

# The Role of Terahertz Waves in Enhancing Human Health

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**TERAHERTZ (THZ) WAVES, PART OF THE ELECTROMAGNETIC SPECTRUM, ARE GAINING CONSIDERABLE ATTENTION IN THE FIELD OF BIOMEDICAL SCIENCE. THIS ARTICLE AIMS TO DELVE INTO THE POTENTIAL OF TERAHERTZ WAVES IN ENHANCING HUMAN HEALTH, TREATING DISEASES, AND INCREASING HUMAN COGNITION.**

Terahertz waves are located between the infrared and microwave regions of the electromagnetic spectrum, and these waves exhibit high sensitivity to biomolecules and water content. Moreover, they are non-ionizing radiation, making them safe for biological applications.

Terahertz waves have effects **such such as improved hydration and increased collagen production**. In addition, terahertz waves have been used to treat skin conditions such as psoriasis and dermatitis, as well as accelerate wound healing.

Also, **they may be used to reduce inflammation in joints or stimulate muscle regeneration in damaged tissue. Furthermore, THz waves may also help improve the body's healing process by increasing blood circulation, reducing pain, and improving tissue regeneration**. Thus, THz technology holds great potential for treating a wide range of human diseases and could help improve overall human health.

## TERAHERTZ WAVES AND ABNORMAL CELLS

Recent studies have shown that exposure to high-power terahertz pulses can down-regulate genes associated with skin cancer and psoriasis. This indicates a possible therapeutic application of terahertz waves in treating these conditions.

Moreover, terahertz waves have also been found to cause DNA demethylation in cancer cells, further highlighting their potential in cancer treatment.

Beyond cancer treatment, terahertz waves have also shown potential in other therapeutic applications. For example, they have been used to stimulate wound healing in animal models.

**Terahertz waves have also been used on other conditions such as acne, wrinkles, and hair loss. In addition, terahertz technology has been used to help improve the delivery of supplements into the body. By using THz waves to deliver supplements directly to the target cells, nutrient delivery can be more efficient and effective. Finally, THz waves have also been used in physical therapy to reduce muscle spasms and inflammation.**

# Benefits Of Terahertz Quantum Light Wave Energy

- 1 Activate normal cells
- 2 Repair damaged cells
- 3 Recognize and destroy abnormal cells
- 4 Detox lymphatic circulation rapidly
- 5 Stimulate better micro-circulation rapidly
- 6 Remove deep tissue coldness and dampness rapidly
- 7 Strengthen the functioning of organs
- 8 Delay onset of aging symptoms

## TeraHertz Wave Therapy

- Tera Hertz technology is the latest treatment from the world of advanced healing. Using Tera-hertz Waves, discovered in the 1980's to match the vibration frequency of human cell, the therapy helps blood flow with normal healthy cells absorbing the Tera Waves while dormant cell are re-activated. As a result, damaged cells are repaired, leading to improved healing times in areas of trauma and leaving the patient feeling energized. Regular use also strengthens and induces the DNA organic molecules, enhancing self-repairing body cells.
- THz (terahertz) waves are 2 form of nonionizing radiation and contain low photon energy, and are strongly absorbed | by polar molecules such as water in both gas and liquid states. It shows the depth of Tera Hertz Wave penetration | our biological tissues.

## Nonionising Energy

- Terahertz can still penetrate the body, but because of the low energy, it's nonionizing, and harmless, unlike, for example, X-rays.

## Cell Therapy

- Researchers from the RIKEN Center for Advanced Photonics found that terahertz frequencies may have applications in manipulating cell functions for the treatment of certain medical conditions.

## Treatment With The Tera-P90 Using Tera Hertz Technology Can:

- Clear the eight extraordinary vessels of the body.
- Pass through twelve main channels of the body.
- Remove toxins and harmful substances from the body
- Remove unhealthy elements that aren't natural to our body.
- Detect potential diseases using 2 scanning function.
- Unclog vessels and stasis in the body.
- Detoxification
- Regulate internal organs and the immune system.
- Replenish the body with Yang aura energy
- Repairs Damaged cells and tissue.

## Hydrogen Bonds

The characteristic energy of the hydrogen bond, which is the most dominant bond in biological molecules, lies within the THz frequency range.

## Precision Targeting

A recent scientific study found that terahertz frequencies when targeting specific areas of the body can have an effect on proteins inside cells without harming or altering the cells themselves.

# Powered By Science, Inspired By Nature

**Nature offers abundant solutions to the problems we deem unsolvable. All it takes is for the world's greatest minds to acknowledge and discover these secrets.**

## Minding The Gap

- It is called the “gap” because our science has yet to bridge its potential into the technology we have today.
- Terahertz frequency does not emit ionizing radiation, with a higher frequency and shorter wavelength that potentially harbor severe health issues, such as genetic damage and different kinds of cancer.
- Nonionizing terahertz energy is safe and beneficial if utilized wisely.

## Frequency Determines Physiology

**Our bodies consist of materials other than the ordinary flesh and blood we easily recognize.**

- The skin is the body's largest organ, with the dermis comprising a dense network of mechanoreceptors and nerve endings that help us feel.
- Our sense of touch, pressure, vibration, pain, and heat all stem from these complex networks branching throughout our bodies.
- It also acts as our body's thermoregulatory, controlling blood flow within a few milli- meters of the body.
- How Terahertz frequencies manage to seep through these crystalline structures within us determines the fundamental properties of the material that makes us.



## Piezoelectricity

Piezoelectricity is the electricity emitted from pressure and latent heat. In response to applied mechanical stress, the electric charge accumulates in certain solid materials, from crystals and ceramics to biological matter such as bone, DNA, and various proteins.



# Hydroelectric Machines

- As humans, we have a deep connection with water, which constitutes a major part of our bodies, just like the world is 70% water.
- In addition, we possess over 100 “ion channels” in our bodies relaying information in the form of frequency. A voltage membrane is maintained through the synchronization of biological processes (such as  $\text{Ca}^{2+}$ ,  $\text{Na}^{+}$ ,  $\text{K}^{+}$ -ATPase).
- Our TeraHertz Device uses these hydrogen bonds and water channels called “aquaporins.” The water around proteins is susceptible to absorbing more terahertz than pure water, which helps proteins fold correctly.
- The correct folding of proteins is crucial to prevent diseases and cellular homeostasis.
- Molecular vibrations present in proteins are essential to regulate the functions of proteins. Terahertz is the catalyst for DNA, RNA, and Proteins to formulate energetic reactions and carry information.
- In other words, you are a hydroelectric being, and terahertz Divine Frequency tar- gets these mechanisms in you!



# PEMF Research

There are also many studies that support the benefits of PEMF devices. The Harvard Medical School found that a PEMF device improves mood by over 10% after just one 20-minute treatment in patients with bipolar disorder and major depressive disorder (Rohan, et al, 2013). In another 8-weeks long study, daily administration of PEMF resulted in a 50% reduction in depression in 49% of patients with treatment-resistant depression. (Larsen, et al, 2020). Let's look at some common brain abnormalities and how they relate to the person's brainwaves.

## 1. Attention Deficit Hyperactivity Disorder (ADHD)

ADHD brain in most cases have too much high beta and too little alpha, thus PEMF is used to stabilise the beta and to support the alpha frequency to perform at a better level. If alpha is not performing optimally it can lead to a loss of energy, concentration and focus and this leads to problems with learning.

## 2. Depression

A depressed brain in most cases has too little delta activity and too much alpha or beta activity in the frontal area. It is also usually much higher on one side than the other. For example, more alpha on the left side than the right side of the brain. This can cause the brain to react differently and think differently about things which can impact motivation and self-esteem.

## 3. Post-Traumatic Stress Disorder (PTSD)

Trauma can cause the brainwaves to become unbalanced. PTSD brain in most cases has a lot of beta and hi-beta activity, a lot of theta activity and almost no alpha activity. The brain is thus either in a state of "fight or flight." Those with PTSD will either feel like withdrawing/ be switched off and struggle to focus or they can be in a constant heightened state where they are hyperactive, get angry easily and really struggle to control their emotions.

## 4. Anxiety

An anxious brain usually has a lot of hi-beta activity especially over the front middle part of the brain which plays a role in the fight or flight response as seen in PTSD. Also, the anxious brain usually lacks alpha and theta brainwaves. These are needed for the brain to be calm.

## 5. Insomnia (Sleep Disorder)

People with insomnia do not have enough delta activity which is needed for deep sleep. In combination with this, they often have too much high-beta activity which keeps the brain active and awake. Their brain also lacks alpha and theta activities. These calmer waves are needed for the person to remain calm and to switch off into sleep mode.

## 6. Stress

Brains that are stressed have too much hi-beta and insufficient alpha and lo-beta. Lo-beta brainwave is needed for a person to stay calm but very focused. When a person's brain has too much high-beta, the brain will act as a super-high-speed train causing the person to easily get confused and overwhelmed. Plus, it tires out the brain so it cannot be maintained for a long time.

## 7. Autism

The autistic brain has too much theta and too little alpha. This affects the ability of the person to function well and to develop normally. Learning becomes a challenge because the specific areas in the brain would be overactive or over developed such as in mathematics but in other areas the brain might not function as well.

## 8. Alzheimer's Disease, Dementia and Memory Disorders

Abnormality of the brain can cause many issues such as personality changes, and in many cases aggression because the person will feel insecure causing the brain's survival instincts to kick in. Often the comorbidity of anxiety-depression is present. Delta and theta will be high while alpha and beta would be below normal in the majority of the cases.

## 9. Parkinson

Theta and alpha imbalances cause those with Parkinson to have trouble focusing and staying still. Involuntary and uncontrollable movement of the muscles will be noticeable.

## 10. Tinnitus

People with tinnitus often have low alpha and increased delta, theta and gamma brainwaves. These types of brainwaves can cause ringing in the ear, which can lead the person to feel confused and hopeless.

## Application of PEMF

**PEMF is a viable and effective treatment for the following issues:**

- Anxiety issues
- Concentration issues
- Enhances meditative states
- Improve sleep
- Reduce stress

**PEMF is also a viable and effective method to reduce the impact and symptoms of chronic brain disorders such as:**

- ADHD
- Alzheimer's disease
- Autism
- Parkinson's disease
- Post-traumatic stress syndrome (PTSD)

### How does PEMF work?

PEMF modulates or tunes the neuronal frequencies or EEG of the brains by changing the frequencies and by modulating and stabilising brainwave frequencies that are erratic and unstable.

In many ways it is similar to music, both PEMF and music are frequency based. Soft music can relax the brain and upbeat music can energize and make a person feel alive. There are 5 major frequency emitted, as seen above - and PEMF can be used to maximize your brainwave states.

The Tera P-90 is unique among all devices in that it implements the incredibly beneficial and potent Tera-hertz waves, which exponentially improves the benefits of PEMF alone.

## THE INCREDIBLE BENEFITS OF PEMF THERAPY

**PEMF therapy offers a myriad of benefits that can positively impact your physical and mental well-being. Let's explore 25 astonishing ways in which PEMF therapy can improve your health and transform your life.**

### #1 PROMOTES THE BODY'S NATURAL HEALING PROCESS

One of the remarkable benefits of PEMF therapy is its ability to promote the body's natural healing process. By recharging the body's cellular batteries, PEMF therapy improves cell health and function, allowing the body to efficiently process chemical and electrical exchanges and address imbalances. This natural healing process is crucial for achieving optimal well-being.

### #2 COMFORTS YOUR MIND AND EASES ANXIETY

Anxiety can be physically debilitating, releasing stress hormones and putting the body in a state of hyperarousal. PEMF therapy can help comfort your mind and ease anxiety by bringing the body into a parasympathetic state. This state of relaxation fosters happiness, creativity, and a sense of calm, allowing you to navigate life with greater ease.

### #3 ENHANCES LEARNING ABILITIES

A calm brain is a receptive brain, ready to absorb and process information. PEMF therapy relaxes the mind, increases focus, and improves cognitive function, making it an invaluable tool for enhancing learning abilities. By stimulating the electrical activities of the brain, PEMF therapy supports higher brain function and helps individuals develop their full potential.

### #4 FOCUSED ON MENTAL HEALTH

PEMF therapy has been widely used to treat mental health conditions such as anxiety and depression. Unlike many other PEMF machines on the market, The OlyLife Tera P90 focuses specifically on mental health, making it a unique and effective treatment option. By addressing the root causes of mental health challenges, PEMF therapy can greatly improve one's quality of life.

### #5 ADDRESSES AGE-ASSOCIATED MEMORY IMPAIRMENT

Age-associated memory impairment is a common challenge faced by many individuals over the age of 65. PEMF therapy has shown promising results in improving memory and engagement in older people. By stimulating the parietal lobe surrounding the hippocampus, PEMF therapy can effectively enhance memory function and overall cognitive performance, thereby enhancing the quality of life for older individuals.

### #6 SUPPORTS COMPLEX TBI'S

Traumatic Brain Injury (TBI) is a condition that can significantly impair mental processing and thinking. Studies have shown that PEMF therapy can improve the outcomes of patients with TBI. By using PEMF therapy in conjunction with neurofeedback training, it is possible to correct repetitive brain patterns and restore brain functions, helping individuals recover and regain their quality of life.

### #7 REDUCES DEPRESSION SYMPTOMS

Depression is a pervasive mood disorder that negatively impacts an individual's quality of life.

PEMF therapy has been shown to reduce depression symptoms by affecting serotonin levels in the brain. Serotonin is a neurotransmitter responsible for positive emotions, and by modulating its activity, PEMF therapy can effectively combat depression and promote emotional well-being.

### #8 IMPROVES ATHLETIC PERFORMANCE

Athletes constantly push their bodies to the limit, and proper recovery is essential for maintaining performance and preventing injuries. PEMF therapy has been shown to improve athletic performance by promoting natural regeneration and healing of cells. It helps manage pain, reduce recovery times, and enhance the overall well-being of athletes. Renowned athletes such as Shaquille O'Neal, Brian Baldinger, and Lance Armstrong have experienced the benefits of PEMF therapy firsthand.

### #9 PROVIDES PAIN RELIEF

Chronic pain is a debilitating condition that affects millions of individuals worldwide. PEMF therapy has proven to be an effective treatment option for reducing neuropathic pain and slowing down the progression of nerve damage. By alleviating pain sensations and promoting healing at the cellular level, PEMF therapy offers a non-invasive and drug-free approach to pain relief.

### #10 REDUCES MUSCLE TENSION AND INFLAMMATION

Muscle tension and inflammation can cause significant discomfort and hinder daily activities. PEMF therapy is highly effective in reducing pain and inflammation in muscles, promoting bone healing, and alleviating joint pain. Studies have shown that PEMF therapy is particularly effective in patients with myofascial pain dysfunction, improving pain levels and enhancing range of motion.

### #11 FOSTERS RESTFUL SLEEP

Adequate sleep is essential for overall well-being, especially in growing children. PEMFs have a profound impact on brain activity and can regulate sleep patterns, leading to improvements in



deep sleep and overall sleep quality. By calming the central nervous system and promoting relaxation, PEMF therapy helps individuals achieve restful sleep, reducing stress and supporting optimal health.

### #12 SUPPORTS CELL FUNCTION AND REGENERATION

Healthy cells are the foundation of a healthy body. PEMF therapy supports efficient cell function and regeneration by promoting cellular health and communication. It aids in the recovery of cells that have been worn down by stressors and triggers, allowing the body to heal and restore its vitality.

### #13 ENHANCES BLOOD CIRCULATION

Healthy blood circulation is crucial for delivering oxygen and nutrients to cells, promoting overall well-being. PEMF therapy has been shown to improve blood flow and cellular function by stimulating the release of nitric oxide in the body. Nitric oxide plays a vital role in various biological processes, including inflammation regulation and wound healing.

### #14 REDUCES INFLAMMATION

Inflammation is a common underlying factor in many health conditions, including mental health disorders. By reducing inflammation, PEMF therapy positively impacts brain health, mood, and attention. It provides a holistic approach to addressing symptoms associated with anxiety and depression, ultimately improving overall well-being.

### #15 BOOSTS DIGESTION AND NUTRIENT ABSORPTION

A healthy digestive system is essential for the proper functioning of the body. PEMF therapy can stimulate the digestive process at a cellular level by activating the parasympathetic nervous system, responsible for the body's "rest and digest" response. By supporting efficient digestion and nutrient absorption, PEMF therapy promotes optimal gut health and overall well-being.

### #16 SUPPORTS DETOXIFICATION

Detoxification is a vital process for eliminating toxins from the body. PEMF therapy plays a significant role in supporting detoxification by re-stabilizing cellular membrane potential. This enhances cellular communication, energy production, nutrient uptake, and detoxification processes. By facilitating detoxification, PEMF therapy helps reduce inflammation and supports mental health.

### #17 STRENGTHENS THE IMMUNE SYSTEM

A robust immune system is crucial for protecting the body against illnesses and maintaining overall health. Stress is a significant factor that weakens the immune system. PEMF therapy can regulate stress levels and build immunity by fostering a relaxed state and reducing stressors that can compromise the body's defense mechanisms. By supporting the immune system, PEMF therapy helps individuals stay healthy and resilient.

### #18 ALLEVIATES ALLERGIC SYMPTOMS

Allergies can significantly impact an individual's quality of life, causing discomfort and sometimes even life-threatening reactions. PEMF therapy helps alleviate allergies by reducing stress and supporting immune function. By regulating stress levels and building immunity, PEMF therapy can mitigate the symptoms associated with allergies, allowing individuals to lead healthier, more comfortable lives.

### #19 REDUCES ANXIETY AND PROMOTES EMOTIONAL WELL-BEING

Anxiety can impair daily functioning and hinder personal growth. Both children with special needs and neurotypical individuals can benefit from PEMF therapy in managing anxiety. By promoting a calm and relaxed brain state, PEMF therapy helps reduce anxiety symptoms and supports emotional well-being. It can be a valuable tool in fostering a positive mental state.

### #20 OVERCOMES THERAPY RESISTANCE

Therapy resistance can be a significant obstacle in achieving progress and desired outcomes. PEMF therapy relaxes the body and calms the brain, breaking through therapy resistance and allowing individuals to engage more effectively in therapeutic interventions. By reducing resistance and promoting receptiveness to treatment, PEMF therapy enhances the effectiveness of various therapeutic approaches.

### #21 SYNERGIZES WITH INTEGRATIVE WELLNESS TREATMENTS

Integrative wellness treatments aim to address health from various angles, including rest and relaxation, brain training, nutrition, positive parenting, exercise, and healthy mindset. PEMF therapy synergizes with these approaches to maximize healing potential. By fostering relaxation and supporting overall well-being, PEMF therapy complements and enhances the benefits of other integrative wellness treatments.

### #22 HARNESSSES THE POWER OF NATURE

PEMF therapy is a natural approach to healing and well-being. It taps into the body's innate ability to heal and regenerate. By supporting healthy and natural cell function, PEMF therapy restores balance and vitality to the body. The OlyLife Tera P90 device is specially designed to focus on mental health and comes with carefully curated protocols to address mental health challenges effectively.

### #23 SAFE FOR EVERYDAY USE

Safety is a paramount concern when considering therapeutic interventions. PEMF therapy is safe for everyday use, and numerous studies have shown its efficacy and safety. It offers a non-invasive and non-pharmaceutical approach to wellness with no known side effects. The OlyLife Tera P90 provides a safe and effective tool that can be incorporated into daily routines for long-lasting benefits.

### #24 SUPPORTS FAMILY WELLNESS

Wellness is a family affair, and PEMF therapy can benefit the entire family. The Tera P-90 device is designed to uplift and energize everyone, fostering a positive home environment. Whether it's chronic pain in the elderly or mental health challenges in children, PEMF therapy offers a holistic solution that promotes well-being across all age groups.

### #25 EMPOWERS INDEPENDENCE IN CHILDREN

Fostering independence in children is a vital aspect of parenting. The Tera P90 device is so user-friendly that even children can use it independently. By reducing anxiety and stress levels, PEMF therapy empowers children to navigate their emotions and experiences with confidence. This safe and effective tool helps children build resilience and develop essential skills for becoming functional adults.

### CONCLUSION

PEMF therapy is a groundbreaking treatment that harnesses the power of electromagnetic fields to promote health and well-being. With its wide range of benefits, from promoting natural healing to reducing anxiety and improving athletic performance, PEMF therapy has the potential to transform lives. By incorporating the Tera P90 device into your mental health toolkit, you can unlock the astounding benefits of PEMF therapy and embark on a journey of improved health and wellness.



**THz Tera P90**



## **The TeraP90** **– a rapid recharger for the body's energy systems**

The fascinating world of Terahertz Waves first captured my attention when I was researching innovative technologies for health and wellness. As I delved deeper, I realized the potential these waves hold for changing the way we approach energy and health. They are not just about advancing technology; they are about advancing humanity.

No other singular device has the capacity to revolutionize both Human Health, but also Human Conscious-ness at the same time .

**To book a session or order your own system  
please email: [info@tucsonbiofeedback.com](mailto:info@tucsonbiofeedback.com)**