PULSED ELECTRO-MAGNETIC FIELDS (PEMF)
John Brimhall DC, DIBAK, FIAMA

The 6 Steps to Wellness
Putting the Pieces of the Health Puzzle together to achieve optimal health.

There are SIX major Interferences to Health and Wellness.
1) Structural Interference
2) Electrical Pollution
3) Nutritional Interference
4) Allergies/Sensitives
5) Emotional Stress
6) Toxins
Geopathic Stress
Electromagnetic
- High Voltage lines
- Electrical Outlets
- Computers, TV, Cell Phone, etc.
Radiation
- Ultra-violet, nuclear, x-rays, etc.

EMF’s In The News
- Watch FOX News
- EMFs are everywhere: cell phones, computers, etc.
Albert Einstein’s $E = mc^2$

Frequency of household current is 60 hertz, the human brain runs on 1-2 hertz when sleeping and 18-22 hertz during intense thinking.

The electromagnetism of appliances, electrical devices, computers, cell phones radios and other electrical devices are not compatible with human cellular function. “The current from these appliances disrupts a healthy human electric current and can actually cause cellular mutation.”

A 2 year study on extremely low-frequency fields (ELF’s) done by the FDA recommended that these fields be listed as probable human carcinogens, alongside chemicals like PCB’s, formaldehyde, and dioxin.
Energy Medicine uses energy fields to treat illness. There are two kinds:

1. **Veritable energies**: electro-magnetic fields, which use mechanical vibrations with specific wavelengths and frequencies to treat patients. Electromagnetic fields include the following:
   - Pulsed fields
   - Magnetic fields
   - Alternating current fields
   - Direct current fields
   - Laser beams

2. **Putative energies**, which include biofields that can’t be measured. No scientific study has been able to verify the existence of biofields. CAM practices that involve biofields believe that the human body is full of a certain energy that has to keep flowing for the body to function properly. Qi in TCM is an example of such an energy. Ayurvedic medicine also believes that an energy called doshas are coursing through the body and must be maintained to maintain health. Even though these biofields have yet to be scientifically verified, therapists who use biofields to treat their patients say they can see and feel the energy and manipulate it to affect the health of their patients.
REPLACE ENZYMES AND/OR HYDROCHLORIC ACID

Dr. John & Teagan

Dr. John & Trig

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Energy Medicine – An Introduction
Dr. John Brimhall

Teagan & Trig

Pro Arthrostim

Step #1: Re-establish Structural Integrity

*** It’s the Foundation of Health!
  * Pro Arthrostim

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Circulation of Cerebrospinal Fluid

- Produced by choroid plexus of ventricles
- Passes to sub-arachnoid space of meninges through roof of fourth ventricle
- Flows down and around spinal cord
- Diffuses freely into nervous tissue
- Absorbed out of sub-arachnoid space and into blood at arachnoid villi/granulations in sagittal sinus
- 500 ml/day, turn-over in 8 hrs
- No feedback to choroid plexus—hydrocephalus is consequence of flow or absorption.
8 5MW Red Lasers
8 5MW Infra-Red Lasers
20 5MW Violet LEDs
Fully Digital
110 Preprogrammed Frequencies
Step #5: Release Negative Emotions and Limiting Belief Systems

- Feelings Buried Alive Technique
- Positive Point Therapy
- 5-minute Phobia Cure
- Ocular Release
- Healing Codes
- Laser Emotional Release Therapy

5 factors of Central Integration:
1. Muscle Spindle Cells
2. Posterior Spinal Facets with Joint Mechanoreceptors
3. Eyes
4. Ears Hearing
5. Ears Vibrational
Energy Medicine – An Introduction
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What is Cold Laser Therapy?
Cold laser therapy is a relatively new technology when compared to acupuncture which has been used since 8000-3500 B.C. Just like the abacus evolved into the computer, slowly needles are evolving into light. Recent innovations in low-level lasers now make it possible for the average physician or consumer to own cold laser equipment. Cold lasers are sometimes called Low Level Lasers (LLL) or Soft Lasers.

In general, cold lasers can be used in two distinct ways:

- Targeting acupuncture trigger points (similar to acupuncture but without the needles). Broad coverage of deep tissue with laser photons to stimulate changes in the tissue. Cold laser therapy offers a non-intrusive option to acupuncture and surgery. It also provides a non-addicting treatment that eliminates the complications of long-term drug treatment programs.

Cold lasers are widely used for treatment of:
- Acute & chronic pain
- Tennis elbow
- Ligament sprains
- Back pain
- Muscle strain
- Bursitis
- Soft tissue injuries
- Carpal Tunnel Syndrome
- Tendonitis
- Fibromyalgia
- Arthritis

“Fueling the Power Plant”
Mitochondrial ATP Production

All the cells of your body have a miniature “power plant” inside called the mitochondria. That’s where your cell’s energy is produced. It’s called ATP (Adenosine Tri-phosphate). Cold laser light stimulates an increase in ATP production in the mitochondria. This process is similar to how your body uses the sun’s energy to manufacture Vitamin D.

When your cells have more energy available, they operate more efficiently. Researchers say, cold laser improves transportation of nutrients through the cells. It can help increase chemicals known as endorphins. These are your body’s natural, built-in pain relievers.

The mitochondria are very sensitive to light. The amazing discovery made around 40 years ago by Hungarian surgeon, Dr. Mester was that certain frequencies of light could increase the “power plant’s” ability to make more energy... speeding up the healing rate of injuries.

The blood’s immune response improves. Oxygen to the cells can increase too.

Cold laser light also activates enzymes within cells. This triggers beneficial chemical reactions to activate more enzymes-like a “domino effect.” What’s really fascinating is that only the cells that need the light absorb it.
Cold laser therapy is a non-invasive procedure, meaning that it does not require a surgical incision. This means that there is no prolonged recovery time. Laser therapy also does not involve taking any medications and many patients prefer to avoid taking medications. Studies have so far found that cold laser therapy does not have serious side effects when used properly by a doctor.

Low Level Laser Therapy (LLLT)

LLLT improves tissue repair, reduces pain and inflammation wherever the beam is applied. Usually applied by a doctor, therapist or technician, treatments take about 10 minutes and should be applied two or more times per week. LLLT has been used for many years on sports injuries, arthritic joints, neuropathic pain syndromes, back and neck pain. Over 200 randomized clinical trials have been published on LLLT, have of which are on pain.

The Earth’s magnetic field strength was measured by Carl Friedrich Gauss in 1835 and has been repeatedly measured since, showing an exponential decay. This could also be stated as a relative decay of about 10-15% over the last 150 years. This deterioration has accelerated of late, increasing debate over whether it portends a reversal of the lines of magnetic force that normally envelop the Earth.

A reversal could knock out power grids, injure astronauts and satellites, widen atmospheric ozone holes, send polar auroras flashing to the equator and confuse birds, fish and migratory animals that rely on the steadiness of the magnetic field as a navigation aid.

The strength of the field at the Earth’s surface ranges from less than 0.3 gauss in an area including most of South America and South Africa, to over 0.6 gauss around the magnetic poles in northern Canada and south of Australia as well as part of Siberia.
The magnetic north pole is always slowly moving and is currently heading towards Russia from its current position in far northern Canada. The magnetic north pole moves by around 64 km (40 miles) per year, because of changes within the Earth's core (unlike the true north pole which moves slowly due to tectonic plate motion). It has moved from extremes of around 10 degrees east in the late 16th century to 25 degrees west early in the 19th century, and is now at around 3 degrees west. The north and south magnetic poles can also switch places, which happened last about 780,000 years ago.

The magnetic north pole is slowly moving and the shift is affecting runways at airports in Tampa, Florida, with the major runway at Tampa International Airport closed until January 13th, 2011 to allow for the signage to be changed and numeric designators at each end of the runway to be repainted.

In Harbin, P.R. China, thousands of sparrows were found in the woods, said to be frozen to death.

On January 2, 2011 in cities and towns of Arkansas, more than 1,000 blackbirds fell to the ground from the sky, and they were dead! The U.S. Wildlife Service is unsure as to why the birds fell from the sky.

We know that birds navigate by the Earth’s magnetic field: if the magnetic field changes, birds may fall. Migratory birds rely on the body’s "biological compass", to determine direction. It is unclear how birds perceive the magnetic field. [Magnetic Crystals]

The aim of this study was to find out how a long-term shielding of the geomagnetic field (GMF) affected the immune system of rats. Male and female Wistar rats were kept up to an age of 2 months in natural GMF (about 37 microT). Afterwards, the rats were divided into four groups (males and females separately): control rats were maintained in ambient GMF while experimental animals were housed under conditions of a weakened GMF (below 12 microT) achieved with steel cages. After 6 months, the rats were sacrificed by decapitation. Spleens and thymuses were isolated and weighed. Peritoneal cells were eluted and cultured in vitro to study their ability to produce nitric oxide (NO) and to synthesize superoxide anion (O2(-)), important microbicidal molecules of macrophages. The number of macrophages was estimated by a crystal violet staining method.

We found that the long term shielding of the GMF could influence the functioning of the immune system in a sex-dependent manner. The deprivation of the GMF delayed physiological thymus involution, that effect being more strongly expressed in females. The weakening of the GMF resulted in an increased number of peritoneal macrophages, an increased intracellular level of NO, and a decreased intracellular level of superoxide anion. It is proposed that the observed changes in the immune system occur as a consequence of the indirect effect of GMF shielding on the circadian rhythmicity of the immune system.
• Every organism on earth (including humans) uses magnetic signals of the earth and that part of the solar radiation that is able to penetrate our atmosphere. These signals are of great importance to internal regulation of the organism.

• These natural signals are often distorted by our modern way of living. The power grid, electrical appliances, mobile phones, mobile phone towers, satellite signals, TV broadcast stations, tall buildings, asphalt, draining pipes, & more are responsible for us not getting the signals we need to stay balanced. All Body Systems and especially The immune system suffers because of this energy disruption.

• Healing frequencies can be incorporated within (transmitted with) the (PEMF) magnetic field and thereby applied to every cell.

• Think of homeopathic remedies, i.e. Bach flower remedies, etc.,...frequencies can be incorporated to increase that resonance effect, creating harmony within the cells and therefore the body.

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**Why We Need PEMF (Pulsed Electro-Magnetic Fields)**

- Atomic excitement stimulating the spin of the electron to store energy there that lasts for three days

- Molecules tend to align slightly with each magnetic pulse, making them easier to combine, especially when excited

- The pH goes a hundred times more alkaline, which allows better oxygen uptake and suppresses some harmful entities.

- The viscosity shifts on the order of 16 fold, allowing liquids to flow into cell gates or lymph to thin and flow.

- Red blood cells separate (probably all take a positive charge and repel each other) in minutes, allowing more surface area to transport oxygen.

- There is an apparent relaxing of the vascular system within minutes of completing a session, which drops blood pressure by up to twenty percent 30 minutes after.

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**How Does PEMF Work?**

- Bone mending, the quality of calcium, is 1/3 normal time and the skin of the bone seems to develop cells more like the DNA dictates.

- Electroporation is the phenomena wherein the cells gates open to allow more passage of solvent (H2O) to dissolve toxins, or allow better delivery of a medicine or herbs.

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**Continued...**

- There is a systemic response to the sessions as though the body’s functions have been fine tuned, or turbo charged. Many different problems get better, often not the targeted problems only, but things not expected to improve. Wounds often heal in 1/3 of what is considered “normal” time.

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- The cell can change some of the sodium back to potassium, which is documented in a US Army study, and this reduces pain, often fading away in minutes.

- The electromagnetic pulse is causing the person to generate tiny micro currents and the energy tends to run through the neural pathways. This seems to swamp the C-fibers from accessing the neural gates which allow the pain signal to stream to the brain. Less signal, less pain perception.

- As the speed of the pulse is so fast (less than a millionth of a second) because of this we can use tremendous amounts of energy without there being time to heat the atom. We can pulse energy into an area without adverse reactions, so serious problems can take the extra energy needed to do extra work.
Pulsed Electro Magnetic Fields influence cell behavior by inducing electrical changes around and within the cell. Improved blood supply increases the oxygen pressure, activating and regenerating cells. Improved calcium transport increases absorption of calcium in bones and improves the quality of cartilage in joints, decreasing pain dramatically. Acute and even chronic pain -also caused by osteoporosis- may disappear completely.

1. Blood circulation is affected and normalized: Loaded particles in the bloodstream will oscillate in the rhythm of the frequency. This can reduce friction and flow resistance in narrow capillaries. Perfusion (blood circulation) increases and at the same time, the diffusion rate for oxygen and carbon dioxide increases.

2. Oxygen partial pressure increases. All studies demonstrated in a dramatic increase in the oxygen content of the blood, up to 200%

3. Cell membrane potential is normalized. General exhaustion of the body, caused by stress or chronic disease, will reduce the cell’s membrane potential. If this potential approaches the zero level, the cell dies. A cell uses 50% of it’s energy to maintain this potential. PEMF with it’s ion transport system enables the selective movement of protons (H+ ions), which will then be retargeted at the cell membrane. In this way, the membrane will be hyperpolarized and the membrane potential normalizes.

4. Calcium influx enters the cell. Through increased concentration of H+ ions in the membrane area pH value is reduced near the membrane. This leads to the release of calcium from the protein layer of the cell membrane. Unbound calcium flows into the cell core and triggers numerous metabolic reactions. Macrophages (tissue cells functioning as protection against infections) are activated and therefore the immune system is strengthened. Metabolism is activated and nitric oxide, a potent vessel enlarger, is produced. In addition, cytogenesis (structure, function, and multiplication of the cells) is stimulated.

PEMF therapy research proves routine neurological, physiological and psychological benefits. PEMF research has repeatedly proven better physiological repair in far less time, while indicating no adverse reactions.
PEMF and Depression

- Transcranial Magnetic Stimulation (TMS) therapy and Depression/UCLA/Neurostar®
  - http://www.medisappler.com
- Neurostar® Uses Magnets to Lift Depression
  - http://www.businessweek.com
- Transcranial Magnetic Stimulation Increases Cell Growth and Protects Cells in the Brain
  - http://www.scienceology.com
- Popular Anti-depressant Blood Brain Barrier, Hopkins Scientific Report
  - http://www.hopkinsmedicine.org

Sustained Use of Anti-Depressants Increases Cell Growth and Protects Cells in the Brain

- http://www.sciencedaily.com

Transcranial magnetic field and methylcobalamin (cyano-C-B12) may offer new therapeutic option for depression.

- http://www.sciencedaily.com

PEMF affects tissue and muscle in the same manner as exercise (and in some cases, anti-depressants) with respect to treatment of depression, but also helps with all other conditions, diseases and dis-ease. Electro-magnetic therapy stimulates cell growth and gene expression (without negative side effects of drugs) re-establishing and balancing the body’s natural energy fields/exchanges, that have been lost and/or negatively impacted by modern terrestrial magnetic field, and proliferation of modern electric devices. The body’s weakened magnetic field and interrupted/blocked energy flow is a common deprivation that we all suffer from and is the missing link behind ineffective and/or failed treatment modalites.

Abstract

Impairments in visual memory and visuoconstructive functions commonly occur in patients with Alzheimer’s disease (AD). Recently, I reported that external application of electromagnetic fields (EMF) of extremely low intensity (in the picotesla) range and of low frequency (in the range of 5 Hz-8 Hz) improved visual memory and visuoperceptive functions in patients with Parkinson’s disease. Since a subgroup of Parkinsonian patients, specifically those with dementia, have coexisting pathological and clinical features of AD, I investigated in two AD patients the effects of these extremely weak EMF on visual memory and visuoconstructive performance.

Treatment with EMF resulted in a dramatic improvement in visual memory and enhancement of visuoconstructive performance which was associated clinically with improvement in other cognitive functions such as short term memory, calculations, spatial orientation, judgment and reasoning as well as level of energy, social interactions, and mood. The report demonstrates, for the first time, that specific cognitive symptoms of AD are improved by treatment with EMF of a specific intensity and frequency.

http://www.pemf.us/docs/ScienStudies_Magnetic 64.pdf
Eleven Yr-Old Young Man Recovering From Autism with PEMF Therapy!

Christian was diagnosed with Cerebral Palsy, Autism and ADHD. He had anxiety and anger issues stemming from associated problems including limited verbal and communication skills, stuttering, inability to focus or look people in the eye. He also had physical difficulty walking and maintaining his balance.

After just a month and a half of PEMF treatments, Christian no longer stutters or loses his balance. He is calmer, more peaceful, has energy and focus and feels like he has awaked from a long sleep. His mom Christine says “he even has a girlfriend now!”

View Christian’s story here: http://www.pemf.us/autism-video/

PEMF & Stem Cells Research
www.pubmed.gov

Stimulation of osteogenic differentiation in human osteoprogenitor cells by pulsed electromagnetic fields: an in vitro study.

Modulation of osteogenesis in human mesenchymal stem cells by specific pulsed electromagnetic field stimulation.
Tsai MT, Li WJ, Tuan RS, Chang WH.

Effect of pulsed electromagnetic field on the proliferation and differentiation potential of human bone marrow mesenchymal stem cells.
Sun LY, Hsieh DK, Yu TC, Chiu HT, Lu SF, Luo GH, Kuo TK, Lee OK, Chiou TW.
Bioelectromagnetics. 2009 May;30(4):251-60. PMID: 19204973 [PubMed - indexed for MEDLINE]

Osteoprotegerin (OPG) production by cells in the osteoblast lineage is regulated by pulsed electromagnetic fields in cultures grown on calcium phosphate substrates.

Pulsed electromagnetic fields enhance BMP-2 dependent osteoblastic differentiation of human mesenchymal stem cells.

Karen suffers from Guillain Barre Syndrome, a debilitating autoimmune disease that causes severe nerve damage and paralysis. She was wheelchair bound for 9 years, in constant pain, had no feeling in her hands and fingers, was unable to care for herself or her family and was suffering from chronic depression as well.

After daily treatments using PEMF, Karen is walking again, she is no longer in constant pain and has regained sensation in her hands and fingers. She can cook and care for herself and her family and is happy to be able to read a book once again...a favorite past-time that she was unable to do before PEMF because she couldn't hold a book or feel to turn the pages. Karen is also free from her chronic depression, which is also an indicated and FDA approved therapy that PEMF offers.

As we become more aware of how electromagnetic energy influences health, we’re beginning to see how “energy medicine” is not just for new age enthusiasts. At the forefront of alternative medicine, electroceuticals are emerging as valuable tools to prevent and reduce inflammation and boost the body’s capability to heal itself. Like nutriceuticals, electroceuticals influence the body at a microscopic level, changing the efficiency with which our cells interact. Viewed in this light, electroceuticals are not recommended as sole treatments for acute injuries or diseases. Rather, in serious medical situations, such as with cancer and heart attacks, they best serve as adjuncts to conventional medical treatments.
Definition of Electrotherapy by Wikipedia

- **Electrotherapy**: From Wikipedia, the free encyclopedia
- **Current use**: Although a 1999 meta-analysis found that electrotherapy could speed the healing of wounds, a 2010 Dutch Medical Council found that although electrotherapy is widely used, there is no scientific evidence for its benefits. They noted that few clinical trials have emerged that support its efficacy, but that it is still used frequently. The use of electrotherapy has been researched and accepted in the field of rehabilitation.

Wikipedia Continued...

- **Current use**: The use of electrotherapy has been researched and accepted in the field of rehabilitation. The American Physical Therapy Association acknowledges the use of electrotherapy for:

  1. **Pain management**
     - **Peripheral neuralgia**
     - **Neuromuscular pain**

  2. **Treatment of cerebral palsy and musculoskeletal disorders**

- **Current Use, Continued…**

  - **Immunological agents**
    - **Delivery of pharmaceutical agents**
      - **Urine and fecal incontinence**
    - **Effects of pelvic floor muscle training on pelvic floor muscle function**
    - **Effects of pelvic floor muscle training on pelvic floor function**

- **Current Use, Continued…**

  - **Delivery of pharmaceutical agents**

  - **Urine and fecal incontinence**

  - **Effects of pelvic floor muscle training on pelvic floor muscle function**

  - **Effects of pelvic floor muscle training on pelvic floor function**

  - **Delivery of pharmaceutical agents**

The science of magnet therapy indicates that two vital things happen when a magnet is placed on the skin:

1. The soft tissue will lengthen and will help to relax a muscle or ligament that is damaged or traumatized. It will work in an area and depth directly proportionate to the type and strength of the magnet used. Depending on the strength, you can effect a change to a radius of between 3-5 inches around any one magnet and to a similar depth.

2. As the tissue relaxes, more oxygen and blood flow is able to gain access to the damaged site, and so it enters the damaged area with increasing magnitude. This effect can be seen using thermal imaging techniques.

Normally, an injured site, whether from arthritis, torn muscles or any other condition, will be surrounded by inflammation. This can comprise of lactic acids, calcium and other deposits. Basically, the site is “hot” with acidity.

The increases in oxygen and blood flow brings with it increased alkalinity, which then neutralizes the acidity, allowing the body to re-commence its own healing abilities. Magnets merely encourage this in a truly dramatic way.

http://www.naturalbodyhealing.com/magnet-therapy.html
http://allfromweb.net/what-is-the-theory-of-magnetic-therapy.html
SEA IONIC CLEANSE V

- Automatic Calibration with 3 Preset Modes
- Triple Safety System
- Built In Aqua Sonic Therapy
  - 22,000 preprogrammed, therapeutic and healing frequencies that enhance detoxification
- Automatic Timing and Auto Shut-Off
- Light and Portable
- Output AMP's/Voltage= 3.2/15V
- 5 Year Warranty
- Professional Unit
  - Cost $2,450.00

SEA IONIC CLEANSE V DUAL

- Same Features as Single Unit
- Detox 2 Users Simultaneously or can be used by one individual
- Increase your Services & Collections by Double
- Automatic Timing and Auto Shut-Off
- 5 Year Warranty
- Professional Unit
  - Cost $3,800.00

SEA IONIC ARRAY

- Safest detoxification processes
- Current flows between array plates and not the body.
- Last between 90-120 sessions
- Made from medical-grade materials
- Does not contain lead or copper.
  - Cost $120 each
Detox at a cellular level.

Detoxify the body from heavy metals including mercury, lead, cadmium, and aluminum.

Detox arsenic, formaldehyde, and industrial chemicals.

Sunlight Saunas Solocarbon heaters helps to purify cells, where our body stores waste and harmful toxins, such as cholesterol and heavy metals.

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**Eyelights Therapy & Protocols**

- Stimulation of the non-dominant eye will affect the opposite hemisphere of the brain via the thalamus.
- When stimulating the right eye, the left side or analytical portion of the brain will be affected greater.
- When stimulating the left eye, the right side or creative portion of the brain will be affected greater.