How EMF Harms and PEMF Heals the Brain Transcript

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Introduction to Dr. Pollack and PEMF

William Pollack is an MD and holistic practitioner near Baltimore. And we're going to talk about something interesting today called pulsed electrical magnetic field, a frequency and PMF.

That's a short term for it. And so what we want to understand from a technology basis is that, well, what are some of the the things that are out there that are new things that are out there that can improve brain healing, that the pilot has previous, university appointments and Johns Hopkins, University of Maryland and it's training is family medicine, acupuncture, homeopathy, hypnosis, body work and energy medicine, functional medicine, nutrition.

So, a lot of things, anything to improve brain health. Doctor poets probably has a tool for it. But over the last 30 some odd years, he's really used, pulsed electro magnetic field, devices to really try to improve the health of chronic disease and the brain.

And so he's the owner of Doctor Polycom. So. Dr. luke.com and author of the most comprehensive book on healing with pulsed electro magnetic field, which is Power Tools for health and also supercharged health with PMA therapy.

And he's written chapters in scientific books and, many peer review articles. It has many podcasts, including Doctor Oz, and past co-host of two holistic health radio shows, for over ten years.

Also, he was featured on the Pain Solutions Summit and received Lifetime Achievement Award for in 2019 for work on electro magnetic field therapy. And so really happy to, introduce Doctor Pollack to talk about this in the context of brain health.

We'll. Awesome. Welcome to the summit. I can't wait to talk about this. So let's kind of dive right in. I kind of already gave people, your background.

So let's dive right into pulsed electro magnetic field. So what does that mean? And what is it? What is it? Therapy. So pulsed electromagnetic fields are basically magnetic fields that are created by current flowing through a wire.

It's based on, Faraday's law. It's based on Maxwell's equations of Maxwell's laws, and it's based on something called the right hand rule. So let's say my thumb is the wire, and let's say the current in the wire is flowing in that direction.

So what happens is that current flowing in that direction is basically creating a magnetic field. It's perpendicular to it. So my fingers are the magnetic field and wraps around the wire.

So it's three dimensional around the wire as the wire pulses the magnetic field in a sense pulses with it. Right. So the magnetic fields in a wire do not really have, any, wavelengths to them.

Okay. It's a frequency is still a pulse rate. That's why they're called pulsed electromagnetic fields as opposed to broadcast electromagnetic fields. And that's the difference between therapeutic pulsed magnetic fields and electromagnetic fields in the environment, or emfs EMF.

How Pulsed Electromagnetic Fields Work

Let's broadly speaking, or broadcast into the environment like a microwave antenna broadcasting from a cell tower or radio waves or TV waves or radar.

They just go out into space. They're non-directional. They can bounce through the atmosphere, come back down to the Earth, but basically they're broadcast out.

So that's called open loop current. Flowing through a wire is basically a closed loop. It does not go anywhere except around the wire. It stays in proximity to the wire.

One of the key attributes of magnetic fields is they pass through almost everything. So magnetic fields are the second, force in the universe. It's the biggest force in the universe.

It's not the strongest, but it's the biggest because it's everywhere. Light is electromagnetic. Light color is electromagnetic. And we know about x rays and gamma rays and neutrinos and the, magnetic fields of the poles of the Earth, etc..

So all of that electromagnetic. But here we're talking about a very constrained magnetic field that's around the coil. So the control unit produces a voltage into a wire that wire then goes out and is put into what we call an applicator or a coil.

And it's a magnetic field. And the coil is what does the work. And it goes through the body as if the body wasn't even there. So I basically tell people that the magnetic field doesn't care about the body.

The body cares about the magnetic field soon. So as the field is passing through the body, it generates charge production. It generates then all kinds of downstream, actions that the body has in response to that induced charge that the magnetic field, creates.

How do we harness this, this power, if you will, for our brain? How do we harness it for the brain? So again, the brain is no different than any other part of the body, right?

It's a tissue that the magnetic field goes into. So if you apply a coil to the side of the head, established magnetic field therapies that are FDA approved are approved for treatment resistant depression using something called TMS transcranial magnetic stimulation.

And those devices, they're very powerful. They get up to about one Tesla, about 10,000 gauss, and they're put over the motor cortex and over the motor cortex there there's the, stimulation is increased to a point where you get a contractions of the hand on the opposite side of the body.

Once you get that, that's called the motor threshold. And the current protocols basically are to take that motor threshold, jack up the intensity by another 20% and put it over the frontal cortex, dorsolateral prefrontal cortex, basically right there.

And that's 120% of the intensity of the potential to cause a muscle contraction. So it's going into the brain. And as the magnetic field passes through into the tissues of the brain, it stimulates charge.

And it's that charged production that causes that hand contraction. So it's powerful enough to go into the brain. And yet it's safe. Now, millions of people have been treated, millions of hours of treatment with PMS supplied to the brain with, no, no negative consequences.

Fundamentally. So, you know, earlier you kind of mentioned, there's emfs and there's pmfs, right? What is really the difference is, is, is one harmful?

Is one more healthful? What what is the difference there? The primary difference between broadcast emfs is they're wavelengths, again, with magnets in a wire, magnetic fields to the wire.

There's no wavelength per se okay. So there's a pulse. The emfs in the environment are extremely like microwave emfs that you get with cell phones are extremely short wavelengths.

And because they're extremely short, they don't pass through the body. They pass into the body and they create heat. So a very long wavelength, we have a wavelength that's three meters long.

It'll completely pass through the body. So it does not get absorbed. It doesn't cause a problem. But the wavelengths that we have that we worry about are like 5G or my Wi-Fi.

They are very, very short frequencies that then get absorbed and cause heating and cause the risk of harm to the tissues. So basically doing a cell phone to your ear is cooking your ear and the brain next to it.

All right. People who have their cell phones to their ears on a regular basis for hours a day. Fundamentally, we find an increased risk of acoustic neuroma because those wavelengths are becoming absorbed and cause heating and cause DNA damage.

So, theoretically, can you harness the power of pulsed electromagnetic fields to combat against the harmful effects of EMF? That's an important question.

So the answer is you cannot deflect. You cannot block, right. You block the field entirely. So what happens is that because magnetic fields are healing to the body, they help the body do repair.

So if I have a cell phone to my ear and I actually I could use a magnetic field to the other side of the head, potentially to block some of the heating action in the tissues.

But basically what you're doing, if you're heating the tissues, you want to undo the damage. And when you're heating the tissues, what do you do? You create inflammation, right?

Yeah. Information is part of the cause of the damage. So right after you do a cell phone, do you hear to your ear or to your head if you did a magnet?

EMF therapy to your brain right after that, you basically undo the damage or the inflammation very quick, very rapid. Interesting. And so, so what other brain conditions can be treated?

Because we know that there's FDA approved modalities for, like TMS to treat, drug resistant depression and now obsessive compulsive disorder. But what but what does, these PMF therapies, what what else can we do for the brain?

All right. So again, those are FDA approved for specific indications using a specific protocols and specific technologies because they're still pmfs okay.

So EMF so what we're doing is with the devices that we can use therapeutically for ourselves to treat the brain.

Using PEMF for Brain Health

They're considered wellness. Okay. It's not really for therapy, but wellness doesn't matter. What the condition is, is training the brain and not the condition.

Right. Because you have 27 different kinds of pmfs on, on the body, including improvements in circulation, including improvements in neural stem cell stimulation, including ATP production, decreasing inflammation.

So, and all of these are outlined in my book, Supercharge Your Health. So there's 25 different actions, including we recently discovered that PMS also stimulate the endocannabinoid system.

Oh interesting. Okay. All right. So reflexive, CBD, on the brain, right. CBD marijuana. So we can activate the CBD receptors, we can activate, we can stimulate serotonin production, Gaba production in the brain.

But we're also doing healing. So we have micro micro glial or astro glial damage or inflammation that's caused by whatever, whether it's cell phones or whether it's toxins like heavy metals or insecticides and pesticides.

Get into the brain. Viruses, bacteria, anything that's causing inflammation in the brain can basically be assisted by

pmfs, but you have to have the right intensity of the magnetic field.

So the research is showing that you need to have an optimal intensity of about 15 gauss. Because is the measure of magnetic field intensity. We or we can say milli Tesla.

So milli Tesla is a common term as well. So 1.5 million Tesla equals 15 gauss. So the opto magnetic field intensity to decrease inflammation is 15 gauss.

That means if you're going to treat from one side of the brain to the other, you have to do a dose calculation. So you need about 4000 gauss to go six inches across the head to get anti-inflammatory action across the whole brain.

Okay. And are these I guess these PMF devices, are they specific for, conditions or are the general general Pmfs what you can do that you can you can basically do research on any condition, right?

And you can say, well, what are the optimal magnetic field parameters to treat your condition? But again, because we have 25 to 27 different specific physiologic actions in the body, we know as clinicians most pathologies share similar pathologies, similar similar physiologic actions or reactions in the body.

Right, right. Any condition is going to share a lot of these different actions that pmfs have in the body. So that means you're not taking a unit directional univariate approach to treat the brain.

You're taking a multivariate approach, which is a really brilliant thing, because what happens then is the body takes from the stimulus what it needs to take from the stimulus.

So that was one of the first things that you'll improve right away is if is a in circulation improvements, it takes a little bit longer to increase ATP production.

It takes a little bit longer to, to decrease inflammation. But inflammation is a gradual process. As you continue to stimulate, the inflammation gradually decreases.

So it doesn't you can't shut off inflammation just like that all at once, but you improve circulation almost immediately. So so what you're saying is makes sense because the same thing that can occur with the brain can create different disease states, right.

Let's say there's a low blood flow to the brain. It can cause mild cognitive impairment, dementia later on parkinsonism. It can create a lot of brain fog, fatigue, post-Covid syndrome, all that stuff.

Right. That same thing. Yeah. When the brain doesn't generate enough power to the production of ATP, which is, its energy subunit, that also leads to very similar diseases.

And mental health workers. Yeah. Brain fog. ADV that's a huge one. Bipolar, tendencies and and major depressive anxiety as well. And panic disorder. So, so, getting to the root of the physiologic mechanism.

Right. Rather than just treating a condition, but physiologic mechanism can improve overall health. And a lot of these different, states of the brain.

And what, what's great about the brain is the brain is always like on a spectrum. You know, it's not like you're classified as one disease and you have that.

Everything's on a spectrum. Right? And if we just shift the spectrum the other direction, you know, that'd be really nice. And so if I speaking of spectrum, I was just watching a video just the other day about, the, value of maps in depression.

So we, we use antidepressants. Yes. Right. The most commonly because it's a chemical, we think it's a chemical

reaction. But why does it take two weeks for an antidepressant to begin to work or longer or. No. Yeah.

Because it has it has to do with actually those, break those, molecules react with the electrically active brain to produce electrical changes in the brain.

And you have to build up those electrical changes, those charges, the charge production of the brain and the frequencies. It takes time to do that. And, doctor named Leuchter, wrote a huge article about this that he said that basically, synapses work on chemistry, works on the bottom up, which you're doing synaptic changes first with the chemicals attaching to sign axes.

Right. And then those synapses begin to oscillate and vibrate, and they basically oscillate to vibrate up, involved in larger and larger regions of the brain.

And as you get to larger regions of the brain, then you have more, broader brain reactions going on, which again, would decrease, say, for example, depression.

So depression may start with a specific part of the brain, right? But then it spreads to other areas of the brain through what we call networks. And PDFs can actually work through networks by oscillating those frequencies as well by the pulsing action of the brain, it can control the oscillations.

Well, this also makes sense on why you know, either the presence only work part of the time, is because not only is it not addressing necessarily the root cause or roots, you know, imbalance use, that's probably the best way to describe it.

But at the frequency level, right, at the synaptic frequency level, you're not really getting to, to to that root issue right there. Sometimes people feel worse like that's a presence because it can create other frequencies.

It can make them feel worse. As well. Right? Not only that, but also it begins to capture the chemistry in the brain. So why don't you keep loading the tissue with that, molecule?

Right. You walks in and essentially becomes, dependent on that molecule. Because if you start to drop the molecule, the brain goes through, draw reaction from that molecule.

So, yeah, I don't have that kind of leg as that chemistry does. So, so theoretically speaking, then, because, I have a really hard time taking people off of the present medication, it's because the brain's physiologic balance is already centered around the body receiving that medication.

EMFs, Inflammation, and Brain Conditions

Right. And tapering people off, which is extremely difficult. And actually that's medication dependent as well. Have you seen anecdotally that, PMF therapy can assist in reduction of some of these medications?

Yeah, all the time. Absolutely. So what you do with the PMI therapy then, is you're providing a, an environment in the brain, electrochemical. And from a frequency perspective, you're providing an environment.

Then that's that becomes a a foundation for the brain. So as you begin to withdraw and you're starting to go through the withdrawal symptoms of the reactions of the brain from the withdrawal, then the brain has got a substrate that crutches underneath it.

Right. You're not having somebody try to walk without having learned how to use crutches. But once they learn how to use crutches, then you can withdraw them from the crutches much faster because they've learned how to walk. Now I see, okay, well, that makes sense.

Completely. So, let me let me get some nomenclature correctly, because we know that there is like transcranial magnetic stimulation centers, you know, all over the country, TMS centers, right.

And is that now is that just one of the PMF modalities, or is all PMF TMS, like, what does it give me the nomenclature here. Yeah. So find a mentally all PMF TMS because you can take any PMF and apply it to the brain.

Yeah. And because it's not obstructed by the skin, which is what happens with Tens units or transcranial electrical stimulation, that's incorrect. That's causing stimulation of the sensory nerves in the skin, or the motor nerves in the muscles that then send signals into the brain.

The pmfs act directly on the brain itself. So when they go right on through completely right, and they're able to work at various depths of the brain and virtually the entire brain, now, the bigger the magnetic field, so you can have a cap, that basically treats the whole magnetic field.

For example, there is a system called no double cure or resistant gliomas. Glioblastoma is where they put this cap on with these little, applicators or, electrodes essentially onto the scalp, but it's loaded with all these around the scalp.

And so it treats deep into the brain with these frequencies that are more electrical. But again, they're operating on the electrical basis. But anything producing an electrical field is going to produce a magnetic field.

Right. Right. Now the cure is doing dual duty. Okay. They don't talk about the magnetic part of this, but they always talk about the electrical part because that's what the FDA approved.

But actually it's doing double duty. Interesting. And that's actually for glioblastoma which is a devastating brain tumor. And that's deadly. It's usually terminal.

And there are other indications begin to develop for that novel cure technology as well, including OCD. So I mean, I feel like, this field is underexplored in, in all of medicine, because, you know, I, I certainly didn't learn this in medical school or residency.

But what I did learn is it's TMS through transcranial magnetic stimulation for drug resistant depression. That's that's sort of the the standard. Right.

Now, are people to, to only get this in doctors offices or can I do it at home? Like what? What does that look like? So TMS as we were just discussing is only done right.

It's FDA approved. It could only be done by doctors, and it's done in health and centers because it has to be controlled by someone who's trained to use it.

Yes. We're not we're not talking about that level of TMS. So we don't have to be a doctor to do it. I routinely recommend transcranial magnetic stimulation for people with low intensity devices.

For example, I use a, a low intensity pump system that you can that's 200 gauss versus 10,000 gauss. So use 200 gauss on your pillow, inside the pillow cover, on top of your pillow, where your head would rest on top of it.

You put that in there. You could run it all night long. And what that does is, through a process called entrainment. So basically it's gradually slowing down your brain.

I think of it like sound. So if I'm listening to music and the music is going, that could be quite irritating to the brain. But if I go right, I present that over a long enough period of time.

The grain listen, the brain listens and gradually slows down so we can then treat insomnia. We can treat problems with sleep just by using very low intensity system on the pillow.

And that magnetic field still goes through the brain, but not as much and not as powerfully. This this reminds me of, binaural beats, or listening to different frequencies per year at nighttime.

You know, that's, that's the audio entrainment, right? And the magnetic field on the pillow is audio magnetic entrainment. And we also talk about audio visual entrainment.

Or you could just do pure audio entrainment. So what we're doing now with this magnetic therapy on the pillow because you hear the clicking you know the coils basically what you're doing is audio magnetic entrainment.

So you're getting dual interfacing. So you do you do have the magnetic field the production. But at the same time the clicks is at a specific frequency as well at three x at three hertz as well.

Yeah. Well that's that's fascinating. Whenever there is this, this is safe. First of all, is this actually safe? Other stuff safety outcomes that's done on this?

Yes, in my book, Supercharge your Health and, and and the Power Tools for health book, I go over the safety aspects and I review a bunch of cases where people have had 100,000 or 300,000, even 70 year olds who have had one hundreds of thousands of pulses to their brains with no, no negative effects.

The biggest risk that the FDA is concerned about with high intensity PMS to the brain is the risk of seizures, but they are extremely infrequent. So unless you have metal in your brain or you have a metal stent in your in your brain inside your skull, unless you have shrapnel inside your head, like, like with, MRIs, you know, these are things that you kind of watch for.

But beyond that, it's extraordinarily safe. Okay, great. You know, there's a lot of people with, with, with silver fillings which do have some mercury that's within there, is that going to be affected by the PMA therapy negatively or positively?

No. There is there is some risk because Pmfs do increase charge production. So saliva is electrolytes. And the electrolyte in our mouth is interacting with the physical structures in our mouths.

So our natural teeth have a, basically a neutral, saliva down on material interaction. So it's more and more normal if you have even, composite fillings.

It's no longer the same as a human tooth filling as a human tooth. So you're going to have dielectrics between the saliva and the tooth.

Devices, Safety, and Home Use

So if you have, dental implants or if you have crowns or bridges that are exposed, the material is exposed to the saliva that you could have to some extent through an electrolytic process.

You can have some leaching. So there is a possibility that and people do often complain about this, that they feel a metallic taste in their mouth when they do magnetic field therapy anywhere near the head.

So you don't have to do it directly to the mouth. Now, when you're doing it to your brain, the magnetic field in your mouth is has dropped off dramatically, so you're not getting a very high intensity magnetic field to the brain.

So gentlemen, but generally speaking, that's not a problem when the people have a lot of fillings and they have they've been told or they've already been tested for mercury, that I usually recommend key layers for them, along with the magnetic field therapy.

And the one that I recommend the most is is, zeolite. Binding. And so heavy metals. So I mean, realistically, if, if people do have brain health or mental health issues, any sort of mercury or silver fillings in the mouth really should be be, replaced, and perform as well as replace them because you're trying to deal with their brain problem anyway, right?

So you have to do it. You have to do this together. Yeah, yeah. Gotcha. Do you think, that this PMF therapy is

going to be, like a well-known thing in the next five years, or what do you think that's going to go?

Well, we know, obviously it's it's growing in the psychiatric world and the neurological world because of TMS. So the awareness level is increasing significantly at TMS.

Centers are now doing brain treatments beyond the FDA approval. They can't advertise it off label. You know, isolate it off label use, and the insurance companies won't cover.

So all the insurance companies will cover will be the FDA approved use. So that's growing. So because you started to open that door, that doors opening, and the doctors who are doing this are becoming more aware of all the other, possibilities with, TMS therapy, not just depression.

We have FDA approved devices for treating, fractures. Nonunion fractures. But it's amazing how doctors are siloed in the way they think. Well, it's only approved for the fracture healing, but they don't think about the technology.

They don't understand what we are just talking about all the different aspects of PMA therapy and what it does. And because they don't, then that level of awareness is could be there.

But it's not. There are three reasons why medicine is not accepting about therapy. Ignorance. They don't know about it. That doesn't mean they're ignoramuses.

They just don't know about it. Now there are obviously doctors who don't want to know about it, and they'd rather remain ignorant than having to learn something new.

And it's going to shake the tree for them right? Second group of people. There's people who are arrogant, and that's a smaller group than the first group.

But the arrogant people say, I know everything that I should know. I don't need to know this. Go away. Right. Yeah. Group of people, which is actually a bigger group of people than the second group is finance and or surgeons in particular.

To cut is to cure. And if you heal the tissue with PMF therapy, you don't need to cut, so I don't surgeons, orthopedic surgeons practices surgical parts of their practices have dropped by 40 to 60% because they're using PMF therapy.

And this reminds me of pre-World War Two era where doctors were treating depression by lobotomies like taking out portions of the brain. Which that we laugh about now.

But that was a standard of of medicine. We would struggle with depression, right. Literally taking a portion of the brain. Right. And TMS was actually developed to, to, avoid having to do ECT.

Right? Yeah. Yeah. Right. I listen to a doctor. Right. Talk therapy. Exactly. Which is barbaric. And there's a risk of fractures as a risk of dental fractures, temporal fractures and tooth fractures with it.

They have to be sedated. They have to go under anesthesia for it. So this is a replacement for that. And it's a lot safer. So this is hilarious because see, at the very beginning the shock therapy was trying to replace lobotomies.

Right. And the crying baby did not want to, accept it at the time. And then now you have electromagnetic field frequencies. And TMS is trying to, like, take away the needs for the shock therapy because now that's, that's seen as barbaric. Right.

So I feel like, you know, as technology moves forward like this, this is really the next progression. What can improve? I mean, the last thing you want to do is go back to cut out parts of the brain.

But you know, well, if you if you have a tumor, you may not have a choice, but. Right. And well, modern day we don't know what's going to happen, you know, 30 years from now. Right.

And so we'll be able to detect is a lot sooner if you could detect it a lot sooner. Growing tumor. I just did a review of the cancer section and my Power Tools for health book on cancer and people who had brain, radiation, function a lot better after their brain radiation if they're doing magnetic field therapy.

Okay, interesting. But like, alongside with, radiation. Radiation, they can do it basically before and after, but they recover better because, you know, we have memory, major memory issues with people with radiation, cognitive function, dysfunction.

And PML therapy actually helps with memory just by itself. If you increase ATP in your brain, you increase circulation in your brain. Right. They increase serotonin, you decrease anxiety.

So basically now you can memorize better as well. So just physiologically you're you can amp up memory function without it being Alzheimer's or Parkinson's or Ms.

PTSD, Memory, and Brain Rewiring

or, or any of the above. Or let's kind of dive into, this topic of PTSD for a second, because we know that, PTSD is so complex and there's depression with anxiety with it, insomnia with it and whatnot.

But there's been a ton of data on PMF therapy in PTSD. Can you kind of link the two together real quick? Well, PTSD is on the spectrum if you if you will, with depression.

Yeah. So the trauma of PTSD and the trauma that caused the PTSD is causing, well, physiologic changes, electrochemical changes, chemistry, chemical changes in the brain, it resets.

Basically the limbic system. So now you've got to and when you do any changes to the brain often enough because of plasticity, you can actually create physical changes to the tissue itself.

It's called remodeling. I think part of the problem within with PTSD becomes to what extent you've got physically, physiologically, changeable tissue or electrochemical processes of the brain versus those are those that are locked in.

We have we have remodeling all over the body. We cannot remodel the bones. We can have remodeling of ligaments. In tennis. We have remodeling of cardiac tissues.

So based on that remodel as well. So the more remodeling there is, the more sort of fixed the lesions become. And pmfs can take that circuitry in the brain and you can shock that circuitry with a with a pulse.

Now you don't want to use an EMP which is like ECT which is so powerful. You don't have to do that. And rtms is not that powerful. So basically a resetting the circuits and then hopefully over time you unmold on, remodel the tissue and you basically can model into, into better, better functioning tissue.

But PTSD, like memory therapy does not improve memory, by itself a reason why traditional PTSD therapy is the ultimate. Yes, that and depression. No we don't it doesn't remember our memory.

So memory can be significantly impacted by PTSD as well, which happens with depression. But one of the problems with that, then again, has to do with the ability to remodel and to actually energize the tissue to do the work it needs to do.

But if you want to remember more, you have to train your memory so I can make your brain function better. I can give you the better substrate for memory to work, but you then have to train the memory.

So with PTSD, you may still have to do some of the shock, some of the remembering of the, stimuli that caused the shock in the first place. You have to unlearn it essentially.

So you're saying in PTSD therapy, when someone, talk about therapy with someone talk therapy. So PTSD talk therapy and kind of behavioral therapy, it can reduce the traumatic states.

But I did not know that actually doesn't improve the memory component because because memory is huge. And in PTSD memory loss huge. Well yeah. So you retrain their memory, have it replace whatever memory you don't want with memories that you do want.

So yeah, I see you can't do that with magnetic field therapy. It's not going to give you a new memory. So it's not like we're, blasting the brain with a thought.

Love or hate or Einstein's equations or, you know, whatever. We're not doing that. All we're doing is we're creating a physiologic structure that's more stable and more conducive to repair.

And regeneration and rebalancing thoughts.

Resources and Closing Thoughts

So we can utilize and harness the power of PMS, then to, reconstruct or re-engineer our brain wiring mechanisms. Right, right. For that improvement, quality of life.

And that's, that's a powerful statement to say about perhaps therapy. You create an opportunity. What you're doing, creating opportunities. Absolutely.

Well, this has been a, absolutely brilliant talk. How do people find out more about you and more about PMS? Well, the two best resources are if you want more of the Science Power Tools for health, a book that I wrote, has 500 references.

So we got more more backing with scientific studies. The Supercharge Your Health book is more practical. So how do I select the PMS system? How do I use a PMS system for my various problems?

And I have about 80 different health conditions in the supercharge book. And I give some some protocols. It's got to be simplistic because everybody's unique and different.

You're really like as physicians, we know we have to tailor our recommendations to the person, to the individual, to their uniqueness. So but those are the two best resources.

Otherwise Doctor Polycom has a ton of vlogs, so there's a lot more information there that's free and accessible. Otherwise. The books that fall back on is DARPA, WKRN, dot com.

Excellent. Well, thank you so much for this enlightening conversation. I actually learned quite a bit and I thought I knew some about EMF. That's what I wanted to do on the summit, because I know that, you know, there would not be an adequate discussion about this aspect of technology being applied to brain and how widespread, how valuable it is across so many different.

We're so locked into thinking about conditions we're not locked into, we know is illogically right, functionally. Yeah. And we should and we should. I think the medical society should think about it from a functional perspective.

Exactly. Yeah. Excellent. Was great talking to you. Thank you for being on the formal with me. Thanks, Jane. Enjoy the rest of your day. Thanks.