# Health Benefits of PEMF for Lyme Disease Transcript

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## Introduction to PEMF and ATP

Since PMF therapy penetrates cells completely, totally, it activates mitochondria. So it increases mitophagy. It increases autophage and it stimulates the whole ATP cycle.

So magnetic field therapy, so ATP by itself, adenosine triphosphate is the energy molecule of the body, right? It's produced by mitochondria. So mitochondrion that are poisoned or dysfunctional can't make ATP, can make enough ATP to respond to the demand for ATP.

Any inflammation is an ATP hog. It just starved for ATP. Some magnetic fields increase the production of ATP from ADP but ATP by itself is not useful.

Welcome to the PEMF Effect, where breakthrough science helps take control of your health. I'm Dr. William Pollack, and I am here to guide you in tapping into the power of PMS therapy for recovery, vitality and total body wellness.

From overcoming chronic pain, optimizing brain health, boosting energy and aging with strength, this podcast is your path to cutting edge solutions for lifelong well-being.

If you're ready to move beyond symptom management and tap into your body's natural healing ability, you are in the right place.

## Podcast and Summit Introduction

Let's dive in. Today's episode is a previously recorded session from a summit where I was a guest speaker. Hey, everyone. Welcome back to this episode of the Healing from Lyme Disease Summit.

I'm your host, Dr. Tom Moorcroft. You're in for an exceptional treat today. We get to hang out with Dr. Bill Pollack, Dr William Pollock, MD, a good friend of mine that we've kind of been developing a relationship over the last several years.

He is an expert and kind the world's foremost expert in PEMF. And it's a topic that comes up so much in the treatment of Lyme disease and recovery from any kind chronic illness, protecting your health.

We've sat down and had conversations not only about the science and the practical application in some of our sick patients, but also just broader conversations about promoting self-healing, getting back in touch with our environment, all the things that we talk about all of the time so that, we're not connected with only our internal ecosystem, were connected to our external ecosystem.

With PEMF, it can help us when we are stuck somewhere, and even if we just want to supercharge things. Dr. Pollack, I'm super excited to be able to You know shed some light on such a complicated topic.

And I can think of no one better who knows more and can actually put it into like terms that we can both physicians and the lay public really understand so thank you so much for being here.

Well thank It's always so much fun because I love talking with people who we were talking right before we popped on. We're going to, at the end, we'll let you know about some of Dr.

Pollock's books and references and resources that are available to learn more about PEMF. And one of the things he was talking about is like, well, if you want to geek out, you get this book.

## What PEMF Is and How It Differs from EMFs

If you kind of just geeked out a little bit and you really want it to get more practical application, without the super geek effect, you would get this other book.

He really knows how to serve our population so well. Today, I'm really excited. We decided we're going to talk about PEMFs and how they have 27 different actions that could help heal the ravages of Lyme disease.

A lot of times, it might augment a title of a talk or something, Bill, but I love this one. One of the things I'd love you to maybe tell us about is like, what are PEMFs and maybe, tell a little bit about your backstory, how you got into it, and then we can dive into how we all these different actions and how these really can be helpful in people suffering from Lyme and other things like that.

Well, thanks. My background basically is found in medicine. And I was a medical director and a chief of family medicine for a big group in the New Jersey area.

And we shared patients, we made rounds together as a group. In the span of about a week, within a we had two admissions to the hospital, people were almost critically ill from GI bleeding, gastric bleeding.

Common factor was ibuprofen. So I started to ask myself, this is stupid medicine. I don't have any better solutions and narcotics are not a better solution.

Surgery is not better a solution and so on. So what could I do? So I said, okay, well, I've had this in my back pocket for a long, long time. Now I'm going to go do it, which is to learn to do acupuncture.

I studied acupuncture and then at the end of my training, wanted to acu-puncture, but nobody wanted do needles. people didn't want needles. They didn' understand that needles were very thin and they were not very painful, but some people did want needle.

So I had to find a different way to do acupuncture and I discovered magnets. And the more I worked with them, the mor I became sort of enthralled about what they did and it was not just acupuncture.

That's one of the clear benefits of PMF therapy is acu-puncture. Every time you lay on a magnetic pad or mat, you're stimulating the entire acuppunture system in the body.

So rather than having to figure out which needle and which point you need or which meridian you needed at any given time, one of the ideas would be just treat the whole body and the body will take care of itself.

It's one of my favorite concepts and everyone at the summit has probably heard me say it ad nauseum, like really like support the body's self-healing mechanism.

So, you know, one the things about this is maybe you could define for a sort of what a PEMF is. And then I think if we're gonna define what that is, maybe we should also dive, dig into what EMFs are.

Because I that like, we hear one as probably positive, We hear the other one is probably negative. And, you know, if we can compare and contrast and just we have a good strong jumping off point for the rest of the conversation.

Well, let's start. That's a Good one. And that's very important. Get the elephant out of a room right away, right? Because that is the first thing people ask me very often.

But what about what? About EMFs? They're dangerous, et cetera. We hear about 5G and 7G, and 10G. Whatever else is coming. EMFs, which I call environmental magnetic fields, they are electromagnetic fields but they're environmentally produced and those environmental fields are primarily microwaves.

Microwave towers, cell phones, Wi-Fi, all of that is EMf. And they're dangerous because of the fact that they are

microwaves. And the problem with microwavs is that the get absorbed by the body.

They don't pass through the bodies because the wavelengths are too short. So they get absorb and because they absorb they then cause heating. Which then causes DNA damage, DNA effects and heating of tissues.

So that's the purpose behind a microwave oven, right? It's to heat. So you're cooking things. People who put a cell phone to their ears and hold the cellphone there, when they take it away, you can clearly see the ears quite red.

And the other ear is red too, but not as much as the primary ear. If you have a cellphone attached to your head for hours and hours at a time, we know that there's an increased incidence of acoustic neuromas and people will keep the cellphone to one side of their head all the time.

But we should not be doing cell phones without the earbuds, preferably not even earbuds. Preferably acoustic, just on voice. Right, like a speakerphone, yeah.

Speakerphones or other ways of broadcasting, the tubes. Yeah, air tube. Air tubes, but they're not very practical. You can't hear them very well. So I just put on Voice.

EMFs are broadcasted in the environment. They're like radio waves and television waves, and radar, sunlight, color, lights, etc. They broadcast in the environment.

So they go on forever. And they are wavelengths, like waves in a pond. PEMFs are very restricted. That's what I call open loop. they don't come back, they won't close on themselves.

PEMFs on the other hand are created by current flowing through a wire. So let's say my thumb is the line, but the wire carrying the magnetic, carrying current.

That current is then producing with every pulse of that current, that a current that is producing a magnetic field. But that magnetic fields goes up and it comes down.

As the current goes, magnetic fuel goes out. The magnetic feel basically is collapsing on itself. It's always opening and collapsing, opening, and collapse.

And the stronger the magnetic field, the bigger the, stronger, that current voltage going through that wire, a stronger than magnetic fields. So you could design magnetic feels will basically go right through the body completely.

Because they're very long, you know, they are not a wavelength, just a pulse of a magnetic feel going in and out of the. And that pulsation then creates charge in the So we know doctors are aware now of, many people are now aware also of devices called TMS, transcranial magnetic stimulation that are used for treatment resistant depression and are FDA approved.

Well, their sole purpose is to replace ECT, electroconvulsive therapy. Right. And they're much safer than ECT, but their goal is to produce current in the brain and that current then wakes things up.

## Intensity, Frequency, and Treatment Depth

Now, while they think that they are only stimulating one part of the left prefrontal cortex, actually that. Current is going through the whole brain. So the effects are not just in that, that pre-front cortex area.

The effects or through. So the magnetic field spreads through the whole brain, the charge production spreads the hole brain. So that principle of creating charge is exactly the principle that we rely on.

And this is why I basically tell people that intensity matters. The intensity of the magnetic field matters because it's the intensity that magnetic fields that produces a charge in the body.

So the way that charge is produced in a body is that it is interacting with all the ions and all of charged molecules of tissues of body and as the magnet field passes through those tissues, it goes all way through without obstruction.

Magnetic field is like the wind in trees. It doesn't stay in tree. It starts to move stuff, but it keeps on going. So we do the same thing with magnetic fields.

We know the magnetic field by its actions. You talk about the 27 effects of PMFs, so we know it by it's action. But what it is doing is increasing charge in the body, that that charge is used by the buddy.

The magnetic feel doesn't do that work. It's inducing charge to the party and the bar uses that increased charge then to do whatever work it wants to.

In other words, I can't dial of those 27 actions of magnetic fields, a single action, circulation, inflammation, pen reduction, acupuncture. The body is going to take that signal and do whatever it needs with it.

And the body prioritizes what it's going do based on what's easiest with the magnetic field is what the tissue is, what pathology is. So the bottom makes the decisions on why it is gonna do with this new energy, this activation that we've just given it, it just wakes everything up.

Are you tired of living with chronic pain? Medication only masks the symptoms, but real healing starts at the cellular level. I'm Dr. William Pollock, the leading expert on PMF therapy.

Pulsed electromagnetic field therapy is a science-backed, drug-free solution that helps reduce pain, speed up recovery and improve overall health, right from the comfort of your home.

Take advantage of an exclusive 10% discount on DrPaulik.com PEMF Systems. Visit DrPaulik dot com. That's D-R-P-A-W-L-U-K dot come to register and claim your savings.

This limited time offer is available only to registered listeners. Don't miss your chance to experience the benefits. Terms and conditions do apply. Don' just manage pain.

Transform your health. Visit DrPolitic.com today and let's get started on your healing journey together. I mean, this might be one of the reasons that I've loved it since the first moment I'd been on a pad.

And I actually even have one on mine right here with me because I keep it at my desk for when I'm at the desk longer than I want to. Or, you know, but it is interesting.

Like a lot of like I kind of, like, tweaked my my knee that was previously injured in sports stuff, a few weeks ago. Then it's like. I put it right over it.

It's all kinds of other stuff happens first. questions that kind of come up for me is because I mean this is one of the things that like with stem cells osteopathic treatment and even like acupuncture that you mentioned so many of our healing modalities and I think this Is so key for the people in our lime community is that the body is going to take the charge the medication, the herb, and do with it what it needs to do first.

Now, certain medications in particular may target a certain area, but still we get results that we're not really expecting all the time because the body is so unique and so wise.

What about like, you know, because we I, we've talked in the past about different machines that I've had and other people have used. And, what about, like frequency and then of the different fields or position on the body?

I mean, can these help us move in a certain direction of healing? Or is it just kind of like we just need to get to high intensity and and make for it to work and let the The problem with frequency is that every molecule in the body has a frequency.

And the range of frequencies in tissues of the bodies is vast. It goes up into the gigahertz range. Even the bodied produces radio waves as well. To try to figure out a frequencies, when you say, okay, I'm gonna pick 10 hertz and I am gonna aim this 10 Hertz at a cell.

Well, how many of functions of a cells are based on 10 Hz? Very, very few. Now there are harmonics. So there multiple tracks for that 10 hertz to multiply itself and different effects downstream.

But the thing is, is that ten hertz is not the only frequency. Picking the frequency, and this is one of the problems that I have with rife machines. And I think rive machines work, that principle makes sense.

That's all based on resonance. but pick the frequency. And if you look up the books on Lyme disease, for example, or you'll look at the book on brain injuries or cancer or other kinds of infections, there is not just one frequency, they give you a bunch of frequencies and how are they discovered?

By an error, not by controlled research. So what happens is that why do you have five frequencies for calcium ion resonance? because there are more than five frequencies for calcium.

And it depends on where the calcium is, the tissue that it's in and what it is combining itself with and so on. So I think frequency fundamentally is way more complicated than it needs to be or can be.

As a result, it was very hard to pick and be right. Now, another factor relative to frequency. Frequency is again like EMFs. are broadcast in the environment.

So frequency is a bit like that. Every molecule, every color has a frequency. It's an open loop, right? It basically just goes out into space. What we're talking about then is trying to confine the frequencies or the pulse rates, we call them, into the particular target.

You can design, say for example, if I do 10 Hertz, let's use that as an example again. That's a very common frequency for healing. Let's say you have to go from zero to a hundred.

let say, you're climbing a ladder and it's going to take you X amount of time to climb the ladder from 0 to the peak. So let us say that time is five minutes, two minutes.

Okay, and that frequency, that pulse going up to the peak of the ladder is going to take that amount of time regardless. And so therefore, if I, let's say that's 10 Hertz, right?

Take 10 cycles per second to get there. Let's, say I decide done doing 20 cycles for second, much faster. You're not gonna get to peak. You cannot achieve the peak in that time, that short a period of time.

You're having the amount of for you to get to the. Right. Because you're the time then you decrease the intensity because the top of the ladder is the that's what you are aiming for, the So again, as you change the frequencies, you're changing the intensity.

And so very often, I have a very hard time differentiating intensity effects from frequency effects or pulse rate effects. Is it the pulse right that's doing the job or is it intensity that is doing that job?

And sometimes it's a combination of both, but there's very little research holding those values constant. So in other words, when you're designing magnetic field devices, there are billions of permutations and combinations, billions.

## Choosing Devices and Matching Intensity to the Condition

That's an impossibility for practical research. But my experience then with 30 years of doing magnetical therapies is I have discovered that intensity makes the big difference.

It's not the frequency so much. And so it's so interesting because so many of the devices that I've kind of seen over

the years either have like one setting or eight billion, like not literally eight million, but essentially a minimum of a hundred.

I'm like, what the hell one do I even use? And it like to me, it was always like well, I was cranking up the intensity just because like for each person for what it felt like they could handle when you're in the room with them or if they have one at home working to adjust that.

When you say intensity though, what are you looking for? Cause I mean, I know one of the reasons that so many people come to you and consult with you in your team, grab your books and such are because you're like no holds barred, no BS, like here's the research, this is how it works.

And when we're looking at different machines and not to get, we don't have to, you can do that on the consultation time and what to buy and whatnot, but I'm mean like from an intensity perspective, is there a certain, minimum sort of power, if you will, that your device needs to be able to create?

Or should I be redefining the words? All right. So if we take those 27 different actions, there is not enough research to say what the optimal signal is for each of those actions.

But the one I tend to work off the most is inflammation, because almost all conditions, all health conditions including aging, are all related to inflammation.

So inflammation research has found, in fact, that 15 Gauss, Gaus is a measure of magnetic field intensity, G-A-U-S-s. So 15 gauss is the optimal magnetic-field intensity to decrease inflammation.

Now, this is all done by the adenosine receptor, which sits on neutrophils. And neutophils are where? everywhere in the body, right? Where are they not?

The cells themselves, so what happens then is if the goal is to give you 15 gauss to provide the optimal magnetic field intensity to work at the adenosine receptor, then you have to do the calculation like we do with radiation therapy.

You have the calculate the dose that you're trying to deliver into that part of the tissue. So 15 Gauss would work superficially just on the surface of But if you're going deeper into the body, the other side of the wrist, you have to then calculate the loss of that magnetic field over that distance.

So a 4,000 Gauss magnetic fields will drop off to 15 Gaus in four inches. That's pretty interesting. Four to six inches, so if we try to treat across a brain with neuroborreliosis, then you'd have calculate that the magnetic intensity to be delivered on the side the brain.

The good news is the body ignores what it doesn't need. So in other words, if you exceed what the needs, the buddy basically ignors it. The goal then is to deliver 15 gouts across the brain, or across a lung, across shoulder, hip, belly, liver, heart, whatever.

You always do that calculation. My book, Supercharge Your Health, has a table. that shows you the intensities you need to deliver 15 gals at a distance.

I also have it on a blog on my website, drpawlik.com on adenosine inflammation and pain. So adenosine, inflammation, and paint. And that table that gives you objectives for what you should be getting to target deeper into the body.

Now, if all you're interested in is treating a tennis elbow, you don't need a high intensity. All right, you don't need some, maybe you only need, well, a minimum of 15 gouts, right?

But if you're going to say half an inch into the body, going into tennis elbow area, it's very superficial. So it was like within a quarter inch, that may be half and inch depending on how much of an area around that tennis elbows

involved with inflammation.

Let's say you need 50 gous or 60 gouse to do an adequate job of a tennis album. But then who doesn't need anti-inflammatory treatment in their body? No one I've met.

The person who has a tennis elbow has need for prevention. That person with a Tennis elbow, has other problems usually going on as well. It's rarely just a tennice elbow problem, but they're ignoring other things because they are not interfering with their lives.

They say, I don't have to worry about that. Let me just focus on the tennis elbows. So then you buy a little device like you have, which is perfect for a tenis elbow.

That's 200 gauss. But that's a nice magnetic field intensity and it will do superficial things pretty well. Um, but it also interacts with the acupuncture system and interacts, with a nervous system to do other things as well in terms of tuning the body or tuning, the brain.

Yeah, I think it's interesting too because having like a whole pad that's much stronger or having the ability to move a smaller thing in different places and travel with it as I do quite frequently.

It's nice. And also like I find that you can put certain things in certain areas if you're working with a practitioner to know how to stimulate different systems in your body.

I guess the other question though is like, Even just looking at your website. There's a lot of different systems out there. If I go beyond your stuff there's even a gazillion more and I know that you vet what you work with, which is why I use you as my primary resource and all this.

And then I just go check the research because you're just referring to the which is great, which to me, as a scientist, the most important thing, and then adding the art of the medicine on top of it, obviously, is how we treat our patients and our families.

But what types of PEMF systems are kind of like the best ones to look at for healing? I mean, there's things that set one apart from the other? Well, this is the Lyme Summit.

Right. So to took a Lyme disease, then when I talk to a lime, an individual Lymedise I know it's a system problem. Yep. It's not just a heart problem or a brain problem, or skin problem our gut problem right.

it is a System problem so that while we want to treat a specific area that may be a particular problem like the brain. but we still want to treat the rest of the body.

## Pain Relief, Healing Phases, and Overuse

Because if you don't treat, the of body, you have to maintain a healthy body for the bodies resources to be able to marshal where they're needed efficiently.

If you've got too many fights going on in the all over the place, then the doesn't have enough energy to get where it's really focused and needed. So I usually aim for intensity.

and I've compared all kinds of devices and that I look at price, I like convenience and ease of use. And so my book, Supercharge Your Health has tables that tells you if you wanna treat locally, do you want to do mild, or do want do moderate, you do wanna do strong.

You would treat regionally, so you have to treat a chest or a belly. then do you need, again, weak magnetic fields, medium or strong? If I'm gonna treat a belly, unless I am treating the skin on the belly that's a big area to have to go into.

It's not only deep, it's also wide. So you wanna get the whole belly then you're gonna need a stronger magnetic field. And so we're talking, typically we are talking I would say a minimum of about 5,000 dose.

If you're doing a device that only delivers 2,000 gums, you are going to get some benefit, but it's going take you a lot more time. You're going have to do a little more treatment time to give enough benefit and quickly enough at that.

So when you go to a doctor's office, if the doctor has a machine, they usually have a very expensive machine that's high intensity, so you can feel it right away.

And you get the results right way. because you're paying by the minute to be in that doctor's office to get treatment, right? So you need to notice that it's doing something and you get results quickly.

But you can't just do a five minute treatment or 10 minute treatments and get result. Because healing takes time and we need multiple treatments to do the job.

We know that with physical therapy, we know with sports training, athletic training. You're not going to get off the couch and run a marathon just by doing a few jumps and using a rope, skipping the rope.

That's not gonna be enough. You don't have to train for weeks. and increase and decrease and increasing increase. So that you could eventually get to the goal you're trying to.

We have to know the body, we have the pathology, the depth that we're try to treat, and exactly what we are treating. Once you understand that, then you have a better sense of the parameters you you had.

The book, Supercharge Your Health, I review 80 different health conditions. And I provide a recommendation and a protocol for those 80 conditions and I also recommend supplements.

It's so good because you have there. I mean, there's thousands and thousands of articles out there on PMF, it seems like, and definitely some better than others.

But there is a lot of misinformation, I think, out. There and having a protocol that you can refer to and one that's maybe disease or illness specific and You know, I think it's just such a useful piece of information, because it is confusing.

You For Lyme, I mean, to me, again, it's a system thing, just like you said. It's certainly a place where you see lots and lots of different things going down and people are reducing it down to certain symptoms and taking things to treat it, which I find is kind of like whack-a-mole a lot of times, and we're not getting there.

But of all the symptoms that you hear from all those patients over the last 30-some years or whatever, What are the ones that PEMF in Lyme and co-infections, mold toxicity, are there any ones it really jump out as ones they might notice sooner than just like, hey, I got to train for five months or six months on my mat before I see it?

I think that's a good question and a very important one. The most common use of PemF therapy is for pain. Now we're not, we are not just talking about Tylenol for pain.

We're talking not only Tyleno. So that's important. Maybe not to you something that reduces the pain right away, but the goal, the gold is to heal the cause.

You can't heal because then you're going to be relying on something, just a numb pain for the rest of your life. I call it numbing and dumbing. That's what we typically do, but we're trying to heal the problem.

So you get some pain relief very quickly with PMF therapy, But it's going to come back unless you actually heal. The cause of the healing, the cause takes time.

I describe PMS therapy as basically three phases. Physiological response, functional improvement, and healing. Healing is part of all three of those. Right.

And functional improvement is even more related to healing than a physiologic response. So physiological responses, improving circulation, a physiological response is reducing inflammation.

A physiological responses is, let's say, well, it's not stem cells is basically a healing response, So decreasing inflammation, improving circulation and pain reduction.

Those are physiologic responses that happen fairly quickly. After that, then we go into functional changes, which relates to healing and maintaining a physiological response so that it doesn't sort of back off.

So if you keep doing the therapy, that physiologically benefit, the functional benefit begins to stay. It now begins the last, it does not regress. But that all depends on healing.

Even though you're done, even though your tennis elbow is gone, have you healed the tissues, right? You've taken care of what you sense and what we sense is actually pretty numb.

That's pretty dumb, actually. We're not that sensitive, all right. Our nervous system has to have a signal get to a certain level for us to even notice it.

And before it even gets to that level, that tennis elbow has been brewing for quite a while until finally it gets a point where it says ouch. So when you're done with the oug, you are not done yet.

And I had a perfect example of this, I have a hockey goalie who lost his scholarship, his university scholarship because he got a groin injury. He did the usual things for about two years, physical therapy, all kinds of devices and so on.

I got him a magnetic system like the one you have there. It wore constantly, continuously. So literally within two weeks, gone. After two of years of fighting with all this pain was gone, so what did he do?

Being a young guy? Stop using it.

## Biofilms, Persisters, and Infection Support

No. What he did though, is he started working out way too much. Because now he was pain free. So without understanding pathophysiology and healing responses, he overdid it too soon, too fast.

Right? And so basically he re-injured. Your body was designed to heal, but illness, chronic disease, stress, injury and time can slow that process down.

What if you could restore your body's natural ability to recover, recharge and feel its best? The key to healing is giving your bodies the energy to repair itself.

PEMF therapy does exactly that. Recharging your cells, improving circulation, reducing inflammation and helping you function at your best. For decades, I've studied this technology, worked with hundreds of medical professionals, and helped thousands of people reduce pain, regain energy, take control of their health.

However, not all PMF devices are created equal. No one size fits all. We offer personalized consultations so you can find the right device for your needs, backed by real science and trusted results.

If you're ready for a real solution, let's talk. Schedule a consultation at drpauluk.com. That's P-R-P-A-W-L-U-K dot com, because real healing starts at the cellular level.

Right. And I think that this is such an important piece of the stages of healing through this PEMF protocol, because

this what we run into with our chronically ill patients forever.

They just want to get a little relief and then they get the relief. It's like, oh, that means I can go or I could crank up my protocol. I love talking about the functional improvement and the healing response because It's so critical.

It is a longer play. You're that important to heal. I always tell people when they go back, do about 70% of what you think you can do and probably even 50% because you're going to overdo it, but we want to do that.

One of the things so interesting, Bill, is we're talking about circulation and inflammation. These are things that everybody talks about in chronic illness.

We bring down that inflammation, we want to improve our circulation. So maybe our Raynaud's goes down, but also we wanna be able to get to these small micro areas that all these organisms are hiding and they have messed up and we've got functional hypercoagulability and blah, blah blah.

But one of things I find interesting about PEMFs is, and kind of, the question has to do with, We know in Lyme disease that not only are we trying to improve circulation and get rid of inflammation, obviously, but we're looking at things like biofilms.

We're Looking at persister forms of these organizations. There you go. Organisms. And then also You know, even antibiotic and herbal resistance. I mean, is there any work that you know of that's been done with PMS that kind of, you can support us in this area of persisters, biofilms, and even antibiotics resistance?

Well, I was not all that familiar with biofilm and Lyme disease. But I just read a couple of articles about this, in fact. that skin, there's a skin infection.

You can get like a granuloma kind of infection from Lyme disease in the skin and you can't eradicate it because it's resistant to antibiotics. So the biofilm then basically creates a microcosm of an environment where you cannot even culture the Borrelia out of that lesion.

because it's insistent, it is dormant, and you try to culture it, but it doesn't culture, But it resistant to antibiotics. In other words, It's not going to heal because you can't get rid of it.

It turns out that PMF therapy is actually very, very important for biofilm reduction. Now, is it the only thing? I think you should still do enzymes. You should do anti-inflammatories.

Do all the normal things that we would do. But now activating the treatment with the biofilms with magnetic field therapy, because the magnetic fields go right through the biophilm.

And it turns out that the magnetic fields help the body by itself to fight infection. Things called nets, traps, net traps. So basically the neutrophils that trap bugs or traps infections or pathogens.

They actually put out like a fibrous network into the surrounding tissue where the pathogens are in that tissue and they trap them. That's why they call traps but PMFs increase those trap functions.

and they also decrease motility of the organisms in the body. So, and inside a biofilm, what do you have? You don't just have Lyme. You have a whole lot of stuff in those biofilms.

And they're all talking to each other and then sharing genetic information on how to resist. Magnetic field therapy then allows access to that bio film with antibiotics, with natural antibiotics with medication.

So I know I've had experience, you've heard it, I'm sure as well, people get months and months of IV antibiotics and they just don't get better. Even with IV antibodies, which should penetrate the biotomes, but they don' So now magnetic field therapy is going to activate all of this and make them work synergistically together to get a much more effective response and much, much faster.

I think that's kind of the holy grails. How do we get in there and use everything together synergistically? A lot of it, I love the word to use, activating, because that is what it feels like to me.

When we have people, it's like they're doing all the right stuff. but maybe they don't have the juice or maybe, they can't get in, then I think that that's a critical component.

I guess one other question too is like, and this is sort of like the Pandora's box of questions, but it's like PEMFs and mitochondrial function.

## Mitochondria, ATP, and Cellular Repair

You know, I mean. Well, again, since PMF therapy penetrates cells completely, totally, it activates mitochondria. So it increases mitophagy, it increases autophagy and it stimulates the whole ATP cycle.

So magnetofil therapy, so ATP by itself, adenosine triphosphate is the energy molecule of the body, right? It's produced by mitochondria. Some mitochondrion that are poisoned or dysfunctional can't make ATP, can make enough ATP to respond to the demand for ATP.

Any inflammation is an ATP hog. it just starved for ATP. So magnetic field increased the production of ATP from ADP, but ATP by itself is not useful. It's a supply.

In order to release the energy from ATP, you have to strip off one of the phosphates and that's done using enzymes. right, in the cells and in membranes of the cell.

And so magnetic field therapy not only increases the production of ATP, it hydrolyzes the ATP with ATPases, enzymes. So it strips off one of phosphates and then recycles it again.

Magnetic field therapies constantly helping the body to recycle ATP. But there's a problem. ATP is used up extraordinarily rapidly. Every beat of the heart basically uses up the ATP that's available at that moment.

So if your heart rate's going too fast, you can't produce enough ATP. All right, so magnetic field therapy augments the production of ATP even in a starving heart.

Not only starving for circulation, but damaged by inflammation, decreased perfusion, and decreased mitochondrial function and ATP production. It augmets the value of heart, I have a blog on my website about heart failure.

And when I was doing the research to produce that blog, I just blown away by the complexity of heart failure and how it turns out that magnetic field therapy basically helps with virtually all the components of hard failure.

Again, magic. Well, it can be viewed as magic when we don't know what those parts are. And the part I love, I loved asking the question about mitochondria because for me, one of the other pieces that we're always looking for is how to clean up those cells that you talked about, how do get mitophagy to occur?

How do we promote autophage, clean-up inside of cells? And a lot of these organisms we are all dealing with are intracellular pathogens. that the cells are just kind of like not working optimally, they're just leaving them there.

So anytime we can get the cell to kind take out the dirty laundry, so to speak, makes such a big difference. And then to your point about the magic, I always ask, you know, and I tell everyone who's viewing, we ask like folks to just give us a couple of questions to help let us know what they think is important about their topic.

and then I get to do my own research and come up with my questions. You're one of the people I love when you send things in because one your questions that you share with me is, can PEMFs raise the dead?

So I'm assuming that I can't wait to hear what this is about, but also I am assuming this has to do something with the magical components of PemF. Well, no, I have a disclaimer.

PmF therapies do not raise to the death. But there's two kinds of death, right? There's a dead dead and there is a living dead. And we're not just talking about dead, the whole body being dead.

We're talking cells and tissues at different stages of destruction, of immolation, a breakdown, dysfunction. And so that's the living dead right next to, if you cut yourself or burn yourself, that tissue is dead where you put, where do you cuts through that?

Tissue. That tissue was dead Now the tissue around it is damaged but not dead. And if it's not treated correctly, if you're not given the proper support, it will die too.

So what you have to do is support the living dead or the near dead, right? So magnetic field therapy definitely raises the dead that has the chance to revive.

As you look at the whole system though, as you've been talking, I'm just thinking like, wow, so many people I talk to and work with on a daily basis, they probably wouldn't come in and say, "I feel like the living dead." But if you ask them, most of them would say yeah, a lot of times they do.

In fact, like I talked to someone earlier today, she's like look, For the past four months, I literally thought I was going to die. Like, it just got so intense.

And, you know, she knows the symptoms she's experiencing are not life threatening, but they suck, and you walk around feeling like… They make you depressed and they make your wish you were dead.

Exactly. So I really liked that analogy because, and the cut is really important because it's like, this is one of the things I tell people all the time.

If you wanna know how to get better from Lyme, please work with a highly trained expert, not someone who, if you're sick for more than just a little bit, don't just start with the newbie.

## Finding the Right PEMF Device and Support

Let's get with someone has experience in this. And if not, like we even have our Lyne practitioner training certification program and our mentorship in case you new, but you want to have backup.

And this is one of the things where if you're gonna go buy a PEMF device, if there's different costs, there is different intensities, often you get what you pay for, or often the high price tag doesn't mean you getting what pay you for.

That's why I always highly recommend someone to reach out and work with someone like you, because if I have a question, I'm calling you. I can do some research, but it's not like the thing I do day in and day out is research PemF.

And I just think, The point about understanding what's alive and what part you know on its way out or on it's way back in depending upon how we support it in the body.

You need a team who's actually studied that to really know that. And so I just think it's just a great highlight of why people should be reaching out and asking for the support.

Because I have a couple of PEMF devices. They're purchased for different reasons, especially the one that I can travel with. But man, you can waste a ton of time and money.

So if someone's looking, I appreciate so much you sharing all this information. Sounds like we could go on all night about this. But most importantly, if somebody wants to get that support with PEMF therapy, what maybe is the best for their condition?

What is maybe the better for the financial situation? And maybe they need even more than that. I don't know.

Where can they find out about the work that you're doing so they can get the actual right support?

Talk about confusion, so my website is totally loaded with information and it's overwhelming. It doesn't give you a specific recommendation for a specifically problem, maybe not the variations of Lyme disease.

So we can talk about Lyne disease, but then we have to talk your particular aspects of your Lymen disease not to mention you. You brought yourself into Lyman disease right?

Sort of. Yeah, like you were alive and then you got Lyma disease you know. you were alive and you had all these other things going on as well, right? So now you have Lyme disease layer on something else.

So I recommend getting my book, Supercharge Your Health, supercharge your health with PMF therapy. That's a $29 investment. If you're gonna spend $5,000 or $10,00 for a PMF device or even $2, 000 for PME device, $29 is well worth it.

And that goes through a lot of protocols and it gives you a lotta ideas. Now, it's still not necessarily enough for you. It's not, how do I do this today?

How do do it tomorrow? Do it the day after? So for that purpose, we offer consultations. So on my website, drpauluk.com, You go to the homepage and then on the right side of the home page you'll see consultation, request a consultation.

You click on that and it'll give you a form to fill out. Fill out the form and apply for a consultations. Now, if you're looking to not have to do any work, you are looking just to give a magic bullet, a pill, and that's it.

If you want to be done, PMF therapy is not for you, because you have to use it. You have apply it, you to work at it just like you do anything else to have adequate results.

And beyond that, the combination of those two things. Now the website, again, has a lot more blogs on individual topics and it gives you some basic information on how PMO therapy can help that particular condition, but it's still not the answers, it is the solution for your.

So the consultations do two thing. We get to know you. at what you're aiming to do. But we want you to be prepared. Don't waste a precious half hour of a free consultation if you don't prepare yourself.

but we recommend certain things that should be watched or read before you even come to the consultation. And having the book would be a big help, not necessary, but it would a help.

Then with the consultations, once we get to know you, then we say, okay, here's your conditions, Here's what you can expect, and here is the device that's probably gonna get you the best answer.

Now, if you're expecting to solve your problem for a $50 device, Lyme disease is not a 50 dollar solution. It's a lifetime commitment. Well, and I think that one of the things I really like about the PMF devices is they are kind of lifetime purchases as well.

And, you know, that's the thing you take care of them. One of my goals, Bill, has always been not to be the doctor who treats chronic illness, but the person that helps people be chronically well, So they can go out and shine their light so that they go do whatever it is they're passionate about.

And the thing I love about PEMF is wherever you're at, it can support you getting to the next level. Then once you are there, you can use it to help maintain yourself, like you were saying, along the way.

That's one of the most important parts. your blog to me is inspirational. And if I need to find like, and for me, somebody's asking me a question, do I refer them to you?

Or do they even want to go down PEMF right now? Maybe it's for condition for a friend that I don't might not be the expert. That's where I can go get a quick look.

But I also have, you know, decades of experience and being trained in how to read research so I Can take your you, know and I Also know you so i know the quality.

But the blog to me is like a quick informational piece and it's a place of inspiration. And it allows me to know the possibility. Then your book is kind of like the DIY version or just getting to it a little bit more.

But I think the consultation part is where, which separates you from so many other people. That's really like what I love about my job is being able to dive in with that individual and find out what their goals are so that you can match their goal and their lifestyle with the proper device, because as you said, it's something you need to use on a regular basis if you want to get the results.

And to me, the other part about PEMF I'd be remiss if I didn't say is freaking easy. I mean, a lot of times you can put it in your pocket, you could lay on it, whatever, depending upon your device.

And yes, yes you have to commit to the time, but if you're going to do this, then you are so worth it. The people we're working with deserve health and to optimize it and, to me, it's just one of the hidden secrets.

It's also a place that other people recognize our hidden secrets. And there's a lot of baloney out there. I feel free to say that because I've talked to a lotta people about it.

So I would just say to everyone, go ahead, Bill. That's the point I want to address. In fact, that's really critical point. There are lots of multi-level marketing companies out that are selling PMF devices.

A lotta pressure. And they sell you a great story, but they're not doctors, they are salespeople. And their totally trained on that machine. So they don't know much else.

Because I mentioned intensity is really, really important. Intensity matters. If they cannot tell you what the intensity of their machine is, why would you buy it?

Why would buy a car when you don t even know if it has an engine or what horsepower is? Right? I mean, you got to know what you're buying and they won't tell you because they don't want to talk about that because that's not important to them.

What's important for them is frequency and it's been around 25 years and improved circulation. But what else does it do? Does it get deep into the body?

Right. Doesn't get deeper into their bodies, especially if you have Lyme disease. Forget about it. Well, and I'm glad you say it that way because there's my mom actually I know one of the devices I've been assuming you're talking about.

And my moms commute you know retirement community couple years back. Everybody's getting it it's curing everything, including their wallet and their savings it like guys like There's nothing wrong with multi-level marketing done well.

I have personally not seen a multi level marketing PEMF device that I would personally purchase or use in my family. And if you need me to say anything else after that, you probably aren't paying attention.

So the key is most of these devices are less than one Gauss. If I had a device I introduced into the market to compete with these other machines that are only one gauss or less.

And they're $5,000 or $6,00. So we created a machine called the BioBalance, which is 10 gauss. It's 10 times stronger than those other machines, and it's $3,500. Still not cheap, but they are $ 6,0000 for one gaus.

And this is at least 10x more than that. it is still not good enough most of the time. Not adequate. For health maintenance, okay. But not for healing.

Right. And I think that that's the point about getting a consultation is in if you're going to invest in something like this, just invest. In the right stuff.

I mean, all of us have bought things that we don't really use or we liked it in the store and we do it for a little while, but it sounded good. Yes, it sounded great, right?

But like you said, Bill, there's professional sales and marketing. And then you have people like us. People can say whatever they want about what I charge and what do.

But I'm going to sit down and have an honest to God conversation just like this, where it's no holds barred. We're just going be on point. and we're focused on helping you achieve your health goals, not helping us achieve our sales goals.

There's plenty of people that we need to serve. My point here is not to belabor this point, but there's so many damn gadgets that people are buying and wasting their damn money on.

I just want you to stop wasting your money and invest it in things that actually are going to move the needle forward for you. This is the reason that, we've done this summit.

We're not partnering with people, were not bringing on speakers who are full of crap. These are all people who are vetted things that we know that were using because in my lifetime, I've had to treat myself.

I lost. Well, try not to say lost because I learned a lot during those 13 years, but I got a little sidetracked for 13. You know, and everybody knows I'm always trying to have a positive mindset, But man, it sucks.

Yeah, you can even see I kind of get a bit choked up saying it. But then my daughter was sick. She got bit by a tick and had acute babesia. was sick for three weeks while I let everybody else try to do it because you're not supposed to doctor your own kid, then I just had to take over and do.

But she was fixed in a couple of days with the acute issue. I treated her for another six months, straight up antibiotics and herbs, and then herbs for six more months.

She's on PEMF and a lot of the other therapies that we've talked about. on a regular basis because she's my kid and she means that much. So the reason I wanted to sit down with Dr.

Pollock today and bring this conversation to you is this is an area where you can get amazing benefit, but you also go to the cleaners. and I'm sick and tired of everybody who's out there Charlestonizing this field.

Too many people are suffering, too many are getting the wrong information, and slick sales stuff has no place here. I can tell you the truth and you can buy or not buy, it doesn't matter, but let's really tell the true.

Bill, I just want to say thank you from the bottom of my heart for showing up and talking about the research, sharing the truth and diving into these devices like no one I've ever met.

I mean, I'm at all these conferences, like I go down every rabbit hole with every stinking device because if I don't, my patients are gonna ask. Right.

But I have never seen anyone who's put so much time and so care into putting together what PEMF can be and should be. And I just wanna say thanks as a patient, as well as the practitioner and a father.

Thank you for that as well. We both share the same heart. I tell people that I'm not your doctor. You're your Doctor, I am your consultant, you have to doctor yourself.

There you go. Well, everyone, I want to say thank you for joining us for this episode of the Healing from Lyme Summit. I'm sure you can tell how fired up I get about this and why I brought Dr.

Bill Pollack on here, because he's the same way we, you know, just so into making sure that you get the right information. in this incredibly important field.

And it's an area of healing that, like he said earlier, can activate, you know, it can really activate your self-healing mechanism when done well. So definitely check out drpollock.com.

As always, we'll make sure we have everything in the, on the summit resource page, point and click, and then you can go over and talk to Bill or somebody on his team, definitely pick up his book.

Dr. Pollock, thanks for joining us. This has been such an amazing pleasure. and may we do it again. Absolutely. Everyone, thank you for joining us for this episode of the Healing from Lyme Disease Summit.

Again, we're here to help you learn more about the options that are out there and then connect you maybe with some of people who can help figure out what the next best step for you is and give you ideas to your practitioner in your area.

Even if you've got a great practitioner near area, maybe they don't know as much about PEMF, definitely have them reach out to Dr. Pollock as well because I learned so much from talking with them.

And we're really here to share information because there's too many people suffering. At this point, we know there are several million people with post-treatment Lyme, chronic Lyne disease.

So we need to get more practitioners in our mentorship programs, being trained by the likes of Dr. Pollock, having his book on their shelves. Thank you very much for being here and we'll see you in the next episode.

Thanks for joining me on the PEMF Effect. I hope today's conversation gave you new tools, insights and inspiration to take control of your health. If you enjoyed this episode, don't forget to subscribe, leave a review and share it with someone who could benefit from PemF therapy and holistic healing.

Your body has the power to repair, recover and thrive. Sometimes it just needs the right charge. Until next time, stay curious, safe, proactive and keep powering up to better health!

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