you still flush. The third, the following day after that, you should be fine. But everyone's different.

0:55:12 CS: Great. I'm going to check this out. I'm always excited to learn more about your products and have been using them at Sophia for a while now, so we appreciate the work that you're doing in formulating.

0:55:26 BL: My pleasure. The Optimal Electrolyte Plain, we're renaming it to Unsweetened, I believe, because plain is not a good name. I think it's tough. I'm not a marketer. I just really do the research.

0:55:44 BL: The Unsweetened, it's actually become my favorite. If you add whatever you wanted to, you can mix it. My wife likes a splash of organic apple juice with it. I just drink it plain. It's really refreshing. One thing I did notice, too, Christine, that I want to touch on because I know you guys are really into this as well, at the Sophia clinic, is WiFi and all these other technologies. So our internet was down at our home for past few days for various reasons, and I was using hotspot on my phone, which requires WiFi and Bluetooth, and here I am three days in of using this for six to eight hours a day, and I'm just not a fan. I'm hard-wired. I'm using Ethernet right now. I don't even have WiFi in our home. Our cell phones don't even really work in the house, either because I've shielded everything.

0:56:47 CS: It's a big issue.

0:56:48 BL: It is, it's a huge issue. What I wanted to share, which is kind of interesting and it's only happened to me, I think a few times, but I think I really, I want to get it out there. I was doing this bluetooth and this WiFi thing and hotspot... Just regardless, I was using wireless technology in front of my computer and concentrated because I had to use my phone plus the computer and I was getting fatigued, I was getting headache-y and I was not feeling very good. I don't feel good from these things. I don't feel sick, but I don't feel right. So I started taking Liposomal C and glutathione. It does help, but it wasn't enough. I drink water and then I added our

electrolyte and I felt much better. I usually have one Optimal Electrolyte a day. I had four in one day. So it makes me think, are we getting dehydrated from these EMF Wi-Fis all over the place?

0:58:01 CS: When you think about our electrolyte balance and our cellular charge, and maybe EMF is affecting our bodies in that way.

0:58:08 BL: Yes, I felt very dehydrated from that experience, and I pinched my skin today, and I was telling you, the last little bit of my skin is still like a quarter of a second still bumped until it flattens out. So to me, I'm still a touch dehydrated. But I just want people to realize, if you're using WiFi technologies, you probably need electrolytes. The electrolytes and liposomal glutathione have been game changers for me to be able to withstand the harms of the WiFi.

0:58:47 CS: It's just not going anywhere, unfortunately. We're trying to educate our patients as much as possible and to do what you can do in your home. But unfortunately, with 5G and this next generation of cell phones, we're just going to be inundated. I always like to tell people, do what you can at home. Not to have WiFi in your home, and try to have a really safe sleeping location, and if you can afford to shield your bedroom at least, that's the best place to start.

0:59:26 BL: I'll tell you, we have aluminium roofing on our home. So we have metal roofing that shields. We have aluminum siding and that shields. And then we have double glazed windows because we face south and east, so we have a lot of sun which is fantastic, but we use a double

glazing to reduce the amount of heat coming through the windows. Even though we're in Seattle, you still can get a lot of thermal heat coming through. The double glazed windows I learned also balance EMF. So just from the aluminum siding, the aluminum roofing and the double glazed windows, our house is pretty bullet proof from the signals from the outside to the extent that you have to go outside or open a window. I can be in a house and I'll open the sliding back door or a window and the WiFi signal will come in. If I close it, it goes away. It's really interesting.

1:00:28 CS: That's how you know if you've shielded well, right? You can very clearly see if the signals go down...

1:00:34 BL: Yes, and the bars on your phone don't really mean anything. If it's one bar, two bars--there's no science behind that, it's all subjective. But just know that one bad thing is we've shielded our house so well, that when you have your cell phone on you, it's sending a bigger signal to try to reach the tower.

1:00:57 CS: Yes.

1:00:58 BL: So you have to keep your phone off your body, otherwise it's a problem.

1:01:03 CS: Yes, we've shielded Sophia Health Institute and we have everybody turn off their phones when they come into the clinic for that reason, because you can make the issue worse, right? If you have the phones trying to get a signal in the shielded environment.

1:01:16 BL: Yes, exactly. I stepped in by our home, and I had the phone in my pocket. I do have a guard on my phone. I don't know how good it is. It's the radiation protection, "safe sleeve." But I need to test it. Somebody tested it, it wasn't that good. Another person tested it and it was good. So I need to test it myself.

1:01:38 CS: I know you're going to be busy testing water, testing your mobile phone.

1:01:42 BL: Yes. I like objectivity.

1:01:46 CS: It's good. I really appreciate your time today Ben, and I know that you are putting all this great information out into the world. How can people learn more about you and your work and where to find your electrolytes and all that kind of stuff?

1:02:00 BL: www.seekinghealth.com is where you can get all the formulations that I've done. Optimal electrolyte is there. And that is a big one that I love people starting out with. I do recommend the plain or unsweetened as it will be called. Then we will have the courses on there as well. StrateGene genetic report is currently on there, it is hard work--it does require you to think. There are no easy answers. A plus B equals C all there, but it teaches you how your body works and then you could work with docs like Christine to guide you through it, because you know all these things very well. StrateGene is available and then we'll have courses available there as well for you. I'm on Facebook and Instagram as well. I do

Facebook Live sessions and I do Instagram Lives periodically. So, @drbenlynch and @drbenjaminlynch at Facebook.

1:03:09 CS: Great. We've got a link to all this in the show notes, and I can't thank you enough for your time. We're in the middle of a snow storm here in the Seattle where we both live. I know you probably have to get back to your family. Thank you so much for your time today.

1:03:24 BL: My pleasure, take care.

1:03:27 CS: Thank you for listening to the Spectrum of Health Podcast. I hope you enjoyed my conversation today with Dr. Ben Lynch. Please check out his website www.drbenlynch.com, and then www.seekinghealth.com as well. If you are enjoying this podcast, we'd love to hear from you. You can reach us at info@drchristineschaffner.com and please if you feel compelled, I would really appreciate a review. I so appreciate everyone who's tuned in and I really enjoy doing this podcast. I learned so much from my guest and I'm excited to continue to offer you more information. Thank you, and have a great day.