Introduction to EMF vs PMF

So everyone, we are back for another awesome conversation. We're joined by Doctor William Pollack, who I actually just met recently and was blown away.

We were supposed to talk for a certain amount of time, and we went way over because the conversation was so interesting. And we're talking about a topic that a lot of people aren't so familiar with how important it is, and how much they need to look into it.

And Doctor Pollock's been investigating deep. It is going to help us learn not only about Pmfs themselves, but also the relation to your genes, your epigenetics and what's going on in general.

So, first of all, welcome. Thank you for joining us. Thank you for having me on, and I look forward to sharing with your audience, your summit attendees.

Yeah. Thank you. It's you know, I spoke to you the other day and it opened my eyes because I've understood EMF is being used in clinical practice, and I understood that there's an evolution towards proof and there's some efficacy.

And maybe first let everybody know when we say EMF, what are we even talking about? That's a critical question. Clearly understanding what it is. Right.

Because most people have heard of the opposite right, which is a which is concerning. And that has to do with emfs. Right. So the way I distinguish between those and you'll hear different things for different people about this.

EMF stands for electromagnetic fields. I define EMF as environmental magnetic fields. Right. And the fundamental difference between them is that is basically how it's produced.

And emfs are basically broadcast into the environment. You have this microwave tower or you have a radio tower or television tower and it's broadcasting the signal basically 360 into the environment.

It can be directed, but essentially it's 360. That means they're there, they're wavelengths, and they go on theoretically to an infinity. So that's EMF.

It's environmental. It's not designed for us. It's designed for communication. Right. What happens to get in the way? Right. The body is incidental to an EMF intercept.

You know, Army kind of intercepting the signal and essentially intercepting the signal. That's absolutely correct. So if you have signals coming this way and your body happens to be here, you know, that signal is going to go into your body, right?

If the wavelength is long enough, there are wavelengths that are broadcast in the environment that are long enough. They'll just go right through the body.

But the reason they they get intercepted by the body is because the signal, the wavelength is extremely short right. A body wavelength say from head to toe let's say a typical wavelength is going to be three meters.

So that means the wavelength has to be more than three meters not to be absorbed by the body. Okay. And for that wavelength you need a wavelength, let's say bigger than 100GHz.

Okay. I'm sorry to take that back 100MHz. So a 100MHz signal is almost three meters long. Okay, okay. Below

that, smaller signals than that, let's say ten megahertz.

That'll go right through your body. Okay. All right, so the shorter the wavelength, the more likelihood of absorption into the body. And that's the problem.

It's absorbed and it's absorbed depending on the intensity of the signal. How far away you are from the transmitter, etc., then you're going to have different degrees of absorption.

Essentially microwaves. And most of what we're talking about is microwaves, magnetic fields or microwave fields. Microwave emfs. So microwaves are in the gigahertz range.

So what is a what is the microwave oven. Do. It cooks.

How PMF Works in the Body

Why is it cooking. Because those wavelengths emitted by the microwave oven, by the magnetron in the oven are extremely short. And therefore they get absorbed and they heat.

So again depending on the degree of exposure, the length of time you have, the exposure for it could be essentially fairly damaging to the body. Let's take a cell phone.

If you put a cell phone to your ear as you hold it on your ear your ear will turn red. You see it all the time. Take the cell phone away from your ear.

It's bright red. So, What's happening? You're cooking your ear. You're cooking your brain minimally because the wavelengths they drop off intensity very rapidly from that, from the emitter, which is the cell phone itself.

If you look at the opposite ear, it's less red. It's reacting reflectively from the other ear that it was exposed. So essentially you're cooking your ear.

Now pmfs are completely different. PMF stands for pulsed electromagnetic fields. So one is a wavelength. In other words one is a frequency magnetic field.

Like our power lines are frequencies. Light is a frequency. Sound is a frequency. All of these are frequency based. And that again depends on the wavelengths.

So PMF is a pulsed magnetic field. And the difference then is that the PMF is generated by a current. Let's say my thumb is the current the direction of the current.

Let's say my thumb is the wire and the wire is passing underneath my my palm. Well, that is that magnetic field, because that electrical current that passes through my thumb or through that line, if you will, then there's a perpendicular magnetic field generated by that.

It's perpendicular to the flow of the current. We call that the right hand rule. And what happens every time there's a pulse in the current the flow of that current.

Then what happens. You get a magnetic field that produced and expands and collapses. Expands and collapses. It always goes back to the zero. That's called a closed loop.

The EMF sort of broadcast in the environment don't come back. So they're open loop. So the big distinction then really is that you don't have a wavelength.

You have a pulse. And that's very different. So every time it pulses, every time that is emitted by the circuitry of the controller, it drives down that line and it's passed it right over.

Right. You want to set it for typically most pmfs are pulse at a rate less than 2000. Does, less than 1000Hz as opposed to megahertz. The hertz is the frequency pulses per second.

So it's pulse at a pulse rate, which some people interpret as frequency. Some people interpret it as hertz. But that's that gets to be dicey in terms of the blurring of the technical terminology.

So a p f is really not Hertz is pulses per second. But you'll see people talking about Hertz, which actually, as I said is very misleading. So a PMF is a is is are still a wave.

It's a wave that's coming into your body and coming back out, wave coming out, coming back down. So it's it's not absorbed as the the wavelengths are too long.

It's not a wavelength as I said, it's just not a wavelength. But it still can pass through into your body and through depending on the intensity of the field.

So that's the key. It depends on the intensity of the field. And the intensity of the field usually is much bigger at slower and slower rates with high intensity magnetic fields.

So magnetic field that's pulsing at let's say the rate of five 5000 pulses per second because it's pulsing so fast. Equipment. Most of the time, unless you got huge equipment, equipment most of the time cannot pulse, fast enough to get through the whole body.

So the intensity drives the, the intensity, the production of that magnetic field drives the benefits of the values of the body. Depending on how deep into the body you can pulse that field.

So again the weaker the pulse the faster the pulse the less penetration there is into the body. But because it's not a wavelength it's not harmful. So pmfs are designed for therapeutic use.

They're designed with the body in mind. Most of the time okay MPs are designed for communications, right or wrong, to the job. It's not, it's not, it's not.

Yes, it's the wrong tool. But you know, it can be used for as a tool in medicine, as you were saying. And doctors use that radio whether it's called radiofrequency ablation.

So they use extremely rapid rates, high intensity to burn lesions on the skin or even to burn tumors or warrants. In some cases it's used to cauterize tissue.

So that means it actually burns the tissues of it basically causes a, a scar. And that has a purpose. It has a value. It's destructive on purpose is intended destruction.

So in a sense it's a it's a form of electrocution. Wow. So we're going to get into now what the benefits are, why someone would even seek out this form of therapy.

But I wanted to ask you, do you use a cell phone yourself? I do, you do? I do. I'm almost always on speaker. On speaker. So you never hold it up to your head.

Rarely. Very rarely. Because I know the risk. And I don't even like the, the cable sets. Right? Right. Because that. But still produces a magnetic field.

But that's still a lot better than holding the volunteer ear. And how about people that are holding the phone on their hands all day, texting and scrolling on social media while there's still going to do some stuff to the hands?

But, you know, you can say, well, okay, well, that's not as bad. If you're holding it in your lap and texting it. It's probably going to be a bit more, have a bit more action on the thigh if you have it in your pocket and it's on ready to take signals all day long.

Well, it's getting close to, parts of your body that you may not want to have that exposure to. Right. Right. You got to think about this kind of mini microwave that you're carrying around.

Would you put your head in a microwave? It totally is. Would you put your head in a microwave? Yeah. I had a friend, actually, who had a, a cellphone.

Carried it constantly in his pocket. It was always on. Right. And he developed this kind of interesting little neuro neuropathic, neuro buzzing thing in his leg.

Right from the stimulation from this up from this awful at that spot. Wow. We have evidence. We have evidence, in fact. Well, there's some degree of evidence that people who hold their phones to their heads in the same place all the time, particularly kids, for hours at a time.

There's been an increased incidence of brain tumors on that side of the head. Well, yeah, we've heard this, in fact, I have a friend that has been for two surgeries and she is on her phone all day.

She runs a real estate company, so she's constantly on the phone, had to bring to her surgeries, but getting back to the PMF. So you've explained the difference.

So there's kind of like, scientific logistical difference between the two types, EMF and PMF. There's some people that maybe don't even know what is the benefit.

Why do I even want PMF? What does it do for me? So that goes back to, basic laws of physics.

Therapeutic Uses and Fracture Healing

The primary benefit comes from Faraday's law. And Faraday's law says that a magnetic field passing by a conductor will stimulate charge. That conductor, the higher the magnetic field and the faster it rises.

So if you have a magnetic field that goes like this, it's very wide. It does have a high peak right. If you have a magnetic field it goes like this really rapidly high and fast.

Yeah. Then that induces more charge. So the faster the rise, the higher the rise of the faster the rise, the more there is, charge induction on the body.

And that's called Faraday's law. And that is the symbol for it scientifically. DB the D stands for delta or change B is intensity. So the change in intensity divided by the change the d dt divided by the change in time.

The higher the intensity and the shorter the time period that you get to the peak of that, that curve that the more charged to production there is in the tissue and it typically is the leading edge of the charge.

So like a wave you know it's going to knock you over the front edge. It's not going to knock you over on the back edge. Right. Right. You know, even the walking or in the sense of like that.

And then what what therapeutic benefit are people seeking when they go get PMF therapy? All right. Very good. See those books behind me? Yeah. Okay. So what is called power tools for health?

Okay. And that book, I wrote that book, it has over 500 references in it. And in that book I talk about some of these basic concepts of pmfs and I described 25 actions of magnetic fields biologically.

Okay. 45 actions in the body that charge production in the body that's caused, you know, by Faraday's law, the induced charge of the body then initiates all kinds of responses in the body.

And those responses lead to at least 25 actions. And I given references to those actions. So in other words, this is not just hypothetical. It's not just marketing hype.

There's science behind this. This causes all of these different actions. So we'll get into some of those in a second. And in the second book, Supercharge Your Health, I provide, concepts of how to organize and think about magnetic fields and then how to use them for different conditions.

So in the first book, I have 50 different health conditions that I review the science for those health conditions. Now there's a research backing for how magnetic fields can treat that condition.

Now why do I do the two? Why do I describe actions and why do I describe diseases or conditions. Because the Western mind thinks in terms of diseases or conditions.

Those 25 different actions that I mentioned, the pmfs apply to almost every disease. Right. There's a change in the physiology of the body. There's a change in the way things are supposed to function physiologically.

There's a change in the way the tissue looks and functions after that. So I describe basically three levels of function of healing in a sense. One is tissue.

So we think of what is this tissue. I could pull up my skin and that's tissue. I poke it, I burn it, I punch it. Whatever I do with tissue. So we don't think of that as molecules.

All right. We think of that as tissue. Okay. Think about the end result. Not what it's made of. Not what it's made up. And what is it made up. It's made up of biochemistry.

It's made up of molecules. How do those molecules work. We have we have let's say well you use that you used about 70 million, 70 trillion cells in our body.

I frequently use 100 trillion. Right. Yeah. Right. So or was somewhere between 72 million and 120. Anyway, it's an impossible number to to imagine, right?

So, all those cells, what percentage, how many, biochemical processes exist in every cell per second? 2 or 5000. Wow. Every single cell has about 2 to 5000 chemical processes.

A process about processes per second that you can't even think about what that even looks like. It's. But the whole thing works. Yeah. Right. It's all controlled.

Yeah, but how what what controls it? Physics. Right. Gets it. Can't touch it. You can't feel. Right. It's there. It's working. It's causing it to work.

So for example charge is an important aspect of physics. Positive charge. Negative charge. So all molecules most molecules have charge. Some markers are pretty neutral.

But for example salt our bodies were sailing right largely a large amount of sailing. But you can't dock sodium molecule to a chloride molecule unless the physics allows that docking.

Right. The physics says okay I can dock I can't dock. And actually there's an atomic microscope at Johns Hopkins and they put dilantin which is a medication for seizure disorders, put it into the solution.

And they were watching it under this atomic microscope. And all of a sudden this thing started shaking, started moving. This is a long, long after they already put the solution.

So there's nothing. There was no environmental contribution to this. They saw things shaking and all of a sudden the dilantin molecule showed up. Oh. Right.

So way before the molecule showed up, there was already electromagnetic action going on, right? So take that principle that you got all these 25 actions of at least, and then you have the tissue, and then things have to work.

Right? Right. And when they don't work, what do you get? You get imbalances. And the body has these what we call homeostatic mechanisms. It's always shifting things back and forth.

If you go up in the body, you're going to have to come down because the body says you've gone farther than I want you to to go. Right. PH is a good example of that.

As you gets a little too acidic, the body produces a little bit more, bicarb, a little more basic functions to bring it back to neutrality. So it's extremely tightly controlled in the body through all of these little shifting mechanisms.

That's called homeostasis. So basically to some extent when you have a disease or a problem you are restoring, balance by virtue of providing the system more energy to do what it wanted to do in the first place.

Right. Let's give you an example. Fractures. So when you break a bone, that's damage to the body, it's already way out of balance for that tissue. Right.

And the body has to kick in automatically kicks in all sorts of mechanisms to try to deal with that fracture. And that means it's there's blood there.

You got to remove the blood. There's inflammation there. You got to remove the information. There's edema the swelling there. There's there's muscle damage.

There's, nerve damage. There is blood vessel damage, connective tissue damage. All that damage now has to be repaired. So when you see a fracture or an x ray, there is a lot more damage on either side of that fracture than just the fracture itself.

Right. The body then kicks in to, all sorts of mechanisms to reestablish balance and to try to break, to reestablish the bone. Right. So that's what. And then the bone heals.

And medically, what we do is we put a cast on it. But why does the cast heal? Yeah. No, it does nothing. All it does is prevent you from being stupid.

Yeah. Right. From moving that fracture. Yep. And then if you don't move the fracture well enough and you're healthy enough, then over, the next 12 weeks or so, fine.

You have what's called a callus. You have an area where the body has now started to produce bone, to fill in the gap in the break. We do that with the skin.

So if you cut yourself in the skin the body knows there's a cut. It marshals all kinds of resources to fill that gap. So the skin heals itself. Right now there's a problem with fractures.

They don't always heal. So 1 or 2% of the time you get what's called a nonunion. So a nonunion means the fracture has not healed. And then you have basically a bone that's wiggly.

The government the FDA has actually approved magnetic devices to heal fractures that haven't healed after six months. Okay. And in some cases now people are using them for work called delayed union.

So if after after three months it's still not healing adequately, then they will start initiating treatment. So the FDA has approved magnetic field therapy to heal these non unions.

Or you could do surgery. You can do all sorts of invasive things to try to get that fracture to heal. A huge percentage of the time they fail. And of course it's invasive on top of that.

So you get the the problems of the surgery itself. What they found is that magnetic fields that are stimulating that area, the fracture, the nonunion, all of a sudden become alive.

They start to kick in and the healing process begins. And the devices that have been approved have been approved for like 18 gauss. So Gauss is a measure of magnetic field intensity.

You need 18 gauss. So that's that's what they were approved for. But you have to treat the fracture for ten hours a day. Wow. So you put it. Sorry to interrupt you.

What are we talking about? A EMF tool or a p m a tool? Always PMF. I don't talk about healing. Okay. Okay. We're not trying to destroy the tissue. Yeah. Understood. Try to heal the tissue.

So, based on Faraday's law, the longer wavelengths the charge goes through has to go through. It stimulates a process all over again. The body now has energy got stuck for a reason?

It didn't have the energy to finish the healing. Right. Now you're giving the body the stimulus to produce the energy to finish the healing process. But you have to treat for ten hours a day.

And they did a survey of 170 people who were supposed to be doing this for fractures of the arm, the leg and the hand. Scaphoid. Right. Which are common for nonunion.

It takes about 180 days. To heal a fracture with magnetic field stimulation. Even fractures that have not healed for seven years. All of a sudden, wake up, start to heal.

It's incredible. So essentially what you're saying is the body is innately resilient, like it's designed to survive. And there's processes in place to do these various things, whether it's healing, replacing, repairing.

You're just supercharging that process. There's a catalyst. There's PMF is saying we already know what happens. Let's just do a lot more of that by providing the energy for it to happen.

Because energy is the root of everything. With all the energy, nothing happens, right? And so it's kind of like taking your Ferrari and, you know, adding a few extra horsepower and, you know, all the sudden it's faster than every other Ferrari.

So that's incredible that you're thinking, you know, cylinders in the Ferrari that are not timed right. Right, exactly. Yeah. You tuned them. Your timing.

Yeah. It could it could be a question of adding capacity to what you do or making up for what you don't do.

Pain Relief, Sickle Cell, and Whole-Body Optimization

Well. It could be either one. Right. So now I actually, by the way, tried PMF when I had a fracture. I think you guys can see this, but there's a bit of a lump here.

So I had a cast, I was actually doing squats in the gym and I got down to the bottom, couldn't get back up. My spotter was gone, wasn't paying attention, and the bar fell on my arm, so snapped my arm.

I went to, a facility that had a p m a tool, and I didn't do it for 180 days. I did it for 4 or 5 days. You know, it wasn't a nonunion. That's different.

It was I it was nonunion. Yeah. It wasn't. Yeah, but, anyways, I, I did feel like almost instantaneous sense of relief. I don't even know how to explain it, but it was this sort of sense of like, it's it's as if I could feel what you described, that there was energy given to this location so that the resilience was increased.

I don't know how else to describe it, but that's what I felt. Well, and that's what you will feel with the right magnetic field. Right. You have very weak magnetic fields.

You might feel virtually nothing. Right. So it had to be the right intensity, and it had to be enough intensity for that

magnetic field to produce enough charge of the tissues that you could feel.

All of a sudden, things waking up. Yeah. And the interesting thing is that there's a tendon here. That was probably the most painful part. The bone actually didn't hurt that much.

It just I couldn't sleep at night because of the pain here. And that's where I felt this stimulus. You know, I felt like all of a sudden, this. Because it wasn't hurting for a while.

I'd already been in the healing process, but I felt that stimulus all of a sudden like, no, you need more work here. It's kind of like my body was telling you that, right?

So it was interesting. Absolutely. And that's a good point, because in fact, one of the things I tell people most of the time pmfs rarely, rarely cause problems.

Right? Because the magnetic field is just passing right through. Right. What they do is they reveal problems, right? If you stimulate an area and it's healthy, then the body doesn't react it.

Nothing was, you know, for nothing you need nothing going on. Yeah. There's nothing going on. So it takes whatever energy you present it. The body says, okay, that was interesting by.

Yeah. Yeah. Right. And yeah. And on the other hand if there's a problem there it's pushing it. So the analogy is an athletic training, you know, get off the couch and run a marathon tomorrow.

Right. Right. You got to train and you're going to hurt. You're going to push and you're going to back off. You're going to push again. You back off and train some more.

Push again. You back off and try some more. So gradually you're basically ratcheting up your your activity level, your resilience level, your endurance, your stamina.

All of this improves and and your performance. You're trying to do a high jump. You've got to be able to go up, you know, jump that high right. We have to train for it.

Well maps are basically like that to the body. They're pushing the body to tell you the body do more work. And do more work. And as you increase the intensity, as you increase the treatment time.

The work is happening. And then the body is able to do more and more and more and more and then finally when it's healed like a fracture it is stimulated to fracture.

Today with a magnetic field you probably wouldn't feel anything right because it's healed. Now. So it makes sense then why you say like when I ask you, you know, so therapeutically, what is this for?

Who needs it? Well, you're like, everybody needs it because most chronic diseases aren't, innate. Something that you're born with. They come from inflammatory loads on cellular structure because you made poor choices that are misaligned to your genetics.

And eventually something breaks. What is that thing? It's different for different people. So if you were to, you know, experiment with whatever that condition is at the PMF level, we're seeing that the system that's failing that led to that being your expression of disease versus something else, you're supporting that system.

So it's if it's a chronic condition that you're not born with, essentially you can help resolve it with this tool. What about things that are innate things like, you know, for example, sickle cell syndrome, you're born with it.

It's a genetic condition. Can you aid in sort of relief of those types of things? Well, this is where we can get to some discussion about DNA right at P.

So the answer is yes. If you have a, if you have a genetic condition. I can't turn you into a female by doing magnetic therapy. Right. That's not going to happen because your DNA won't allow it.

Now the magnetic fields that we use are not designed to do that, to push you beyond what your genetics would be. So in sickle cell disease, we don't aim to reverse sickle cell disease.

I tell people that for sickle cell disease that's between your car. Right. And you made a deal with God to get sickle cell disease. Right. So go negotiate with God. Yeah.

And good luck with that. Yeah. No kidding. All right. So no, what we do though is we say fine, what happens? What's the path of physiology of sickle cell disease.

Path of physiology. Is that the cells those red cells are sickle. And because they're sickle they're not round little donut things that can fully accept charge and take in nutrients and release oxygen.

And so on in the tissues. They're not functioning properly. So I can't make it function properly because it's still a sickle cell. But I can optimize its function.

So I can take it to the best level it can be. So perhaps will help to restore the best balance it can be. That could happen in the presence of imbalance.

Can you run let's say a 100 meter race with one leg. Yeah. Well you can kind of, you can hop. You can hop or get an artificial leg. Right. Right. So you're adapting to this, to your situation, and you're going to find the best balance you can find in the presence of that that imbalance.

So that's that's actually fascinating that something like what we believe to be what you have to live with a genetic condition, you're born with sickle cell, but you're understanding the functional nature of what's actually going on, which is.

So what's the problem with sickle cell? But because of the shape of the cell, it's not optimal in terms of nutrient absorption and all that type of thing.

So let's make up for that. And then yes, you still have sickle cell but not try to get rid of it or try to make up for what that does to you at a functional level and replace it with other sort of resilience, which is incredible.

Well, sickle cell disease happens to be a for a favorite topic of mine because. Oh, okay. And therapy can be extraordinarily helpful. What happens with sickle cell disease?

Because you have bad functioning sickle cells. They clump. Yeah. And when the circulation slows down they can clump and form clots. And therefore you develop pain. Right.

So that's what the sticklers do is they begin to actually cause tissue damage because of the lack of oxygenation and lack of circulation in the tissue.

And they have extreme pain. So PMF therapy then basically helps decrease that density of the of the sickle cells, increases more oxygen to the tissue, so improves the circulation of the tissue and at the same time has a natural pain relieving effect. What you describe to your arm.

There's a natural anti nociceptive God knows reception which is the perception of pain. So it's an anti pain perception action that happens almost instantly.

And then all the other actions roll out as the body begins to organize itself and produce the changes that need to be made. Wow. So then how do you target meaning that I understand when my arm was broken I had these two discs that were sitting on either side of my arm that created the waves.

So how do you target something like sickle cell which is head to toe. Yes. Supercharge your health. Supercharge your health. Yeah. So the answer's in there.

Well, I don't know that I talk about sickle cell disease specifically, but yes, the answer is, first of all, because we have, let's say, 100 trillion cells in our body, right?

And there are 5000 processes per second. And every single cell. What can go wrong? Sounds like a lot and a lot of opportunities. And they have to be perfect, right? Not to be in balance.

So the question is what can't you optimize even in a healthy person? What can't you optimize? Right. And aging I call aging is, death by a thousand cuts.

Right. That makes sense. Not so much the genetics. The genetics is important. Then we're going to talk about epigenetics, but then you're loading on top of that, genetics, other demands on the body's repair processes.

And right restoration rebalancing processes. So what we're doing then is we're pushing all of those systems to be optimized and giving it the opportunity.

Now, you can't build a house without bricks and mortar. You need the tools. You need the nutrient elements. When you're repairing a fracture, all of a sudden your demand for calcium goes up.

Your demand for magnesium goes up, your demand for boron goes up. So your demand for a lot of nutrients go up. And if you're if you're deficient in those your healing process is not going to be as good.

Right. So you have to optimize the substrates for the body to be able to do the work that you need to do. That's why you know the analogy is you can't build a house without bricks and mortar.

So if you have all the mortar you want but you don't have any bricks where you're not going to go very far. Right. Yeah.

Anti-Aging, Home Use, and Daily Maintenance

And then you need, if you have all the bricks in the mortar that's fine. But you're going to need plums, you're going to need ladders. You're going to need all sorts of other tools and equipment, and you're going to have to have somebody doing it.

So PMF therapy basically relies on the body's natural capacity to do the work. It should do optimizes it. But it's limited by the tools the body has available.

And so I mean everything we've spoken up until now is sort of condition based like therapeutic. How do we deal with various diseases whether chronic or not.

I've heard you one say that this extends beyond just masking or supporting your therapeutic throwing conditions. But you can actually dive deeper into like, the actual DNA repair and cellular regeneration and going beyond just what you feel, but what you don't even know is happening.

And so how does that work? How does PMF help with sort of DNA repair? Well, we're ask we're talking about global, right? Right. And you're talking about an obvious problem.

So let's do another analogy back to 100 trillion cells in your body. How many cells that your left little toe have. Yeah I don't know. Let's say millions. Okay.

I bet it could be 20 million. I don't know, let's say millions. If your left little toe decides to get an ingrown toenail. How many cells have to be damaged before you even notice.

Right. Millions. Yeah. Big number. Huge number. Yeah. But if you're doing magnetic field therapy on a regular basis, all those cells are getting the energy they need.

They wouldn't have that problem. So because you're optimizing everything constantly continually now you can't do it all day long. You can if you wanted to.

But there's no harm if you did. No paradigm studies. We have not done studies on people for 30 years doing 24 hours a day of magnetic field therapy. Right.

But but at this point, depending on the intensity of magnetic field, if you're giving that body energy on a regular basis, it's got enough energy when it needs it.

So if I do, if I take five deep breaths right now. Yeah. What what am I going to do to my body? You know, oxygenated I'm going to oxygenated. But what am I going to do because of the oxygen?

I'm going to cause oxidative stress right at the body. Now has to do it because that's not the natural state. I should be breathing that many breaths that quickly.

Right. Right. So then the body and the pumps then help the body's optimization processes fix that faster. Right. Same thing with the foot. You know, you just you just don't develop the problem the all because those cells in, medicine there's a concept called cell injury.

It's called the cell injury model. Right. So every cell has all these processes in it. If any of those processes go awry and they go awry, bad enough, then the cell begins to become injured.

It can't function as well as if it can't function as well. Long enough and bad enough it dies. And there's there's a demarcation line called the line of irreversible injury.

So cause if you cross that line now, that cell's doing a die, right? It's going to die naturally. Because you hasten the aging process of that cell, or it actually dies because you poisoned it or burned it, or traumatize it in some fashion.

So it dies, and then it goes through a whole process of dying. There's a process of dying as well, and it's detectable by us at different degrees. We can do lab testing, we can do X-rays, we could do biopsies.

We can do all sorts of testing. The more you can see it, the farther it's advanced. But it's way past that line of irreversible injury already. So if you're supplying energy to the body on a regular basis, the cell has a chance to repair before it gets down to that bottom.

Before it becomes irreversible. And that's the goal. So we're making. So we're not just talking about treating or masking or eliminating. We're talking about preventing chronic conditions.

Correct. Because our bodies are opportunities to fail. We're not designed to be alive forever. Yeah. Nothing is actually anything that has form is not designed to live forever.

Because of entropy. Everything over time loses loses energy to maintain form. So you have to constantly be adding energy to form to maintain the form.

And that's what we're doing with medical therapy. We're adding energy to the body or increasing the energy production of the body, so that you're maintaining the form at whatever optimization you can't depending on the stressors you put on it.

So essentially you're saying it's also an anti-aging tool because you can add healthy years to your life that you wouldn't have otherwise had because you were on a certain path with your energy and cell degeneration.

But you're slowing that down. Totally, totally. So the question for us is, you know, between aging, they say up to

age 24 or so, this is the aging curve, actually up to 24, you're actually more like this.

You start off faster at the, at the bottom one, two and three. And then eventually you go you start to plateau at an age 24 ish. Now the rate of breakdown and rebuilding or building has plateaued.

It's even it's equal. Most of us notice by about age 40. Now we start to have creaks and rattles. Right. So why do we have creaks and rattles. Because the curve is not like that anymore.

The curve is started to tip. So at about 24 if we're not doing optimization we're going to age. Now obviously the more stress you put yourself under if you happen to play for the Toronto Blue Jays or the Argonauts or a professional football team, you're going to go down faster.

You're putting your body in harm's way. You're putting a greater demand on your body. And often it's an uncontrollable demand. Like your fracture. Exactly. Right.

So and that's what that's entropy. You have to maintain the energy in the system so that the end of the curve of decay, the curve of breakdown and aging, is optimized as much as you can.

So doing adequate nutrition, taking care of the genetics. And I think we'll be talking about as well all optimize optimizing your genetics as well becomes an important part of this process.

So the P and S gives you one more tool. So if somebody believes that this is it sounds like what I need like it's noninvasive it's easy to do. What does it typically look like if somebody's buying a machine and keeping it at home.

Are they going to a clinic or do they typically do this? That's an important question. So going back to 5000 chemical process per second. Right. Go to a clinic. Yeah.

How much help are you going to get? Yeah. So you're going to get help. But it's not the same as doing it more regular. Yeah. So as a as a holistic family physician, I learned a long time ago.

I'm. I'm not your doctor. You're your doctor. I'm your consultant. You got to take care of yourself. I'm going to give you the tools and then you take care of yourself.

So you have to be taking care of yourself essentially all day long. Yeah. Eating properly. Resting properly. Getting enough activity. Having the right attitude.

All the things we talk about with lifestyle for anti-aging. They're still necessary. What they're missing, though, still, is the amplification of the natural energy in the body.

Optimization purposes. Because otherwise you're taking a chance. You go once a week to, get a treatment. It's better than not going. But it's not the same as doing something every day yourself.

Right. And the question is once a day enough, 5000 chemical processes per second. Has a lot to do with, we don't know how much is enough. So what you do is you do what you can.

And what we find out is that people who do mechanical therapy at home on a regular basis, on a daily basis, go on vacation. They took it for granted because they were doing it every day.

So they're optimized. Relatively speaking, unless they have a barbell fall on their arm. Right. So they're optimized. You go on vacation. They've stopped optimizing.

Yeah. When they feel it and people feel it, they can feel the difference. And then when they go back home, they feel the difference right away in order to get themselves back up to where they were before they left.

So every condition, every health condition, every body, every person needs to kind of figure out their own formula

for what you should be doing. Back to your point though.

I think really the key would be to do your own treatments at home. And then we go back to Faraday's law. Sure, sure. And how do people access these machines?

Like, what is it? Do they work with you or how does how do they get them in their homes? Well, there are lots of people selling magnetic therapy devices.

Okay. There are multi-level marketing companies that are selling devices. They're on the internet. As if you do a search on Pmfs, you'll come up with thousands of links.

So there are a lot of people selling. A lot of people are selling are not doctors. They're not engineers. They're not physicists. They don't really know exactly what they're selling.

They don't necessarily know the mechanisms and they don't know how to optimize. You know, the processes for you. So we have set up Doctor Polycom. Okay. For that purpose.

So as a physician I guide people to the right device. Now if you're just looking for something for health maintenance you probably don't need my advice.

So you could just read one of the books. And there's a list of the machines and the books, some of which I carry, some of which I don't. So we, we sell the machines on our website because people want advice and then they want to know how to use it.

And then they want to know what to do for the next condition. They get. So we decided at one point basically to do this, to do proper support, proper education, get people into the proper equipment for their needs.

Then they need a consultation, typically. Right. And just to be clear, for everyone that's listening today it's Doctor Polycom. So you look correct. Com correct.

So doctor.com highly recommend you go check that out and read the book.

Genetics, Epigenetics, and Prevention

I've been skimming through it and it's been very interesting to learn so quickly. But I think what you said nails it is that health isn't a doctor's visit.

It's everything in between the visits. Right. It's it's. What are you doing? You know, you might see your doctor once, 2 or 3, maybe five times a year.

And depending on what you're dealing with, but the time you spend at home is really where health happens. Because what you eat, what you do or how you spend your time, those are the things that turn the dials up and down.

Right. And going to your doctor, like you said, I mean, your perspective is amazing. And we wish that more doctors who think that way. But essentially you're saying you're a quarterback.

You're helping them. You know, you're you're you're creating those guardrails, which becomes their strategy and making sure that they stay within them.

And that's what medical sort of practice should be is like, here's everything. Come see me. I'm going to maintain what you're doing. But you got to do it.

Because if you don't do it, then it's just you coming to me for a prescription every six months or whatever. You know, so it's amazing what you're doing.

I mean, I wish more people would think that way. So, one last thing. But broaden that concept a bit. Sure. Yeah, yeah. Years ago, they did a study, about 10,000 people and asked them if they had any symptoms and had any issues.

Health issues, and then they found out over that number of people over the next month. How many people ended up in a University of medical center? How many people ended up in a, how many people had surgery?

How many people ended up in a university medical center? How many people ended up in a hospital? Right. And people went to the doctor. So after 10,000 people, 80% of other people said they had a symptom.

Right. In that month, they had some kind of health symptom, but only something like 2000 people ended up going to a doctor. Of the then of the 2000 people end up going to a doctor maybe 100 ended up in the hospital.

Okay. Only one ended up in a university medical center. Really. So you have this pyramid. In terms of descending down into the, if you will, into, into the into the mess.

Right. If you can capture people at the point at which you are having symptoms. Like I've mentioned with cell injury. If you're already having a symptom you're having a dysfunction.

If you can fix that dysfunction at that point without having to take a pill, without having to go to a doctor, that's optimal because that's when you could reverse it most quickly.

Yeah. Before it's too far gone. Like certain things like dementia Alzheimer's. You know you want to catch it early and literally reverse it you know. Versus wait and see and hope hopefully the doctor will fix me which I, you know, at a at age 60 or 65 or so, people will have memory problems already.

Fairly substantial percentage over the next 5 to 10 years will become clinical. Because you know we we're not doing the things we could be doing when we start to notice the memory problems.

That we need to be doing. So because again we distracted and we have other priorities. And so now we now we wait. And by the time you wait it's kind of too late.

Yeah. And there's also the belief that the can you even intervene. You know, the belief that I have it or I don't have that binary sick or not sick versus it's coming like chronic diseases take time to develop.

Right. So again capsules, red flags or warning signs access to your DNA and understand where the risks are. Get ahead. Blood work isn't just about testing when you're sick.

It's about knowing in advance what's coming. Right. So all the stuff you can do to have, preventative insights. Yes, you very much can take control regardless of what that chronic condition is, and prevent or reverse it.

But you have to start on time, you know, in the DNA testing that you do gives you a large lead time. Right? Yeah. The earlier you start, the better. So this was fascinating.

I want to thank you. Remind everybody, to check out the website because I agree this type of thing. It's not about one and done. It's not. You wait to get sick and then you deal with it.

If you have it at home and you make it routine. It's part of what you do. You brush your teeth. You comb your hair. You know this is another thing you do in terms of maintenance.

And it's so easy and painless. And if it's in your home, it's not just you. It's your whole family. So highly, highly recommend. Go to Doctor Pollock's website.

Check it. Check out what's going on there. Get the book so you can learn also and start teaching the people around you. Because healing isn't just about what you do for yourself.

It's becoming an ambassador to help everybody around you. And when the habits of everybody changes, everyone's healthy. Then all of a sudden what you eat at night, how you exercise, how you like, everyone's doing it together, right? So.

So we talked about how pmfs can aid in sort of DNA repair, cell regeneration. What about the epigenetic phenomenon? Is there any insight there in terms of disappointing us in any direction?

Is there anything we can do and glean from PMA? Well, when we've chatted before, we chatted before. We talked about fixed genetics and epigenetics. And we assume that fixed genetics is completely fixed.

Right. But even fixed genetics gets attacked, gets assaulted and has to react. So the question is and what you can do is to try to optimize your fixed genetics, or at least remove the things that are going to stress that fixed genetics.

So one of the example is examples is if you start taking say you're a male, we start taking female hormone or you take male hormone but you're a rapid converter.

So now what are you doing. You're stressing your fixed genetics. Right. So you don't do that if you know that don't do it. On the other hand fixed genetics also can be compromised by other things including injuries including infections.

So it needs to be able to function and it can't you know I say that you can't, grow a garden in a swamp. Yeah. Right. So even good, even good genetics may not be able to function adequately for the amount of stress that's put on it.

So that's 1 to 1 aspect of what PMS could, could do by keeping you optimized that you're optimizing the the environment for that genetics. You're cleaning the garden, you're making making the ground more, appropriate for that genetics.

And then then we talked about epigenetics. So I think you can do a much better explanation of epigenetics than I can. That's the response of genetics.

Yeah, it's the response. And we I mean, a lot of people here listening are familiar but not deeply familiar. And that's where maybe you can help them understand, you know, how you see it.

Life is adaptive, right? Right. As I said, it's got everything's got to be in balance. So it's put out of balance. The body tries the best it can to bring it back into balance.

As I said, if you lose your leg then you can't put yourself back into balance. But you find ways of dealing with that imbalance as bad as it is. Now most of the time with epigenetics it's not that bad.

But as we stress our bodies, our bodies adapt genetically. And I guess you can call that epigenetics. It's adaptive genetics. And so again, if you're optimizing functionalities in the body then your epigenetics doesn't have to work that hard.

Or if it's causing if you're causing problems like let's say alcohol, you're stressing your genetics with that alcohol. If all you do is just stress your genetics and you don't do nothing to help you with the damage that's causing, then that's going to take you down that path right downhill.

So what if you do if you. So you're taking alcohol. Now let's let's repair your liver. So what do you do to repair your liver. You take all the supplements and herbs and you detox as much as you can.

But you have cell damage. So does does does, nutrition help to repair a cell? The epic that your genetics controls how much you can repair that cell and the burden you've placed on it.

So the epigenetics basically is responsive. And you can help the epigenetics by removing the condition that caused

the problem in the first place, or amplifying the the ability of the body to repair, to reestablish balance and all the tissues of the body.

Everything's epigenetic. What is 85 and 90% of our genetics is epigenetics. It's responsive. It's really part of that. Okay. So we're saying that we're responding.

But that delta value between where we could be and where we are starts from, you know, how healthy are we genetically. Right. That that springboard that launching board where you're starting from.

And you're saying that through PMF maintenance, you can bring that load way down, right? So the negative epigenetic expression maybe becomes negligible because you're starting from such a healthy spot.

You start, sorry, from a spot of the least amount of damage or at least amount of injury, the least amount of imbalance. Yeah, that's very insightful.

So I want to thank you again for coming. This was awesome. Check out the website. Thank you again, doctor Paul. It's my pleasure because you've.