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## PEMF Response Guide

### Printer Friendly PDF

This document proposes a PEMF response analysis. Generally how individuals respond to PEMF exposure provides quite meaningful information regarding health status. In addition to immediate therapeutic response, it often provides data regarding to toxicity and infection.

### Primary Goals:

- Enable determination of probable response to PEMF Exposure to manage user expectation;
- Suggest an initial assessment model to establish useful limits to initial exposure duration and intensity manage initial exposure for optimal response;
- Establish response analysis model which guides next-step therapy recommendations.

### Jumpstart Links:

- [Expected Response Guide](#)
- [Device Definition](#)
- [Adverse Response Analysis](#)
- [Unexpected Regenerative Responses](#)

## Expected Response Guide

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A response is a physical effect produced by PEMF exposure. This publication reflects thousands of observations from PEMF use with TSDDs devices dating back to 1900.

PEMF therapy is broadly applicable in a wide range of conditions because it appears to improve cellular energy metabolism relating to virtually all aspects of both health and disease.

There is an overwhelming tendency for positive responses. A positive response means the individual "feels better" after exposure. The perceived response reflects the tendency of the physiological influences to be strongly positive, where the enhanced cellular energy provide both relief and improved healing.

The following table indicates the typical positive to negative response ratio relative to health status.

- Negative responses suggest noxious toxicity;
- Toxicity that causes a negative response usually caused the main symptom;
- Individuals with degenerate health are more likely to have noxious toxicity;
- Adverse responses to prolonged PEMF exposure suggest Energetic Nutrient Depletion;
- A negative response suggests PEMF to the liver will help - ***easy does it.***

<u>Basic Health Status</u>	<u>Pos/Neg Response Ratio</u>	<u>Initial Symptom Reduction</u>	<u>Response Duration</u>	<u>Significant Cumulative Response</u>	<u>Initial Treatment Limit</u>	<u>Negative Responses Causes</u>
<u>Good</u>	1000:1 (Never observed)	90%	4-6 days <u>Acute</u>	~2 Weeks	30 Min	<u>Energetic Nutrient Depletion</u> with prolonged exposure.
<u>Fair</u>	200:1	80%	3-5 days	2-8 Weeks	20 Min	Chronic joint discomfort, arthritis, degeneration. <u>Swamped Exit Path</u>
<u>Degenerate</u>	100:1	65%	2-5 days	4-12 Weeks	15 Min <u>TB Test (3 min)</u>	<u>Swamped Exit Path, - Toxin Backflow</u>
<u>Pathological</u>	30:1	50%	1-4 days	8-16 Weeks	10 Min <u>TB Test (2 min)</u>	<u>Swamped Exit Path, - Toxin Backflow</u>

<u>Severe</u>	10:1	30%	.25 - 2 days	12-32 Weeks	3 Min <u>TB Test</u> (1 min)	<u>Swamped Exit Path, - Toxin Backflow</u>
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## Basic Health Status

Description refers to the general condition of the individual. As a general guideline, the degree of core health strongly influences the probable treatment experience. See [Membrane Pathology Matrix](#) for more information

### Good:

- Individuals who exercise regularly without discomfort;
- Sleep at least 8 solid hours every night;
- Report they wake up rested;
- Report good energy during day;
- Have zero disease diagnosis;
- Take no prescription medications.

### Fair:

- Report minor persistent discomfort in under two joints;
- Issue has existed for less than six months;
- Sleep at least 7 hours at night;
- Report at most minor periodic fatigue;
- Occasional use of pain medication.

### Degenerate:

- Report long term discomfort;
- Report daytime fatigue three or less days weekly;
- Structural degeneration in joint;
- One chronic disease diagnosis less than six months;
- Two or less prescription medications;
- One out of range marker in blood chemistry.

### Pathological:

- Chronic disease diagnosis for more than six months;
- More than two out of range markers in blood chemistry;
- Any indicator for an autoimmune disease;
- Report daytime fatigue five or less days weekly;
- Four or less prescriptions
- Less than six hours of good quality sleep

Severe:

- Any chronic neurological condition;
- Any autoimmune disease diagnosis;
- Perpetual fatigue;
- Any condition which exceeds the limits above.

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## Toxin Backflow Test (TB Test)

The (TB Test) is recommended for any person who has a health status less than fair. The TB test involves picking a joint with discomfort and doing a short term PEMF exposure. This exposure should be last from 1-3 minutes depending on health status. Do the test as a series of 1 minute exposures. After each exposure determine if the discomfort in the treatment area is less or more than prior to the test.

Individuals with toxin backflow will likely experience minor increased discomfort after the initial short term exposure. If the individual fails the TB test consider a [physiology evaluation](#) to develop a detoxification strategy.

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## Pos/Neg Response Ratio

The positive to negative response ratio is the probable number of individuals likely to experience a negative response based on unrecognized occurrence [Negative Response Cause](#) present with the individual at the time of treatment.

This number reflects the probable observation of a positive therapy response.

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## Initial Symptom Reduction

This number indicates the probable reduction in discomfort/symptom as a result of a single therapy session on an affected area for the amount of [Response Duration](#).

Note that the symptom reduction reflects the tendency for symptoms to be reduced for the duration of time indicated. The sicker the individual the more time, energy and detoxification will be needed to enable healing.

## **Response Duration**

This is the amount of time the symptom reduction for a treatment is likely to last.

Treatment usually provides durable relief. Successive exposures tend to create more durable responses because the body was able to increase healing after each exposure. Generally the amount of time between the discomfort which motivates treatments increases with healing progress enabled by treatment.

The duration of the therapeutic response normally reflects:

- The amount of energy the body was able to absorb from exposure;
- The amount of time it takes the body to use up the energy;
- The amount of damage present in the area, which determines the healing process.

It is better to do two short treatments separated by several hours amount of time than it is to do one long treatment for recovery of acute injury or trauma.

## **Significant Cumulative Response**

This number indicates the amount of time required to produce a significant cumulative response. It indicates the amount of time likely to produce significant healing for the particular issue.

For example, for an individual in good condition is likely to experience substantial resolution of a broken bone or sprain in about two weeks. This has been reproduced numerous times.

## **Initial Treatment Limit**

This number recommends a maximum first time exposure for an individual to avoid a negative response. Generally the individuals in better physical condition experience more response from longer exposure.

Individuals who do not exhibit a negative response after an initial exposure can usually increase exposure by 20% per session without provoking a negative response. Monitor the therapeutic response. Do not continue treatment beyond the [point of diminishing returns](#).

Treatment that exceeds 15 minutes on a single location may trigger [Energetic Nutrient Depletion](#) requiring topical or systemic nutrients to restore normal nutrient balance.

## Negative Response Cause

In cases where the perceived response is negative, one or more of the following effects are likely the cause:

1. Overwhelmed exit path. Increased cellular exchange from [electroporation](#), releases more cellular waste than the body can remove at the time. This causes a [Herxheimer's Reaction](#). This response persists until the body disposes of the waste dumped by the cells. This response indicates poor bodily flow and indicates need for systemic [detoxification](#).
2. Toxin Backflow. Increased cellular enables toxins accumulated in [extracellular](#) fluids to reenter cells. Toxin backflow indicates acute [lymphatic](#) toxin accumulation, and strongly indicates a need to support local or whole body detoxification process. Toxin Backflow is normally indicated by increased discomfort after a brief exposure to PEMF.
3. Energetic Nutrient Depletion. Cellular energetic activation [up regulates cellular energy](#). Elevated activity changes the rate at which cells utilize available nutrients. In cases of prolonged PEMF exposure depletion of cellular nutrients can cause symptoms resulting from local depletion of these energetic nutrient substrates. Energetic Nutrient Depletion is normally indicated by discomfort resulting from prolonged PEMF exposure.



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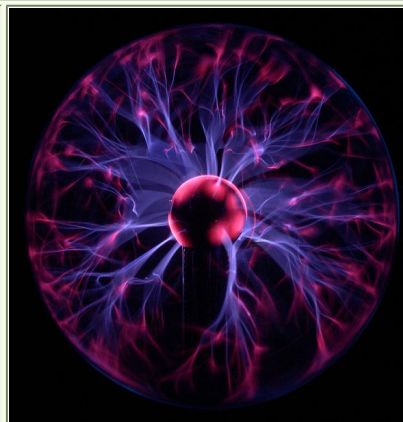
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## PEMF Device Definition

Tesla Spark Switch Discharge (TSSDs). TSSDs are spark-discharge devices.

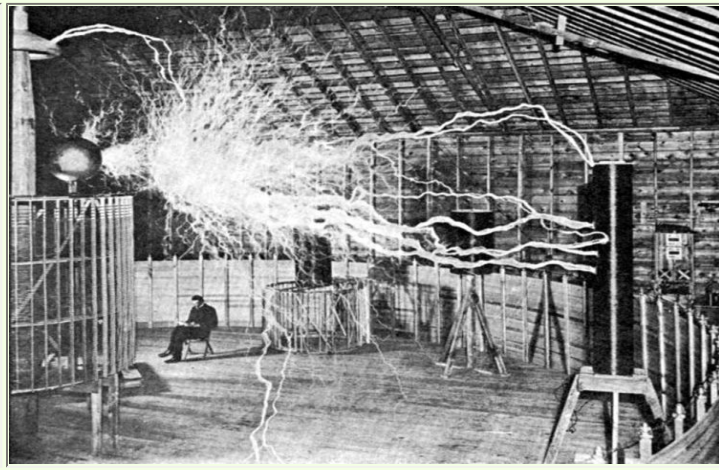
TSSDs operate when a high voltage accumulates in a voltage circuit. The voltage is exposed across a spark gap, usually filled with air or other gas. When the voltage exceeds the ionic breakdown voltage of the insulating gas, a spark occurs. The spark creates a "[plasma](#)" zone.



The devices produce a spark when electricity discharges across a spark gap causing a pulse of high current to flow through the circuit. The gap is a switch. The wire containing the the current loop is an antenna. The flow creates a brief, usually 100 ns to 500 ns, current to flow through the antenna wire. This flow, when coupled to tissue, has normally beneficial effects on nearby tissue.

There are many PEMF devices which utilize low energy harmonic waveforms. This publication does not attempt to address these devices. This author was unable to find any references to Tesla working with "low voltage" devices.

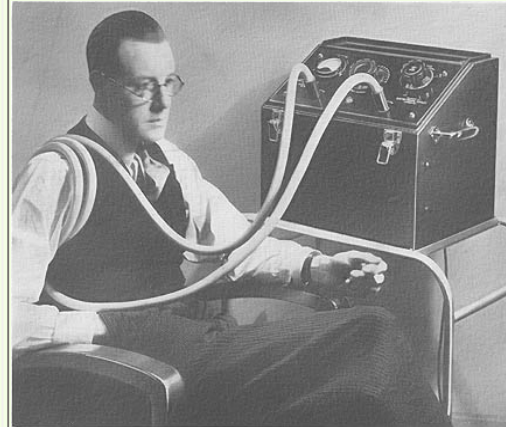
Tesla reportedly discovered while under contract with New York City subway to investigate health effects of high energy discharge. During this investigation he developed the concept of [cold electricity](#).



Tesla recognized that there was a cellular response to cold electricity. At very high levels, with generators that powered the New York subway system, the effects were sometimes harmful.

During later experiments, he discovered that lower levels, effects tended to be very beneficial. The relationship between energy and life earned a nobel prize for scientists in about 1961 for the discovery that electrical energy is the missing ingredient for creation of life.

Tesla reportedly developed Electro therapeutic devices, which were widely deployed into hospitals that utilizes small spark discharges like the one pictured at the right.



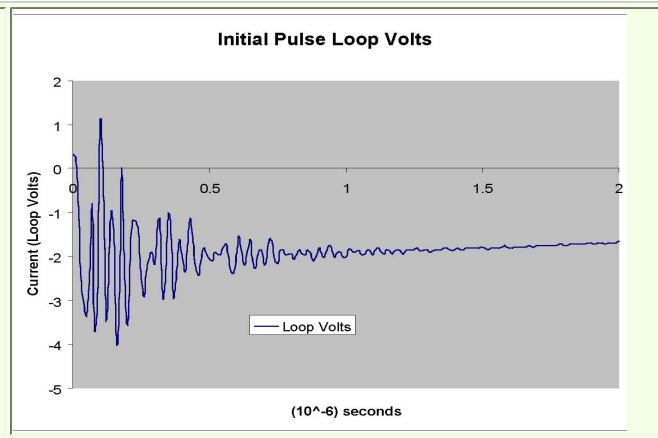
These devices produce a waveform with in the antenna coupling.

The waveform from these devices tends to look something like the picture on the left.

Intermittent pulse discharges create an initial impulse. Depending on energy absorption within the circuit, the waveform decreases within multiple cycles to quiet.

They are called pulsed because the whole waveform repeats on an intermittent basis.

More [information on PEMF here](#).



These devices were reportedly common use in hospitals until the late 1940s. Their use was discontinued with the dominant emergence of the Pharmaceutical industry and subsequent discredit of energy medicine resulting from the monetary conflict between [Morris Fishbein](#) and [Royal Raymond Rife](#).

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## Adverse Response Analysis

This page contains analysis for cases where PEMF produced a negative response. The overwhelming majority of responses are positive. When possible we investigate negative responses to gain knowledge. Negative responses evidence a bigger systemic problem is causing a particular symptom.

Analysis often enables us to discover the nature of this problem and identify beneficial therapy.

### Primary Goals:

- Describe the physiological conditions that can result negative responses;
- Explain, when possible, why PEMF exposure triggered the undesirable/unexpected response;
- Provide a basis to interpret responses to guide future care;
- Enable next-step recommendations;
- Enable avoidance of negative experiences.

### Important Note:

Individuals who use energetic therapy including PEMF have usually lost confidence in traditional health care. They perceive that there is a core problem resulting in a symptom.

The strong tendency for pharmaceuticals to mask symptoms, and not to resolve a cause, enables their health issues to persist without resolution. Over time they quest for understanding and resolution.

- Click here for more information on our [Physiology Analysis Services](#).

They have a personal history of persistent or repeated failure with standard health care methodology.

## Tools and methods

When possible we employ a detailed analysis to determine the why an individual experienced an negative response. This [analysis](#) targets major physiology areas:

- Toxin accumulation in blood and lymphatic compartments;
- Electrolyte Evaluation
- Urine and Saliva electrophysiology, [ORP](#), [pH](#), [Conductivity](#)
- Glucose Status
- Autonomic Nervous System Status
- Detailed review of existing medical records
- Detailed questionnaire of preferences and tendencies.

[See Membership for more information.](#)

## Adverse Response Listings

Therapy	Intended Result	Actual Result	Interpretation	Resolution
PEMF treatment of wrist	Reduce/resolve discomfort in wrist joint	Wrist Discomfort increased and returned to original level in 1 week.	Testing indicated: Saliva <u>ORP</u> Elevated, <u>Urine NO3 levels 10x normal</u> . <u>Bilirubin &amp; Ketones</u> in urine indicated significant liver challenge.	Detox protocol did not resolve systemic issues.  Developed <u>Toxin Backflow Test</u> to avoid recurrence.
<u>PEMF treatment of Botox Injection site</u>	Accelerate effects of Botox injection to reduce wrinkles.	Lesions with <u>pustules</u> formed at the injections sites along with a surrounding inflammation.	PEMF improved immune response to Botox toxin causing immune system to reject to foreign agent.	Lesion healed by itself.
<u>PEMF treatment of Varicose Veins</u>	Subject sought to improve vascular health by direct tissue treatment hoping to restore tissue integrity of degenerate veins.	Vein ruptured causing bleeding after exposure.	PEMF reduced capillary inflammation in capillary beds that fed veins. Restored pulse pressure from restored capillary circulation exceeded containment strength of degenerate veins resulting in bleeding.	Bleeding stopped by itself with applied pressure.
<u>Seizures Intensified after 1 minute test exposure to head</u>	<u>Reduce/eliminate seizures.</u>	Seizures increased.	<u>Testing</u> indicated 10x normal electrical conductivity in extracellular compartment. Conductive toxins were "shorting out" nerve signals resulting in seizures	Seizures stopped with 24 hours of starting lymphatic detox protocol.

\* PEMF often improves seizures due to probable improvement in nerve signal integrity. Adverse response due to electroporation likely indicates accumulation of toxins in fluids surrounding nerves.

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## Unexpected Responses

An unexpected response is a physical response not anticipated by the [published research data](#) regarding PEMF.

Categories of unexpected Responses:

- [Bacteriostatic](#)
- [Regenerative](#)

### Bacteriostatic

PEMF has multiple beneficial effects on bacterial infections. In some cases the response is highly effective. The following observations occurred in a 1 of 1 ratio (at this time), meaning that the response is likely statistically significant, but reproducibility is unknown.

#### **MRSA - Methicillin-resistant *Staphylococcus aureus***

Two exposures of the same individual to the right knee. MRSA infection contracted during surgery 5 years prior. First exposure observations:

- Improved range of motion - immediate;
- Old scar began to drain yellow fluid within 15 minutes;
- Resulted in yellow fluid draining within 15 min;
- Reduction in apparent severity of infection noted;
- Exposure did not resolve infection;

Second Exposure Observations (1 year later):

- Series of four exposures
- Lesions opened and drained 1/4 cup of puss after second exposure;
- Repeated exposure appeared to increase immune response;
- Structural changes in knee, reduced circumference;
- Treatment of liver resolved fatigue, subject reported sense of "well being";
- Drainage of joint continued for approximately two weeks;
- Applied [ePad](#) continuously while therapy not active;

- Subject continued ePad use after PEMF no longer available.
- One of one cases.

### **Oral Abscess - Two of Two Cases**

Two subjects used PEMF to treat dental discomfort prior to scheduled [root canals](#). Each treatment was approximately two days prior to the root canal appointment. Each subject used a small probe to apply high intensity to the area.

Both subjects cancelled the root canal appoints because the apparent need resolved.

### **Regenerative**

PEMF exposure has produced recovery responses in a number of individuals. These are:

- [Arthritic Joint Regeneration](#);
- [Tooth Regrowth and Regeneration](#);
- [Accelerated Wound Healing](#)

We continue to evaluate these responses to determine and improve reproducibility.

### **Arthritic Joint Regeneration**

This apparent reproducibility of this effect is over 50% of the time when an individual does not experience and adverse response to initial exposure. Repeated exposures normally result in [Significant Cumulative Response](#).

### **Tooth Regeneration**

Case History. A 33 year old woman had a tooth removed. That evening she used a PEMF device for a 20 minute exposure to treat the discomfort of the surgery site.

Approximately one week later she noticed discomfort in the former tooth site. She returned to the dentist who took an X-Ray. The radiograph showed a new tooth forming.

Later she noticed discomfort in her other dental work. Upon follow-up to the dentist he observed re-formation of tooth surfaces below most of her existing dental work.

### **Accelerated Wound Healing**

A 47 year old woman in good health experienced a sprained ankle. The ankle turned purple within 10 minutes and she was unable to walk. She has a historically high tolerance for discomfort having delivered 5 children without complaint or pain medication, two of the deliveries were breach.

Applied PEMF and [ePad](#) post injury. PEMF was reapplied when pain recurrence for approximately 30 minutes.

Recovery Benchmarks:

- Three days post injury she walked 1/2 mile with a splint
- Four days retired splint;
- Seven days, reported fully recovered

Recovery performance has been reproduced with high reliability. Multiple reproductions of the therapy report:

- Consistent reduction healing time of approximately 75% (healing in about 1/4) expected time;
- No apparent tendency for reinjury - suggesting near complete regeneration;
- Substantial reduction of injury related discomfort;
- Reduced tendency for scar tissue formation.

More Information:

- [Injury Recovery HowTo](#) for more information;
- [Tissue Regeneration eBook](#)

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