
Why Isn't My PEMF Device Helping Me Yet?

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As I talk to people who purchase magnetic field systems I frequently get asked "when will I likely see a result?" The other question is "why is the device not helping?"

Both of these questions are actually related. The answers require an understanding of how pulsed magnetic fields work when applied for specific health circumstances, and considering the individual body.

PEMFs, of the kind I usually recommend, typically penetrate all the way through the body without being used up by the body. However, like a light, the intensity of the light is strongest near the light and decreases as you move away from the light. The same thing happens with PEMFs - the intensity drops off as you move away from the applicator. That means that the part of the body next to the applicator will get the highest field intensity and the other side of the body away from the applicator will get a very low level of intensity. This is an important consideration in where to place applicators and will determine often what kind of results will be obtained.

Some health problems require higher field intensities. Some health problems do better with lower field intensities. Some problems require a broader range of frequencies, while others do better with a minimal number of frequencies. So, selecting the right device becomes important to achieve the best results. Every magnetic system will produce benefits to some extent. The right magnetic system for the circumstances will tend to produce results faster. Unfortunately often people have to make purchasing decisions based on affordability and so the right magnetic system may not always be possible to obtain.

If this is the case, then it will likely take more time for benefits to be achieved and patience will be required.

Many people get tremendous results quickly and are very happy with their PEMF system even in the first week or so of use. For some people the results don't happen quickly. This is where we can fine tune the treatment program to achieve better results. I often have to remind people that the body takes time to heal once it's given the appropriate signal or stimulus for that to happen. For example, a fracture will need 8 to 12 weeks to be strong enough for the bone to be

able to be used. This does not mean the healing process is finished, it is just a more usable body part. Magnetic therapy can speed the healing rate but it will not be instantaneous. This is an unreasonable expectation.

PEMFs do not drug the body into being painless or euphoric. I call that "numbing and dumbing." Sometimes drugs are important during the therapy process. One of the goals of PEMFs is to be able to reduce the use of drugs if one can and accomplish less pain and improved function.

PEMFs work deep in the tissues to stimulate natural healing processes that have gotten stuck. It is the healing of the tissues that creates a reduction in pain, and improvement of function and health. This is ultimately the best solution and produces the most sustainable, least likely to regress, results. Unfortunately, we didn't get here overnight with our problem/s and it will take time for the healing to work. Despite this, at the same time, other benefits begin to happen in the body, that were unexpected. For example, sleep, mood or vitality, or gut function, etc, may improve before the original problem improves.

So, what are some of the ways to improve results?

1. Setting expectations

Having proper expectations is really important. If one is depressed or very miserable in one's life, small improvements in a problem may seem inadequate to improve the overall quality of one's life. I see this particularly in the elderly who have so many health issues, among others, that it is hard for them to appreciate the benefits they may be getting. Important to setting expectations is understanding the nature of the problem the depth of the damage or dysfunction, the tissue involved and its ability to regenerate, the likely time it will take to recover even in favorable circumstances, and the age of the individual. It is clear that a 20-year-old will heal much faster than an 80-year-old. The body has more vitality and the genetics tends to support faster repair and recovery. 20-year-olds typically don't have as many chronic problems and so acute injuries tend to resolve much faster than chronic problems, which have been around for decades. While often considerable funds are being spent on PEMFs we have a risk of setting expectations that are too high for what the technology can accomplish and the ability of the tissue to regenerate.

When expectations are too high we are unfortunately often very likely to seek magic bullets, including surgery, expecting dramatic benefits. Rarely, miraculous things happen quickly, but this is not the norm. Still, PEMF therapies are a better solution than exposing the body to risky procedures or potentially toxic drugs/medications. PEMF therapies or a more natural solution,

most of the time. Often, individuals will seek PEMFs as a solution after they have already been subjected to numerous procedures or surgeries. This unfortunately becomes a bit like putting Humpty Dumpty back together again. I have seen PEMFs work extremely well and quickly in patients who have very little damage in their bodies for multiple procedures. This can happen even in this last situation, if the circumstances are right. Most of the time, however, it takes time for healing to happen that is likely to be permanent or dependable. Often also, PEMFs may not cure or reverse the problem but are necessary on a continuing basis to maintain control of the problem. The same thing obviously happens with the use of medications, physical therapy, massage, etc.

2. Acknowledging the level of tissue damage/dysfunction

This is a critical piece to understanding how long it is likely to take for benefits to be seen in treating specific problems. Problems in the body have degrees of involvement and different tissues are involved in any given injury. The degrees of involvement can be considered in terms of layers or levels. One way to conceive of these levels is: the energetic level, the physiologic level, the pathophysiological level, and the pathologic level. At any given time there can be overlap in the tissues of all of these levels, and they can even all be simultaneously present.

Energetic level

The analogy I use is that of a common cold. When a cold is first beginning, many people feel a vague sense of disease, or discomfort, without any specific sense of where or what the problem is. This is in the energetic level.

Physiologic level

Once a cold begins to produce a sore throat, a slight temperature, a runny nose, sneezing, etc., the infection has moved to the physiologic level.

Pathophysiological level

If the infection continues in the body and progresses, it may begin to produce bronchitis, rhinitis, a significant cough, mental foginess, with a green or yellow sputum, etc. This is the pathophysiological level. In this level there are elements of a physiologic response to an infection and elements of cellular destruction (pathology) with color changes to the sputum indicating infection of the nose, sinuses or bronchial passages. Once the infection descends further into

the body, acute sinusitis or pneumonia is possible. Most chronic problems are in the pathophysiologic level, with varying degrees of pathology.

Pathologic level

With significant cellular or organ damage, this level is considered pathologic. A substantial amount of tissue death can occur before an organ or the body as a whole will fail. At a minimum, a number of cells have died. At the extreme, there is either complete or partial organ failure or death of the person.

Responses to treatment at each level

Treatments directed at a problem that is at the energetic level are much more dramatic and likely to produce responses very rapidly, even in minutes. For physiologic level problems, treatments are more likely to produce responses in hours to several days. Once there is some level of pathology, that is, at a pathophysiologic level, the effects of treatment usually take longer, and can take days to weeks. The pathophysiologic level in these cases can be surprisingly affected by magnetic fields, with often dramatic results. At the pathologic level, treatments have very unpredictable results and may take months to years to produce results, if ever. True and complete organ death is unlikely to be reversible with magnetic fields. Magnetic fields do not create the "Lazarus effect".

Once one knows what the probable level of damage to the organism is, it's easier to predict how long it may take for these therapies to produce results. Miracles, that is, much better than expected results, are always possible, however. Treatment may be directed at a particular problem of interest but improvement may first be seen for a different issue, based on which layers are involved. Since more superficial layers will be more likely to respond quickly, these problems will respond regardless of where the MFs may be directed first. This is like peeling an onion; more superficial issues will be "peeled" away first, deeper next, etc. and deepest will be last. This is why holistic treatment may take months to years to clear all the layers.

As a physician, I always attempt to determine the level of damage that's present in the person I am asked to help. Once I have a sense of the levels involved, I have a much better idea of how long it will take to achieve significant relief or improvement or cure. The level and extent of the problem seems to be more important than the strength of the magnetic fields applied, or the frequencies used or how much time is devoted to treatment each day. Optimizing these variables should shorten the process.

Beyond this, all bodies are different and all illnesses or diseases need to be well understood, along with some sense of the mind, body and spiritual states of the individual looking for treatment. All of these will determine how long treatments will take to produce expected or desired results. Without this sense of layers, both the individual seeking treatment and the therapist can experience unnecessary frustration. The body has its own wisdom and will respond in the layers and levels that make more sense to it than to our expectations or fantasies. We need to respect these layers of healing timelines and processes and work positively with them. What gets healed initially and in what order after that is mostly up to the body, not our expectations. The order of healing will follow the body's own wisdom of what level/tissue should be cleared first, second, etc. Patience and acceptance of this natural order will aid the healing process.

The second aspect, beyond the levels of dysfunction, is the tissues involved. The body is constantly regenerating itself and we are informed that we are new bodies about every seven years. However, various tissues within the body have faster levels of regeneration and repair cycles than the overall body. For example, the cornea of the eye repairs itself 24 hours. Intestinal cells can repair within 72 hours. Skin and muscle cells may repair in 2 to 3 weeks. Bone can take up to seven years. Some tissues do not repair well, if at all, for example, ligaments, tendons, nerves, brain, spinal disks and possibly cartilage. The tissues that do not repair well generally do not have great blood supplies or have a low regenerative capacity.

Since many problems for which PEMFs are used involve musculoskeletal tissues, these problems can be very stubborn to get results. Some problems are just very deep in the body and difficult to access without procedures to be able to produce benefits. This is one of the areas where PEMFs are especially useful, since they penetrate right through the body. We cannot push the tissue to regenerate beyond its optimal capacity for regeneration. The optimal capacity is comparable to what would be seen in childhood. So, for example a fracture may take 8 to 12 weeks to heal to a point of functionality naturally. With the use of PEMFs this fracture may take half to three-quarters of the usual time. It is known for example, with fractures that have not healed for over six months, that the use of PEMFs may be needed for upwards of 8 to 12 hours per day for as long as a year, depending on the fracture gap.

For tissues that do not have the capacity for regeneration, PEMFs are used in the circumstances to reduce pain, swelling in the tissues, improve circulation, and stimulate whatever regeneration is possible. Again, usually in any given problem there are multiple layers involved and multiple tissues. Since we never clearly know what the pain generator might be, the use of PEMFs can still be very valuable.

3. Adequate amount of use

Most of us are under significant time pressures. The amount of time for which treatments need to be applied, will depend on the levels of dysfunction, the tissue type and the particular magnetic system used. Generally speaking, faster results will be obtained with higher intensity PEMFs. Unfortunately, these are usually significantly more expensive PEMF systems. Therefore, if a lower intensity system is all that is affordable, longer treatment times will be needed for more extended intervals to achieve desired results. As mentioned above for nonunion fractures, treatments may need to be applied for upwards of 8 to 12 hours per day for upwards of a year. This is an unusual circumstance but generally, it may be necessary to use the PEMFs for 60 min. to three hours per day on average.

It is generally better to break up the treatment times to give gentle nudges to the body to stimulate the healing processes. So, a common recommendation I make is to do 30 min. three times a day. If this is not possible at least an attempt should be made to do 30 min. twice a day and when possible add another 30 min. session in the middle of the day. When time is available better results may be achieved with 60 min. three times a day. No matter what, at least one treatment session should be done daily usually around 30 min. at a time. One of the most important aspects of treatment with PEMFs is consistent daily application until the problem has improved.

Occasionally frequencies become important and for some problems higher frequency systems will do a better job faster, even if less intense. The same rules for time of use applies to these systems.

4. Duration of use

How long should magnetic therapies be applied for? The short answer is - as long as it takes. Many people stop doing their treatments as soon as they feel comfortable enough. It should be understood that the healing process is not finished itself because symptoms are better. PEMFs work at the cellular level and are repairing and regenerating cells and improving the function of cells at a level way below our awareness. So, healing can take a lot longer than simple symptom reduction. This is one of the reasons we get into trouble in terms of chronic conditions because we don't appreciate that problems are developing until they become symptomatic. A good example of this is hypertension which is silent until a stroke or heart failure occur. A general rule of thumb would be to continue treatments at the same level prior to symptom improvement for least another month. Another caution is that when symptoms have improved

we should not necessarily increase our activity level dramatically because it may reenter the tissues. Activity should be increased gradually and the body will instruct us what is tolerable. When symptoms recur we know that we have gone too far too fast and need to back off and continue treatment for a longer period of time.

A common example where PEMF therapy is not always achieve desired results is in bone on bone arthritis. This could be the knee or the hip. In this circumstance the damage is so extensive and so late in the history that a joint replacement is often inevitable. Even though in this situation the opportunity for PEMFs to make a huge difference is limited, I'm constantly surprised at the benefits people get. If however, there is minimal benefit or the benefit is not a sufficient level of reduction of pain, there is still the benefit of assisting the tissues to be as healthy as possible prior to having their joint replacement. After the surgery, the recovery time for the joint replacement may actually be shortened with a decreased risk of complications. In addition, some research and feedback from patients indicates that the prosthesis integrates better with the bone.

In addition there may be long-term benefits in having this osteointegration decrease the likelihood for future breakdown and the need for re-doing a joint replacement. Redoing her joint replacement is much more difficult than the original procedure, and is to be avoided if possible. I have had one patient least whose recovery from hip replacement surgery was dramatically short and painless because she had been using her PEMF system for at least a year prior to the surgery. Her doctors and physical therapists were amazed at how quickly she recovered. This almost never happens with a hip replacement. Again, my point is that we never know what kind of benefits can happen with any given individual, even though not necessarily all of our objectives are met when purchasing the PEMF system.

I consider pulsed magnetic therapy to be a lifetime health care tool. Therefore, the way the system purchased can be used will obviously vary over time depending on circumstances. No matter what, we all need health maintenance, and therefore magnetic therapy should be a component of daily health management.

5. Proper placements

The usual placement of applicators is to the place of pain or discomfort. Often however, the pain is actually generated in another part of the body. For example, low back problems can be referred down to the knee or foot. Knee problems can be referred to the foot. Hip problems can be referred to the knee. Shoulder problems can be referred to the elbow or wrist/hand.

Spasticity of the lower extremities is caused by a problem in the spinal cord. And so on. If it is known that the lesion is directly in the tissue experiencing the pain, then it is appropriate to apply the PEMF applicator to that spot. There is never any harm and placing it higher up, particularly the spinal cord because all sensory traffic from the lower extremities travels to the brain through the spinal cord. The brain will perceive the pain and send a signal back to the extremity or location of the pain. So, treating the spinal cord above the level of the problem can be very helpful. For example, if the problem is in the arm then it may be useful to also apply treatment to the neck. A problem in the lower extremities can be additionally helped by applying the applicator to the lumbar spine area, to get the lumbar spinal cord.

Not only is it important to place the applicators in the right locations, but also it may not be as useful to treat the entire body expecting specific areas to receive the same level of benefit. As mentioned above, to lie on your back will not necessarily help the front of your chest, because the field intensity may not be strong enough to treat the chest. So an application may be needed to the back as well as the front of the chest, in this case. Some magnetic systems allow two applicators to be used simultaneously on opposite sides of the body part. This often allows higher field intensity to be generated in the tissues between them, which I call a magnetic sandwich. Some applicators can actually be folded into a tube which also increases the intensity the field in the body part inside the tube. This can also be accomplished with a whole body pad turned sideways and wrapped around part of the body.

Depending on the magnetic system, a pillow applicator may be of higher intensity than a whole body pad. Even if not, a pillow applicator can be applied for much longer periods of time without the risk of over stimulating the body, as would happen with extended treatments with the whole body pad. Generally, tissues in body cavities, such as the abdomen, the chest and the skull, are more sensitive and may be easily overstimulated in some individuals. In this case, lower intensities and shorter periods of time may be necessary to reduce overstimulation.

It is likely that different body parts need different periods of time of treatment, depending on the level of dysfunction, discussed above. Often, acute problems need less time than chronic problems. So, treatment times will need to be adjusted based on the circumstances.

6. Getting support

While often, a purchased PEMF system can be used out-of-the-box following the instruction manual, it may be possible that support is required from somebody who is well-informed about clinical conditions and understanding the technology being applied. Obviously, if the treatment is

not going well or producing acceptable results, professional support may be necessary. Most medical personnel will have some significant degree of knowledge about clinical conditions but have very little understanding of PEMF technology and so they may not be able to provide useful advice.

7. Having adequate nutritional support

I instruct patients that you can't build a house without bricks and mortar. It is well-known in medicine that wounds won't heal without adequate nutritional support. In fact, wounds will often stall or breakdown and become complicated because the nutritional state is inadequate. I know surgeons will not operate until patients have been on an adequate nutritional program for several months before elective surgery. We often run into trouble doing emergency surgery because the condition of the body is not up to the stress of the surgery and won't support adequate recovery afterwards. So, for PEMF therapies to work best, individuals need to be on decent diets and using a reasonable number of supplements. At the very least most of us should be taking adequate levels of vitamin D3, omega-3 fatty acids, and a broad spectrum multidose, multivitamin.

It may be desirable to get a consultation with a natural medicine clinician or nutritionist to get set up on appropriate nutritional program. Many people using PEMFs need extra magnesium. Some individuals need support with melatonin as well. A high carbohydrate, high fried foods diet, or what might be called the standard American diet (SAD) does not adequately support tissues to achieve the best results with PEMF therapies. Additionally, PEMFs will work better when the bodies adequately hydrated. It is often recommended that individuals should be drinking about half their body weight in ounces. For example, a 160 pound person may need about 80 ounces of fluid per day. Most of us should be getting minimally, about 64 ounces per day. Caffeinated drinks do not count as fluids since we tend to lose as much as we put in.

8. Effects of medications

Some medications are very challenging to the bodies energy systems. Some of them, particularly the antidepressants, neuroleptics and sedatives may change the way the body perceives pain signals. They may in fact blunt some of the pain reduction benefit of PEMFs. I would never suggest that somebody should stop their medications without medical consultation. I raise this point only to inform you that occasionally pain reduction is not a successful. This is not to say that all the other benefits of PEMFs in healing and regeneration would not be happening. This only relates to the sensation or perception of pain. On the other

hand, is not infrequent that the same medications may actually be improved in their results with reduction of pain symptoms by the simultaneous use of PEMFs and the medications. My experience indicates that medications and nutrients are absorbed better in the body with the use of PEMFs. On occasion, it is possible to reduce medications once PEMFs have been used. Again, this should be done with medical guidance.

9. Toxicity and sensitivity

Infrequently, some individuals are very sensitive to PEMFs and experience increased discomfort or other unpleasant symptoms. These individuals may have a condition called electrohypersensitivity.

When this happens, PEMF therapy would have to be used "low and slow." We would need to use lower intensities, often the lowest possible on the system, and only extremely gradually increase the intensities and the time per treatment. Clearly, in this situation benefits may be more difficult to achieve because the appropriate and necessary intensities in time are not possible. Still, results can be dramatic given the opportunity with this treatment. Consultation with a clinician experienced in the use of PEMFs in this setting may be necessary. Most of these individuals need to be on a significant supplement and nutrition program to achieve the best results.

PEMFs can open cells and cell membranes to the point of unloading toxins stored in the tissues of the body. This type of response is in the long run a desirable action. However it may be unpleasant and will have to be managed by a clinician experienced in doing detoxification. The length of detoxification will vary from individual to individual. Rarely will PEMF therapy have to be stopped, whether temporarily or indefinitely while this is happening. Those individuals with multiple chemical sensitivity PEMF therapy may well be intolerable and may never be able to be used even in the most gentle fashion, at least until major detoxification can be achieved.

10. Psychological issues

Research at Hopkins, in their pain management program, found that some individuals with chronic pain have certain personality traits, that result in very poor treatment outcomes. These individuals often experience negative reactions to even placebo magnetic field devices. And when they are followed over time, some even complain that their problems continue to be worse due to the placebo treatment. In this situation it is not possible to ever please these individuals and PEMF therapy is not an appropriate treatment modality. Psychological counseling is necessary to help with any pain issues in this situation.

11. Wrong device

In the final circumstance, if results are not being achieved as desired, it is possible that the wrong device has been selected. It is often difficult to know in the first month or two months of use whether the device is appropriate or not. Since many health problems for which PEMFs are being used are stubborn and chronic, it may take 3 to 6 months to see desirable results.

Usually, people see some degree of change even in the first month. If the treatment program is too gentle with too little time applied, then results may not be seen even in the first month. It would be easier to say with certainty that the device is inadequate after at least three months of intensive and proper use. When this happens, it is usually a matter of having inadequate field intensities. In this case, a much stronger device may be needed. My experience is that this is an uncommon situation.

Understanding and managing the above scenarios would usually lead to positive results with PEMF therapies. Adjustments in the treatment program will likely be necessary over time to address various problems in the body and also to properly handle the needs of any specific body area.