

Biological effects in Human Tissue of Specific Magnetic Energy

Dr Charles Wallach, MD; Ph.D Neurologist. [Extract]

“This is a brief introduction to the important medical specialty of Pulsed Electro Magnetic Field Therapy (PEMFT, PMFT or PMF). It is relatively new and often unknown to the current generation of mainstream physicians, and although this technology has been evolving and developing since the 1920’s, it has a long history of dramatically successful applications to a broad spectrum of diseases and trauma conditions.

“My name is Dr Charles Wallach with a doctorate in neurophysiology, but over the past 25 years I have been involved in research and clinical studies relating to the biological effects of electromagnetic fields - especially in medical therapies – on which I have authored two books and many journal articles and practice as a clinical consultant in this field.”

Modern treatment with most PMF devices consists of very short (momentary) pulses of extremely low power magnetic energy a few times per second, continued for 20 minutes at a time, and optimally repeated at similar intervals until the desired therapeutic results are obtained, or continued as a preventative. With the low intensity output type PMF devices, each pulse contains a spectrum of harmonics which depending upon the type of device can change and enhance cellular activity at the molecular level.

With this protocol, there are not only no detrimental side effects, but the benefits of each treatment persist for extended periods.

The magnetic energy pulses penetrate through the body without skin contact. This treatment is painless, non-invasive, inexpensive, and usually produces almost immediate beneficial results.

PMF therapy is quite unrelated to microwave heating, such as cellular or mobile phones, and many medical and physical therapy equipment devices, as it does not create heat in body tissues. PMF therapy is remotely related, but far superior to the increasingly popular use of permanent magnets to alleviate pain. The difference lies in the fact that the magnetic field of a permanent magnet is static – it does not move. Therefore its beneficial effects result from small movements in tissue near the magnet, such as adjacent blood flow or muscle movement.

With PMF therapy, the rapidly oscillating movements (expansion and contraction) of the magnetic field actually pulses through the tissues and conductive circuits within the body to produce beneficial microcurrents throughout the whole body, particularly at 0.5Hz (pulses per second).

Now we come to the complex question of how PMF therapy works, and why it works so well on such a large number of medical problems. In this regard, several different mechanisms have been observed and objectively measured and demonstrated.

It is axiomatic that moving or pulsed magnetic energy fields induce currents in electrical conductors such as nerve fibres, blood vessels and lymph channels, and that these currents – actually microcurrents at levels of microamperes – modify the electrical potentials and characteristics of cells along their paths.

One effect is to stimulate such a cell’s production of adenosine triphosphate (ATP) the fuel used by the cell to function, and provide the body’s energy needs. As low ATP is characteristic of sick, damaged or nutrient-starved cells, this ATP booster factor accelerates their healing or regeneration. The dramatic history of PMF therapy in wound therapy and stimulation of immune system cells strongly supports this phenomenon.

Also, under a microscope, the movement of phagocytes has been observed to accelerate significantly, thus speeding up the killing of bacteria and other debris in the bloodstream. At the same time, haemoglobin (red blood corpuscles) can be seen to swell, increasing their volume and surface area so that they are capable of absorbing and carrying more oxygen to damaged muscle tissue.

Moreover, as haemoglobin contains molecules of iron that are constantly being attracted and repulsed by the oscillating magnetic fields, this vibration against soft walls of the capillaries may enlarge them to increase blood supply to damaged tissues. This is principle mechanism of magnetic resonance imaging (MRI) that is also combined with high frequency radio type waves, at a much higher energy level, for imaging purposes.

Electroporation and electroporation are terms used to describe the pores or tiny holes that are observed to appear in cell membranes under voltage stress. Such pores facilitate the entrance of nutrients and oxygen, immune system killer cells, and the removal of by-products such as CO₂, H₂O, plus energy.

Scientist Dr. G. Rein has demonstrated that the correct magnetic pulses can produce an impressive 20-fold increase in T- and B-lymphocytes. This boost of immune system potency would account for the responses to PMF therapy with many serious conditions that have not responded to other treatment regimes. The FDA recognised in 1978 the benefits of magnetic energy in healing of un-united tibia fractures.

It must be noted however that PMF therapy is not a cure for actual diseases, but that correctly applied PMF can help the body to fight the invasion of many diseases, reduce the severe complications and pain, and often helps in the return towards a healthy body. Results appear to be frequency and waveform specific.

With particular regard to rogue cells, it has been shown that PMF therapy at 0.5Hz alters their pH and also the status of the DNA, thus inhibiting reproduction and causing such faulty cells to just die. Under proper treatment protocols, this has been demonstrated to at least arrest tumor growth and in many cases cause a remission of the condition.

Results in the neurological area of medicine have been nothing less than amazing. I have witnessed subjects with conditions from Epilepsy, Parkinson's Syndrome, Multiple Sclerosis, Motor Neurone disease, and other similar situations, benefit to at least some degree from the gentle and subtle magnetic energy.

There have been a number of PMF devices on the world market. In spite of the vast number of highly favourable clinical reports on PMF therapy, the lack of funding required for the exorbitant cost and years of evaluation to meet the FDA evaluation criteria, has delayed approvals. Moreover, the deeply entrenched opposition of the pharmaceutical industry with billions of dollars in sales of their products at risk has so far been successful in blocking most attempts to obtain the funding of required clinical studies and trials of this pill-less, painless, inexpensive and effective therapy.

The Magnafield system, developed by the research team led by Dr Bob Grace in Australia since the mid 1980's, has been through successful clinical trials by the medical faculty of the Monash University and Medical Centre, in Melbourne, Australia. It is compact, light, fits into an attaché case, and has one of the longest histories of efficacious therapeutic applications of the currently available modern devices, and is also one of the least expensive at around \$US2500.00. It is available from Magnacare Pty Ltd in South Australia.

It is Listed on the FDA (CDRH) and the TGA (ARTG), and meets all quality, safety, and efficacy requirements. In my travels on lecture tours, and when introducing the Magnafield and the Magnatens devices where people are suffering, with little chance of alleviation or recovery, I have seen remarkable results in such otherwise 'hopeless' cases in many instances in California, Nevada, Arizona, New Mexico, and Texas.

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(Dr. Bob, you can use this memo
from one of my TV presentations
if you think it is appropriate. C.W.)

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[Footnote:

A list of many disease conditions and claims of cures followed, but under Australian regulations we are not allowed to use these in this format. Ref. TGA Advertising Code Council.]
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