# "PEMF - The Fifth Element of Health Overview"

### An Introduction to PEMF

Hello, my name is Bryant Meyers, author of the book, PEMF – The 5th Element of Health.

You probably know that food, water, sunshine, oxygen are essential for life. But there's a fifth element of health that most people don't know is essential – and that is the Earth's PEMFs, or Pulsed Electromagnetic Fields. This is both the Schumann and the Geomagnetic field, which is the magnetic field of the Earth.





These frequencies and energies are so essential that NASA and the Russian space program actually equipped their spacecraft with Schumann and magnetic field generators.

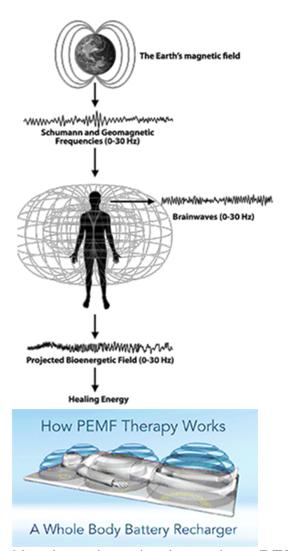
So, we need these frequencies and energies for the body's circadian rhythms, energy production, and even to keep a pain-free body, which I'll explain later. There's a two-fold problem on planet Earth. And PEMF, as we'll find, is the solution to this problem.

Here is a preview of some of the research-proven benefits of PEMF therapy:

- 1] PEMF helps to eliminate pain and inflammation naturally.
- 2] It will help you get deep, rejuvenating sleep.
- 3] It will increase your energy and vitality.
- 4] PEMF will help you to feel younger, stronger, and more flexible.
- 5] It will keep your bones strong and healthy.
- 6] It will help your body with healing and regeneration.

## 7] PEMF will help to improve circulation and heart health.

I want to get right to one of the most exciting aspects of my book: The body-mind-earth connection. And this connection is the 0-30 Hz. Frequency range. The Earth's magnetic field, and the Schumann and geomagnetic frequencies are roughly in the range of 0-30 Hz. And the human brainwaves, as established by electroencephalograms, are also roughly 0-30 Hz (from delta, to theta, to alpha, to beta). The tissues and the healing response in the body (the frequencies that the tissues in your body respond to) are also in the 0-30 Hz. range. The cells in your body also respond to 0-30 Hz. And here's something that really gave me goose-bumps: the energies that your body emits is also 0-30 Hz! We talk about the body-mind connection, but really it's the body-mind-earth connection! Our tissues, cells, brain, and our bodies are intimately connected to the Earth's frequencies and magnetic field.



Here's an introduction to how PEMF therapy works. PEMF therapy acts like a whole body battery recharger, helping to re-charge your 100 trillion cells. And you only need to use it twice a day for eight minutes. It's very time efficient.

PEMF therapy was featured on the Dr. Oz TV show in 2011 as the most important breakthrough in pain management. Pain management is probably the #1 reason that people purchase a PEMF therapy device.

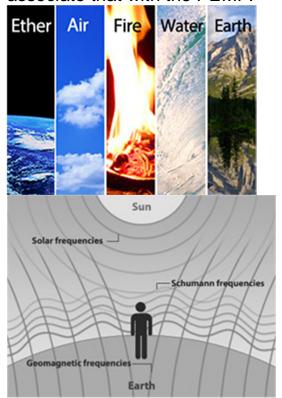
There have been more than 10,000 scientific papers and over 2,000 double-blind studies on PEMF therapy. You can research them using PubMed at the National Library of Medicine. Search for "pulsed electromagnetic field" at <a href="https://www.ncbi.nlm.nih.gov/pubmed/">https://www.ncbi.nlm.nih.gov/pubmed/</a>.

There's a NASA study done by Thomas J. Goodwin, Ph.D. that really showed exactly the kind of frequencies and energies that are ideal for PEMF therapy. And the Johnson Space Center even developed a PEMF prototype for bone loss and muscle degeneration during space travel.

The FDA has approved PEMF therapy for bone fractures, wound healing, pain and tissue swelling, and even depression.

I call PEMF the fifth essential element of health because I base this on the ancient Greek system of the elements: earth, water, fire, air, and ether. Most of us know we need food (earth) and water (you can only live a few days without water). You can live a bit longer without food. Fire in the form of sunlight is an essential element. You can get seasonal affective disorder without sunlight. And you can only live a few minutes without air (oxygen). So, most people would agree that we need those elements; they are essential.

But there's a fifth element, the Earth's PEMF, that I'm going to show you is also essential. The fifth element in the ancient system was called ether, so I loosely associate that with the PEMF.



There are two main types of PEMF on the Earth:

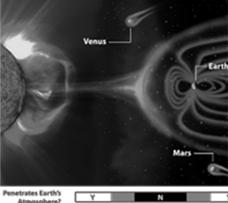
- 1. The Schumann frequencies that come from above, and
- **2.** The Geomagnetic frequencies that come from below.

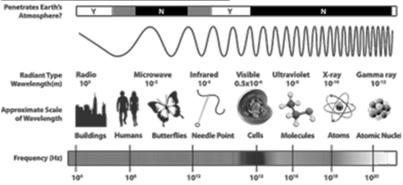
In my book I provide the history of four men who discovered the essential nature of the Earth's PEMFs, and its connection with the body and mind. They are Dr. Winifried Otto Schumann, Han Berger, Dr. Rutger Wever, and Dr. Wolfgang Ludwig. It's an exciting story.

Before we get into talking about PEMF therapy, I want to give you a new way of looking at the human body. The body is primarily a holographic field of energy and information, and secondarily physical. We have over 100 trillion cells, and there's somewhere around 500 billion chemical reactions happening every second in your body. Our mainstream models for explaining the human body as a mechanistic or biological machine is insufficient to describe the majesty and complexity of the human body.

Energy medicine and quantum biology and the new understandings in biophysics are giving a whole new picture of the human body as primarily an energetic, holographic field of energy information which communicates via bio-photons. The PEMF therapy actually goes along with this new understanding of the human body and can assist the body energetically in healing itself.

The Earth is a very living planet. The magnetic field is very complex and stratified. And it's this magnetic field that is the source of both the geomagnetic and the Schumann frequencies. The Schumann frequencies come from the upper layers of the Earth's atmosphere.

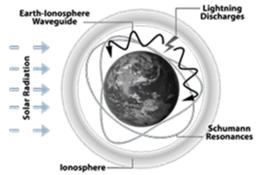




Let's talk a little about frequency. Frequency is defined as cycles per second. When we think of the electromagnetic spectrum, radio waves are very long, gamma and x-rays are higher frequencies, and visible and infrared light is in the middle. When we are dealing with arthbased PEMF, the Schumann and geomagnetic frequencies at 30 Hz. or less, we are talking about ELFs, or extremely low frequencies.

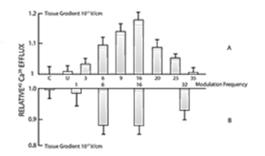
The Schumann frequency is produced by lightening strikes. On planet Earth there are about 7 million lightning strikes a day (about 5,000 a minute). And this rings the ionosphere like a proverbial bell to the tune of 7.83 and higher harmonics. The Schumann resonance is a quasi-standing wave, or quasi-scalar wave. It's a fundamental, deeper energy.

The Earth's magnetic field, along with the Schumann resonance, has a frequency which is modulated. Even Nicola Tesla said the Earth's frequency was around 12 Hz.

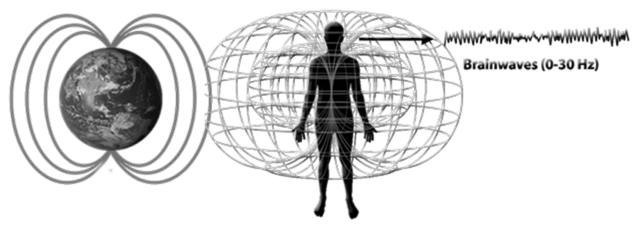


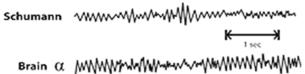
I want to talk in a little more detail about the body-mind-earth-connection; the 0-30 Hz. range. A scientific study demonstrated that cells respond primarily in the range of 0-30 Hz. If you use frequencies higher than 30 Hz. the cells just don't respond. The study found a peak of around 16 Hz. which would correspond roughly to the second harmonic of the Schumann resonance. The cells are tuned to the 0-30 Hz. range.

In another study done by Siskind and Walker it was demonstrated that tissues in the body seem to also primarily respond to 0-30 Hz. For example, nerve regeneration happens around 2 Hz. Bone growth around 7 Hz. Ligament healing around 10 Hz. And the stimulation of capillary formation around 15 and 20 Hz.



Frequency	Effects
2 Hz	Nerve Regeneration
7 Hz	Bone Growth
10 Hz	Ligament Healing
15, 20 Hz	Stimulation Capillary Formation





We can see a beautiful picture of the Schumann resonance juxtaposed with the brain alpha state. Alpha in brain state research is a relaxed state of mind. As I mentioned before, the brain operates mainly in the 0-30 Hz. range from low delta up to high beta. But the Schumann resonance, interestingly, is right at this very relaxed alpha state. Brain state research also confirms that the 0-30 Hz. range is what our brains operate at.

In a study done by Zimmerman and also confirmed by Seto in Japan done on Reiki healers it was shown that our bodies emit 0-30 Hz. In fact, not only did the hands of these Reiki healers emit 0-30 Hz., but they were scanning up and down the 0-30 Hz. range. So we actually emit all of the frequencies in this earth-frequency range. Our tissues and cells resonate 0-30 Hz. Our brain operates 0-30 Hz. And we even emit up and down in a scanning fashion 0-30 Hz. And remember, the Earth itself is primarily giving up 0-30 Hz. frequency.

To summarize the body-mind-earth connection:

- 1] The Earth's frequencies are 0-30 Hz.
- 2] Our brainwaves are 0-30 Hz.

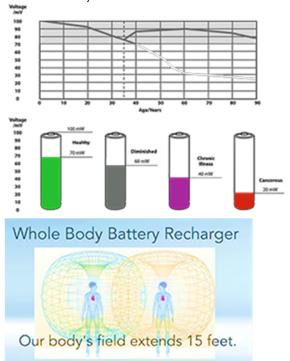
- 3] Our tissues and cells operate at 0-30 Hz.
- 4] And we even project at 0-30 Hz. from our bodies

So you can see this intimate connection we have with our planet earth, and also our body and mind.

Now let's talk about this concept of PEMF being a whole body battery recharger. Our cells are actually miniature batteries. We have 100 trillion cells. And cells are batteries and batteries are cells.

In fact the word "battery" is a collection of two or more cells, by definition. The cells in our body are able to store 10 million volts/meter. We have a cell membrane that is about 7 nano-meters across, and the voltage across the cell membrane is around 70 millivolts for a healthy cell.

When we get sick, our cellular voltage will diminish. There's a direct connection between your health and your cellular voltage. Dr. Otto Warburg did some pioneering research on the connection between cellular voltage and health. He found that healthy cells range between 70 mV to 100 mV. If you have chronic illness or disease the voltage starts to plummet. Many chronic illnesses can have cellular voltages as low as 30-60 mV, and cancer 20 mV or below.



Interestingly, we never hear about heart cancer. That is because the heart is the most energetic organ in our body. Heart cells will have 120 mV of voltage. In fact, the field from our body extends 15 feet out into space, as detected by science. And the heart field is going out the farthest.

Here are seven ways in which PEMF recharges our cells:

- **1.** PEMF recharges the trans-membrane potential (TMP). That's basically the voltage across the cell membrane.
- **2.** It also increases ATP production in the mitochondria. The TMP and ATP are the two primary ways that the cells store energy.
- **3.** PEMF enhances the sodium potassium pump. So it gives a net positive charge on the outside of the cell.
- **4.** It increases cellular pH. pH meters are volt meters. pH is a direct measure of the voltage of your cells. If you have healthy cells you're going to be slightly alkaline. 5. PEMF helps to oxygenate the cells.
- 5. It helps to lower blood viscosity and improve circulation and microcirculation.
- **6.** PEMF creates a healthy level of electroporation. Electroporation means using electricity or magnetism to make the cells more porous. This will allow nutrients to go in the cells more effectively and waste products to go out.

# Ion transport: Na\*/Ca\*/O<sub>2</sub> and 90 other different vital substances: different vitamins 12 Amino acids 60 vitamins and trace elements 3 unsaturated fatty acids (Omega 3, 6, 9)

### Membrane potential in a human cell: 70 to 90mV

We have a two-fold problem; we are not getting enough of the good frequencies, and we are getting too much of the bad.

We are not getting enough of the good frequencies of the Earth. And the Earth's magnetic field is declining in intensity or strength. Another reason we are not getting enough of the good frequencies is that we are too insulated. We spend a lot of time indoors. We drive in cars with rubber tires. We walk in shoes with rubber soles. We sleep in insulated beds. We spend the majority of our time in concrete and steel structures. All these factors divorce us from the Earth's natural magnetic fields.

The second half of our two-fold problem is getting too much of the bad frequencies –

what I call "electro-smog." One main component of electro-smog is dirty electricity: 60 Hz. power line frequencies. All of the appliances in your house will be operating at that frequency. I'm not in favor of compact fluorescent lights (CFL) because they are so unhealthy.

Another component of electro-smog is microwave frequencies. 4G networks and all the other technology we use; cordless phones, Bluetooth, WiFi, smart power meters. A lot of these are operating at microwave frequencies. In fact, the 4G network is almost identical to the frequencies used by microwave ovens.

Here are some action steps you can take to clear your house of electro-smog:

- 1. Get rid of cordless phones. Used only wired or corded phones in your home.
  - 2. Minimize cell phone usage as much as possible.
  - **3.** Turn WiFi off when you're not using it. Consider connecting directly to the Internet using an Ethernet cable.
  - **4.** Get rid of all compact fluorescent light bulbs in your home.
  - **5.** Avoid high EMF appliances; keep a safe distance from them.
  - **6.** Don't use cordless baby alarms or monitors.
  - 7. Avoid water beds, electric blankets, and alarm clocks.
  - **8.** Try not to live near a cell phone tower. Check locations of towers and antennas near you using the website <a href="https://www.antennasearch.com">www.antennasearch.com</a>.
  - 9. Opt out of smart power meter installations.
  - **10.** And, of course, invest in an earth-based PEMF device. In my book I talk about how earth based PEMF devices can cleanse your body of all the static electricity you can accumulate from electro-smog.

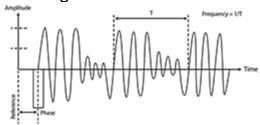
# **PEMF Therapy Devices**

Let's talk now about what to look for in a PEMF therapy device. When you're shopping for a PEMF therapy device I recommend looking for an Earth-inspired device. That means a PEMF therapy machine that is inspired by the Earth's frequencies and intensities, and that will also complement the circadian rhythms of your body. The four main parameters of a PEMF signal are:

- **1.** Frequency cycles per second.
- 2. Intensity measured in Tesla (T) or Gauss (G)

# 3. Waveform - geometry of the signal

**4.** Timing – duration.

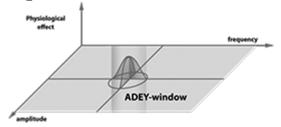


Those are the four parameters of any electromagnetic wave or frequency wave. Let's begin by talking about intensity.



The intensity or amplitude is the strength of the magnetic field. The Earth's natural static magnetic field is 33-66 micro-Tesla (uT). That corresponds to 0.33 to 0.66 Gauss.

The Earth's Schumann resonance, which is more of the frequency component of the Earth's magnetic field, is only 1 pico-Tesla. A pico-Tesla is one-millionth of a micro-Tesla, or one trillionth of a Tesla. So, we're talking about a very weak intensity. As I mentioned earlier, the Earth's Schumann resonance has been proven to be an essential element of health, just like food, water, air and oxygen. There's a saying "small is powerful – less is more." We can use an analogy of our senses. For example, the amplitude window for your sense of hearing would range from a level that is just loud enough so that you could hear it to a level so loud that it could cause harm. It's the same thing with light. If there's not enough photons in a room (if it's really dark), you can't see anything. Or if you're staring at the sun, it's too bright.



That is also true of PEMFs of the Earth, and what our cells respond to. If you use too high of an intensity, it can cause harm over time. The NASA study showed that you only need 1-20 micro-Tesla to get the maximum benefits from PEMF. That's weaker than the Earth's static magnetic field.

Less is more. Some PEMF therapy devices on the market use very high intensities. They are trying to sell you on the "more is better" myth. Here are some more thoughts about high intensity PEMF machines:

Some use intensities of up to 2 Tesla (which is way too high).

They will give you some symptomatic relief. But that's more like allopathic energy medicine. It may have side effects.

NASA has proven that lower intensity is what speeds up healing and regeneration.

It's similar to homeopathy; the strongest homeopathic remedies are the ones that are the most dilute.

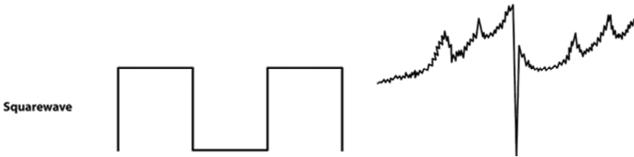
Don't be misled by the "laying on the grass" myth disseminated by proponents of high intensity devices. They say you don't have to buy a low intensity device because you can just go "lay on the grass" and get the same results. This isn't true.

If you take a magnetic field detector and put it up to the Earth, all you will measure is the static field. You won't get any frequency components unless you have a very sensitive antenna to pick up the Schumann resonance.

Our bodies do have biological "antennas" that will tune in to the Schumann resonance and geomagnetic frequencies.

Let's go over the best frequency, waveform, and timing to look for in a PEMF device. We already looked at the frequency component, which is the 0-30 Hz. range. The most effective waveform, according to the NASA study, has a rapid rise and fall. Two waveforms meet that criteria:

- **1.** The Square Wave. The NASA study concluded this waveform was the most effective for healing and regeneration.
- 2. The Sawtooth Waveform. This waveform delivers many frequencies simultaneously.



Ideally, you'd want a PEMF device that has a sawtooth waveform on the full body mat. That would give you the full range of 0-30 Hz. frequencies. On the local applicator (like

a pillow, probe, or pen) you would want the squarewave to break up cycles of pain and to help with healing and regeneration.

So, I recommend looking for a PEMF device with a rapid rise and fall waveform (square wave and sawtooth). Certainly not a static mattress pad, because those have no frequency component. And machines that use a sine wave do not have a rapid rise and fall.

The next topic is timing. This goes along with circadian rhythms of the body. For example, how long do you lay on the PEMF mat? Research has shown with PEMF therapy versus static magnets, all you need is 8 minutes, twice a day of a low-intensity, Earth-inspired PEMF system. That is enough to charge up your 100 trillion cells.

Now I'd like to present the top 8 benefits PEMF therapy. PEMF therapy charges up the cells, so it's working very fundamentally. As research as shown, it will help you to:

- 1. Have stronger bones
- 2. Improve endorphins and break up cycles of pain
- 3. Get better sleep and HGH secretion
- 4. Have more energy ATP
- **5.** Enjoy better oxygenation and circulation
- 6. Improve your immune system
- 7. Relax and reduce stress
- 8. Regenerate nerve and tissue.

Finally, let's go over some action steps you can take to change your life:

- 1] Look for mostly organic whole plant foods
- 2] Drink clean and energized water
- 3] Take full spectrum light and sauna therapy
- 4] Oxygen therapy (air purification, exercise, and deep breathing)
- 5] Natural, Earth-based PEMF therapy

### **Learn More**

For a much more detailed explanation about PEMF, be sure to purchase the book at Buy the Book Here

Comment - The iMRS meets all the criteria listed in chapter 8 of this excellent book and the iMRS is the device that most closely duplicates the Earth's Natural PEMFs in book frequency, Intensity, Waveform and Phase/Timing.

# Bryant Meyers



Or listen to Bryant Meyers' Video: <a href="https://www.youtube.com/watch?v=LKOli-nNALM">https://www.youtube.com/watch?v=LKOli-nNALM</a>
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