How Cell Membrane Therapy Supports Lyme Disease Recovery Transcript

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Opening on Cell Membranes and Phospholipids

Lime feeds on our phospholipids, Bartonella feeds our our phosphate lipids and when that happens, we start to oxidize them. And now our Phospholippids become thick and waxy and we want the cell membrane to be nice and buoyant and happy.

And not only do the outer cell membrane have phospholipids, but so does our mitochondria. Our mitochondrion, that's the powerhouse of the cell. All of our energy that is needed for chemical reactions in life to happen depends on ATP, which is made in the mitochondrial.

And so when these phospholipids get damaged, we really get stuck. And we get in something called the cell danger response. The body never gets this all clear signal.

It never get told it's safe again. So it can't return back to normal cellular processes. That is where cell membrane therapy really shines. Hi and welcome to the Lime Bites podcast, where we shine a light on the misunderstood science of Lyme and other vector-borne diseases, as well as the truths that many still miss.

I'm Dr. Mariah Hinchey, naturopathic physician and fellow of the Medical Academy of Pediatric Special Needs. I specialize in treating chronic Lyme disease as well as other complex inflammatory conditions.

In this podcast, we break down what's working and what is not. We share the facts that most people miss, challenge outdated thinking, and give both patients and practitioners the tools to heal smarter.

So let's get into it and change the way we heal Lyma. Welcome to another episode of the Lime Bytes podcast, Rebuilding Immunity, Reducing Inflammation, and Redefining Recovery.

I'm your host, Dr. Maria Hinchey. And today we're exploring the critical role of phospholipid therapy in restoring cell membrane integrity and mitochondrial function.

These are foundational components of healing Lyme and other complex chronic illnesses.

Podcast Introduction and Guest Background

When cellular communication, energy production, recovery can stall, making targeted membrane support an important piece of the healing puzzle. Today's guest is Dr.

Melanie Stein, a naturopathic physician with a special focus on Lyme disease, complex chronic illness, and phospholipid therapy. Through her work at the Restorative Health Clinic, she helps patients address the underlying cellular dysfunction that can contribute to persistent symptoms and impaired recovery.

Welcome, Dr. Stein, thank you so much for joining us. Thank you, Doctor Hinchey, I'm excited to be here today. Great. So most practitioners in this complex chronic illness arena have a story that really reveals why and how they got involved in the work.

If you're open to sharing that, please share that with our audience. Yeah, so I have a story most, you know, most of us do, right? And I woke up paralyzed from Lyme disease one day.

So I was on a Qigong retreat while I in medical school and I wake up and could not move my legs and had full upper body tremors. Unfortunately, I live out in the Pacific Northwest and so when I taken to the hospital, was very dismissed.

They didn't know what was wrong with me. They ran a battery of tests, they all came back normal. And so I was told I had convergent disorder. Luckily for me, a couple days into my hospital stay, I actually developed a bull's-eye rash.

Even then, I was dismissed. Having been in medical school, i knew what the bulls-eyes rash means, right? So I knew that that meant I have Lyme disease.

It explained my symptoms. But I remember an infectious disease doctor coming and looking at me and saying, well, you know, there's two worlds to Lyme disease.

There's people who believe it's out here and there are people that don't. And so I was really left with basically the medical community here telling me, Well, if you have convergent disorder, then you need to work on your mental and emotional health and figure out why you're choosing to not walk and sorry, goodbye.

Luckily, being in naturopathic medical school, I had a wonderful community where my natropath said, nope, we're putting a PICC line in you. We're getting you on IV antibiotics.

And my story was that simple, right? I wish I just got on iv antibiotics and within a couple of weeks I was better. But it took a few years to get out of a wheelchair and it wasn't just antibiotics, it was herbs, it was IV therapies.

It was a lot of different modalities that led ultimately to me being able to walk again and start my practice and realize that this was my calling until I got COVID.

When I get COVID, I develop seizures 20 times a day, and my life just completely changed at that point. You know, several years into my practices, had a whole clinic I was running and I just couldn't function.

I was already doing the lipid replacement work at the time in my clinic. And, you know, we went back and we started to treat everything that we knew how to do best, but I still just wasn't getting better.

My mast cells were reacting to everything. So I actually flew out to my mentor, Dr. Werner Woslow's clinic so I could kind of separate myself from my clinical a little bit.

I underwent the phospholipid therapy that were going to talk about today. That was the changing point for me. It was a very hard few months of treatment, but by the end of it, I felt so much better.

My brain was working the best it had ever worked in my life. And my seizures by end that had really decreased. I did more treatment from there, But I feel like today I don't live a life where I'm thinking about my chronic illness every day.

Thank God. didn't know any of this about you. And I really appreciate you sharing and it's just, you know, every time you listen to somebody's story, it is just so mind blowing how dismissive the conventional medical community at large is regarding Lyme disease.

I mean, how crazy to say that it was just maybe a coincidence, right? That you had an acute onset of Lyne disease as you're having, It must be your mental health, right?

It's just, yeah. Yeah. I mean, the gas lighting is unreal and like, wow, what a perfect example of how COVID and spike protein can just come along and reignite all of these dormant infections.

Dr. Stein's Lyme Journey and COVID Relapse

I agree, you know, and I think it's one of the reasons why our community is so wonderful of practitioners because we all have, I, think a similar story where we don't want anyone else to ever go unheard like this.

And we want to fight for our patients because, we know people can get better. Right. They just need the right tools

and they need someone to look at them as individual, right?

And do personalized medicine. Alright, so let's get into it. Thank you again for sharing. Let's start with the very, very basics. So I think this is a topic that your average Lyme patient doesn't know a lot about.

So phospholipids are specialized fats in our body that help with cell signaling and cell regulation. So we have trillions of cells in your body. We have brain cells and lung cells, and heart cells.

And they all do something a little bit different. They make life happen and they need to be very controlled and very regulated. And so on the outside of our cells, we have these things called cell membranes, and our cell membrane need to be made up of the perfect consistency of phospholipids.

And in order to do that, that's how we control what can come into the cell, making sure the right nutrients, proteins, hormones can coming in, but more importantly, make sure infections and toxins can't come in and when they do, you can get them out.

So, when I think about the main phospholipids of the cell membrane, there's many different phospho lipids. But the two main fossil lipid that I thing about are phosphatidylcholine and phosphotidylethanolamine.

And these phospholypids are made in our body and they're embedded into the cells in this perfect way to control almost like the wall of our house, right?

To make the walls of though. And in doing so, you know, they're very vulnerable also. They're vulnerable to inflammation, their vulnerable, to oxidative stress in the body.

When toxins and infections can come into the bottom, over time they can get damaged. So that's really where phospholipid therapy shines is how do we protect ourselves from being damaged when infections do occur.

had a huge aha moment when I was doing research. I think it was on Bartonella specifically, or it might have been mycoplasma. And I like looking at like, okay, what do these organisms need for nutrients to live?

And then how do they get them? Because they can't make them themselves. And like most of these vector borne organisms actually need phospholipids to be able to function.

And so they're robbing our phospho lipids for themselves, leaving us more defenseless against them. Then there's this whole downward spiral where now we can't bring in our nutrients inside of the cell to where they need to And I use these intracellular micronutrient panels and I see so often the people that have the most deficiencies also tend to be very deficient in choline, serine, right, which are two, you know, You said cholene for a phospholipid, but I just find it so interesting how this is all so interconnected and makes sense as to why a patient with these chronic infections would need to have this phospholipid therapy done.

Another component of the cell membrane are lipid rafts. And lipid rafts are almost like, I like to think of them like antennas for lack of a better concept, you know, but these little antenas on the cell membrane that help with the immune system.

So if Lyme disease or Bartonella is coming into the body, the cells are able to communicate through these fossil lipids structured lip and raft. And Lyme disease actually has a way of altering the structure of these lipid rafts so it can sneak inside the cell and bury itself deep within the cells so we can never find it too.

Yeah, that's crazy. So talk a little bit more in depth. What actually is phospholipid therapy and how does it support healing from Lyne and other vector-borne diseases?

So let's talk a little bit more about what happens to our phospholipids so we can understand why we need the therapy. So you were talking about how Lyme feeds on our Phospholippids, Bartonella feeds our our phosphorus, and when that happens, we start to oxidize them.

And now our fossil lipids become thick and waxy and we want the cell membrane to be nice and buoyant and happy. And not only does the outer cell membrane have phospholipids, but so does our mitochondria.

And our Mitochondria, that's the powerhouse of the cell, right? All of our energy that is needed for chemical reactions and life to happen depends on ATP, which is made in the mitochondrion.

So when these phospho lipids get damaged, we really get stuck and we get in something called the Cell Danger Response. The cell danger response is a normal mechanism.

We want it to happen so that the body can basically say, hey, something's here. I want you to fight this off. But when we have this constant insult by these chronic infections and we're depleting our phospholipids, the buddy never gets this all clear signal.

It never get told it's safe again. And so it can't return back to normal cellular processes. And that is where cell membrane therapy really shines.

What Phospholipids Do for Cells

Cell membrane is the idea where we are healing the phospholipids that have been oxidized or turned toxic and replenishing the body with healthy phospho lipids, helping heal all of this inflammation and oxidative stress in the the mitochondria make ATP again, the cells to be able to communicate that there's a threat and actually be to rid these infections, and then also really replenishing the outside of the membrane so that the right nutrients and the rate hormones can come into the body.

So it may be that we were able cure the Lyme already and that infections or Lymes are no longer there or even mold is no long there. but the cell was stuck in this response.

And by healing the membranes, we're able to get out of that response and the cells are able work again. That's when we really start to see symptomatic improvement.

Or we may have the patient that's just reactive to everything. Mass cells have membrans too. Sometimes in my most severe patients where their mass cells just triggering constantly and we can't even give them some of our best therapies for these infections, healing the membranes is the answer and then we go in and we can actually clean up the infections.

So is it important, so I love the idea of the oil change, right? So, is important when you're going through, and I might be getting ahead of ourselves, but is that important that we stop toxins from the environment seed oils, oxidized fats, things that are going to come into the body and challenge the ability for us to get the phospholipids and the good fats into cell membranes.

Is it important to actually monitor and stop putting some of these inflammatory fats in our bodies while we're going through this process? Are you ready to transform the way you diagnose and treat complex chronic inflammatory illness?

Because what if everything you've been taught to treat separately is actually deeply connected? At the Limebite Symposium, we're bringing it all together.

Join us November 13th and 14th at the Fort Lauderdale-Pompano Beach Resort in Florida, or attend virtually from anywhere for the premier functional medicine conference on complex chronic illness.

This year, we're diving deep into the interconnected drivers of chronic disease, including neuroinflammation, immune dysregulation, COVID spike protein related pathology, mold and mycotoxin illness, breast implant illness pans pandas, and of course, Lyme and other vector borne infections.

Because the reality is, your patients don't have just one of these. They have several. And if you're not trained to

recognize how these layers interact, you'll continue to miss the root cause.

If you are a patient still searching for answers, this is the information that your doctor may be missing. This is how we move from symptom management to true healing.

So join us in Pompano Beach or from anywhere in the world. Don't get left behind. Register now at LymeBytes.com. That's L Y M E B Y T E S.com Yeah, absolutely, right.

We need a balance of some of these fats, but fats can be bad too. And I think there is a little bit of a stigma in society that all fats are bad and that, you know, it's not true.

we need good, healthy fats for our inflammatory process to happen. So things like flax seeds and sunflower seeds, and egg yolks are great sources of healthy fat that we needed for the inflammatory processes to happened.

But putting things like, you know, canola oil and soybean oil into our bodies can actually perpetuate even more inflammation in the body. We want our cell membranes to be omega-3 rich, we want them to DHA rich.

And when they start to become omega 6 rich which is what we find in soybeans and the canolo oils, We start just to perpetuating inflammation even so as we're trying to heal these nice healthy membran- or these toxic membrans, were just putting more information at the bottom.

if we're eating those foods. So I think that's just a really important point to touch on. And then, so it is important too to make sure that we are getting adequate EPA and DHA as the predominant omega-3s when you're doing phospholipid therapy as well, right?

Yeah, I actually have a seed cream that I have my patients make of really good, healthy nuts and seeds, and I'll have them mix their oral phospholipids and their healthy linoleic acids.

You know, like I like to use BodyBio's Balance Oil for this.

How Infections Damage Membranes and Lipid Rafts

I will have to make a nutritious shake every morning so that they are getting their health fats through their diet as well as through the IV phospho-lipid therapy as Alright, so we've established that these membranes are important for overall communication, for our ability to keep infections out of the cell, and for us to be able to bring waste out, bring nutrients in, hormones, etc.

Talk to us a little bit more about the importance of this cell membrane in the body's ability Yeah, so we talk a lot about the structure of the cell membrane.

And in the mitochondrial membrane, the inner mitochondria membrane is where something called the electron transport chain happens. That is the third step of energy production of a cell where we actually make ATP.

And that inner mitochondrial membrane, it needs these folds in them in order for ATP production to actually occur in the electron transport chain to run.

That has another fat that we need to talk about. that fat is called cardiolipin. And cardiolypin is the fat, that actually helps with the structure of the folds and the mitochondria.

And it is also highly prone to oxidation when infections and toxins enter the cell. And one of the things that can happen, and without getting too scientific, but I love biochem and science, is that the body switch to quick, fast energy when it gets stuck in the cells danger response.

It gets in glycolysis instead of running the electron transport chain and oxidative phosphorylation. But eventually we run out of our ATP stores and the body says, no, right?

I need to keep life sustaining. And so it actually takes linoleic acid, which is one of the building blocks of cardiolipin, and it starts to elongate it.

It starts elongated into something called adrenic. Adrenic acid is another toxic, thick, waxy fat. It's good because it can help short term with the structure of the mitochondria, but long term, it's really why our patients are just so fatigued and so exhausted.

We can give them all of our best therapies, mitochondrial support might not be working, and that's when the mitochondria support's not working. We need to step back and we need think, well, why?

And it's really because the mitochondrial membrane is damaged, so that when we give CoQ10, when give ALA, acetylcarnitine, those processes that the Mitochondria are doing that we're trying to support with all those great supplements, it can actually work, we can make ATP.

So, tell our listeners what food sources can we use to get cardiolipin up and or what supplements can be taken to increase it. Yeah. So a lot of the times when it comes with cardiolypin, I really think about the IV cell membrane protocol.

Because at the end of the day, we need to get the toxic fat out. And I really feel like when we get that toxic out, the body returns to doing what we want it to do.

So in my eyes, it's not necessarily that we to replace the cardiolipin, but we tell the cell it is safe to make it again. What does it need as the building blocks to phospholipids.

So the building blocks are phosphatidylcholine and phosphetidylethanolamine in order to… So it will convert into… It will covert….ardiolyte. And healthy linoleic acid.

Okay. Then for our listeners, so what are some food sources of phosphotidycholine, phosphotytolyserine, and phospatidylethanolamine? Where can we get those from in our diet?

So my favorite source is egg yolk. Egg yolks are very, very highly rich in phospholipids. And then for the linoleic acids and things, that's really where the healthy seeds come in.

That's why we give that seed cream to the patients. I actually have them put a raw egg, egg yoke in their shake every morning too.

Cell Membrane Therapy and Diet Support

Wonderful. So it is this impairment of the electron transport chain and it's because we're switching into glycolysis that we have at least kind of chronic fatigue symptoms that see in these chronic infections and complex chronic illness.

Can you elaborate beyond that, like how this all feeds into chronic illnesses in general? Well, I think it all compounds on each other, right? I mean, we need ATP for everything.

We need ATP to even be able to move. And so when we start to get mitochondrial damage and we're depleting our ATP, that's when were gonna start see pain and muscle weakness and brain fog.

Were not gonna be to make the right hormones and the nutrients we'd need. So that where we gonna see thyroid disorders and you know, immune system functioning as well, right, connecting it back to like the lipid rafts where like we're giving all the best treatments to our patients, but the cells are just saying, I just simply don't know what to do with this.

So are there common signs or symptoms that might give a listener or a practitioner a clue that cell membrane dysfunction is contributing or is at like, the heart of this stalled healing response?

I really think about it in the patients where you've tried supplement after supplement. Maybe you had a little bit of progress, but your progress is just really stalled.

We have so many wonderful treatments out here for tick-borne disease, and when they're just not working or when you're extremely highly reactive to everything and nothing is stabilizing you, that's when I think of the therapy.

I'm thinking about a patient that I have right now where I couldn't give her anything orally, nothing. every single treatment I tried on her, even just the most gentle detox support she would have, the more extreme reactions too.

And so we said, look, let's just try a very, very small, small dose of IV phospholipids and let just see how you respond. I actually woke up this morning to a message from her that said she had the energy she's had in months after the two treatments this week.

So, Not everyone responds that way, but I think it's important to think about this in our highly reactive patients too. Absolutely. We'll talk more about the why, let's talk a little bit about how.

What does phospholipid therapy entail from a logistical standpoint? Paint the picture. Someone that wants to go through this. How many times a week? How much?

What is in there? Like what is the mixture? Be specific if you don't mind. So, I mean, the main component of the phospholipids is IV, phosphatidylcholine, and it does have some phosphotidocerein, inositol, anethanolamine in the IV phospho lipids, but I find it very important to do the therapy in an IV form.

You know, we can take oral phospholypids and we get so far with it, But the reason I'm really stressing the ivs is because of this bulk flow concept where we're flooding the body with healthy fats so that we could detox the cells.

So we're replacing the bad fat in the body and the stolen phospholipids out of the cell membrane with the IV phospho lipids, but we also give IV butyrate as well.

And so butyrate is very important to help with byproducts of toxic fat. So, we were talking about adrenic acid. We were talking about the byproduct that happens in the cell membrane, which is called melano del aldehyde.

Those are these toxic reactive fats. And so when you were asking me the question about cardiolipin and how do we replenish it, it's not that we need to replenished it.

It's that, we get the bad fat out through the use of IV butyrate. Replenish the cells with the healthy phospholippids in healthy building blocks so that it can make it on its own again.

I always give everyone IV glutathione. I love glutothione, I think it really helps support detox of all of these toxins as well. And then, you know, just depending on the patient in front of me and what their micronutrient testing says or what other cellular support processes I need, all add in a lot of different nutrients as in their IV.

So how many times a week is therapy? And how long? Like, what is the duration? Is it weeks? is it months? For the typical average person, I am sure it varies per person.

Yeah, you know, i would say I do this in a couple different ways, right? You know I have my patients who are local and I for treatment. In my eyes, the faster we can get the phospholipids in you, because of that bulk flow concept that we were talking about.

Mitochondrial Membranes, ATP, and Fatigue

If someone can come into my IV room four days a week, I want them in the IV For my patients that are local or very highly reactive, maybe we are only doing once a week and giving them rest time in between because we aren't asking the body to do a lot of work and you are going to be very tired more often than not.

It's about a three to four hour IV. So you're in the clinic for three or four hours. We have a lots of other fun little gadgets that you get to use when you in a clinic like our you know, photobiomodulation red lights and our vagus nerve devices, or sometimes we're doing a therapy called neural therapy on you.

So when you're in the clinic, we are basically giving you our best the whole time you are in a clinic. How many really depends on the patient. I've seen patients need as little as 20 IVs, I have seen patient needing 80 IV.

Myself I think I did close to about 120 IV's. In what period of time? So if you're doing it four days a week, I always say you treat for three weeks and then you rest.

Because we want to give the body time to assimilate the phospholipids, to detox the toxins, deliver a chance to kind of recover because we're also asking the liver to process a lot of fat and a And then I always rest for about a month and then re-evaluate.

And during that month, you know, we may be treating the infections. We may doing other things during the rest period orally, but really from the IVs, if we're doing four days a week, I like the body to rest a little bit and re evaluate and see how you're going and determine how much more you might need from there.

Is there a test, like is there any sort of objective measurement to see how treatment is going or when you have, you know, restored proper cell membrane integrity or is it really based off of symptoms and response of the patient?

Are you suffering from Lyme disease or another complex chronic illness and aren't sure who to trust when it comes to herbal supplements? Hi. I'm Dr. Mariah Hinchey, founder of Lime Core Botanicals.

As a naturopathic physician specializing in complex, chronic, infection-driven illnesses like Lyme disease, I needed herbal medicine I could truly trust.

That's why I formulated LIME Core botanicles. where our herbal tinctures are handcrafted in small batches right here in Connecticut. We use the whole herb, never isolates, to preserve the full spectrum of medicinal compounds.

Every single step from sourcing to extraction is done with precision to ensure maximum purity, potency, and consistency. These are the same herbal formulas I used to heal myself and have used for years to help my patients and family members heal too.

And now I'm making them available to practitioners and patients everywhere. Lymecore Botanicals, herbal medicine you can trust from a doctor who lives this work.

Learn more at LymencoreBotanicles.com So there's tests that we can infer with. You know, there used to be a really great intracellular phospholipid test, but unfortunately, the owner of the lab passed away and that knowledge went with him.

We are utilizing right now a couple different tests. I'm liking them right know. We're in this case study stage where we're working on a paper right now trying to publish some data on treatment responses.

And I do think that the testing is working, but it is not an intracellular test. It's a serum test of your phospholipids. So you're making an inference of what the membranes might be doing based on the building blocks that are in the blood.

That's called the prodrome scan. We are using that test a fair amount in our practice right We're using oat testing. We are using some other mitochondrial testing out of Germany to look at mitochondria function and what's going on with mitochondrion function, as well as micronutrient testing and seeing if the micronutsrients are replenishing as we're doing the therapy as to kind of decide.

But more often than not, I'm going off how patients feel. The best day that I have in my practice is when a patient walks in and says to me, I feel so much better.

I'm regaining function. I'm walking again. You know, I have a patients right now who's in a wheelchair and her wife told me the other day, that she was sleeping and she got up and the patient was in the wheelchair trying to take herself to the bathroom, which You know, we don't necessarily want you to do that by yourself, but at the same time, she felt good enough that she could get herself out of bed and into the wheelchair.

To me, that was a huge success. And so that's where working alongside the patient, really listening to them and listening their function regaining.

Therapy Protocols, IV Ingredients, and Frequency

That's how we know the treatment's working. Yeah, absolutely. And that's what I say to both patients and practitioners all the time. Those labs can tell us so much.

It's how is the patient responding? How are their symptoms literally disappearing or coming down in frequency and severity? Just to close the testing loop, though, if you're looking at intracellular levels of, let's say, choline and serine, and they were very deficient in the beginning and you are seeing now, optimal levels of choline and serine, is that at all helpful or is not telling the full picture?

It's helpful. I wouldn't say it's not helpful, it is telling not the whole picture because these phospholipids need EPA and DHA bound to them in order for them to be embedded in the cell membrane in healthy forms and we're not getting a full-picture of are these oxidized phospho lipids, are they not, what's actually being embedded into the membrane.

And that's really the challenge right now since that lab went away is we're not getting the full picture, which is why we really need to rely on our clinical reasoning right.

So do you feel like you have been complete and said all of which you would like to say regarding the actual like therapeutic process? I think so. Okay.

So let's go back more to like the pathophysiology and the physiology. How would phospholipid therapy improve the body's ability to absorb and utilize nutrients as well as in detoxification?

So I guess it comes back down to the cell danger response for me. So maybe we talk about the cellular response and what that is a little bit. I was going to say start by explaining it in the most concise way possible.

Okay, so the cell danger response is the body's response when a threat happens. So there's three stages of the Cell Danger Response. There's the, hey, something's here that needs to not be here stage.

And in that stage, the bodies actually changing the phospholipid structure of cell membrane into a more saturated or thick waxy structure. The second stage is when we're gotten rid of the infection and the body gets this all clear signal and it starts to repair itself.

So it's starting to shift energy production back to healthy energy, production, right? We're talking about, it goes into glycolysis and fossil lipid structures are starting And then the third stage is when that repair is really completed and the body's kind of going back into this homeostatic place and being told, okay, I'm safe again.

I can, function normally. That's happening all the time. It's probably happening to us right now. The problem being is that patients can get stuck. They can gets stuck in any phase really of the cell danger response.

And when we're stuck, in the self danger, response, the repairing. And so we're not getting the proper nutrients. The body's not communicating because it's basically just stuck in this state of saying, I have a threat.

I've a thread. So I need to continue to protect myself. To continue, to shut down energy production. Need to release inflammatory cytokines, which are then going to cause their own slew of symptoms in our body, with all the wonderful herbs that can help calm down.

these inflammatory processes that occur, but they're gonna keep continuing to occur until we tell the body it's safe. And in some patients, we can treat the infections, We can detox the toxins, and the bodies gonna say, okay, I'm safe again, And we'll complete the cell danger response.

But in the patient demographic that I'm seeing, and I think just in post-COVID world too, where we're just seeing patients so much more toxic and so many more inflamed than we've ever seen them, we are not getting that all safe signal because of the phospholipid depletion.

And so that's really my theory that I'm kind of working to try to publish on right now is that by replenishing these phospholipids, the body doesn't keep seeing I am not safe.

That's awesome. Thank you for that explanation. How does phospho lipid therapy specifically help us to pull out of the last stage of cell danger response where people get stuck and actually resolve that healing response?

Yeah, so when we're thinking about all the different stages, we have to think about, one, what's happening to the phospholipids, right? We're saying that they're getting saturated and they are getting oxidized.

Testing, Candidate Selection, and Clinical Response

So the first thing is that by replenishing the phosphorus, which is what is happening in the second step of of the cell danger response naturally by giving people IVPC in and these phospholipids, we're telling the body it's safe again so that it can then enter into the third stage of this cell-danger response when the membranes are healed and the out of glycolysis out, of that fast rapid energy production and back into phosphorylated oxidation into the electron transport chain so that I'm making sustained ATP.

I am going to rebuild my reserves of ATP so the body is not functioning in the survival mode anymore. more. And that's when I really see, okay, now when we come in with all of our great mitochondrial repair tools and our Great Mitochondrial Support, they're working now.

Right. I was going to say they actually work. You can actually utilize them. Okay, so for our listeners, fixing the cell membrane is crucial in pulling out of that stalled cell danger response and moving through that final healing stage.

So I just think that's such an important point to make. What does the research show? And I'm so happy to hear you're doing research, but like, is there a lot of research out there showing how important phospholipid therapy is for Lyme and other complex chronic illnesses?

I think there's some research practitioners that have studied this and published on it. I don't think there's enough. There's a lot of research out there on what phospholipids do in the body.

And there is a a research on there about what happens to these phospho lipids when they're under stress. But in my opinion, there really just isn't enough research.

Well, what do we do about it? And that's the missing piece. You know, How do you know if someone is a good candidate for phospholipid therapy? I do run these tests on them.

I run mitochondrial function testing, micronutrient testing. But it's really your story. You know, I used to do this therapy. Because, I mean, let's be honest, it is expensive, right?

Just naturally speaking, It is. And so I used to wait until the treatments have failed. We'd been treating for years. Nothing was working. I've really changed my thought pattern in the last couple of years, especially after my own journey a couple years ago with COVID, of what if we do this first too?

You know, what if we do this therapy when the patients first come into my office? And I hear the story that they've been sick for years. Does it make treatment work better?

So really, I think, you know the patient demographic is those highly reactive patients, the patience that have been treating and they're just not getting better.

But also, What if you just got your first diagnosis of tick-borne disease? I do find that it saves years of treatment. I was just going to say that, it could save so many years, of pain and suffering.

And even though it's expensive, If you have complex chronic illness, right. It's no matter what your, you know, just doctor visits alone are expensive, to see someone who is proficient in healing these infections.

So, okay. What advice would you give to someone, who's interested in incorporating phospholipid therapy into their treatment protocols? I would say look for practitioners to do it.

I know I'm not the only one. There's other clinics that do do phospholipid therapy. We are accepting new patients at our clinic, at Restorative Health Clinic.

Myself and Dr. Somales, my colleague, both do this therapy at the clinic and I am training my nurse practitioner right now. And we accept patients from all around the country to fly in.

You would need to be able to flying in, but the other thing is, as I did write a book on this, It's called Breaking Through Chronic Illness. And I do go into a lot more of the oral protocols that you could take at home.

If, you know, flying to Portland or you can't find other practitioners that do this therapy, there's some really great tools that can start with, including a whole chapter on a diet that, that You can do at Home to try to implement these protocols as well.

So you're in Portland, Oregon. You're accepting new patients. Patients could come in and see you just for this therapy if they wanted. If they're already working with someone, you know, whom they have a good rapport and love working, they could just come and just have this with your clinic.

Yeah. And that's how I work with a lot of my out of town patients is usually it's another practitioner that said, hey, come see Dr.

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Stein and I'll work your practitioner. You know my goal is just to get you better. So I will work you practitioner to say, okay, come out for a couple weeks, get some treatment, go back to your practitioner, let's work with them to come up with a plan.

And then, you know, usually you're coming back two, if not three times to Portland. All right. Well, any last pieces of advice, anything you'd like to share regarding phospholipid therapy or anything else?

Yeah. I think I just always love to end these podcasts with a message of hope because, you know, being a Lyme patient myself, but also working with this patient demographic every day, it's so easy to lose hope.

And it so is to think, I'm never going to get better or why am I reacting to everything? I don't even want to try anything anymore because I am just going get sick.

But there's a wonderful community of practitioners, Dr. Hinchey, your bringing them together. iLADS is bringing them together. Keep looking for answers, keep thinking outside the box because eventually you find that one treatment where the light bulb just turns on and it's not phospholipid therapy for everyone, it is not antibiotics or herbs for every one, but there are so many modalities and so just keep fighting and keep looking.

Thank you. Thanks for being with us. And to all of our listeners at home, thank you for joining us and until next time, stay positive and remember together we all heal stronger.

We'll see you next. If this episode gave you an answer, brought you new insight, or made you think differently, subscribe to the Lime Bites podcast and share with someone who's ready to take control of their healing journey.

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