Introduction to Dr. Pollak and PMF Therapy

Welcome to the reverse Alzheimer's Summit. I am your host, doctor Heather Sanderson, and I'm so pleased to have Doctor William Pollak joining me today.

He is an MD and a holistic doctor near Baltimore, Maryland. His previous academic positions at Johns Hopkins and the University of Maryland included training in acupuncture, homeopathy, hypnosis, energy medicine, nutrition and body work.

Considered the foremost authority in the use of PMF or pulsed electron kinetic field therapy in North America. He's interested in holistic pain management, sleep anxiety, anti-aging, and general health.

He's also interested in new solutions to stubborn, chronic, and frustrating health problems like dementia. He he wants to try to resolve the cause of the problem and not to simply put a Band-Aid on it.

You can. However, I've invited him to be here. For example, most conventional treatments for relying on, numbing and dumbing. Instead of listening to that signal.

And this simply may make the perception of better pain, but it doesn't heal the cause. When he joined the doctor also. They both agreed that pain management should be focused on healing the cause.

After 25 years of seeing the risks and side effects of traditional approaches and studying various healing approaches, he discovered the PMF provides the most benefit and allowed a safe, nontoxic, self-directed, self-controlled and at home pain management solution.

To this end, Doctor Pollack has worked with magnetic field therapies for 30 years and established an authoritative, web authoritative website that I have used personally myself Doctor Polycom.

He's the author of a comprehensive book on healing with magnetic fields called The Power Tools for health. This book describes what magnetic magnetic fields are.

Over 25 actions of magnetic fields in the body, how they work with over 50 health conditions, and how to get a PMF device for yourself and then how to use it.

This book is supported by over 500 scientific references, and is the most authoritative yet readable book on the topic available to date. To help promote his healing concept, he has well over 50 radio, podcasts, magazine and TV interviews combined.

He has also been the co-host of a two hour holistic health radio show in Baltimore for over ten years. Most recently, he hosted the Pain Solutions Summit, interviewing more than 30 experts on helping people with chronic pain.

Doctor Pollak, welcome to the show. Thank you. Thank you for having me. While there seems to be a an emphasis on pain, there's a lot more to pmfs, I think, as you said as well than that.

Just pain management. So, and that's why we're here. Okay. And even in the case of dementias, so many of our elderly folks or loved ones who have gotten up into their 70s and 80s and 90s, they do experience some bit of pain.

And that pain can be sort of a chronic stressor, right? Chronic cortisol, a chronic sort of irritant that can contribute to dementia. Not to mention if there's medications involved, like narcotics, certainly can, contribute to cognitive decline.

But even things that we think of as more benign, like NSAIDs, Tylenol might affect the gut or the detox pathways in ways that really do directly affect cognitive function.

So I think treating pain is part of that comprehensive approach to treating, Dementors and that's why I'm so excited to dive into this conversation around PMF, not only in the context of pain, but also just generally in terms of cognitive function.

Well, thank you. And I think, you know, you did mention that, one of the things about Pmfs is they have so many actions, and it's because of those actions that all the other benefits of PMF happen.

How PMF Supports Brain Health and Dementia

So the in in a sense, I mean, there's a direct painkilling effect of PMF, but killing pain is you might to put a bandaid on and take ibuprofen. You know, what you're going to do is, as you said, numbing and numbing while you're going to do is basically just try to eliminate the pain.

But it doesn't heal the pain. It doesn't. You know, you still have to keep using your pain killers if you can't heal the cause or if you can't heal the problem.

And so all the things that help with healing the cause of that pain, at the same kinds of benefits and actions that you get to heal the brain. I love it.

And most of the people who have who have Alzheimer's disease, except for the very young, like for example, with, those with genetic disorders, like, you know, it's Mongol ism, right?

Who developed PMF early on in life? I develop an early on in life. They have a genetic defect that causes that problem. So, we're not dealing with most mostly we're not dealing with those kinds of individuals.

So most of the time we're dealing with the, gradual development of Add as we see people getting and, you know, you, I'm sure, talk about this all the time as you start, you start with memory loss.

Age related memory decline, and then it gets worse. And but then you also end up having cerebrovascular issues, right? What happens to ATP as we get older?

Yeah, it's much harder to make. There's. So I love that you're kind of going through this. There's so many contributing factors to cognitive decline. And PMF really hits a lot of those in terms of circulation and ATP production for that energy, but even oscillatory actions in the brain.

So actually you can wake the brain up and make the brain much more, alert, facilitate memory production, development, memory development and retention, memory retention with pmfs.

So they have so many actions. And the thing about those actions is that you and I, the clinician or even the PMF device doesn't control that. What does what does could question the body.

So let's talk about perhaps a pmfs that we could distinguish between pmfs and the bad emfs and even interestingly, and Alzheimer's. We also have evidence that shows that, cell phone stimulation to brains of mice decreases the risk of developing Alzheimer's.

And we think of emfs as being bad for us. But emfs are still a form of electromagnetic stimulation. We may not like them, but they may have other harm to the body.

But they are a form of electromagnetic stimulation. So they can wake they can wake things up. That's why light therapy can wake things up. It can also have benefits too.

That's all part of the electromagnetic spectrum. But let's go back to PMS policy. Electromagnetic fields basically are like the wind in the trees. You don't know if there's a wind there until the leaves start moving, but there's wind there and the wind doesn't stay in the trees.

So as it's passing through, it creates action in the leaves, and it creates action in the limbs of the trees, in the branches. And that action in the leaves and the branches creates movement.

So electric movement that causes sap to flow awakes things up. The electromagnetic fields in the trees caused by the wind blowing through through them, wakes things up.

Okay, now this is making me a little nervous because I'm thinking tornadoes and hurricanes. So you can give wind, right? There's that calm which is no breeze at all, although there's air there.

It's just not moving that you have the breeze. You have a you have a wind, they have a strong wind and then you have a tornado. So yes, anything a life has a spectrum has a relationship to how much is good and how much is not so good.

So milder forms of stimulation and the magnetic fields are still going through the body. There's more power behind them when there's a hurricane going on, and that power may be strong enough to break things and tear things.

Well, obviously we don't want to be using magnetic fields like that. So but but to give you an example, magnetic fields like that are being used to treat treatment resistant depression and they're FDA approved.

This is like our magnetic fields to the brain. Transcranial magnetic stimulation is transcranial high intensity transcranial magnetic stimulation. And that's been found to be extremely safe even with that.

And I would consider those to be a very strong wind. Got it a very strong signal. And then what about an MRI? Just kind of what we're talking about. Different magnetic interventions that are used in healthcare.

Where does an MRI fit on the spectrum? Well MRI has got two components. It's got a radio frequency component, which is like your cell phone levels of megahertz simulation high very high frequency.

And then it's got a static magnetic field component. So the high frequency component jiggles things like a lot. And then all of a sudden they snap with the high with the high intensity static magnetic field, high intensity static magnetic field is Tesla level, what we call Tesla.

Magnetic Fields, Safety, and Medical Comparisons

So most magnetic fields that I use are going to be under 10,000 gauss and MRI's are 20,000 gauss, all the way up to as high as 5 or 6005 Tesla, 50,000 60,000 gauss.

So we're talking about much lower intensity of magnetic fields than MRI. And they have been found to be very safe in children and even in pregnant women.

And women who work in MRI environments or pregnant still keep working in those MRI environments. And, you know, that considered safe. However, you know, obviously, we know that you shouldn't wear jewelry while you're having an MRI.

You shouldn't probably not have a, a gun on you. You should probably not have metal inside your body. Right? So there are risks and those risks, most of those risks have to do with the high powered magnetic field, but they also have to do with the high frequency magnetic field.

So combining high frequency and high power that creates the risk. But if you avoid, you know, go into that environment with those potential risks, then you don't, you know, you don't have to worry.

Most people don't have to worry at all. Great. So those are some of the risks. What about the benefit? What benefit is our cell getting when we're exposed to these magnetic fields?

Well, that's where the 25 different mechanisms come in. And there are more than that. Even so, now we also know

that they have a, cannabinoid effect. Oh, wow.

That was basically cannabis. And I have a blog on my website how are perhaps like marijuana. So we stimulate the nervous system and that activates. And the cannabinoid system, which, you know, we're just beginning to discover all the different things that that does in the body.

But that's like taking CBD. It's not like taking, THC, but it is like taking CBD because that affects that system. There are other effects on inflammation.

So we know there are very strong and, and, you need very high intensity magnetic fields to reach deep into the brain and deep into the body to decrease inflammation.

So what percentage of AD is caused by inflammation? What percentage of memory loss with age is caused by chronic inflammation? And I would say probably almost all of it.

But then that begs the question what's causing the inflammation? Well, there you go. And so life. Exposure to toxins and environmental, molds and also emfs to some extent.

But viruses, what percentage of the population has EBV in their body? Epstein-Barr virus. Most of us have been exposed. Some 85% or more of the population has EBV antibodies.

And EBV like shingles virus is in the body. It's there. Once you've been exposed to it, it's in your body for the rest of your life. Now, is it active?

Is shingles active all the time? No, it's sitting there doing nothing. I tell it gets activated until the immune system becomes inefficient and doesn't control it.

Usually it. Sorry. Shingles happens when people have been under a lot of stress. Well, I'll tell you, I had a woman who had fibromyalgia. She was a, a nurse, a very smart lady, and she was told she had Lyme disease to talk about a cause of brain dysfunction.

So Lyme disease, she had EBV, but she had a bunch of other virus antibodies as well. And she was convinced that she had her memory loss, her, brain fog, her pain and fibromyalgia.

Pain was caused by her Lyme disease because that's what everybody she saw was the who is Lyme literate said that she had. So I said, well, you know, your your antibody levels for Lyme are not that high are not that bad.

I'm not convinced that that's all that's going on. That didn't mean that that was not what was going on. But as we as it turns out, the antibodies for EBV, the particularly the, the main antibodies, the western blot antibodies cross react with EBV, right, right.

So if you got any DV in your body, you have weakly positive Western blot antibodies. Do you have any or do you have Lyme. Right. Right, right. So what I did so I she wanted to have a prescription for me to give her a month's worth of I've added biotics and I wasn't convinced.

So we get a lumbar puncture. How many people do that on purpose? So we did a lumbar puncture, and lo and behold, zero Lyme, zero EBV. And we found HHV six human herpes virus six in her spinal fluid.

She had antibodies. That was most likely the cause of her problem. And did she respond to antivirals? We didn't know antivirals don't work that well because they they have a hard time getting into the blood brain barrier.

Plus, what the antivirals do. They don't kill the virus. There are a lot of back there are a lot of antibiotics that don't kill the bacteria. They keep it from growing more.

So when you have shingles you get antiviral those. What do they do. Do they kill the virus. They stop it from

growing and therefore they quiet down the attack.

But they don't ever get rid of the virus. So most antivirals are what we call viral static. They stop the growth, but they don't kill it. So antivirals are not going to help her.

What we did is we did a program that you would do for, dementia as well. I. V., vitamin C, I. V. glutathione, IV, alpha lipoic acid, and, Maya's cocktail.

So minerals. And she did. She had a port. We did that every day. And in a month, she was like, her brain was clear. Well, so just really supporting the immune system, which is exactly what I think with a lot of these more ubiquitous viruses, bacteria like EBV or line, it's the more we can support the immune function, then the less they have to worry about those things.

But as we add stressors and toxins and other things that suppress our immune function, then they become a bigger and bigger issue. Not only that, well, the Myers cocktail supports this basic function of the cells, so it gives you the minerals that your cells need to function better.

Plenty of nature, you know, and I routinely say magnetic field therapy can't cure you if you are starving, if you're protein deficient, if you're mineral deficient, magnetic fields won't work.

So you need to supply the nutrients that the body needs to be able to do the repair work, that the magnetic fields are now stimulating the body to do so. Basically, magnetic field therapy is passing through the body.

The body does not exist to a magnetic field. A magnetic field does exist to a body. So when the magnetic field is passing through, it's stimulating the tissues to do all sorts of things.

So it's 25 things 27 things that we that we mentioned.

PMF Mechanisms: Inflammation, Infection, and ATP

Would you mind basically listing the 25 things? I'm so curious what the the mechanisms are here. Well, I, I would recommend my book but so let's go over some of that because you know, to go over all of it would take the whole hour.

We talked about, reduction of swelling, acupuncture, stimulation, antibacterial, antifungal of that type, viral effects for always stimulating the immune system to take care of the infections that are inside you, including the mono virus or the, shingles virus.

It has an active coagulant effect. So if you talk about Rouleau formation, you talk about, infection and inflammation of the body, thickening of the blood.

Well, magnetic field therapy actually breaks down clots. And at the same time, it makes your platelets less sticky. So it has a natural anticoagulant effect equivalent at least to the, aspirin taking aspirin, at least, but not so much so that you may have a risk of bleeding.

Correct. However, if you are on aspirin or you're on an anticoagulant, one plus one doesn't necessarily equal two. Magnetic field therapy could augment what other other anticoagulant things you're doing.

So it's possible that with CoQ10 or vitamin E or other things that tend to thin the platelets or decrease the stickiness of platelets, those two together may be more likely to cause you to have a bit more bruising.

Generally speaking, magnetic field therapy is extraordinarily safe. So you reduce edema, you reduce inflammation, you decrease the spasm of blood vessels and muscles.

So you open things up. And that's one of the mechanisms for increasing circulation. So improving circulation is

clearly a big mechanism for pumps, whether it's the brain or the heart of the muscle or the god.

You know, wherever ATP big time, you can have 100 to 600% increase production of ATP. So which organs in the body use the most ATP, the brain and the heart?

My heart. Exactly. So are you stimulating the brain for a short period of time? At least you're increasing the amount of ATP production. Now. Your brain has got more energy to do the work that it needs to do.

But what's the problem with stimulating ATP production? It's not a rock that you can throw off the top of a hill, and it will roll all the way to the bottom, and depending on how long that hill is, you know, it can go for a long, long time.

We recycle ATP about 200 to 5. Every single molecule of ATP in our body is recycled 200 to 500 times per day. We create our bodyweight in ATP every day, but it's constantly being used and what magnetic fields do is while their being while the magnetic fields are working in the body, they, increase the cycle of production of ATP from ADP.

ATP by itself does nothing. It's having a cake in front of you. But what does the cake in front of you do unless you eat it? That's nothing. It just looks like a cake.

Well, if you get close enough, you might smell a cake, but beyond that, you have to eat it. So magnetic field therapy makes the ATP from ADP. And then it causes the body to strip off the enzymes in the body to strip off one of the phosphate molecules, which then releases the energy.

And then the ATP that's created by the ATP. Hydrolysis is recycled, so it constantly recycles ATP, makes it uses it, makes it uses it constantly. So while you're doing the stimulation, your brain is going to wake up for a while, but that will die down.

So your body has to make your body has to continue to support you, support you, and make make the ATP on its own. But you can temporarily at least really work things out.

So ATP is as big and as as a result, the mitochondria. It helps recycle cells, cells that are old. They can clean their stuff. You have to clean your house now and then get rid of the old stuff.

Well the brain does that to the muscles. The whole body. All the cells in the body have to go through a process called autophagy. Autophagy or autophagy.

So I'm cleaning house and if you don't clean house you've got dead cells, you know, mucking up the works. So you have to clean house periodically and make I feel therapy helps with that.

Circadian rhythms are important. So your magnetic field therapy can restore circadian rhythms that rebalance and poor sleep causes Alzheimer's is the risk for Alzheimer's, isn't it?

So magnetic field therapy helps with sleep. So which then helps with your circadian rhythms as well. So on back and forth collagen production. So in other words it improves the skin but it also improves the basic cellular structure.

So it helps to build cellular structure detoxification growth factors, healing of tissues. It helps cars to to heal themselves. Brain injuries are a major cause.

Concussions. How many people do you know have had at least one concussion? The vast majority of people I ask, have you hit your head? Say, yes. Yes. They don't get a concussion.

Right. Because you got better. That means it's gone. Well it's not if you do MRI studies on people who've had, bang to the head. They didn't lose consciousness.

They may have gotten a little mosey for a second and then they're fine. But you know, how many of those can you

take before you end up having a pretty significant amount of, brain effect?

Right. So magnetic field therapy helps to restore and recover brain function in people who have had concussions. I actually did a study, with people with concussion and magnetic field therapy, and they all improved significantly.

Great. So healing and regeneration, the heart, the immune system, nerves and conductivity, oxygen supply is increased. The tissue, the tissues of the body are able to use the oxygen that you provide the body better with therapy.

We talked about pain and, where does pain go? Where is the sensation of pain? To the brain pains in the brain. And so when you have chronic pain or you have severe pain, the brain automatically resets itself as a result of that pain.

So people with chronic pain syndromes are more prone to developing dementia and Add as well. I you talked about that at the very beginning. So pain managing pain is an important part of the process because that will definitely cause the progression and the development of aid, psychological function.

We can treat anxiety, we could treat depression. All of those lead to aid and vice versa. Right. So perhaps help to restore brain function. Significantly, red blood cells, stem cells, stress water.

The water, our water in our bodies is affected by PMF. The water in our bodies is made to be used by the body better because it changes the bond angles of the water molecules, making them slipperier and more accessible to the cell.

That's all that magnetic fields do. That's it. There's no that's all. So wow, there is a lot there. And we can see, you know, I'm a natural Catholic doctor, how I was trained.

And so whenever there's something that helps benefit cell health, no matter if it's in the brain or the heart or the big toe, if there's something that can safely deliver an increase in function, what other, the mitochondria or the cell generally, then I'm going to get excited.

And certainly PMF is one of these things. I've personally been on PMF maps and noticed a detox response from it a little bit. I feel a little. I felt a little shaky, a little headache, maybe a little sore afterwards, and I didn't take it as a terrible sign.

It was like, actually, I need to probably do a little bit more of this, and I probably also wasn't hydrated enough at that point. I was training for a marathon when I had done it, and so I think I was being a little hard on my body.

But what was impressive to me wasn't, you know, that I didn't feel great, but that I felt a difference. I felt a real difference after being on the mat and then getting off of it.

And so many of my patients, have really similar experiences. So I'm curious which, you know, in this kind of context, talking about not marathon training, but more for, the marathon of dealing with cognitive decline.

What PMF devices do you recommend specifically to help with brain health? So and that's complicated.

Brain Waves, Entrainment, and Frequency Training

And magnetic field therapy, as I mentioned, that is approved by the government for the FDA for treating the brain. And now we're discovering that it's useful for at mass and Parkinson's and, degenerative brain disorders.

So one of the reasons that they that they're using this, the the primary mechanism that they're looking to do is to increase charge in the body, and they're increasing electrical charge in the brain itself.

So every time a magnetic field passes through a cell, through the tissues, it's generating, we talked about ATP, but

it's actually generating electrical charges in the tissues.

And those electrical charges are then used by the body to accelerate or do whatever the body does. Now, what's aging? It's called entropy. I describe aging as being death by a thousand cuts, all the little insults that we have throughout our lives.

And that's why as we get older, those insult insults accumulate straws on a camel's back. Right? So a magnetic field therapy, by increasing charge in the tissues now has the tissue have more energy to do the work it needs to do.

So for example, if you have a fracture can I heal a fracture like that? If I have a head injury, can I heal the brain like that? No, the body has to do the work.

All we're doing is providing the stimulus to the body to do the work. That's why magnetic fields don't do the work. The body does the work, but the magnetic fields are the stimulus for the body to be able to do what it hasn't been able to do, or it can allow the body to do it better for some period of time, like the ATP production.

So you're again, all these mechanisms are happening at the same time. The body decides what it's going to do with it. I also just love that concept of providing what the body needs and then allowing that inherent wisdom in this complex system that we sort of, you know, pretend to fully understand.

But I have so much reverence for how the body think. It often knows if we just show up and give it the things that needs and take the things out of the way that it doesn't, that harm it, then so much of this happens naturally and PMF feels like it really supports that process in so many ways.

You know, I mentioned stem cells. We now know that adults grow grow stem cells. They don't grow stem cells as well as children do. Right. But they still have you still have the capacity in your brain with the appropriate stimulation to and to produce stem cells, to help to heal and repair the tissues of the brain.

The neurons. But I think most, most the most important aspect of what magnetic field, function does in the brain is to increase the energy of the brain by waking cells up, by giving them more ATP, by improving the circulation, by helping them to detox.

And the brain is the most difficult organ in the body to detox it because of the blood brain barrier. But magnetic fields, nothing stands in the way of a magnetic field.

Nothing. The body, nothing of the body. Whether it's skin or muscle or bone brain, nothing stops that magnetic field. If you have a body here and I have a magnetic field here, right.

And I have a measuring tool on the other side, okay. If I stimulate the body and I remove the body, that magnetic the magnetometer does not change at all.

The magnetic field just goes right on through as if it wasn't even there. Fascinating. So you mentioned voltage. We're doing a clinical trial on, our integrative individualized approach to cognitive, reversal of cognitive decline.

And, in that we are using OAB. I'm not sure if you're familiar with the EEG device called the hobby. And one of the things that it measures is voltage.

So if we were to use a PMF, I'm just curious because we we're measuring people all the time here. If we were to use a PMF, mat or device on someone and then measure their voltage through an EEG before and after, would we see a change?

Depends. So that goes back to the question you asked before. Which is which device do you recommend? So if I'm going to be treating a, treatment resistant depression, I'm going to be using an hour TMS repetitive transcranial magnetic stimulation machine, which is going to be about 8000 gauss, and that produces charge right there within

the brain.

But then we know now that that charge doesn't stay there. It goes through the entire brain, right? It's going everywhere. And the same thing with oscillatory patterns.

If I stimulate the brain with ten hertz right here, then right there, it's going to have a higher concentration of ten hertz and the amplitude of those EEG waves right there.

But then they cascade through the rest of the brain. So the other side of the brain, you're going to have an amplitude change, but it won't be anywhere near as high as it will be near the stimulus.

So how much stimulus do you need to get the biggest increases in amplitude? That depends on a lot of things. But and treatment is one of those things.

So if you like a radio signal, if you have an analog dial on the radio, right, the airwaves are full of, so they're full of radio signals and they're all all these different stations are broadcasting 98.7, 21.2, you know, 110.6.

They're all out there. And what our tuners do are radio 202 is you change the dial and the frequency within the tuner. And when you hit a frequency that's out in the air that you start to start to engage that frequency.

It's called phase locking or frequency following. As you come into the station, the frequency gets louder and louder and less. Less fuzz. Right. And then bang, you got the radio station and then once it's locked in, that's called phase lock.

And once it's locked in, it's louder because now it's fully in sync with the environment. It's like people dancing and people are dancing at different rates and rhythms.

Right? If they they're all dancing in sync, it's a lot more fun. And everybody dancing their own dance, right? The brain does the same thing. So we're causing then the brain cells to oscillate in frequency.

And the more you lock in the the greater the amplitude. So you can either create more, of that phase locking or the amplitude by increasing the intensity.

Or better yet, you increase the phase locking, so you don't need as much power. Then if you're going to phase lock frequency, follow and train, then you will if you're not in training.

Is this more like a neurofeedback? I'm I'm curious about the training. What what does that mean? How do you pick the right frequency? Well, we know we know, for example, that, you know, we you and I right now we're in beta.

We probably have some amount of gamma going on, maybe a little part of our brain and wants to rest. And it's an alpha. And these are brain data. Pardon me.

And we're talking about brain waves. Can we do it. Just a quick reminder for everyone listening and watching beta is going to be had a more engage alert consciousness learning, thinking, judging.

You know processing okay. So that's beta. You mentioned theta. So below beta go in order in terms of lower. So beta is going to be 10 to 30Hz approximately cycles per second.

Then we have alpha which is just below beta. So that's going to be between ten about 13 cycles per second or hertz. And then below alpha is is theta. And that's going to be between 5 to 8Hz.

And then below that is going to be delta under five hertz approximately. So there are different scales that people use. And there are lower and higher eight alpha and beta and theta and so on.

So delta is where we are in deep sleep at the, in during the night, probably about an hour, an hour and a half into

sleep. That's when we are in deepest sleep.

It's hard to wake up out of, out of the Delta where we fall asleep, where they most of our night, 75 to 8% of our nighttime is in Theta when we're relaxing, when we're sort of dozy, but not asleep, then we are in, Alpha when we're sort of watching the Observer.

I call it the Observer State that we're in Alpha. 14Hz is called, sensory motor rhythm. That's also an idling rhythm of the brain. You're not processing. You're not thinking, you're not judging.

You're just there. Once you start processing what you're thinking, you start learning. Then you go into beta. And then there's another level above that called gamma.

And gamma is important actually in Alzheimer's as well. So you could pick magnetic systems that are going to give you those individual frequencies. And then by presenting the brain with an individual frequency, your brain is going to lock in.

I'll give you an example. So if I'm doing. It's hard to pay attention to that. Right. But if you go. Loud and consistent it becomes hard to ignore it.

And so part of your brain, your auditory cortex and part of your other, the parts of the brain are now starting to pay attention to that pattern. That's called entrainment.

So when we again when we give the brain these frequencies, the stronger the frequency, the more the interim it's the stronger the interim. It's going to be.

But if if we're trying to, go to the auditory cortex and right now the auditory cortex might decide that it's going to be in 23Hz. If I give the brain 23Hz.

Bingo. My brain is alert. I use that principle. I have a magnetic device that I use. I had to go pick up my daughter at the airport in the Baltimore area at 2:00 in the morning.

She was supposed to get in at 730 at night and I didn't want to take more coffee because that I wouldn't be able to go back to sleep. When I got home.

Right. How do I stay awake? Well, I happened to know about magnetic field therapy. So I have a machine called the Flex Pulse. So the flex pulse, that is a I can present that frequency 23Hz with a coil put on the back of my neck.

Choosing the Right PMF Device and Intensity

So that's what they did. You get the buzz. I mean you get the lift the uplifting and get the awakening. But nobody's. Put at the back of the head. And I was amazing. I was like alert.

And I picked her up and drove home. And as soon as I took it off, went to bed, I said, did you wear the whole ride to the airport? All right, all right. Great.

Because what happens is once you stop, the brain wants to do what it wants to do, and you're trying to force the brain to do something that it's not wanting to do at that moment.

So if you take away the stimuli, it's going to go back into its pattern. It'll go back into whatever pattern it was. It wanted to be in and use it 2:00 in the morning.

We're asleep. So the brain was the delta. Exactly. Got it. Well, so. And these devices. And I was curious about the practicality. Does you bitch and take it in the car with you so it doesn't always need to be plugged in?

There are mobile devices. Sure. So again, there are many types of devices. You asked which device would you

use? So in this case I was using the, Flex Pulse because the battery operate, it's portable. It's easy to put on the back of my neck.

So where's the where's the center of the brain that controls? Are there consciousness or consciousness? In fact, the reticular activating system is at the top of the brain.

It's the bottom of the brainstem, the top of the neck. So that's where I put the coil because right, right next to that brainstem. Let's go to and train that brainstem to be at that higher frequency, even though the rest of the brain wants to be asleep.

At that point, I'm telling the brain at the brainstem, stay alert. Gotta drive. And the way I drive, you got to really stay alert. And so if somebody wanted to entrain better memory making, and retrieval of memories, what would they use?

Well, memory. Where does memory, what frequencies does memory happen in? It's good thing we have the expert here because I do not know. All right. So theta is in a sense more in a sense more conceptual emotional memory.

Children are in theta until they're about 7 or 8 years of age. That's why we don't remember very well before age 5 or 6, unless a very powerful memory, very emotional memory.

So what happens is theta learning has has shown us that people who learn and theta, they're stimulating the brain while they're learning, they can't remember detail.

But they remember the concepts. So if you question them about how to apply a formula, how to apply an idea to a problem, they will have, they'll have a solution like that because it's coming from a theta level, which is again more vague, more generalized.

So if I want very useful army, it sounds very useful. It can be very useful. And the Russians did a lot of this. There's a book called Mega Brain. And would you talks about, theta learning.

So it's hard to stay awake during theta learning. But what the Russians discovered is that if you put, speakers, playing tapes, Encyclopedia Britannica under your head while you're sleeping, since you're sleeping in theta most of the night, that you're going to be learning what you're hearing subconsciously.

So there is something to this. I you can put a book under your pillow and sleep on it and and maybe learn something at night. Yeah, I could try that. I go ahead.

I don't think I'd want to do that. That could be disturbing to your sleep. So. Sounds a little uncomfortable. Yeah, but anyway, the theory is there, so. So basically, you could use different frequencies to make the brain alert at different levels.

And as soon as the stimulus goes away, the brain will tend to revert back to where it wanted to be. And different parts of our brain are in different frequencies all the time.

Our brain is not ever in one frequency. So if I put something under my pillow for sleep, which I do every night, if I put three hertz under my pillow every night, a portable, battery operated, you know, a machine like a flex, flexible, it's going to help to drag me down into the lower theta levels and upper delta levels through the night.

So it's going to be more likely to help me to fall asleep. And then because I play it all night long, it helps me to stay asleep. So I'm more likely to stay in that low theta level up or delta level through the night.

So I call it the equivalent of that is say for example, the image. The metaphor is you're trying to swim on the surface of the water, and now you've got a weight around your waist, right?

So delta is the weight around your waist trying to keep you down at the lower levels of theta. If you're if you're

remembering your dreams, if you're conscious of your dream that you're an upper or upper theta, you're just about awake, right?

People do conscious dreaming, lucid dreaming that way where they're sort of sort of asleep, but they're not really asleep. Well, that's not deep sleep.

It's not restorative sleep. So what we're doing that by ensuring deeper sleep, you're more likely to keep yourself asleep because instead of coming up to consciousness, being aware of your fact that you're not sleeping, then you know that's not restful sleep.

So we break yourself down even though your brain wants to be higher. Say, no, I'm not going to let you do that. I want to deep sleep. I want to sleep deeper until I've had enough sleep tonight.

Thank you very much. Yeah. So how do you turn it off? But it doesn't it keep you there? Oh, I turn well, I turn the machine off and the brain goes about doing its own business, you know, again.

Wow. And then, so could you wear a PMF device all day long and have the stimuli all night long, or do at some point? Don't you want the breeze to stop?

Well, there I have a friend who has. I spoke to him this morning who has chronic back pain. He wears his portable, battery operated PMF device all day long, and if he doesn't, he's got significant back pains.

There's no harm and the. But would you rather have chronic pain or a chronic magnetic therapy? Yeah. It's just how is this different from tens or tens unit at a Tens unit is electrical stimulation.

So if you if I find electrocute myself, what if I stab myself with an electrical pulse. It's irritating because it doesn't penetrate deep into the body.

PMF goes all the way through. I just stop it. It doesn't hurt, right? Tends, hurts so tends most of the time is used for pain management. So what is tends to do when you use it for pain management?

It's like stopping on your toe when you have a headache. Oh, that sounds terrible, right? What you're doing is you're distracting the brain with another stimulus.

You're not removing the cause of the pain, you're just distracting the brain. So it's it's function. It's useful that way. It's better than taking an opioid, but it's still not really dealing with the, the cause.

It it's not dealing with helping to heal the tissues and remove the cause of the pain. Because we don't heal the cause of the pain. The pain will just come back.

God has given you the opportunity to actually heal the tissue. I see. So this is just absolutely fascinating. I'm learning so much about PMF and the potential to use this in in the world of Alzheimer's.

I just so feel so privileged to be having conversations with experts like you, throughout this summit. And I'm really excited for our listeners to understand where they can get even more resources, because I think it's very clear, certainly to me, that we have only scratched the surface of what's possible here with Pmfs.

Now, I will say from personal experience and professional, I have looked on your website and you have a phenomenal amount of resources just there about how to compare different Pmfs you also offer, a consultation where you're willing to take people through and kind of determine which one is best for them based on their story, their history, and even talk with their doctor.

You've done that with me for a patient of mine, and it was so helpful to get your, expert just weigh in on what would be most appropriate. So I'm really excited for what you have to offer.

And I want our listeners to know where they can find out more. Well, Doctor pollock.com, Dr.. Outlook.com, not too easy. And my book, you mention my book so possible for health maybe I if you're going to some people have to invest a significant amount of money to get the best magnetic therapy system, like the rtms that we talked about.

They're 25, $40,000 machines. You don't have to spend that kind of money. But if you've got head injuries, if you have head injuries and you have had encephalitis or you have had, brain surgery, you recover from all those things and higher intensity magnetic field therapy is going to be necessary. Why?

Because of some. But something called the inverse square law. So magnetic fields like sound like light all drop off very rapidly. So this is the peak magnetic field.

And then the farther you move away from the source, it drops off extraordinarily rapidly. So for example, a 4000 gauss magnetic field, the Earth's magnetic field is a half a Gauss about a whole body.

Magnetic systems are being sold that are less than one gauss. I will pay $5,000 for a machine that only gives you one gauss. Can I say Beamer is a CPA, so that's not going to go very deep into the body.

A 4000 gauss magnetic field 4000 times stronger than these whole body systems. Okay, 4000 gauss drops down to 15 gauss in four inches, 4 to 6in. 4000 Gauss becomes 15 one, 5 in 6 inches.

And this is if it's just six inches from your body. Is that we're saying even if it's in error. Yeah, but it's your body. Since your body's heir to a magnetic field.

So if I stimulate across the brain for Alzheimer's, head injuries, migraines, Parkinson's, M. S., you name it, by simply going across the brain, I want that magnetic field to go to the other side.

I want to go completely through the brain. So I'm delivering a minimum of 15 gauss at the other side. The good thing is the body ignores what it doesn't need, right?

So if I have to, I have to start at 4000 gauss to get the brain 15,000 at the other side. And that's the optimal magnetic field intensity you need to decrease inflammation.

Say that again the optimum magnetic field frequency to decrease inflammation is to to decrease at the intensity to to decrease inflammation is 15 gauss, 15 gauss, one five.

So if you're treating the skin then you only need 15 gauss. But if you're treating across the brain or through the chest, into the heart, into the lungs, through the whole belly, the liver, etc., then you're going to have to calculate.

And there's a blog on my website about adenosine. So it's called the adenosine block. And if you go to doctor com and the search page on the search, box on the right side of the homepage, you type in adenosine a DNA, CNE.

And this is like adenosine triphosphate or ATP. That's been. Yeah. Oh, yeah. Body has adenosine receptors. Adenosine has to dock itself to, like, a lock in a key to the adenosine receptor.

And it turns out the adenosine receptor is critical to decrease inflammation in the body. Optimum magnetic field intensity to stimulate that adenosine receptor is 15 gauss.

Yeah, I am I think that's a drop off very rapidly. You need to calculate what the intensity needs to be to start with to deliver the 15 gauss at the target.

Interesting. So if the brain is your target tissue versus the stomach versus the heart versus the inside of your knee, you're going to need different intensities to start with.

You got it. And it's not wasted even if you have more than you need. And it's not going to hurt you if you have more than you need. Healthy cells ignore the magnetic field so it's only the cells that are out of whack.

The cells that are deficient in energy, that need the magnetic field stimulation to be able to do their function to fulfill their job. Fascinating. Fascinating stuff.

Well, this is so exciting. Again, to find a very safe and effective tool that we can use a power tool for health, is always fun and always a treat, and I'm so excited for my people to learn more about them so that they can be getting the benefit of PMS.

Doctor Pollack, thank you so much for being here. It's been an absolute pleasure. My pleasure. I look forward to helping all of your summit listeners about how to help their brain function, their executive function, the memories, and to stay that way so that you don't age.

Right. So that's the key is to be able to do this on a regular basis. You can't just do it treatment, can't go doctor's office and just do a treatment and be done with it.

Ideally, you should own your own system because then you can help your brain and help your body every single day. So exciting to have these tools available.

Thank you again. My pleasure. Pleasure talking to you and and sharing with your, tribe, your summit audience. Much appreciated.