PEMF Therapy In Cancer Care: Insights & Benefits

Jennifer Simmons, MD
with **William Pawluk, MD, MSc**

Jennifer Simmons, MD
Hi there, it is Dr. Jenn, and welcome back to the Breast Cancer Breakthroughs Summit. I am so delighted to have my next guest. This is Dr. William Pawluk. In addition to being a conventionally trained doctor, he is also trained in acupuncture, nutrition, herbs, and energy medicine, which is what we are going to be talking about today, but also in homeopathy, hypnosis, bodywork, and multiple other therapies.

He is a breath of information with an amazing life and work experience. He has been on the Dr. Oz Show. He is the author of two books, Power Tools for Health and Supercharge Your Health with PEMF Therapy. Dr. Pawluk, welcome. I am so happy to have you.

William Pawluk, MD, MSc
Thank you, Jenn. I appreciate you having me on. I appreciate having some time to spend with you and provide some information to your listeners.

Jennifer Simmons, MD
Yes. You have amazing training, and you have very broad training. Can you talk to me about how a medical doctor also gets trained in acupuncture through nutrition, herbs, and the magnetic field? How does that happen? Because having gone to a conventional medical school, I know for a fact that they do not talk to you about any of that.

William Pawluk, MD, MSc
I call it leaving the house of medicine.

Jennifer Simmons, MD
Yes, I love that.

William Pawluk, MD, MSc
I call myself an unhappy doctor. I am not.

Jennifer Simmons, MD
Is that what happened?

William Pawluk, MD, MSc
I am not happy until I can solve your problem. I have to go get some other training. I would have to do that. But the first thing you have to do is say, Fine, the House of Medicine does not have all the answers. How I came to that and what prompted me to study acupuncture was because I had three patients in the hospital in a very short period. I had a group practice that I shared with the doctors routed in a hospital, and within a very short period, within a week or so, we had three patients almost die of GI bleeding and gastric bleeding. The common denominator among those patients was ibuprofen. They almost bled out because of ibuprofen.

Jennifer Simmons, MD
From ulcerations? Is that what happened? Ulcerations.

William Pawluk, MD, MSc
Ulcerations. Ulcers. They almost bled out. That is, 33,000 people a year die from Ibuprofen. Yes, that is where anti-inflammatory drugs are. That is a huge number. We are still doing it today. Back then, I said, Well, I was practicing stupid medicine so I could use opioids. I could use Ibuprofen or Tylenol. I could refer them for a procedure, but that is about all the choices I had. I said, Well, that is too limiting. I know there is more that we could do. I knew about acupuncture. I said, Okay, fine, I am going to leave the House of Medicine. My partners would go like this.

Jennifer Simmons, MD
Yes, the House of Medicine.

William Pawluk, MD, MSc
How could you dare leave the House of Medicine? We have all the answers. Well, so I learned acupuncture. After I learned about acupuncture through the UCLA School for Professionals, I discovered that people in 1990 did not know what acupuncture was, so they did not want to do acupuncture as well.

Jennifer Simmons, MD
In this country.

William Pawluk, MD, MSc
Well, in this country, that is exactly correct. There were about 300 doctors that were trained by this program in the U.S. Sorry, only 300. Yes. In the US.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
The need is much bigger. I said, Okay, well, I will do acupuncture with needles. Let me do acupuncture. Find some other way to do acupuncture. I studied magnets and discovered that in the Orient, people were using magnets on acupuncture points. Okay, find out that I can. Let us do magnets. I started working with magnets and discovered they were doing other things. Wait a minute; you are doing it. But no, they are doing other things. A good example. I took a magnet I was going to read on my deck. I am going to read for about two or three hours. I read a book, and I noticed I had a spider bite on my leg. I did not even feel the bite, but it was a nice big, round red area. Nice with a little bit to it.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Spider bite.

Jennifer Simmons, MD
Once you have seen them, once you have seen one, you recognize it.

William Pawluk, MD, MSc
As I am a family physician by background, I knew what it was. Three hours later, the magnet. Gone. Why? This is not supposed to happen.

Jennifer Simmons, MD
So let us start with what is happening. Why does a magnet change the usual course of events, which would happen with a spider bite, which is a huge inflammatory response?

William Pawluk, MD, MSc
Correct. That is the key. Magnets, a magnetic field goes into the body as it goes into the body and it begins to influence the cellular environment in the body under that magnetic field, and nothing in the body stops the magnetic field. Nothing—bones, a fat brain—nothing. Nothing stops the magnetic field.

Jennifer Simmons, MD
Which is why we can have an MRI.

William Pawluk, MD, MSc
Which is why we are doing an MRI. Exactly. Correct. Now we have other devices that we are using for treatment-resistant depression. There are very powerful machines that can cause muscles to contract when you stimulate the brain. As the magnetic field goes into the body, all sorts of things begin to happen. Because of what the magnetic field is doing in the body, it is introducing or increasing the availability of something called charge, or electrical charge, in the

tissues. All the tissues have charges associated with them. All the molecules in the body have charges associated with them. When that happens, you are influencing that charge, and you are increasing the amount of charge production in the body. Now, what I was using was what we call static magnets. It is a fridge magnet. It is a permanent magnet, a horseshoe magnet, or a bar magnet.

However, I discovered and began to work with pulsed magnetic fields. It turns out that in Europe, they were using them for a long time. One of my books that I had written besides the ones that you mentioned is one called Magnetic Therapy in Eastern Europe, A Review of 30 Years of Research. I published that book in 1985-88. That was 30 years of research up to that point. Now it has been a lot more since then. Of course, we know a lot more about magnetic fields now in the West. But as in that second book, the first book was because of an MD Ph.D. in the Czech Republic who got his Ph.D. in using PEMF, pulsed magnetic fields in rehab. He had to summarize all this science in Eastern Europe for his Ph.D. thesis. He had a manuscript. We started talking. He said, Let me give you my manuscript. Then I published the book. We worked together. We published the book, that science—30 years of science in Eastern Europe—is now available in the West in English. Otherwise, it was an obscure journal written in the Cyrillic alphabet and was largely inaccessible.

Jennifer Simmons, MD
Well while we are on that topic. This is largely why I do this. The reason I put on these summits is to bring information that is otherwise unavailable to people and make it available to them so that they know that they have choices outside of the conventional medical world so that they can safely leave the House of Medicine and get what they need.

William Pawluk, MD, MSc
Safely, as you said, safely living the house of medicine. You do not have to leave the house of medicine, but you can attach something else to the house of medicine, that is.

Jennifer Simmons, MD
Absolute.

William Pawluk, MD, MSc
At the house. That medicine has not been attached yet, largely because of.

Jennifer Simmons, MD
Money and fear. Fear here.

William Pawluk, MD, MSc
Fear with this control, there is power. There are all sorts of reasons.

Jennifer Simmons, MD
Yes. Doctors very much fear what they do not know and so I say this all the time. They say no. When what they should say is, I do not know. But they are so uncomfortable with I do not know and use no instead.

William Pawluk, MD, MSc
Once you have gone outside the house of medicine, you begin to realize that it is a very limited sphere of information and knowledge. There was a study done by one of the major government agencies on technology assessment, and they discovered that 70% of the decisions that doctors make are not based on science. 70%. They say it is based on science because there is some science behind them. However, the decision is not directly related to any science available. As we are even in the house of medicine, we are largely flying blind.

Jennifer Simmons, MD
Yes, well, we are being guided and blinded.

William Pawluk, MD, MSc
Guided and blinded. Good way to say it.

Jennifer Simmons, MD
Yes. Okay, so you started off working with static magnets, and then you started to work with pulsed electromagnet fields. First of all, what exactly is that? What does that even mean?

William Pawluk, MD, MSc
All right, so there is an elephant in this room, and the elephant is EMF.

Jennifer Simmons, MD
I beg your pardon.

William Pawluk, MD, MSc
Okay. There is an elephant in the space between you and me. We cannot see it. It is transparent. But there is an elephant in this room. It is on people's minds, and that is EMFs, 5G, wi-fi routers, microwaves, and so on. Well, that is true. Those technologies were developed for different purposes. It was developed for communication, but it has effects on the body, and those effects are similar to PEMFs. EMFs are broadcast into the environment. They are high frequencies, and high frequencies get absorbed by the tissue. That is the purpose and the premise behind a microwave oven, which you bake with microwaves. Well, if you take a cell phone and put it in your head, you are baking; you are cooking your ear. You look at your ear after you have finished talking on your cell phone; it is going to be red. Exactly. We all know that, right?

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Well, that is what we are doing with these microwaves that are being absorbed. EMFs are absorbed, and they are broadcast into the environment. PEMFs are made in a completely different way. PEMFs are made by current flowing through a wire. You have a piece of equipment that is typically driving current into copper wires, and those copper wires are then wound into what we call copper coils. As the current flows through that copper coil, it produces a magnetic field that is perpendicular to the flow of the current. We call that the right-hand rule. My thumb is the wire, and the current is slowing down that wire. The magnetic field produced by current flow through a wire is perpendicular, and my hand is flowing in the opposite perpendicular direction.

That is what the principal relies on. We are producing current in a wire that, even though the wire is shielded, the magnetic field still goes outside the wire, and that magnetic field can then be pulsed. A pulsed magnetic field is a lot more potent than a static magnetic field, and it is not moving at all. The pulsed magnetic field passes into the body, in and out of the body. The analogy, the metaphor that I use, is the wind in the trees. You cannot see it. The only way it is there is because the leaves are moving or the branches are moving, but that is essentially what a magnetic field is doing in the body. It is called evidence.

Jennifer Simmons, MD
All of you see the evidence of it.

William Pawluk, MD, MSc
You see the evidence.

Jennifer Simmons, MD
The proof. Yes.

William Pawluk, MD, MSc
So the wind and the magnetic fields are stirring things up in the body. They are producing charges and energy. The principles of physics are that magnetic fields interact with electrical charges. I charge out a molecule; I charge out a metal; I charge out an iron. All of that is then influenced by magnetic fields. As you pass the magnetic field through those tissues and through that material in the body, you are now increasing charge and energy in the tissues. What happens when the body has more energy?

Jennifer Simmons, MD
There are lots of good things.

William Pawluk, MD, MSc
Work. How efficient is a body at turning energy or fuel into work?

Jennifer Simmons, MD
I do not know the answer to that question.

William Pawluk, MD, MSc
25%, How efficient?

Jennifer Simmons, MD
Not that efficient.

William Pawluk, MD, MSc
How efficient is a car at turning fuel into work?

Jennifer Simmons, MD
I have no idea.

William Pawluk, MD, MSc
About the same.

Jennifer Simmons, MD
Wow.

William Pawluk, MD, MSc
It is about the same. What we are doing now with magnetic fields is increasing the amount of energy production in the tissues above normal. Then we are giving the body more energy to do the work it needs to do. This is why a magnetic field can heal a wound in about half the time.

Jennifer Simmons, MD
Wow.

William Pawluk, MD, MSc
If you are a surgeon and you do your surgery at the end of the surgery, you close things up, and what you do is cross your fingers. Because now it is up to the person. They have got to heal themselves. What does the surgeon do to help you? To heal yourself?

Jennifer Simmons, MD
That is mostly nothing.

William Pawluk, MD, MSc
Nothing. You are leaving things to chance or expecting the body to do the work it is supposed to do. We know there is a huge amount of variability in how well people heal. What we are doing with magnetic field therapy by increasing the charge and the amount of energy available in the

tissues. Now the body is much more efficient at doing the work it needs to do. It does not leave us much to chance, so much harder and better and longer and stronger.

Jennifer Simmons, MD
What are the indications for using PEMFs, and are there limitations?

William Pawluk, MD, MSc
There are. Let us start with almost unknown limitations. No limitations. We have to be careful with pacemakers or anything implanted that is electronic because magnetic fields interfere with electronics. We know that. A lot of implant electronics these days are MR-compatible. They are called MR-conditional. If they are MRI-conditional, then they are pulse electromagnetic field-acceptable. Typically.

Jennifer Simmons, MD
Mm hmm.

William Pawluk, MD, MSc
The only true contraindication to magnetic field therapy is a transplant.

Jennifer Simmons, MD
Why is that?

William Pawluk, MD, MSc
Why, if you usually get anything transplanted, even a cornea, you are on immunosuppression.

Jennifer Simmons, MD
Mm hmm.

William Pawluk, MD, MSc
A magnetic field influences the immune system, and you do not want the immune system to be stimulated.

Jennifer Simmons, MD
Because it increases rejection.

William Pawluk, MD, MSc
Host versus chronic.

Jennifer Simmons, MD
Chronic.

William Pawluk, MD, MSc
Only contraindication. Otherwise, you have to just be careful sometimes. The thing is that you and your body may not be ready to do the amount of work that the magnetic field is allowing the body to do or trying to coax or convince the body to do so. If you just spent a month in the ICU, if you are depleted, you are nutritionally depleted in a whole lot of ways. You just do not have the energy anymore to do what you need to do. You have to recover from that. In that situation, you go low and slow, and we have protocols in my book, Supercharge Your Health book on how to go low and slow, gradually. That is like athletic training. You cannot get off the couch and run a marathon tomorrow. You better train.

Jennifer Simmons, MD
Yes, so what does that look like?

William Pawluk, MD, MSc
What does that look like?

Jennifer Simmons, MD
What does training look like? What do low and slow look like? How does one start to use this healing modality?

William Pawluk, MD, MSc
If you are just dealing with a cut or I have a spider bite on my leg, you probably do not have to worry all that much. If you are a 270-pound linebacker on a professional sports team, you probably do not have to worry all that much. They are masochists. They try to be.

Jennifer Simmons, MD
I know. I gave birth to one of those.

William Pawluk, MD, MSc
Oh dear.

Jennifer Simmons, MD
I am a very proud football mom.

William Pawluk, MD, MSc
Football mom. You know what am I talking about?

Jennifer Simmons, MD
I have a 200-pound linebacker.

William Pawluk, MD, MSc
Linebacker. They love to get beat up. They love to beat and get beat up.

Jennifer Simmons, MD
Yes, they do.

William Pawluk, MD, MSc
Well, normal people do not. The most frail among us have to be very slow. There are two aspects of magnetic field therapy: the dose, or, in other words, the strength or intensity, and the magnetic field and the amount of time that you are doing treatment. There is another aspect to it: how often do you do treatment? For most of the processes in the body, you need a certain amount of time. There have been magnetic devices approved by the FDA to heal fractures that will not heal. They are called Non-unions. The intensity of the magnetic field in these devices is about 16 gauss. Gauss is the measure of magnetic field intensity. It is G-A-U-S-S and the company that developed it got FDA approval and said that you have to treat for 9 hours a day.

Jennifer Simmons, MD
Wow. That is a lot.

William Pawluk, MD, MSc
You have to put a magnet over that bracket for 9 hours a day to heal it, and they have done studies and looked at the people who did it and then how much treatment time they did and then how long it took them to heal. If you worked 9 hours a day for three months, you would have heard three months. If you did it for 3 hours a day, it would take double the time to heal.

Jennifer Simmons, MD
What if you okay? It would take three times the amount to heal. If you did not do it.

William Pawluk, MD, MSc
It would take it 2 to 3 times. Instead of three months and taking six months, it also depends on the environment, the tissues of the person, the recoverability of the age, and all those other factors. My point is that when you have a magnetic system, you have to know how much time you need for the type of problem that you have to get the best results. If the intensity of the magnetic system is too low, you are generally going to need more treatment time.

Your newer devices now say that you do not need nine hours a day; you only need three or four hours a day, but you still need a large enough amount of time to stimulate those tissues to not only re-initiate the healing process but also make new bones. Not only decrease the inflammation and the damage that is causing the soft tissues as well as the bone itself, but they have to stimulate all of that. But the body does not heal overnight. You do not make new bones overnight. It takes time, but all healing takes time.

Jennifer Simmons, MD
Yes, for sure. I am curious because I am thinking of my women who have had chemotherapy and are walking around with white blood cell counts in the twos. You said that this is stimulatory for

the immune system. For these ladies, would this be an appropriate modality to help them recover?

William Pawluk, MD, MSc
Without question, without any question whatsoever. Anybody having any surgery, I will give you an example of myself. I had to have an elective appendectomy. I took a small portable magnetic device, and this was done midday on Friday at three stab wounds. I was told that I probably had to be out of work for two or three weeks. I put a small portable battery-operated magnetic device on two of the stab wounds, and I left the third one as a control.

Jennifer Simmons, MD
Are you talking about; did you have a laparoscopic appendectomy? So your stab wounds are that or the ports.

William Pawluk, MD, MSc
Yes. Microscopic ports.

Jennifer Simmons, MD
Yes. Okay. Surgeons do not make their entry points to be called stab wounds. We like to think of ourselves as a little kinder than that.

William Pawluk, MD, MSc
Well, if you get to do the work.

Jennifer Simmons, MD
We call them incisions.

William Pawluk, MD, MSc
Incisions, okay. Incisions. I call them stab wounds.

Jennifer Simmons, MD
I know.

William Pawluk, MD, MSc
But then a stab wound is.

Jennifer Simmons, MD
Semantics.

William Pawluk, MD, MSc
An incision is a scalpel. Scalpel cut. Nicely and precisely. controlled cut. A stab wound means you have to penetrate that peritoneum.

Jennifer Simmons, MD
Yes. With the trocar. I get it.

William Pawluk, MD, MSc
Anyway, I was back to work on Monday.

Jennifer Simmons, MD
Okay. So you use two of the sites, and you used PEMFs on that? Then the third site you left without assistance?

William Pawluk, MD, MSc
Crossed my fingers.

Jennifer Simmons, MD
What did you find?

William Pawluk, MD, MSc
I was back to work on Monday. I had virtually no pain. I could bend, I could get up, and I could roll over in bed. I could walk and go upstairs.

Jennifer Simmons, MD
Now, is this a matter of directly applying a device to an area?

William Pawluk, MD, MSc
Yes.

Jennifer Simmons, MD
In terms of recovering from chemotherapy, are you getting in a tent? What, how are you covering your entire body?

William Pawluk, MD, MSc
You do not need to. Well, we do recommend it. In breast cancer, typically, I recommend a whole-body magnetic system for lots of reasons. One of the reasons is that your stab wounds are not just there by themselves. They are connected to the rest of you.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
You have to think about the whole person. We talk about chemotherapy. You are talking about whole-body involvement in the chemo, not just going to the cancer itself. It affected the whole body.

Jennifer Simmons, MD
Right.

William Pawluk, MD, MSc
So it is connected to the head bone, It is all connected.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
If you stimulate the health of the body and the vitality of the body in general, the body now has more resources to do the work it needs to do. It may be that your breast incisions mastectomies or lumpectomies are local. But let us say you have arthritis in your knees, you have MS or you have some other health disorders or an autoimmune disease. Well, you have got to amp up the whole system. You have to make the whole body healthier. That has less work to do for the problem that you are especially interested in. As for the chemo. Magnetic field therapy helps the body to heal better from the chemo and makes the chemo more effective because they are working synergistically together.

Jennifer Simmons, MD
I have two questions to ask. The first is, is this having a direct effect on the mitochondria? Is that how it is creating more energy?

William Pawluk, MD, MSc
It is way more than that. In my Power Tools for Health book, I outline 25 different actions of magnetic fields. I provide scientific evidence. I provide the actual references for each of those actions. We are not just dealing with a technology that does one thing. We are dealing with a technology that fits and is affecting the whole body's ability to function, whether it is local or systemic. Everything begins to benefit. It is not just disease or condition-specific. It is about what the magnetic fields are doing in the body.

Mitochondria, increased ATP production, mitochondrial repair, and mitochondrial recycling are supported by PEMF therapy. But you also have anti-inflammatory action. You have increased circulation, you have decreased edema in the tissues, you have decreased bruising, you are stimulating stem cells, and you are stimulating fibroblasts to repair wounds. There are 25 different actions of magnetic fields. You and I cannot control those actions. The body decides what it wants to do with this nonspecific stimulus. Then the body will do what it wants, and the low-hanging fruit is pain reduction. One of the natural things that magnetic fields do is reduce pain. They did studies on snails, and put snails on a hot plate. If you put a snail on a hot plate, what will a snail try to do?

Jennifer Simmons, MD
I assume it would try to get away.

William Pawluk, MD, MSc
Or try to get off. They have models that they evaluate for what it takes to get a snail to leave.

Jennifer Simmons, MD
That is cruel. But okay.

William Pawluk, MD, MSc
Keep it based on how hot it is. Anyway, what they found is that treating snails with PEMF is equivalent to ten milligrams of morphine.

Jennifer Simmons, MD
Wow. That is amazing.

William Pawluk, MD, MSc
There is a natural painkilling effect, and then all the pain is not just caused by pain itself. Pain is usually caused by something, which is usually inflammation, trauma, or injury to the tissues. But inflammation is probably the most important so magnetic fields decrease inflammation.

Jennifer Simmons, MD
The pain that you are talking about—does it work as well for emotional pain as it does for physical pain?

William Pawluk, MD, MSc
Not in the same way. Emotional pain is still a memory-based issue, typically, the emotional attachments to whatever the cause of the pain was are a much more complex situation. But we can use magnetic flow therapy to help the brain ro chi

Jennifer Simmons, MD
So interesting. Is it adaptogenic in that sense?

William Pawluk, MD, MSc
Totally.

Jennifer Simmons, MD
Yes. Yes, that is fascinating. In terms of breast cancer, what are the advantages?

William Pawluk, MD, MSc
breast cancer, even if you did nothing, magnetic field therapy did nothing. No treatment? Nope. No chemo. No radiation. No surgery.

Jennifer Simmons, MD
Mm hmm.

William Pawluk, MD, MSc
Magnetic field therapy has been found to reduce the cancers themselves directly. I will give you a case in an e-book that I wrote recently. It was a 48-year-old woman who had stage three breast cancer, and she had been treated with chemoradiation. She had been treated conventionally. This is a Russian researcher from Moscow. They had a research institute. They did a lot of this work. She was not a candidate for any of the treatments because her white counts were too low. Well, then let us just give her some magnetic therapy. That is good for everything.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Anyway, she had 30 treatments with a special device that the Russians had developed, which is a rotating magnetic field. It is almost an MRI machine. The magnetic field just goes round and round and round. She had 30 treatments, and the infiltration in the breast decreased considerably, but the direct inflammation in the breast decreased considerably. After 60 treatments, one metastatic node disappeared, and the other metastatic nodes were soft and smaller. 110 treatments completed tumor regression, and the metastases were gone. Totally. I followed her for 12 years. 12 years after the treatment, she was still in great health.

Jennifer Simmons, MD
Did she continue those PEMF treatments?

William Pawluk, MD, MSc
Now she has had 110 trips.

Jennifer Simmons, MD
Total, and then that was it.

William Pawluk, MD, MSc
That was probably pretty well four or five days a week. Based on that research, in that one case, they have developed a whole research program around magnetic field therapy. They did it before surgery: radiation with radiation without radiation. different kinds of comparison groups. The PEMF therapy made everything work better.

Jennifer Simmons, MD
Amazing. For the people who are watching this, who are at all different stages, some of them are just getting diagnosed. Some of them are in active treatment now. Either in chemotherapy or they are getting radiation. Some of them have completed that acute part of their care. Maybe

they have already had surgery, chemo, or radiation; maybe they are on hormonal blockade. Maybe they have refused that because they have had enough. Maybe some people are living with metastatic disease. Maybe some people are way past their diagnosis and trying to figure out how to not have a recurrence. Are there different approaches depending on what stage of diagnosis and treatment you are at?

William Pawluk, MD, MSc
Not so much for the magnetic therapy itself, but for what you put around it. I do not, you can repair the body without the body having the nutrients and the ability to repair.

Jennifer Simmons, MD
Okay.

William Pawluk, MD, MSc
You have to make sure that they have adequate nutrition. You should not be pouring gasoline on the fire. You should avoid the things that should be avoided if you have cancer. If you keep stimulating the cancer, then, of course, you are defeating it. You are battling whatever therapy you are doing, you are still battling what you are doing to your body. All of that is still very important.

Jennifer Simmons, MD
You are talking about looking at the patient as a whole holistically and trying to figure out the root cause—why they got cancer in the first place.

William Pawluk, MD, MSc
Which is always very difficult to figure out.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
These days, of course, we know some of the reasons are too much estrogen, and that may be because most breast cancer happens post-menopausal.

Jennifer Simmons, MD
That is why I struggle with the too much estrogen explanation.

William Pawluk, MD, MSc
But it has been there for how long has the cancer been before it was discovered?

Jennifer Simmons, MD
Right.

William Pawluk, MD, MSc
What we found is that so where were we going with this?

Jennifer Simmons, MD
We were talking about estrogen. You were saying that the development period of a tumor is somewhere around 10 or 12 years. I think the point that you were going to make is that there might have been a hyper-estrogenic state in a premenopausal woman, but then the tumor was not discovered until she was post-menopausal. Where I struggle with that is that if it is a hyper-estrogenic state, why are we seeing its predominance when that hyper-estrogen no longer exists?

William Pawluk, MD, MSc
It has been built for a long time. It had been in the works for 12 years before it was finally discovered. Then, as we paddle around, we decide what we are going to do with this tumor. There is, well, let us throw some chemo, let us throw some radiation at it, and then we will do the surgery. Well, the research shows that the longer the tumor is there, the more cells are being shut off from the cancer. With every millimeter of tumor growth, you have more stem cells being shut off. We know now that 40–60% of women with breast cancer at the time of diagnosis already have breast cancer and stem cells in their bones.

What are we doing now? We are not doing enough after the time of diagnosis. We're, as I said, piddling around trying to do the things that conventional medicine says we should be doing. I am recommending that every woman have that lump removed as fast as possible so the diagnosis can be made. Remove it because the more it grows, the more opportunity there is for shedding. But in terms of the risks of what we are doing, we have plasticizers in our environment. How much exercise does a typical breast get? How much lymphatic drainage does the typical breast get? We wear bras. We do not allow our breasts to exercise, and we have ligaments in our breasts. That allows the breast to move in balance. Then the bouncing of a breast is lymphatic drainage.

Jennifer Simmons, MD
Yes, just rebounding.

William Pawluk, MD, MSc
Rebounding, whatever. Just walking without a bra. If you can do that as much as possible, we probably should have a bra on, never mind the wires and stuff there is controversy about that. What happens then is that if you do not give a lymphatic massage to a breast, it is going to build up all this material inside it that is inflammatory. They are the plasticizers that are in our environment. All the cosmetics, all the shampoos, and so on that are estrogen-positive? They are estrogenic in their activity. Being overweight is also a predisposition. What is the breast, mostly?

Jennifer Simmons, MD
Fat.

William Pawluk, MD, MSc
Adipose tissue? What does fat have in it? Fat has lots of cytokines and lots of inflammation. You have a foundation that has been building there for a long time. All these little things, all those little straws on that camel's back, they are adding to it.

Jennifer Simmons, MD
Yes. I think as our environment continues to deteriorate, which it certainly does, and when we have more and more chemical compounds that we are coming into contact with day in and day out, multiple times a day, whether we are putting them on our faces, washing our dishes with them, or washing the clothing within our homes with them, they are in our toothpaste and our shampoo conditioner. We are washing your skin with what we are hydrating our skin with. It is everywhere.

William Pawluk, MD, MSc
What is the burden?

Jennifer Simmons, MD
Yes, it is more breast. Yes. We see these toxins in our fat cells, so without a breast, being mostly fat is going to be a reservoir for all of these toxins.

William Pawluk, MD, MSc
The bigger the breast, the more fat it has in it. the rest of the body, the more fat you are carrying. Then there is more risk.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Also, the reason I talk about menopause is that progesterone by itself is anti-inflammatory. But just natural progesterone, we are not talking about progestins.

Jennifer Simmons, MD
It is the off button. When estrogen is the on button. Progesterone is the off button.

William Pawluk, MD, MSc
But what happens to our progesterone around age 45?

Jennifer Simmons, MD
It was happening a lot earlier. Now, unfortunately.

William Pawluk, MD, MSc
As an afterthought. Then the amount of estrogen overbalances the amount of progesterone, which only gets worse over time. This is again why I think breast cancer tends to be a problem with women. Post-menopausal.

Jennifer Simmons, MD
Yes, but the other thing that is happening in a postmenopausal woman is that glandular tissue, which previously occupied a greater percentage of the tissues of the breast, then gets replaced with fat. That only increases the fat percentage and the storage capacity of toxins in the breast.

William Pawluk, MD, MSc
I agree. PEMF therapy can help with all that before breast cancer.

Jennifer Simmons, MD
Wow. In a preventive way.

William Pawluk, MD, MSc
PEMF works in three ways. I call it the pre-game, the game, and the long game. The pre-game is prevention and the way you do prevention is to decrease the amount of inflammation in the breast. After you have to do it in the rest of the body too. But I just wanted to focus on one place—just treat the breast. But you do not know if you are going to get breast cancer or not. Then theoretically, ideally, all women should be doing chemotherapy before going off for the rest of their lives.

Jennifer Simmons, MD
Yes. Then, how does that look if you are talking about it in terms of prevention? What does that look like in terms of time, commitment, and frequency?

William Pawluk, MD, MSc
Well, for prevention purposes, you do not need as much, but it depends on the total burden the body is dealing with. Because if you have a lot of inflammation elsewhere in the body, that also compromises your immune system.

Jennifer Simmons, MD
So how do people know that? How do people know what their inflammatory burden is?

William Pawluk, MD, MSc
What do you say?

Jennifer Simmons, MD
Well, I think that we can tell if you are metabolically healthy or not. We can look at markers of inflammation, and we can look at indications of that. You are in a pro-inflammatory state. For

instance, when we look at a lipid panel, most people think that we are looking for cardiac risk, but LDL is an anti-inflammatory molecule, and we know that when people bump their LDL, that is their body's attempt to put out a fire.

William Pawluk, MD, MSc
Right.

Jennifer Simmons, MD
I look at things like that. I look at high-density C-reactive protein, I look at side rates, and I look at ferritin. I am also looking at body composition. I am looking at a waste-to-hip ratio. I am looking at where you store your fat and whether or not you are overweight. I do not look at your BMI so much, but I do look at whether or not you are overweight.

William Pawluk, MD, MSc
A BMI is very important. It increases the risk of death from cancer. Yes, a significant amount.

Jennifer Simmons, MD
Yes. However, there are some people with a normal BMI who do not have a normal waist-to-hip ratio.

William Pawluk, MD, MSc
There are always

Jennifer Simmons, MD
Skinny-fat.

William Pawluk, MD, MSc
All of those things that you mentioned, I think, are appropriate, and I used to do those as well. But it is not enough.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
It is not enough that you do not know for sure. You have a normal CRP; you have a normal setting of a normal fibrinogen level, which is normal. Well, with all these different markers, you still have that risk.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Clearly. It is important, and if you have those indicators and they are all there, then your risk is already very high. You have to deal with that. How long does it take you to deal with that? Typically, it is going to take several years for you to deal with that. In the meantime, you have had decades, usually, but by that point of exposure and risk.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Everyone should be doing PEMF therapy anyway, preventively, regardless. Anyone over 25: if you stop growing, entropy will kick in; your body's not on a downslope. You may try to take that slope and flatten it out as much as you can. Nobody gets out of here alive.

Jennifer Simmons, MD
You are still doing other things. You are still watching your diet. You are still trying to avoid plastic. You are still trying to get movement. You are still prioritizing sleep. You are still doing the things that we know promote health.

William Pawluk, MD, MSc
Decrease risk.

Jennifer Simmons, MD
But in addition, you are adding in PEMF therapy.

William Pawluk, MD, MSc
Because you do not know what else is left. You have not dealt with. PEMF gives the body a fighting chance.

Jennifer Simmons, MD
Okay.

William Pawluk, MD, MSc
More ammunition, more energy to be able to take care of silent things. Because what happens with magnetic field therapy? One of the reasons I quit doing acupuncture is if I found that magnetic field therapy heals. Acupuncture does not heal, but makes you feel better but does not heal and heals at the tissue level, at the cellular level. There is something called the cell injury model. If you look at the cell injury model, reductions in ATP production increase in ROS reactive oxygen species, mitochondrial damage, and protein misfolding—all the effects of inflammation in the body that happen with a cell injury. You want to get ahead of the cell injury. If you drop a brick on your toe, then you have to deal with that damage, and some of that damage is not going to be repaired. But ideally, if you are dealing with it and you are doing magnetic therapy

beforehand, you are getting rid of the damage that is beginning but has not caused a point of no return. Irreparability.

Jennifer Simmons, MD
Yes, so how much treatment are people doing? How many times a week?

William Pawluk, MD, MSc
Okay, let us go back to that. That i a good question. It is an important question. It goes back to inflammation. Related to that point. How many cells do we have in our bodies?

Jennifer Simmons, MD
Trillions. I do not even know.

William Pawluk, MD, MSc
100 trillion. You mean how many biochemical processes per second do every cell? Millions.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Millions. How much treatment do we need?

Jennifer Simmons, MD
Everyone's different.

William Pawluk, MD, MSc
I would say. All day. Every day. That is not practical. To get back to your point.

Jennifer Simmons, MD
That is not happening.

William Pawluk, MD, MSc
That happened, I would say.

Jennifer Simmons, MD
Plus, all of my people have to exercise, and they have to be in their sauna.

William Pawluk, MD, MSc
All those others.

Jennifer Simmons, MD
A lot of stuff to do.

William Pawluk, MD, MSc
I find that if you do magnetic field therapy with the system and you do enough of it, there are a lot of things you do not need.

Jennifer Simmons, MD
Good.

William Pawluk, MD, MSc
But you do need nutrition. Fundamental. You have to have the proper nutrition. The key to magnetic therapy is inflammation. There is another key that relates to cancer, and that is called hypoxia and the tumor microenvironment.

Jennifer Simmons, MD
Say more about that.

William Pawluk, MD, MSc
Inflammation causes hypoxia. Hypoxia causes inflammation, and you end up with a vicious cycle.

Jennifer Simmons, MD
In case someone does not understand what that word means. Can you define it?

William Pawluk, MD, MSc
Hypoxia is low oxygen. Now, when oxygen leaves the lungs and is then delivered by the heart to the body, it is between 100 and 40 - 60 millimeters, by the time it comes back from the venous system, is down to 40.

Jennifer Simmons, MD
Why is hypoxia particularly a problem in people with cancer?

William Pawluk, MD, MSc
It is a particularly bad problem for people to get cancer. Number one. Then it promulgates the cancer, makes the cancer, and promotes its development.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Then, not only does it promote cancer development, but it causes cancer within itself to have areas that are hypoxic, which means low oxygen, and that means that they are now struggling to survive, and they create all kinds of genetic changes.

Jennifer Simmons, MD
They may go into even more survival mode.

William Pawluk, MD, MSc
Even more survival.

Jennifer Simmons, MD
Yes. How do we react in hypoxic situations?

William Pawluk, MD, MSc
Not well.

Jennifer Simmons, MD
Not well.

William Pawluk, MD, MSc
Lack of information is the key to hypoxia. Anywhere in the body. Anywhere in the body, you have inflammation. If you have inflammation in your joint, in your elbow, knee, hip, or brain, you have hypoxia in those tissues because of swelling edema, and then that edema chokes off the oxygen supply. Then that is the perfect environment for cancer to develop. Getting rid of hypoxia and inflammation is key to the tumor microenvironment. If you have hypoxia in a tumor microenvironment, all the nutrients you are pouring into your body should not get into that area. You have to deal with the information. You have to deal with hypoxia in other ways. Nutrition is not enough by itself. It is supportive to help you recover better and faster. But it does not take care of the hypoxia. Fact: There is a big industry developing now in the pharmaceutical world for creating oxygen therapy.

Jennifer Simmons, MD
The nitric oxide.

William Pawluk, MD, MSc
On nitric oxide, Magnetic field therapy increases in the nitric oxide.

Jennifer Simmons, MD
Yes. Okay. You have to do all the other work, and then adding in PEMF will help to prevent the development of cancer. What if the horse is out of the barn? What if you have a cancer diagnosis?

William Pawluk, MD, MSc
Well, you do not want the horse to run too far. You want to be able to corral that horse. The sooner you can get at it, the better. Once you start getting at it because it goes deep into the body, there is nothing that stops the magnetic field. But the key is having a magnetic field. This

is the biggest mistake people make with chemotherapy: inflammation requires 15 gauss one five optimally at the adenosine receptor, at the receptor site that controls inflammation. That means you have to account for the fact that the magnetic field is light, heat, or cold drops off with distance. The deeper you have to work in the body, the stronger the magnetic field has to be because of the loss of intensity.

For example, if you want to work six inches into the body, you need a 4000-gauss magnetic field to deliver 15-gauss. You need a whole-body magnetic system, preferably a strong enough magnetic system that is going to take care of business throughout the body. For the most part, it is not 100% still, but it is getting very close to doing that. You get the magnetic field intensity. Maybe you do not have to spend as much money, and you can again do prevention. There is a family of breast cancers. you have, you are overweight. that you may have a triple-D breast. Well, then you are probably going to have to do something to help your breasts. The earlier you start, the better.

Decreasing inflammation depends on the person. But I usually recommend, with the magnetic field intensity, a half hour, twice a day, for prevention. Then if you have stage two, or stage three cancer, breast cancer, you do your lumpectomy and just do magnetic field therapy to your breast for the rest of your life. Because you got rid of that lump. That does not mean you got rid of the risk. Because we have stage-one cancer, you are.

Jennifer Simmons, MD
You are talking about stage two or stage three disease. This means someone has lymph node disease.

William Pawluk, MD, MSc
No, I am talking about stage one as well.

Jennifer Simmons, MD,
Okay. But my question was going to be, is this instead of systemic therapy because everyone with stage two and stage three disease is getting a recommendation for chemotherapy?

William Pawluk, MD, MSc
I cannot argue that. That is going to have to be a personal decision. The problem that I find is that most women who do magnetic field therapy want to spend maybe $200 or $300 for a machine. It is not going to work.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
There are lots of people who are selling machines that are multilevel marketing. There are $75,000 machines that are only one gauss, only one gauss.

Jennifer Simmons, MD
That is not going to work.

William Pawluk, MD, MSc
We need 15 at the tissue. You have to judge the magnetic field intensity for the size of the breast as well. If all you are doing is treating the breast, You need 200, 500, or 1000 gauss just to treat the breasts themselves.

Jennifer Simmons, MD
How does someone go about knowing what they need?

William Pawluk, MD, MSc
Well, you can get my e-book. Number one.

Jennifer Simmons, MD
In which book is that?

William Pawluk, MD, MSc
It is called PEMFs and Cancer E-book.

Jennifer Simmons, MD
Okay. We will be sure to have that information available.

William Pawluk, MD, MSc
I think we will provide that for you.

Jennifer Simmons, MD
That would be amazing. I am sure.

William Pawluk, MD, MSc
Then I have the two books.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
That is a big resource. There are lot of information on drpawluk.com and I have people who want more of the science in the Power Tools for Health book. There are over 500 references, not just for cancer but across the board for general health.

Jennifer Simmons, MD
Yes, amazing. I guess my last question is, how does someone get the right equipment? Because you talked about people getting the wrong equipment. How does someone go about getting the right equipment?

William Pawluk, MD, MSc
In the books, I have tables of different devices and machines and their magnetic field intensities, whether they are whole bodies or local. You can always contact us at drpawluk.com. That is D-R-P-A-W-L-U-K dot com.

Jennifer Simmons, MD
Okay.

William Pawluk, MD, MSc
They just go to info@drpawluk.com. If you are more advanced—we have more advanced cancers—stage two, stage three, particularly stage four—then you are probably going to need a consultation. I would provide free consultations to women to help them get the right piece of equipment.

Jennifer Simmons, MD
Yes, this is amazing. I just want to go back and review for anyone who might have come on late or just wants a reminder about what we talked about today because it has been an awesome discussion. The two books that we talked about are Power Tools for Health and Supercharge Your Health with PEMF Therapy.

Then you are going to provide us with a guide for PEMF therapy for cancer. You started by telling us why you left the house of medicine because, as everyone here knows, it is just incomplete. It just does not give us enough. You have learned about magnets and the magnetic field and how that helps to alter these processes that are happening in the body, these inflammatory processes, and improve significantly, improve outcomes, accelerate healing, and reverse disease. Of course, there are some limitations, transplant being the most important one, but this therapy helps the body to be more efficient by literally creating energy, helping with mitochondrial repair, and recycling ATP. It helps with the circulation. It helps with stem cells, stimulates fibroblasts, and improves immune function. It can help to reduce pain, and it is adaptogenic.

There are 25 different things that it does in the body. Of course, this is done in conjunction with exercise, improvement in lymphatic drainage, careful nourishment and nutrition, and

elimination of toxins in your environment. You think about it in three different categories. The pre-game is someone who is using it for purely preventative purposes. When you have a diagnosis and then, of course, maintenance for the future to prevent a recurrence. The key is getting rid of inflammation, getting rid of hypoxia, and creating this healing environment, which these PEMF machines can only help to improve the entire state of the body. What did I miss?

William Pawluk, MD, MSc
Not much. I just want to emphasize the point that you were making: There is a lot of science behind it. This is not my guesswork. I am not.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
Have a hypothesis. I have over 500 references to power tools throughout the book.

Jennifer Simmons, MD
Yes.

William Pawluk, MD, MSc
That is just the scratch. That's just scratching the surface. I have a library of 30,000 abstracts on magnetic field therapy effects.

Jennifer Simmons, MD
Wow.

William Pawluk, MD, MSc
We are just scratching the surface. Medicine has not kept up with science. They mostly do not want to know about it.

Jennifer Simmons, MD
No, they do not. We know that. We know that there are so many things that exist that we know heal, that we know promotes health that are not talked about within the confines of conventional medicine for a variety of reasons. But that does not mean that they do not work. That does not mean that they are not scientific. That does not mean that you should not look for these things and incorporate them into your health journey. We know that where health happens is not home, and it happens because of what we do for ourselves.

William Pawluk, MD, MSc
In the body. Yes.

Jennifer Simmons, MD
Yes. Dr. Pawluk, thank you so much for being with us today. This was an awesome talk. I am sure people will appreciate your years of experience, your knowledge, and your insights. I know that this is going to be tremendously valuable.

William Pawluk, MD, MSc
I hope so. But knowing about it is not enough. You have to do something.

Jennifer Simmons, MD
You have to do it. You heard him. You have to do it. It is Dr. Jenn. Bye for now.