PEMF: The Best Kept Secret In Medicine For Pain & Chronic Disease

No Shots, Drugs, Surgery, or Long-Term Side Effects

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About the Author

Meet Dr. Robert Gilliland, a compassionate and dedicated healthcare professional whose journey into the realm of healing has been driven by a deep personal commitment to finding better solutions for health challenges. With a diverse educational background and a genuine passion for holistic well-being, Dr. Gilliland is a guiding force in the world of healthcare.

Dr. Gilliland's academic journey began with a Bachelor's degree in Environmental Science, where he developed a profound understanding of the intricate relationship between human health and the environment. Building on this foundation, he pursued a Doctor of Chiropractic degree from Palmer College, equipping him with a comprehensive understanding of the body's natural healing mechanisms.

Driven by a relentless pursuit of knowledge, Dr. Gilliland embarked on a path of post-graduate training that has enriched his expertise and empowered his practice. His studies in Functional medicine, neurology, nutrition, and functional blood chemistry analysis have elevated him to the forefront of healthcare innovation. This multifaceted approach allows him to offer a comprehensive understanding of health that goes beyond the conventional and delves into the root causes of health challenges.

In addition to his professional pursuits, Dr. Gilliland finds immense joy and strength in his family. He is a loving husband to Sarah and a proud father to three wonderful children: Amber, Ashley, and Matthew. This familial foundation infuses his approach to healthcare with empathy and understanding, as he recognizes the importance of wellness for individuals and their loved ones.

Dr. Gilliland's journey into healthcare was sparked by his own battles with chronic health issues, including three autoimmune diseases. This personal experience has kindled a fire within him to explore alternative avenues of healing, to question the status quo, and to offer his patients innovative solutions for their own health challenges.

With an unwavering commitment to enhancing lives through integrative and holistic approaches, Dr. Robert Gilliland stands as a beacon of hope and healing. His unique blend of education, experience, and personal insight forms the cornerstone of his approach to healthcare –a commitment to helping others experience the transformative power of well-being.

Join Dr. Gilliland on a journey of discovery, as he shares his insights, experiences, and the remarkable potential of PEMF therapy in his book "PEMF: The Best-Kept Secret In Medicine For Pain And Chronic Disease." Through his words, you'll discover a roadmap to better health, driven by

a doctor who knows firsthand the power of finding answers when they matter most.

INTENDED USE STATEMENT

The book titled ‘PEMF: The Best-Kept Secret In Medicine For Pain & Chronic Disease' is intended to provide readers with insightful information and perspectives on alternative approaches to managing pain and chronic diseases. Through a comprehensive exploration of emerging medical insights, innovative therapies, and holistic strategies, this book aims to empower readers with knowledge that can supplement their understanding of pain management and chronic disease mitigation. It is important to note that the content of this book is for informational purposes only and should not be construed as medical advice or a substitute for professional medical consultation. Readers are encouraged to consult with qualified healthcare professionals for personalized guidance and recommendations tailored to their specific health conditions.

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INTRODUCTION

Imagine sitting in a chair, enveloped in a world of gentle yet powerful waves, invisible to the naked eye but coursing through your body, reaching deep into the very essence of your cells. This is the captivating realm of Pulsed Electromagnetic Field (PEMF) therapy - a revolutionary approach that has remained a best-kept secret in the realm of medicine, offering hope and relief to those seeking solace from the burdens of pain and chronic disease.

As you sit in this chair, a PEMF device, carefully calibrated to deliver precise electromagnetic frequencies, envelopes you in a soothing electromagnetic field. Though the waves may only be perceived by your senses as a light touch, their effects reverberate through every cell, every tissue, igniting a symphony of healing responses within.

In this book, “PEMF: The Best-Kept Secret In Medicine For Pain And Chronic Disease," we embark on a journey to uncover the mysteries of PEMF therapy and explore its potential benefits. Delving into the annals of history, we find that the concept of using electromagnetic fields for healing dates back millennia, drawing inspiration from ancient civilizations that revered the power of natural energies to restore health.

Fast forward to the present day, and we discover that PEMF therapy has evolved into a sophisticated science, supported by a growing body of research and real-world testimonials. Countless individuals have found respite from pain that once consumed their lives, and others have experienced a renewed sense of hope after navigating the dark labyrinth of chronic illness.

Throughout the chapters that follow, we will explore the science behind PEMF therapy, unraveling the mechanisms that underlie its remarkable potential to reduce pain, promote healing, and alleviate the burden of chronic disease. We will witness how electromagnetic frequencies can harmonize with the body's own natural rhythms, amplifying its innate ability to regenerate and restore.

But this journey is not merely about scientific exploration; it is also a celebration of human resilience and the unyielding spirit of those who have sought alternative paths to healing. We will hear from individuals whose lives have been transformed by PEMF therapy - stories of triumph over pain, rejuvenated bodies, and minds unshackled from the prison of chronic suffering.

So, let us venture forth together, as we unlock the secrets of PEMF therapy and shine a light on a realm of healing that has the potential to change lives - a secret that deserves to be revealed to the world. May this knowledge inspire hope and illuminate a path towards a brighter, pain- free future for those in need.

Chapter 1
The Hidden Power of PEMF Therapy

Imagine a life free from the shackles of pain, where chronic diseases no longer dictate your every move. Picture a world where hope and healing intertwine, bringing relief to those who have tirelessly sought solace in the midst of suffering. Such a world exists, and its beacon of light shines on a little-known therapy that has the potential to transform lives - Pulsed Electromagnetic Field (PEMF) therapy.

For many of us, the journey through pain and chronic disease has been a long and arduous one. We have traversed the realms of traditional medicine, seeking answers and relief through drugs, surgeries, shots, acupuncture, and chiropractic care. Yet, despite our efforts, the grip of pain persists, and chronic ailments remain steadfast, robbing us of the life we desire.

It is to those who have experienced the disappointment of conventional treatments, those who still suffer despite their unwavering resolve, that this book is dedicated. For within the pages that follow, lies a best-kept secret in the realm of medicine - a treasure trove of hope and healing that might just be the missing piece of your health puzzle.

PEMF therapy, the focal point of our exploration, operates in a realm beyond the traditional. Its power lies not in invasive procedures or chemical interventions, but in the natural rhythms of electromagnetic fields - a force that resonates deep within the fabric of our being.

Though the concept of using electromagnetic energy for healing traces back millennia, it has remained relatively obscured in the annals of mainstream medicine. However, as the years pass, a growing body of evidence and real-world testimonials has begun to unveil the profound potential of PEMF therapy.

At its core, PEMF therapy harnesses the essence of life - the interconnected dance of cells, tissues, and organs, orchestrated by the symphony of electromagnetic signals. It is a therapy that understands the language of our bodies, speaking to the very foundation of our cellular existence.

But how does it work, you might wonder? How can something so intangible, so invisible, hold the key to our well-being? As we dive deeper into the heart of PEMF therapy, we will explore the science behind its mechanisms, unveiling the exquisite dance of frequencies and resonances that ignite healing responses within us.

Throughout this journey, we will encounter stories of those who have found respite from pain and chronic disease through PEMF therapy - tales of triumph and newfound hope that might mirror your own. And while the

road to healing may not always be smooth, the knowledge within these pages will empower you to take charge of your well-being, to explore alternative paths that lead to a life free from the burden of suffering.

Chapter 2
Breaking Free from Traditional Treatments

For many of us, the journey through pain and chronic disease has been a labyrinthine path, fraught with visits to doctors, specialists, and healthcare practitioners. We have endured an array of treatments, each promising relief and healing, only to find ourselves disillusioned by limited results. Drugs have offered temporary respite, surgeries have mended some wounds, and alternative therapies have provided moments of solace. Yet, despite our earnest efforts, the grip of pain and the burden of chronic disease continue to tighten their hold on our lives.

It is in this realm of exhausted hope that we begin to question the efficacy of traditional treatments. Are we destined to navigate a maze of temporary fixes and band-aid solutions, or is there a path less traveled that could lead to lasting healing?

Enter PEMF therapy - a beacon of hope amidst the fog of uncertainty. As we embark on this chapter, we dare to step away from the familiar landscape of conventional medicine and open our minds to the wonders of electromagnetic healing.

Traditional treatments, though valuable in many cases, often target the symptoms of pain and chronic disease rather than addressing the root cause. Painkillers offer temporary relief, but they fail to heal the underlying issues that perpetuate discomfort. Surgeries can mend physical injuries, but they might not alleviate the chronic pain that accompanies certain conditions. Acupuncture and chiropractic care provide relief to some, but their effectiveness can vary from person to person.

For those who have walked the path of traditional treatments without finding lasting relief, it is essential to consider the potential of PEMF therapy as a complementary or alternative approach. Unlike the conventional treatments that focus on suppressing symptoms, PEMF therapy operates at the cellular level, seeking to restore balance and ignite the body's natural healing mechanisms.

The power of electromagnetic fields lies in their ability to penetrate deep into our bodies, resonating with the intricate dance of cells and tissues. By delivering precise frequencies, PEMF therapy can encourage optimal cellular function, promoting circulation, reducing inflammation, and supporting overall well-being.

Moreover, PEMF therapy embraces a holistic perspective, considering the interconnectedness of body, mind, and spirit. It acknowledges that pain and chronic disease can stem from a complex interplay of physical, emotional, and

environmental factors. As we journey further into this realm, we will explore the potential of PEMF therapy to address not only the physical aspects of our conditions but also the emotional and mental aspects that often influence our well-being.

It is natural to approach new treatments with skepticism, especially when they deviate from the familiar terrain of traditional medicine. However, by opening ourselves to the possibilities of alternative therapies like PEMF, we might find the missing pieces of our healing puzzle, guiding us towards a future free from the chains of pain and chronic disease.

In the chapters to come, we will delve deeper into the science behind PEMF therapy, exploring its mechanisms and the evidence supporting its efficacy. We will meet individuals whose lives have been transformed by the power of electromagnetic healing, finding hope and solace beyond the confines of conventional medicine.

As we continue our exploration, let us challenge the boundaries of what we know and dare to embrace the unknown - for it is often in the uncharted territories of healing that we discover the true potential of our bodies to rejuvenate and thrive. So, with an open heart and a curious mind, let us venture forth, breaking free from the confines of traditional treatments and embracing the hidden power of PEMF therapy.

Chapter 3
Unraveling the Mystery of Pain and Chronic Disease

Pain and chronic disease, like shadows in the moonlight, cast a haunting presence over the lives of countless individuals. For those who have walked the path of suffering, the journey can feel like an enigma wrapped in a riddle. Why does pain persist even when treatments seem promising? Why do chronic ailments refuse to yield to conventional therapies?

In this chapter, we embark on a quest to unravel the mysteries of pain and chronic disease, peering into the intricate web of factors that contribute to our physical and emotional well- being. As we delve into the depths of these conditions, we gain insight into why they persist and how PEMF therapy might offer a glimmer of hope.

Pain, both acute and chronic, is a complex phenomenon. It can stem from physical injuries, inflammatory conditions, nerve dysfunctions, or underlying health issues. Yet, pain is not solely a physical experience – it intertwines with our emotions and mental states, amplifying its presence or even becoming a persistent source of distress.

Chronic diseases, on the other hand, are often characterized by long-lasting and sometimes incurable

conditions. From arthritis and fibromyalgia to diabetes and autoimmune disorders, these ailments can significantly impact our quality of life and sense of well-being.

Traditional medicine approaches pain and chronic disease with a focus on managing symptoms. While this approach can provide temporary relief, it might not address the underlying causes of the conditions. Here is where PEMF therapy stands apart - it endeavors to explore pain and chronic disease from a different vantage point.

At the heart of PEMF therapy lies the understanding that our bodies are intricate ecosystems, comprising a symphony of cellular activities. When harmony is disrupted, pain and disease can arise. Electromagnetic fields, delivered through PEMF therapy, resonate with our cells, encouraging them to return to a state of balance and coherence.

Research has shown that PEMF therapy can promote cellular regeneration, boost circulation, and reduce inflammation. By addressing the fundamental processes within our bodies, PEMF therapy might have the potential to not only alleviate pain but also contribute to the management of chronic diseases.

In the pages ahead, we will explore the diverse factors that contribute to pain and chronic disease. We will unravel the intricate interplay of physical, emotional, and environmental elements that influence our well-being. As

we expand our knowledge, we gain the power to make informed decisions about our health and explore alternative paths to healing.

Through the lens of PEMF therapy, we will discover how electromagnetic fields can ignite a symphony of healing responses within our bodies. From supporting nerve regeneration to modulating the immune system, the power of PEMF therapy offers a multifaceted approach to our well-being.

As we journey together through the labyrinth of pain and chronic disease, let us remain open to the possibilities that unfold before us. Through the knowledge gained within these pages, we can embrace a more comprehensive perspective of our health, one that considers not just symptoms but the whole person - body, mind, and spirit.

So, with curiosity as our compass and PEMF therapy as our guide, let us continue our expedition into the mysteries of pain and chronic disease. May our quest lead us closer to the light of healing and reveal the transformative potential of electromagnetic resonance in our lives.

Chapter 4
Understanding the Science behind PEMF Therapy

In the realms of healing and medicine, the mysteries of the human body often intertwine with the wonders of science. It is through the lens of scientific exploration that we seek to understand the underlying mechanisms of treatments like PEMF therapy, uncovering the secrets that illuminate its efficacy and potential.

As we venture into this chapter, we embark on a journey through the realms of physics and biology, seeking to comprehend the intricate dance of electromagnetic fields and cellular responses. At the heart of PEMF therapy lies the concept of resonance - the harmony between electromagnetic frequencies and the frequencies of our own bodily systems.

Electromagnetic fields, though invisible to the naked eye, form an integral part of the natural world. From the gentle caress of sunlight to the subtle magnetic forces that govern the Earth, these energies play an essential role in the fabric of our existence. PEMF therapy harnesses these forces, delivering precise frequencies to our bodies to create a symphony of resonance within our cells.

At the cellular level, our bodies are a thriving metropolis of activity. Every cell hums with energy, communicating with its neighbors and fulfilling specialized functions. However, external stressors, injuries, and imbalances can disrupt this harmony, leading to pain, inflammation, and chronic disease.

PEMF therapy acts as a catalyst for healing, resonating with our cells and tissues, and encouraging them to return to a state of coherence and balance. By delivering targeted frequencies, PEMF therapy helps restore the natural rhythms that govern our well-being, sparking a cascade of healing responses.

Through scientific research and clinical studies, the efficacy of PEMF therapy has been increasingly validated. Evidence has shown that it can promote cellular regeneration, enhance blood flow, and stimulate the release of natural pain-relieving substances. Additionally, PEMF therapy's ability to modulate the immune response can aid in combating inflammation and supporting the body's defense against chronic ailments.

One of the key aspects of PEMF therapy lies in its non-invasive nature. Unlike traditional treatments that might require invasive procedures or pharmaceutical interventions, PEMF therapy offers a gentle and drug-free approach to healing. As we continue to explore the science behind PEMF therapy, we gain a deeper appreciation for its

potential to offer relief and hope to those who seek healing beyond the boundaries of conventional medicine.

As we journey deeper into the realms of electromagnetic healing, let us approach this exploration with open minds and inquisitive spirits. Embracing the knowledge that science provides empowers us to make informed decisions about our health and well-being.

In the upcoming chapters, we will delve further into the practical applications of PEMF therapy, examining its potential to address various health conditions and complement traditional treatments. We will meet individuals whose lives have been transformed by the power of electromagnetic resonance, discovering how PEMF therapy has brought them renewed vitality and freedom from pain.

Together, through the alliance of science and experience, we will continue to unveil the enigmatic power of PEMF therapy, guided by the pursuit of a pain-free and vibrant future. May the knowledge within these pages kindle a spark of hope and ignite a curiosity that propels us ever closer to the heart of healing.

Chapter 5
A Journey through the History of Electromagnetic Healing

The concept of using electromagnetic energy for healing is not a novel discovery of modern times; rather, it is a practice steeped in the ancient wisdom of civilizations long past. As we delve into this chapter, we embark on a journey through the annals of history, unearthing the roots of electromagnetic healing and its profound significance in human civilization.

The earliest records of electromagnetic healing can be traced back thousands of years to ancient civilizations such as the Egyptians, Greeks, and Chinese. These cultures revered the natural forces that surrounded them, recognizing the power of energies that flowed within the Earth and the cosmos.

In ancient Egypt, healing temples were adorned with images of sacred symbols and geometric patterns, believed to harness the transformative energies of the universe. The ancient Egyptians sought solace in the gentle embrace of magnets and lodestones, perceiving them as conduits of healing energy.

Across the oceans, the ancient Greeks embraced the concept of "magnetism" and its potential to relieve pain and support healing. The father of medicine, Hippocrates, acknowledged the therapeutic properties of lodestones, using them to alleviate a variety of ailments.

Meanwhile, in the vast lands of China, the practice of magnetic healing flourished, forming an integral part of Traditional Chinese Medicine. Acupuncture, a cornerstone of this ancient healing system, involved the application of magnetic stones to balance the body's energy and restore health.

As time unfurled its tapestry, the legacy of electromagnetic healing continued to weave its way through various cultures and civilizations. It found its place within the realms of Ayurveda in India, Native American healing practices, and the folklore of European countries.

Fast forward to the late 19th century, and the groundwork for modern electromagnetic healing began to take shape. Visionaries such as Nikola Tesla and Antoine Priore pioneered the exploration of electromagnetic fields for medical applications, kindling a renewed interest in this age-old practice.

"If you want to find the secrets of the universe, think in terms of energy, frequency, and vibration."

~ Nikola Tesla

Throughout the 20th century, scientific curiosity continued to evolve, yielding a greater understanding of the intricate relationship between electromagnetism and the human body. As researchers delved into the profound effects of electromagnetic fields, the concept of PEMF therapy began to take root, emerging as a potential pathway to healing for the modern age.

Today, we stand at the precipice of a new era in electromagnetic healing, armed with knowledge and technology that would have astounded our ancestors. The mysteries of the past converge with the advancements of the present, culminating in the potential for PEMF therapy to redefine the landscape of pain management and chronic disease.

As we journey through time, exploring the historical tapestry of electromagnetic healing, we gain an appreciation for the continuity of wisdom that traverses generations. The recognition of natural energies and their impact on our well- being transcends time and space, offering us a timeless legacy of healing potential.

In the forthcoming chapters, we shall witness the convergence of ancient wisdom and modern science, as PEMF therapy takes center stage in the pursuit of a pain-free future. We will explore the evidence that supports its efficacy, bridging the gap between the practices of antiquity and the frontiers of contemporary medicine.

Together, let us pay homage to the ancient sages who first glimpsed the power of electromagnetic energies. May their wisdom guide us as we continue to uncover the mysteries of electromagnetic healing, illuminating a path towards a vibrant and vital existence for all who seek relief from pain and chronic disease.

Chapter 6
Unlocking Cellular Vitality: How PEMF Therapy Elevates Your Cells' Well-Being

Imagine your body as a bustling city, and your cells are its diligent citizens. For these citizens to thrive, they need a conducive environment, just like a city needs infrastructure, services, and coordination. Enter PEMF therapy - the innovative ally that aligns with your cells' demands for optimal functioning. Buckle up as we dive into the realm of cellular vitality and the remarkable synergy between PEMF therapy and cellular well-being.

The Nutrient Symphony: A Cellular Overture

Picture this: a grand symphony orchestra playing a harmonious melody. Similarly, cells require a choreographed ensemble of nutrients, oxygen, hydration, energy, and more to perform their metabolic symphony seamlessly. Nutrients, those essential vitamins, minerals, and amino acids, are the musicians; oxygen, their rhythm; hydration, the stage they dance upon; energy, the conductor guiding the performance. But it doesn't stop there - cells also communicate electromagnetically, detoxify, protect themselves from oxidative stress, maintain a balanced pH, undergo metabolism, receive physical support, preserve their genetic integrity, rest, repair,

manage stress, and require proper circulation. Phew! A lot goes into making those microscopic performers shine.

PEMF Therapy: An Orchestra Conductor for Your Cells
Now, imagine PEMF therapy as the maestro orchestrating this symphony. Like a skilled conductor guiding each instrument's timing and harmony, PEMF therapy steps in to enhance various facets of cellular health. It ramps up energy production, kick-starting metabolic processes. The electromagnetic signals it introduces facilitate cell-to-cell communication - think of it as the musicians sharing musical cues for a flawless performance. Detoxification mechanisms get a boost, as PEMF therapy ushers waste products and toxins out of the cellular arena. It even plays superhero by shielding cells from oxidative stress with its protective aura of antioxidants. While not a direct hand, its influence on cellular processes indirectly supports maintaining pH balance and efficient metabolism.

Rest, Regenerate, and Recharge
But PEMF therapy doesn't just orchestrate the main act - it's an expert at the encore too. Rest and repair are crucial for cells to recharge. PEMF therapy joins the scene, encouraging cellular repair and regeneration. And remember stress? PEMF therapy contributes here too, inducing relaxation and relieving tension for a more melodious performance.

A Collaborative Ensemble: PEMF Therapy and Beyond

Yet, before you think PEMF therapy is a solo act, remember that a thriving city needs more than a single artist. Similarly, cellular well-being is a team effort. While PEMF therapy shines as a conductor in this symphony, it's not a substitute for proper nutrition, hydration, and medical care. Consider it a vital part of a holistic approach, a powerhouse collaborator in a larger cellular masterpiece.

So, next time you wonder about the magical connection between PEMF therapy and cellular well-being, envision a grand orchestral performance where each note resonates with vitality, health, and harmony. Your cells, those diligent citizens, deserve nothing less than a standing ovation.

Chapter 7
Enhancing Cellular Vitality with PEMF Therapy: A Boost in Oxygen and Nutrient Uptake

At the core of optimal health and cellular function lies the intricate dance between oxygen, nutrients, and our body's trillions of cells. Every tissue, organ, and system relies on a consistent and abundant supply of these vital elements to carry out their functions effectively. Pulsed Electromagnetic Field (PEMF) therapy, with its unique ability to influence cellular behavior, plays a pivotal role in augmenting the uptake of oxygen and nutrients, thereby supercharging the effectiveness of nutrition.

Stimulating Circulation for Oxygen Delivery: Oxygen is the lifeblood of every cell, fueling cellular respiration and energy production. The circulatory system is the highway through which oxygen travels to reach cells, and PEMF therapy acts as a traffic conductor, optimizing this delivery. The electromagnetic pulses emitted during PEMF sessions enhance blood flow and vasodilation, widening blood vessels and improving circulation. This heightened blood flow ensures a more efficient transportation of oxygen to cells in need. As a result, cells become better equipped to generate energy, support metabolic processes, and maintain optimal function.

Boosting Nutrient Uptake: Nutrients such as vitamins, minerals, amino acids, and antioxidants are essential for cellular growth, repair, and maintenance. However, effective nutrient uptake relies on efficient cellular mechanisms, including membrane permeability and active transport processes. PEMF therapy contributes to this process by aiding in the opening of ion channels on cell membranes. This improved permeability allows nutrients to move more freely into cells, enhancing their availability for cellular processes. Moreover, the enhanced circulation facilitated by PEMF sessions ensures that these nutrients are swiftly transported to cells, further enhancing their absorption and utilization.

Cellular Metabolism and Energy Production: The interplay between oxygen and nutrients is crucial for cellular metabolism, the complex web of biochemical reactions that sustain life. Optimal cellular metabolism is vital for energy production, waste elimination, and overall cell function. PEMF therapy's impact on oxygen delivery and nutrient uptake creates a favorable environment for efficient metabolic processes. As cells receive ample oxygen and nutrients, they can generate energy more effectively and perform their specialized functions optimally.

Synergistic Nutritional Support: PEMF therapy and proper nutrition synergize to create a harmonious environment for cells to thrive. While nutrition provides the building blocks and fuel, PEMF therapy optimizes the cellular environment to receive and utilize these elements

most effectively. By enhancing oxygen availability and nutrient uptake, PEMF therapy creates a foundation upon which the benefits of nutrition are maximized. This synergy translates to increased cellular vitality, improved overall health, and potentially accelerated healing processes.

In essence, the fusion of PEMF therapy and nutrition creates a powerful partnership that fuels cellular vitality. By enhancing oxygen delivery, improving nutrient uptake, and optimizing cellular metabolism, PEMF therapy lays the groundwork for cells to thrive and flourish. This dynamic interplay underscores the potential for holistic approaches that harness the body's innate ability to heal and regenerate, offering individuals a pathway to vibrant well-being.

Chapter 8
The Synergy of PEMF Therapy as an Adjunct to Other Therapies

In the realm of wellness, the adage "strength in numbers" holds true. Just as a team of experts collaborates to achieve greatness, combining different therapeutic modalities can yield exceptional results. Enter PEMF therapy, a versatile and potent tool that synergistically enhances the effects of various treatments. In this chapter, we unravel the remarkable dance of PEMF therapy as an adjunct, harmonizing with a spectrum of therapies to elevate your healing journey.

The Healing Orchestra

Imagine a grand orchestra - each instrument playing its part, guided by the conductor's baton. Similarly, when it comes to healing, different therapies function as the instruments, working in unison to compose a masterpiece of well-being. Let's explore how PEMF therapy seamlessly blends with various therapies, orchestrating an exquisite symphony of healing.

1. Medication and PEMF Harmony

Medications provide targeted relief, but PEMF therapy enhances their effectiveness. By stimulating cellular energy and improving circulation, PEMF therapy ensures that medications reach their intended targets more efficiently.

This harmonious collaboration can reduce reliance on higher doses, potentially mitigating side effects while optimizing outcomes.

2. Massage and PEMF Therapy
Massage is a tactile art that soothes sore muscles and relaxes the body. When coupled with PEMF therapy, the impact magnifies. As PEMF therapy boosts circulation and reduces muscle tension, it prepares the canvas for massage to work its magic. The combination creates a holistic experience, with PEMF therapy priming the body for deep relaxation and the healing touch of massage therapists.

3. Physical Therapy and PEMF Therapy
Physical therapy aims to restore mobility and function. Imagine the added advantage of PEMF therapy, which accelerates tissue repair and reduces inflammation. This partnership expedites recovery, allowing physical therapists to achieve results faster, thereby shortening the healing journey.

4. Chiropractic Care and PEMF Therapy
Chiropractic adjustments align the body's structure for optimal function. By complementing these adjustments with PEMF therapy, muscles relax, and inflammation diminishes. This pre-adjustment relaxation aids chiropractors in performing adjustments with greater ease, while PEMF therapy supports post-adjustment healing.

5. Acupuncture and PEMF Synchrony

Acupuncture channels energy flow to restore balance. When intertwined with PEMF therapy, cellular energy receives an additional boost. This dual approach enhances the body's innate healing mechanisms, fostering profound rejuvenation.

6. Stem Cell Therapy and PEMF Amplification
Stem cell therapy holds immense regenerative potential. When paired with PEMF therapy, the stage is set for optimal integration of stem cells into tissues. PEMF therapy's ability to enhance cellular communication and metabolism facilitates stem cell incorporation, optimizing their transformative effects.

7. Functional Medicine and the PEMF Connection
Functional medicine delves into the root causes of ailments. PEMF therapy perfectly complements this approach by addressing cellular imbalances. By fine-tuning cellular function, PEMF therapy aligns with functional medicine's goal of holistic healing, fostering a deeper level of wellness.

A Symphony of Healing
In the grand symphony of healing, PEMF therapy serves as the conductor, guiding various therapies to harmonious outcomes. It's the missing puzzle piece that completes the picture, magnifying the therapeutic impact of each modality. Just as an orchestra produces a richer sound when all instruments play together, your healing journey

reaches new heights through the synergy of PEMF therapy and complementary treatments.

The upcoming chapter will delve further into the mechanics of PEMF therapy when utilized as an independent therapeutic approach.

Chapter 9
How PEMF Therapy Works: Unleashing Cellular Healing

At the heart of every living being lies a world of ceaseless activity - a bustling symphony of cells and tissues, orchestrating the dance of life. Within this microscopic realm, a profound secret awaits discovery - the innate ability of our bodies to heal and rejuvenate.

In this chapter, we embark on a fascinating exploration into the intricate workings of PEMF therapy and its profound impact on the cellular landscape. As we venture deeper into the inner sanctum of our bodies, we unravel the elegant interplay between electromagnetic fields and cellular healing.

The human body is a tapestry of trillions of cells, each engaged in specialized tasks that contribute to our well-being. These cells communicate with one another through a complex language of electrical signals, forming a delicate web of interconnectedness.

But what happens when this harmony is disrupted? External stressors, injuries, and illness can lead to imbalances within our cells, hindering their ability to function optimally. The consequences manifest as pain,

inflammation, and chronic disease - a symphony out of tune.

Enter PEMF therapy, the harmonizing conductor of cellular healing. Through targeted electromagnetic frequencies, PEMF therapy resonates with our cells, encouraging them to return to a state of coherence and balance. It is as if a symphony of healing frequencies envelops our cells, reawakening their inherent potential to rejuvenate and regenerate.

One of the primary mechanisms of PEMF therapy lies in its ability to boost circulation. Electromagnetic fields penetrate deep into our bodies, stimulating blood flow and oxygen delivery to tissues. This enhanced circulation brings a surge of nutrients and vital energy to cells, aiding in their repair and revitalization.

Moreover, PEMF therapy has been shown to reduce inflammation - a fundamental process that underlies many chronic ailments. By modulating inflammatory responses, PEMF therapy alleviates discomfort and supports the body's defense against pain and disease.

At the core of PEMF therapy's magic is its resonance with cellular frequencies. Cells possess natural frequencies that govern their activities. When exposed to external electromagnetic frequencies that resonate harmoniously with their own, cells respond with increased vitality and efficiency.

PEMF therapy's profound influence on cells extends to their membrane potential - a critical factor in cellular health. By optimizing membrane potential, PEMF therapy enhances cellular communication and nutrient uptake, fostering an environment conducive to healing.

Through the lens of scientific research and clinical studies, the efficacy of PEMF therapy continues to be substantiated. The symphony of healing frequencies delivered through PEMF devices has garnered attention as a promising alternative to traditional treatments.

As we journey through this chapter, we gain a deeper appreciation for the wisdom of PEMF therapy and its ability to unlock the door to cellular healing. It is a therapy that recognizes the essence of our bodies - the intricate web of electromagnetic signals that govern our existence.

In the subsequent chapters, we will explore the practical applications of PEMF therapy, delving into its potential to address various health conditions and complement traditional treatments. We will bear witness to the transformational stories of those whose lives have been touched by the power of electromagnetic resonance.

Together, let us embrace the revelation that PEMF therapy offers - the resounding symphony of cellular healing that lies within each one of us. May the knowledge within these pages kindle a spark of hope and illuminate the path to a

pain-free and vibrant future - a future where PEMF therapy stands as a beacon of healing in the landscape of medicine.

Chapter 10
PEMF Therapy Cleans, Nourishes, and Energizes Our Cells

PEMF therapy aims to promote healing and wellness at the cellular level. To understand its effects, let's delve into the intricate interactions that take place within our cells when exposed to PEMFs.

Our cells are dynamic powerhouses that maintain the body's functions. At the core of each cell is the mitochondria, often referred to as the cell's "powerhouse." Mitochondria are responsible for producing energy in the form of adenosine triphosphate (ATP), which fuels various cellular activities. This energy production is crucial for cell repair, growth, and overall vitality.

PEMF therapy harnesses electromagnetic fields to penetrate the body and interact with these cellular powerhouses. When exposed to PEMF, a cascade of biochemical reactions occurs within the cells. This interaction triggers the opening of ion channels within the cell membranes, allowing ions like calcium, potassium, and sodium to flow in and out of the cells. This influx of ions initiates several positive effects:

Enhanced Energy Production: PEMF therapy stimulates the mitochondria to produce ATP more efficiently. This

increased energy availability fuels cellular functions, facilitating repair, and supporting overall vitality.
Improved Circulation: The electromagnetic fields induced by PEMF therapy can enhance blood flow by relaxing blood vessels and promoting vasodilation. Improved circulation ensures that nutrients and oxygen are delivered more effectively to cells while waste products are removed efficiently.

Cellular Regeneration: PEMF therapy stimulates the production of nitric oxide, a molecule known for its role in vasodilation and cellular communication. Nitric oxide promotes tissue regeneration and healing, making it particularly beneficial for injuries and tissue damage.

Reduction of Inflammation: PEMF therapy has been shown to decrease the production of inflammatory markers, helping to mitigate chronic inflammation. This is significant because chronic inflammation is associated with a wide range of health issues, including neuropathy.

Enhanced Cellular Communication: The ion influx triggered by PEMF therapy affects cellular membranes' electrical charge, leading to improved cellular communication. This synchronization helps cells work together more harmoniously, contributing to overall systemic balance.

Relaxation of Muscles and Nerves: PEMF therapy can influence nerve cells and their signaling, leading to muscle

relaxation and pain reduction. This effect is particularly relevant for peripheral neuropathy, as it may help alleviate the discomfort associated with nerve damage.

It's important to note that the effects of PEMF therapy are complex and multifaceted. The therapy's ability to influence cellular processes has led to its application in various medical fields, including pain management, wound healing, and orthopedics.

As we continue to unravel the intricate mechanisms underlying PEMF therapy's effects, it becomes increasingly evident that this non-invasive approach holds promise for enhancing the body's innate healing abilities. By promoting cellular health, improving energy production, and supporting overall well-being, PEMF therapy is an exciting frontier in the realm of alternative and complementary medicine.

Chapter 11
Easing Pain and Inflammation: PEMF's Natural Approach

Pain, like an unwelcome companion, can weave its way into the fabric of our lives, casting shadows on moments of joy and tranquility. It is a relentless force that seeks to overshadow our well-being, demanding attention and robbing us of our vitality. In the realm of traditional medicine, the management of pain often involves pharmaceutical interventions that might offer temporary relief, but might also come with potential side effects and risks.

In this chapter, we delve into the natural approach of PEMF therapy in easing pain and inflammation - a gentle yet powerful pathway to healing that aims to restore harmony within our bodies.

Unlike conventional treatments that might focus solely on symptom suppression, PEMF therapy offers a holistic perspective, addressing the root causes of pain and inflammation. By resonating with our cells and tissues, PEMF therapy stimulates healing responses at the cellular level, fostering a cascade of rejuvenation and repair.

In the realm of pain management, PEMF therapy has shown particular promise in addressing various conditions.

Whether it's joint pain from arthritis, muscle soreness from injury, or nerve pain from neuropathy, PEMF therapy's ability to enhance blood flow and reduce inflammation can offer welcome relief.

Inflammation, often a contributing factor in chronic diseases, is a natural response of our bodies to injury or infection. However, when inflammation becomes chronic, it can lead to persistent discomfort and deteriorate overall health. PEMF therapy, with its anti-inflammatory properties, offers a gentle intervention that supports the body's ability to rebalance its inflammatory response.

By modulating inflammatory cytokines and promoting immune function, PEMF therapy contributes to the body's natural defense against inflammation-related disorders. It is a testament to the symbiotic relationship between electromagnetic fields and cellular healing, harmonizing the intricate dance of our immune system's responses.

What sets PEMF therapy apart is its non-invasive nature and absence of pharmaceutical agents, making it an attractive option for those seeking natural alternatives to pain management and inflammation relief. As we continue to explore the wonders of PEMF therapy, we encounter stories of individuals whose lives have been transformed by its healing touch.

Beyond the realm of physical pain, PEMF therapy extends its reach into the domain of emotional well-being. Chronic

pain and debilitating conditions can take a toll on our mental health, exacerbating stress, anxiety, and feelings of helplessness. PEMF therapy's ability to promote relaxation and reduce pain can contribute to improved emotional states, offering a ray of hope amidst the shadows.

Throughout this chapter, we unravel the intricate dance of PEMF therapy as it addresses pain and inflammation, rekindling the body's intrinsic potential to heal. The symphony of electromagnetic frequencies resonates with our cells, inviting them to embrace a renewed state of coherence and balance.

As we journey through the realms of electromagnetic healing, we draw closer to the realization that PEMF therapy stands as a natural ally in our pursuit of a pain-free and vibrant life. In the forthcoming chapters, we shall explore the practical applications of PEMF therapy, unlocking its potential to address various health conditions and complement traditional treatments.

Together, let us celebrate the marvels of PEMF's natural approach to pain and inflammation, recognizing its power to embrace the wisdom of our bodies' inherent healing capacities. May the revelations within these pages ignite a spark of hope and illuminate a pathway to a future of well-being and vitality.

Chapter 12 Overcoming Chronic Illness: Empowering the Body's Defenses

Chronic illness, an unwavering adversary, can cast a long shadow over our lives, challenging our resilience and testing the limits of our spirit. When traditional treatments offer limited relief, we find ourselves seeking alternatives that can empower our bodies in the face of chronic ailments. In this chapter, we embark on a transformative journey of how PEMF therapy empowers the body's defenses to overcome chronic illness.

As we delve into the heart of chronic disease management, we encounter the intricate web of factors that contribute to these relentless conditions. From autoimmune disorders and diabetes to fibromyalgia and neurological conditions, chronic illnesses often arise from complex interactions between genetics, lifestyle, and environmental influences.

Traditional treatments for chronic illness can involve a blend of medications, therapies, and lifestyle changes. While these interventions might alleviate symptoms, they might not address the underlying dysregulation within the body. Herein lies the potential of PEMF therapy, as it aims to restore balance at the cellular level, fostering a profound environment for healing to unfold.

PEMF therapy's resonance with cellular frequencies sparks a symphony of healing responses within our bodies. By promoting cellular regeneration and enhancing communication between cells, it cultivates a milieu that supports the body's natural defense against chronic illness.

In the realm of autoimmune disorders, PEMF therapy's ability to modulate the immune response offers hope for those living with conditions where the body's immune system mistakenly attacks its own tissues. By encouraging a balanced immune reaction, PEMF therapy can potentially alleviate symptoms and reduce the impact of these conditions on daily life.

For those grappling with metabolic disorders like diabetes, the potential of PEMF therapy to enhance circulation and cellular metabolism can be a valuable adjunct to traditional treatments. By optimizing cellular processes, PEMF therapy might contribute to improved glucose regulation and support overall metabolic health.

Neurological conditions present unique challenges, affecting both physical and cognitive function. PEMF therapy's ability to stimulate nerve cells and enhance blood flow to the brain offers a promising avenue for supporting neurological health. While it might not provide a cure, it might complement existing treatments and improve quality of life for individuals living with these conditions.

Beyond the physiological aspects of chronic illness, PEMF therapy embraces the interconnectedness of our bodies, minds, and emotions. Chronic illness can take a toll on mental health, contributing to feelings of despair, anxiety, and isolation. PEMF therapy's relaxation-inducing properties and potential to ease pain can foster emotional well-being, offering a sense of empowerment in the face of adversity.

As we journey through the transformative landscape of PEMF therapy and its role in overcoming chronic illness, we bear witness to stories of hope and resilience. Individuals who have incorporated PEMF therapy into their healing journey share tales of renewed vitality, enhanced well- being, and a greater sense of agency in their health.

Throughout this chapter, we come to understand that PEMF therapy is not a panacea, but rather a complementary approach that supports the body's innate defenses. By empowering cellular healing and fostering balance within our bodies, PEMF therapy stands as an ally in our quest for a life unencumbered by the limitations of chronic illness.

In the forthcoming chapters, we will continue to explore the practical applications of PEMF therapy, uncovering its potential to address various health conditions and enrich our understanding of the body's intricate systems.

Together, let us embrace the empowerment that PEMF therapy offers as we embark on a journey towards a life of vitality and well-being amidst the challenges of chronic illness. May the revelations within these pages ignite a spark of hope and illuminate a pathway to a future of healing and resilience.

Chapter 13
The Rise of PEMF Therapy: Success Stories and Testimonials

As the curtain rises on the stage of healing, PEMF therapy takes center stage, garnering attention and acclaim as a transformative approach to pain management and chronic disease. In this chapter, we bear witness to the real-life accounts of individuals whose lives have been touched by the power of electromagnetic resonance. Through their testimonials, we gain insight into the profound impact of PEMF therapy in overcoming adversity and embracing a path to renewed vitality.

Testimonial 1: Brenda S.

“A friend recommended me to see Dr. G. She had several health issues, including knee pain, that got better with PEMF therapy, so I had some hope it might work for me too. I've got arthritis in both knees and moving around was a struggle. I had pretty much tried everything you can think of - meds, physical therapy, shots, acupuncture, chiropractic care, creams, and braces, but not much was getting better. I was really hoping that PEMF therapy could save me from having surgery. After a several weeks of doing PEMF therapy twice a week, my knee pain was 90 percent better, I had greater range of motion, more energy, and better sleep. It's not a miracle cure, but I can tend to my garden and get around better now.”

Testimonial 2: [Dan M.]
“When I went to see Dr. G., I was dealing with peripheral neuropathy in my hands and feet and had sciatica in my right leg. My balance was so bad that I had to use a cane all the time just to keep from falling. The medications my doctor prescribed didn't really do much and caused too many side effects. Dr. G. recommended 30 one-hour sessions of PEMF and Hako-Med, and the pain went away, my balance greatly improved, and I am back playing golf again, which is amazing!.”

Testimonial 3: [Martha G.]
“I came in with a 10 year history of back pain that was unresponsive to multiple therapies. I also had bursitis in my left hip that effected my sleep. I was very skeptical that this would help me but after half a dozen sessions I began to notice an improvement, and after 20 sessions my back pain and bursitis was gone!”

Testimonial 4: [Nancy P.]
“After the birth of my last child, over thirty years ago, I was unable to control my bladder. I panicked every time I coughed or sneezed. I was waking up 5 or 6 times every night to use the bathroom. After about 20 sessions of PEMF therapy I regained control of my bladder. I no longer panic when I feel a sneeze coming on. I’m sleeping through the night and my energy level is amazing!”

Testimonial 5: [Linda C.]
"I was skeptical coming in and probably wouldn't have returned had it not been for Dr. G.'s other patients bragging about their progress. I had trouble believing that sitting in a chair that tapped me on different areas of my body could make my sciatic pain disappear, give me more energy, improve my sleep and even get rid of the floater in my eyes. But all those things happened after 30 sessions of PEMF therapy. It's amazing. I am no longer a skeptic."

Testimonial 6: [Pamela F.]
" I got off to a rocky start. After my first two sessions I felt worse. But after that I began seeing improvement with my neck and shoulder pain. Before starting PEMF therapy I could barely move my right arm without severe pain. Now I am able to lift my hand above my head without pain and I've even started playing pickle ball again.

Testimonial 7: [John T.]
" I had a 15 year history of peripheral neuropathy, with pain and numbness in both feet, and swollen ankles. Despite that, Dr. G. didn't use the therapy over my feet or ankles for at least my first ten sessions. He would do some kind of funky test and tell me, "You don't need it over your feet yet." Ignoring my feet and ankles for 10-12 sessions greatly concerned me. But after 30 sessions the pain, numbness, and swelling were gone. I'm not sure how any of that stuff works but it does."

Testimonial 8 [Sherri M.]

“My surgeons had a serious chat with me, making it crystal clear that surgery wasn't even on the table. I experimented with all sorts of medications and injections, but honestly, they might as well have been placebos. When I walked into Dr. G.'s office, I was literally bent over like a question mark from all that pain. But I kid you not, after just that initial session, I started noticing I could stand up straighter, and the pain had dialed down significantly. Fast forward a bit, I've gone through a total of 8 of those sessions, and I've got to say, my back's like a whole new ballgame. I'm even tackling things I've been pining for, if you can believe it. It's like a blessing, really.”

Testimonial 8 [Matt H.]

“I work as a distributor for a popular home PEMF therapy device. My fascination with PEMF therapy led me to use it consistently for over two and a half years, and the results it brought to my overall health were truly remarkable. While the therapy greatly benefited many aspects of my well-being, I unfortunately found it ineffective in addressing my hand tremors. Despite diligently following the recommended instructions as a distributor, the tremors persisted.

Driven by my commitment to finding a solution, I turned to Dr. G.'s hybrid device. His unique testing procedure unveiled a protocol different from what I had previously followed. Astonishingly, after just a single session with the hybrid device, my hand tremors disappeared entirely. Eager to ensure lasting relief, I continued to use the hybrid device for several weeks, determined to prevent any

recurrence of the tremors. I even reserved one session as a precaution, but after an entire year without experiencing hand tremors, I finally utilized my last session during my final appointment.
Though I'm uncertain whether it was Dr. G.'s testing method, the hybrid device itself, or a synergy of both that put an end to my hand tremors, one thing is clear—it undeniably worked."

For more testimonials please visit our website at www.theladylakedoctor.com and watch our patient video testimonials.

Chapter 14
Choosing the Right PEMF Device for You

As you embark on the journey of exploring PEMF therapy, a crucial decision awaits - choosing the right PEMF device to suit your individual needs and wellness goals. In this chapter, we will navigate the landscape of PEMF devices, empowering you to make an informed choice that aligns with your unique health requirements.

Step 1: Clarify Your Objectives

Before delving into the world of PEMF devices, take a moment to clarify your objectives. What specific health conditions or concerns do you wish to address with PEMF therapy? Are you seeking pain relief, improved mobility, better sleep, or overall well-being? Identifying your goals will guide you in selecting a device that best aligns with your needs.

Step 2: Consider Intensity and Frequency

PEMF devices come with varying levels of intensity and frequency settings. Lower intensity devices are generally suitable for general wellness, while higher intensity devices might be more appropriate for targeting specific health issues. Similarly, consider the frequency range of the device and its compatibility with the conditions you aim to address.

Step 3: Portable or Stationary
PEMF devices come in both portable and stationary options. Portable devices offer the flexibility of use on-the-go, while stationary devices are designed for use at specific locations, such as home or office. Evaluate your lifestyle and preferences to choose a device that fits seamlessly into your daily routine.

Step 4: Application and Coverage
Different PEMF devices offer varying methods of application and coverage. Some devices are designed for local application, targeting specific areas of the body, while others offer full-body mats or paddles for more comprehensive coverage. Consider the application style that aligns with your treatment goals.

Step 5: Research and Reviews
Dive into the world of reviews and testimonials from users who have experienced PEMF therapy with the device you are considering. Research the device's reputation, effectiveness, and durability. Seek out unbiased sources to make an informed decision.

Step 6: Consult with Healthcare Professionals
Involve your healthcare professionals in the decision-making process. Discuss your interest in PEMF therapy and seek their insights on the most suitable device for your health condition. Their expertise will complement your research and guide you towards an appropriate choice.

Step 7: Budget and Warranty
Consider your budget when exploring PEMF devices. Prices can vary significantly, so it's essential to strike a balance between your financial capacity and the features you desire in a device. Additionally, check the warranty and customer support options to ensure you have peace of mind regarding your purchase.

Step 8: Trust Your Intuition
Ultimately, trust your intuition when choosing a PEMF device. Consider how you resonate with the device, its features, and the company's ethos. Choose a device that not only aligns with your health goals but also brings you a sense of confidence and trust in its ability to support your well-being.

By navigating these steps with mindfulness and discernment, you will be better equipped to select the ideal PEMF device for your healing journey. Embrace this empowering step in your pursuit of a pain-free and vibrant future, knowing that the right PEMF device can be a valuable ally in your quest for well- being.

* “Navigating the Abundance of PEMF Devices”, which can be found in Chapter 18, delves deeper into the distinctions among various PEMF devices.

Chapter 15
Overcoming Skepticism: Debunking Myths and Misconceptions

In the world of alternative therapies, skepticism can be an unwelcome companion, casting doubts on the validity and effectiveness of innovative approaches like PEMF therapy. In this chapter, we embark on a journey to address common myths and misconceptions surrounding PEMF therapy, shedding light on the scientific evidence and real-life experiences that challenge skepticism.

Myth 1: "PEMF therapy is just a placebo effect."
Some skeptics argue that the benefits of PEMF therapy are merely due to the placebo effect, where individuals experience improvements because they believe in the treatment. However, scientific studies and patient testimonials reveal significant results beyond a placebo response. The tangible physiological effects observed in cellular responses, improved blood flow, and reduced inflammation provide compelling evidence of PEMF therapy's efficacy.

Myth 2: "PEMF therapy is not backed by scientific evidence."
Critics may question the scientific basis of PEMF therapy, dismissing it as pseudoscience. In reality, numerous studies and clinical trials have explored the effects of PEMF

therapy on various health conditions. These investigations have yielded promising results, supporting PEMF therapy as a valuable complementary approach in pain management and overall wellness.

Myth 3: "PEMF therapy is not safe."
Concerns about the safety of PEMF therapy may arise, particularly when considering the use of electromagnetic fields. It is essential to note that PEMF therapy devices designed for home use have undergone rigorous testing to ensure their safety and effectiveness. Adhering to recommended guidelines and consulting with healthcare professionals can further enhance the safety of PEMF therapy.

Myth 4: "PEMF therapy is too expensive."
Critics may perceive PEMF therapy as an expensive investment without tangible benefits. While some PEMF devices might carry a higher price tag, they offer a long-term and cost- effective approach to wellness compared to ongoing expenses associated with conventional treatments. Moreover, many affordable PEMF devices are available, catering to a diverse range of budgets.

Myth 5: "PEMF therapy is a cure-all for any health condition."
PEMF therapy is not a panacea, nor should it be regarded as a sole treatment for all health conditions. While it holds immense potential, PEMF therapy is most effective as a complementary approach alongside traditional medical

treatments and a holistic wellness regimen. Understanding its limitations and applying it appropriately enhances its efficacy.

Myth 6: "PEMF therapy is not supported by healthcare professionals."
Critics may suggest that PEMF therapy lacks support from healthcare professionals. In truth, an increasing number of healthcare providers are embracing the benefits of PEMF therapy and recommending it as part of integrative care. More research and clinical evidence contribute to the growing acceptance of PEMF therapy within the medical community.

By addressing these myths and misconceptions, we uncover the truth behind PEMF therapy's potential. As science and real- life experiences converge, skepticism gives way to a deeper understanding of the transformative power of PEMF therapy in the pursuit of pain relief, improved well-being, and overall vitality.

As we conclude this chapter and our journey through the world of PEMF therapy, let us approach this transformative modality with an open mind, embracing the possibilities it offers. May the knowledge gained within these pages serve as a beacon of hope, guiding you towards a future of healing, wellness, and an unwavering belief in the power of electromagnetic resonance.

Chapter 16
Navigating PEMF Therapy For Different Health Conditions

As we embark on the final leg of our journey through the realm of PEMF therapy, we delve into the practical applications of this transformative modality for addressing various health conditions. In this chapter, we explore how PEMF therapy can be tailored to complement traditional treatments and support healing for specific ailments.

Pain Management and Musculoskeletal Conditions

PEMF therapy has shown great promise in pain management, particularly for musculoskeletal conditions such as arthritis, back pain, and joint discomfort. By promoting circulation, reducing inflammation, and supporting cellular repair, PEMF therapy can offer welcome relief and improved mobility for individuals grappling with chronic pain.

Neurological Disorders and Cognitive Health

For individuals living with neurological conditions like neuropathy, migraines, or post-stroke recovery, PEMF therapy's ability to stimulate nerve cells and enhance blood flow to the brain can be of immense benefit. While not a cure, PEMF therapy can complement traditional treatments and support neurological health and cognitive function.

Autoimmune Conditions
Autoimmune disorders arise from an overactive immune response, leading to inflammation and tissue damage. PEMF therapy's immune-modulating effects hold promise in alleviating symptoms and promoting a balanced immune reaction. As part of a comprehensive approach, PEMF therapy can support individuals living with autoimmune conditions.

Metabolic Health and Diabetes
Metabolic disorders, including diabetes, can have a profound impact on overall well-being. PEMF therapy's ability to enhance cellular metabolism and improve circulation may contribute to supporting metabolic health. While not a replacement for traditional treatments, PEMF therapy can be a valuable adjunct in managing these conditions.

Mental Health and Stress Reduction
The mind-body connection is integral to overall wellness. PEMF therapy's relaxation-inducing properties can aid in managing stress, anxiety, and mood disorders. By promoting a sense of calm and balance, PEMF therapy can be an invaluable tool for supporting mental health.

Sleep Disorders and Insomnia
Quality sleep is essential for health and vitality. PEMF therapy's potential to improve sleep patterns and promote relaxation can contribute to overcoming sleep disorders

and insomnia. Integrating PEMF therapy into a pre-sleep ritual can set the stage for restorative rest.

Postoperative Recovery
Following surgical procedures, PEMF therapy can aid in postoperative recovery. By supporting cellular repair and reducing inflammation, PEMF therapy may expedite healing and reduce discomfort during the recovery process.

General Wellness and Preventive Care
Beyond specific health conditions, PEMF therapy can serve as a proactive approach to overall wellness and preventive care. Incorporating regular PEMF sessions can support your body's natural defense mechanisms and promote a sense of balance and vitality.

As you navigate PEMF therapy for different health conditions, remember that each individual's healing journey is unique. Consult with your healthcare professionals to tailor PEMF sessions to your specific needs, and approach this transformative modality with mindfulness and an open heart.

With each pulse of electromagnetic resonance, PEMF therapy becomes a symphony of healing, harmonizing with the intricate dance of your body's cells. As we conclude this chapter, may you carry the knowledge of PEMF therapy's potential as a valuable ally in your pursuit of well-being,

vitality, and a life embraced by the resonance of optimal health.

Examples of Some of The Common Ailments We Help People With In Our Office:

Sciatica - Allergies - Food Sensitivities - Frequent and Urgent Urination - Enlarged Prostate - ED - Floaters - Peripheral Neuropathy - Back Pain - Neck Pain - Shoulder Pain - Hip Pain - Bursitis - Arthritis Pain - Headaches - Anxiety - Depression - Plantar Fasciitis - Ankle Pain - Edema (Swelling) - Diabetic Wound Healing - Breathing Problems (COPD, Asthma, Bronchitis) - Type 2 Diabetes - Stroke Recovery - Sleep - Energy - Pelvic Pain

Chapter 17
A Holistic Approach to Pain Management and Chronic Disease

In our pursuit of well-being and vitality, we come to recognize that healing is not limited to addressing symptoms but encompasses a holistic approach to pain management and chronic disease. In this chapter, we explore the profound impact of embracing a comprehensive approach to healing—one that integrates the transformative power of PEMF therapy with other complementary modalities to foster balance, resilience, and a life of thriving wellness.

Understanding Holistic Healing

Holistic healing views the individual as a whole, recognizing the interconnectedness of mind, body, and spirit. Pain and chronic disease are not isolated conditions but are often manifestations of imbalances within the entire system. A holistic approach acknowledges the multifaceted nature of health, guiding individuals on a path towards greater well- being on all levels.

The Role of PEMF Therapy in Holistic Healing

PEMF therapy becomes a cornerstone of holistic healing, offering a gentle yet powerful tool to restore balance at the cellular level. By stimulating cellular repair, enhancing circulation, and reducing inflammation, PEMF therapy

complements the body's innate capacity for self-healing. This integrative approach to pain management and chronic disease is founded on the belief that the body possesses the wisdom and resilience to thrive when supported with the right tools and approaches.

Embracing Mind-Body Connection

A key tenet of holistic healing is recognizing the profound connection between the mind and body. Negative emotions, stress, and unresolved traumas can manifest as physical symptoms, exacerbating pain and chronic conditions. In conjunction with PEMF therapy, practices that nurture the mind-body connection, such as meditation, mindfulness, and yoga, play a pivotal role in fostering overall well-being.

Nutrition and Wellness

Optimal nutrition serves as the fuel for our bodies, influencing the functioning of every cell and system. As part of a holistic approach, embracing a balanced and nutritious diet complements the healing power of PEMF therapy. By providing essential nutrients and antioxidants, a well-rounded diet contributes to cellular vitality and supports the body's healing processes.

Physical Activity and Exercise

Regular physical activity and exercise contribute to overall well-being. While chronic pain and certain health conditions may pose challenges, adopting an exercise routine tailored to individual capabilities can promote

mobility and enhance the effects of PEMF therapy. Engaging in activities that bring joy and align with individual needs fosters a sustainable and enjoyable approach to wellness.

Complementary Therapies

Holistic healing embraces a diverse range of complementary therapies that synergize with PEMF therapy. Modalities such as acupuncture, chiropractic care, massage, physical therapy, and herbal medicine offer additional support for pain management and chronic disease. Integrating these therapies into a comprehensive healing plan enhances the potential for positive outcomes.

Mindset and Emotional Well-Being

Cultivating a positive mindset and emotional well-being is integral to holistic healing. By practicing self-compassion, embracing gratitude, and engaging in activities that nourish the soul, individuals reinforce the healing power of PEMF therapy. Emotional wellness contributes to resilience, enabling individuals to navigate challenges with a sense of empowerment and optimism.

The Path to Thriving Wellness

As we embrace a holistic approach to pain management and chronic disease, we discover a path to thriving wellness that transcends the confines of symptoms and diagnoses. This journey encompasses the power of PEMF therapy, mindfulness, nutrition, physical activity, and

complementary therapies–a symphony of healing that harmonizes the mind, body, and spirit.

In conclusion, a holistic approach to healing acknowledges the intricate dance of our being and celebrates the potential for transformative well-being. As you embark on your personal journey of pain management and chronic disease, may the wisdom of holistic healing and the resonance of PEMF therapy guide you towards a future of thriving wellness–a life embraced by harmony, balance, and an unwavering commitment to the integral nature of your health and well- being.

Chapter 18
Empowering Men and Women over 60: Rediscovering Vitality

Life beyond 60 opens a new chapter—one filled with wisdom, experience, and the potential for continued growth and vitality. In this chapter, we celebrate the transformative power of PEMF therapy as a catalyst for empowering men and women over 60 to rediscover vitality and embrace the fullness of life with enthusiasm and grace.

A Time of Renewed Purpose

Entering the stage of life over 60 brings with it a sense of renewed purpose and self-discovery. As we embrace the wisdom gained from our life experiences, we recognize the value of nurturing our well-being on all levels—physical, emotional, and spiritual. PEMF therapy becomes a transformative tool that harmonizes with this stage of life, igniting a renewed sense of vitality and resilience.

Addressing Age-Related Challenges

Pain and chronic conditions may become more pronounced as we age. The unique benefits of PEMF therapy—its ability to reduce inflammation, stimulate cellular repair, and promote relaxation—become invaluable in addressing age-related challenges. As we navigate the joys and complexities of aging, PEMF therapy offers

support, empowering us to embrace life with greater ease and comfort.

Enhancing Mobility and Flexibility
Maintaining mobility and flexibility is vital for a vibrant life. PEMF therapy, coupled with physical activity tailored to individual capabilities, becomes a dynamic duo in promoting flexibility and enhancing mobility. Rediscovering the joy of movement, we open the doors to new adventures and experiences that enrich our journey.

Supporting Cognitive Function
Cognitive health is an essential aspect of well-being as we age. PEMF therapy's potential to support neurological function complements other practices that promote cognitive vitality, such as brain exercises, social engagement, and mindful practices. Embracing a holistic approach to cognitive health enhances our capacity to navigate life with clarity and mental agility.

Cultivating Emotional Well-Being
Emotional well-being becomes a cornerstone of embracing life beyond 60 with grace. PEMF therapy's relaxation-inducing effects contribute to emotional balance, complementing practices that nurture emotional wellness, such as meditation, gratitude, and spending time with loved ones. In this phase of life, we prioritize self-compassion and self-discovery, embracing our emotions with gentleness and understanding.

Fostering Connections and Community
Community and social connections are vital in this stage of life. Engaging in shared experiences, such as PEMF therapy sessions, can become opportunities to foster connections and build a support network. As we interact with others, we find strength in shared experiences and celebrate the camaraderie of rediscovering vitality together.

Embracing Life with Gratitude
Life over 60 becomes a canvas for embracing each moment with gratitude. As we embark on each PEMF session, we express gratitude for the gift of well-being and the opportunities to continue growing and evolving. Gratitude becomes the foundation of our mindset—a guiding light that infuses life with joy and positivity.

The Resonance of Rediscovered Vitality
Through the resonance of PEMF therapy, men and women over 60 embrace the symphony of rediscovered vitality. This transformative modality harmonizes with the essence of this stage of life—empowering us to nurture our bodies, embrace our emotions, and celebrate the wisdom that comes with the passage of time.

In conclusion, the journey of rediscovering vitality beyond 60 is a testament to the resilience of the human spirit. As we integrate PEMF therapy into our lives, we embrace a future of thriving well-being—a life enriched by the harmony of wisdom, vitality, and the unwavering

commitment to rediscovering the fullness of life at every stage of our journey.

Chapter 19
Your Journey to Healing: Roadmap to PEMF Success

As you embark on your journey to healing with PEMF therapy, a roadmap emerges—a guiding path that leads you towards success and transformative well-being. In this chapter, we outline essential steps and insights to empower you on your PEMF therapy journey, supporting you as you navigate the landscape of healing and embrace a future of thriving vitality.

Step 1: Setting Your Intentions

Begin your roadmap to PEMF success by setting clear intentions for your healing journey. Define your goals, whether it's pain relief, enhanced mobility, improved sleep, or overall well-being. Embrace these intentions with a sense of purpose, laying the groundwork for a focused and committed approach.

Step 2: Consultation with Healthcare Professionals

Consult with your healthcare professionals to discuss your interest in PEMF therapy and its potential benefits for your specific health conditions. Their insights and guidance can help tailor your PEMF sessions to align with your unique needs, enhancing the efficacy of the therapy.

Step 3: Choosing the Right PEMF Device
Select a PEMF device that aligns with your goals and lifestyle. Consider factors such as portability, session duration, and specific features that cater to your health needs. Investing in a high-quality PEMF device ensures that you have a reliable companion on your healing journey.

Step 4: Establishing a Routine
Consistency is crucial in experiencing the full benefits of PEMF therapy. Establish a routine for your sessions, incorporating them into your daily or weekly schedule. Treat these sessions as sacred moments of self-nurturing, prioritizing your well- being.

Step 5: Mindful Engagement
Approach each PEMF session with mindfulness and presence. Embrace these moments as opportunities for healing and rejuvenation. Focus on your breath, and let go of any distractions, immersing yourself fully in the resonance of well- being.

Step 6: Tracking Your Progress
Maintain a journal to track your progress with PEMF therapy. Document any changes in your physical health, emotions, and overall well-being. Reflect on your journey, celebrating the positive shifts and recognizing the transformative power of PEMF therapy.

Step 7: Integrating Complementary Approaches
Explore complementary approaches that synergize with

PEMF therapy. Practices such as meditation, yoga, nutrition, and other wellness modalities can enhance the healing potential of PEMF sessions, fostering a holistic and integrated approach to well-being.

Step 8: Nurturing Your Mindset
Cultivate a positive and empowered mindset throughout your PEMF therapy journey. Embrace self-compassion, gratitude, and optimism as pillars of your healing mindset. Trust in the wisdom of your body and its capacity for self-renewal.

Step 9: Embracing Community
Engage with others who are on their own healing journeys. Seek support and inspiration from like-minded individuals who share the transformative power of PEMF therapy. Community connections provide encouragement and foster a sense of shared growth.

Step 10: Celebrating Your Success
Celebrate each milestone and success along your PEMF therapy journey. Acknowledge the progress you make, honoring the commitment and dedication you bring to your healing path. Celebrating your successes reinforces your resilience and motivates you to continue thriving.

As you traverse your roadmap to PEMF success, remember that healing is a dynamic and multifaceted journey. Embrace the process with openness and curiosity, celebrating the transformative power of PEMF therapy as

you step into a future of thriving vitality and a life embraced by the harmony of well-being.

In conclusion, your journey to healing with PEMF therapy becomes a testament to your commitment to well-being. As you navigate this transformative modality with intention, mindfulness, and self-compassion, may you rediscover the symphony of healing that resonates within you—a future illuminated by the transformative power of PEMF therapy and the unwavering belief in your potential for thriving vitality.

Chapter 20
How PEMF Therapy Transformed Our Practice

Introduction
Nine years ago we focused on helping people with complex metabolic conditions like hypothyroidism, type 2 diabetes, and autoimmune diseases utilizing functional medicine. While we successfully helped hundreds of men and women, some remained challenging cases.

Diving into Functional Medicine Premise
Determined to find a solution for these individuals, I delved into the premise of Functional medicine, which involves identifying the root causes of disease and dysfunction and addressing them with specific nutrition.

Challenges Despite Comprehensive Efforts
Despite running comprehensive lab tests and prescribing tailored nutrition plans, some of our patients didn’t reach the level of success that we aim for, and I couldn't shake the feeling that something was hindering the nutrients from reaching the cells, which would explain why some weren’t responding to care.

Turning to Research and Discovery
Seeking answers, I turned to the widely used online database, PubMed. PUBMed is operated by the United

States National Library of Medicine (NLM) under the National Institutes of Health (NIH). I use PUBMed as a resource because it maintains a database for traditional and alternative medical studies worldwide.

Discovery of PEMF Therapy

Upon entering the phrase "*increases oxygen and nutrient absorption*," into the search bar, among the hundreds of responses, PEMF therapy caught my attention.

PEMF Therapy: A Research Goldmine

Unfamiliar with PEMF therapy, I conducted a more targeted search and was astonished to find an extensive list of conditions associated with PEMF therapy. It became evident that PEMF therapy had been the subject of multiple studies across various health conditions. This newfound revelation intrigued me and ignited my curiosity to explore the potential of PEMF therapy as a complementary approach to address the unique challenges faced by our patients.

PEMF: A Hidden Gem?

Upon discovering a vast number of PEMF studies, I was simultaneously impressed and skeptical. How could a therapy like this exist without crossing my path? After two decades of experience in hospitals, chiropractic offices, and functional medicine clinics, I thought I knew about all the groundbreaking treatments. Yet, PEMF therapy had eluded me.

Unearthing Astonishing Evidence

Motivated to explore further, I completely immersed myself in thorough investigation, leading me to discover a wealth of compelling evidence. Among these findings were thousands of meticulously conducted medical studies, following the double-blind, placebo-controlled model, which unequivocally showcased the safety and effectiveness of PEMFs across over 80 different conditions. Adding to this were numerous FDA approvals and a comprehensive four-year examination by NASA. Interestingly, it's worth noting that NASA filed for a PEMF patent shortly after their in-depth study. Yet, the most astonishing aspect of this therapy was its global utilization spanning five decades, accompanied by an astounding absence of reported long-term side effects.

Pursuing Practical Implementation

If these claims held truth, one might wonder why this therapy wasn't dominating the headlines. Despite harboring certain uncertainties, I chose to push the limits of PEMF therapy and ascertain its authenticity. The initial hurdle I faced involved sourcing an appropriate device for our clinic.

Navigating the Abundance of PEMF Devices

Navigating the expansive landscape of PEMF devices in search of the perfect fit for our practice presented a significant challenge. Along this journey, I was met with a myriad of PEMF devices, each touting a ‘secret sauce’ that made their device stand out from the rest, and each had

substantial evidence to back its claims. It was a bit overwhelming. The more I read, the more research I did, the more confusing it became.

Trusted Resources
Fortunately, as member of a network of esteemed physicians I could seek guidance from doctors that I know and trust. Our community of functional medicine practitioners consisted of medical doctors, chiropractors, acupuncturists, and naturopaths, spanning across various regions of the U.S. and even beyond so there was a good chance that some might hold valuable insights into the realm of PEMF therapy.

A Plethora of Experience
As luck would have it, more than twenty fellow members of the group had already incorporated PEMF therapy into their practices. Among these practitioners, some opted for low-intensity devices, other used high-intensity devices, and a few enthusiastically embraced a hybrid device, illustrating the diverse range of choices at hand.

Following extensive discussions, I deduced the following list pros and cons for each type device; low-intensity, high-intensity, and hybrid devices.

Low-Intensity PEMF Devices:

Pros:
Safe and Gentle: Low-intensity devices emit a milder energy output, making them safer for prolonged use and suitable for a wider range of individuals, including those with sensitivities.
Minimal Side Effects: Low-intensity PEMF therapy typically has fewer reported side effects, such as discomfort or tingling sensations.
Wellness Maintenance: They are well-suited for general wellness maintenance, stress reduction, and relaxation.
Sleep Improvement: Low-intensity PEMF therapy may help improve sleep quality by promoting relaxation and reducing sleep disturbances.
Non-Invasive: They are non-invasive and do not require any invasive procedures or techniques.
Adjunct Therapy: Low-intensity devices can be used alongside other treatments, potentially enhancing their effectiveness.

Cons:
Limited Intensity: The gentler energy output might not be sufficient for addressing more severe or chronic conditions that require higher intensity therapy.
Slower Results: Achieving noticeable results might take longer with low-intensity devices compared to high-intensity devices.
Milder Impact: For individuals with significant pain or chronic conditions, the impact of low-intensity therapy might be less pronounced.

High-Intensity PEMF Devices:

Pros:
Focused and Intense: High-intensity devices offer a more powerful and targeted energy output, making them effective for addressing specific and severe conditions.
Rapid Results: Due to their higher intensity, they might yield quicker and more noticeable results, especially for severe pain or injuries.
Muscle and Tissue Penetration: High-intensity PEMF therapy can penetrate deeper into muscles and tissues, making them suitable for musculoskeletal issues.
Bone Healing: They can be effective for promoting bone healing and fracture recovery.
Advanced Cases: High-intensity devices are suitable for addressing advanced or intricate health conditions that require a stronger therapeutic approach.

Cons:
Potential Discomfort: High-intensity therapy might cause discomfort or sensations in some individuals, and some might find it challenging to tolerate.
Limited Usage: Due to their intensity, high-intensity devices might not be suitable for everyone, especially those with sensitivities, certain medical conditions, or during pregnancy.
Higher Risk: There's a higher risk of overuse or incorrect use leading to adverse effects, emphasizing the importance of proper guidance and supervision.

Cost: High-intensity PEMF devices tend to be more expensive than their low-intensity counterparts.

Hybrid Device

Pros:
Versatility: Hybrid PEMF devices combine the benefits of both low-intensity and high-intensity therapies, offering a versatile solution for a wide range of conditions and individuals.
Customizable: These devices allow users to adjust the time, frequency, and intensity levels, enabling a personalized treatment approach.
Comprehensive Therapy: Hybrid devices can target both superficial and deeper tissues, making them suitable for addressing various musculoskeletal issues and complex conditions.
Individual Tailoring: Users can adapt the device to their specific needs, switching from low-intensity relaxation sessions up to higher-intensity therapeutic sessions as needed.
Efficacy: Hybrid devices are designed to provide effective therapy for both mild and severe conditions, offering a balanced approach to healing.
Reduced Need for Multiple Devices: Instead of purchasing separate low and high-intensity devices, a hybrid device can fulfill both purposes, saving space.

Cons:

Complexity: The versatility of hybrid devices can also lead to increased complexity in usage. Users may need time to learn how to properly adjust settings for different therapeutic
goals.
Learning Curve: Due to their multi-functionality, there might be a steeper learning curve associated with understanding the various settings and how to optimize them for different conditions.
Cost: Hybrid PEMF devices tend to be more expensive than single-purpose devices, reflecting their advanced capabilities and versatility.
Potential Overuse: Users might be tempted to use high-intensity settings more frequently, which could lead to overuse or discomfort if not properly managed.
Healthcare Professional Involvement: Due to the multifaceted nature of hybrid devices, it's recommended to involve a healthcare professional in setting up a customized treatment plan to ensure safety and effectiveness.

The Hybrid; The Most Potential and Most Challenging
Although each doctor within our group expressed contentment with their device, there was unanimous consensus that the hybrid possessed the greatest potential. Nevertheless, its substantial cost and significant learning curve proved a hurdle too high for many.

Finding The Right Device For Our Office
With this knowledge in hand, I set out to find the best device for our practice. I scheduled appointments to try

several devices, including low and high-intensity PEMF devices, and a hybrid device. In the subsequent sections, I will recount my first time experience with each type device.

Low Intensity Devices
The low-intensity devices for me were underwhelming. I felt nothing during sessions and felt no improvement afterwards.

*My perspective on low-intensity devices has since evolved. After spending nine years working with them, I've grown to value their contributions in promoting general well-being, relaxation, stress reduction, and the management of minor discomforts. While I don't integrate low-intensity devices into my clinic's offerings, I have acquired a few for family members and suggested them to certain out-of-state patients as part of a maintenance routine. If you purchase a low-intensity device, be patient and be willing to use it daily.

High-Intensity Devices
My first experience with a high-intensity device proved quite intense, almost overwhelming, and a tad uncomfortable. Some of this unease stemmed from the physician's enthusiastic emphasis on the device's immense power and penetration capability. Undoubtedly, I could feel the potency, yet it left me feeling a bit sore. Nonetheless, I did notice a degree of relief afterward. Had my choices been limited to either a low or high- intensity device, I

would have chosen the high-intensity device due to its efficacy.

*Subsequent experiences have altered my perspective on high- intensity devices. We added two high-intensity devices to our practice to see how they compared to our hybrid devices. While high-intensity devices were effective for musculoskeletal complaints, they lacked the nuance to properly address some of the more complex cases that presented in our office. As a result, we transitioned to all hybrid devices.

The Hybrid Device
Finding a hybrid device posed a challenge. None within a 90- mile radius had the specific one that piqued my interest.

Eventually, I located a practitioner in Tampa, Florida, who had an older model. He assured me that the only distinction between his device and the newer one was that the newer one had a wider frequency range. Everything else, including accessories, remained identical. Thus, I opted to arrange an appointment. He suggested scheduling it at day's end, enabling him to provide a thorough demonstration.

Upon arrival, the doctor led me into his dedicated area for PEMF therapy. The hybrid device's appearance immediately caught my attention; it was unlike any I had encountered before. This particular device showcased an

impressive 6-foot- long full-body mat, accompanied by a Poang chair and footstool adorned with sturdy and luxurious mats. Equally noteworthy were the rings, paddles, and pads. The control module, housed within a robust blue metal box roughly twice the size of a desktop CPU, boasted three distinct knobs for adjusting time, frequency, and intensity. Additionally, it featured two outlets, enabling the simultaneous use of two accessories. This setup was a far cry from the flimsy mats and budget accessories I had encountered elsewhere; the hybrid configuration emanated an aura of professionalism and top-notch quality.

My initial experience with the hybrid device left me in awe. As I settled into the therapy chair, the practitioner selected the time and frequency settings, gradually allowing me to increase the intensity to a comfortable level.

To my surprise, a subtle tapping sensation surfaced in the lower region of my back. The precision of this sensation and its direct correlation with a troublesome area—a Grade 2 spondylolisthesis contributing to stenosis—left me genuinely amazed. Despite its gentleness, the pinpoint accuracy was truly striking. What captured my astonishment even further was that this effect required no additional accessory. The chair's mat alone generated this impact, a fact I found to be remarkably impressive.

The following day, I even noticed a slight reduction in the tightness and discomfort in my lower back, all after a mere 30-minute session.

The hybrid device's exceptional precision and performance solidified my belief in its potential. Therefore, I accepted its $40,000 price tag and steep learning curve and placed my order.

Chapter 21
Incorporating PEMF Therapy Into Our Practice

A Curious Beginning: Assembling the Hybrid Device
When the hybrid device finally arrived, the anticipation I felt was almost tangible. Deciding to stay after work to assemble it, I could hardly wait to witness its capabilities firsthand. My original plan had been to reserve PEMF therapy for our more complex cases, observing closely for any signs of improvement. However, news of its arrival quickly spread, and soon enough, all of our patients were expressing keen interest in trying out this innovative therapy. In response, I decided to offer each patient a 30-minute session to experience its effects.

Diverse Feedback: Initial Patient Experiences
The feedback we received from our patients after these initial sessions was intriguingly diverse. After just a single thirty-minute session, approximately half reported no discernible change in their condition, about a third noted a positive improvement, while around 20 percent actually felt worse following the session.

A Personal Commitment: Delving Deeper into PEMF Therapy
In light of the varying responses, I made the decision to bring the therapy device home with me. My intention was

to personally engage with it, dedicating the time needed to unlock its potential and determine the most effective ways to utilize it.

My Personal Health Concerns: Exploring the Therapy's Benefits

With a few lingering health concerns of my own, I was hopeful that PEMF therapy could offer some relief. I was dealing with a swollen left knee, lower back stenosis, and an enlarged prostate. Out of these concerns, it was my knee that bothered me the most, as it hindered my ability to play with my energetic 7-year-old son. At 6'5", bending down constantly to interact with him proved to be a real challenge. Therefore, my focus turned to addressing my knee discomfort first.

A Stubborn Challenge: Addressing My Persistent Knee Issue

My left knee had remained swollen for a stubborn 18 months, and despite trying over a dozen therapies, it showed no signs of improvement. Finding a solution for it would undeniably be a significant achievement.

Diving into Research: The Quest for an Effective Protocol

Dedicating three months to an extensive review of medical studies, I meticulously documented the various parameters used in various knee-related studies. This included noting details like session times, frequencies, intensities, and pad placements. I also reached out to fellow doctors within our

group, conducting experiments with every possible variation. Yet, even with all this effort, my knee remained unresponsive.

A Common Predicament: The Challenge of Differing Approaches

The underlying issue became clear: every practitioner had taken a unique approach to address the same problem. While each approach had achieved some level of success, there was no universally effective solution. After three months of unrelenting dedication, I found myself back at the starting point. It dawned on me that uncovering protocols for over 80 conditions would be a Herculean task, and I realized that such a pursuit might extend well beyond my professional career.

Unlocking The Hybrid's Potential

A Need for Precision: A Shift in Methodology

What I required was a more effective methodology, one that could precisely address the unique needs of each individual. The systematic approach I had been using was proving to be impractical, leading me to a crucial realization: a different path was necessary. Turning my attention back to the realm of medical research, I embarked on a quest to find a solution.

Exploring the Unknown: The Quest for Alternative Testing

Uncertain about the exact nature of the solution I was seeking, I began my search for alternative testing methods. This quest yielded a staggering 70,000 results, an overwhelming number. Yet, I believed that investing time into sifting through these results would be a wiser course of action than persisting with my current approach.

A Fortuitous Discovery: The Energetic Equilibrium Test

After an exhaustive search, my journey led me to a testing method pioneered by an American-trained Japanese medical doctor and researcher during the 1980s. This unconventional test offered a non-invasive way to assess the body's energetic equilibrium and uncover potential health imbalances. While unconventional, this method intrigued me enough to dive deeper. Videos and medical studies on PUBMed shed light on its potential effectiveness. I decided it was worth a try; after all, what did I have to lose?

Personal Experimentation: Tailoring the Testing Method

Armed with this new testing method, albeit modified to suit my needs, I embarked on a personal experiment. My focus was to identify the optimal approach for addressing the persistent swelling in my knee, a hindrance to my daily life.

Intriguing Results: Personal Transformation

To my astonishment, the modified testing method yielded remarkable results. It revealed that I needed to employ the

round paddles on the right side of my head, utilizing specific frequencies and intensities. With the safety of PEMF therapy over any part of the body, including the brain, confirmed, I ventured forth. Remarkably, within just two weeks, the swelling in my knee vanished completely.

A Tentative Conclusion: Confirmation through Further Tests

Yet, skepticism lingered, cautious of coincidence. Eager for further exploration, I extended the same testing method to address my enlarged prostate. After 10 sessions, I observed improved urinary flow, and astonishingly, after 20 sessions, uninterrupted sleep returned. Previously, the struggle to empty my bladder and multiple nightly bathroom trips had been my norm.

The Final Test: Addressing Stenosis

My final test aimed to address stenosis resulting from a Grade 2 spondylolisthesis. This complex condition, where L5 slides forward over the sacrum up to 50 percent, posed a challenge. While it took about 5 months, the outcome was nothing short of astonishing. Pain that had previously kept me from engaging in activities with my children dissipated. Now, I can walk miles without discomfort.

Returning with Confidence: Tailoring Plans for Patients

Filled with confidence, convinced that I had discovered a testing method to unlock the hybrid device's true potential, I returned to the office. My enthusiasm was contagious as I

delved into crafting personalized plans tailored to each patient's unique needs. The impressive results I had experienced personally fueled my anticipation.

Diverse Responses: Reflecting Human Complexity
However, the initial outcomes mirrored past experiences: approximately fifty percent of patients reported no improvement, a third observed positive changes, and roughly twenty percent felt worse.

Recognizing Complexity: Embracing Variation in Responses
Recognizing the intricate nature of human responses, I came to understand that even with personalized therapy, variations in reactions are inevitable. Some individuals might exhibit slower responses than others, and in certain cases, initial sessions could trigger temporary worsening of symptoms. For a more detailed exploration of this phenomenon, refer to the upcoming 'Frequently Asked Questions' section.

Guiding Patients: Setting Expectations
In introducing PEMF therapy to new patients, we ensure clarity by outlining the three potential outcomes: "You might experience immediate improvement, which is truly encouraging. Alternatively, you could initially feel a temporary exacerbation of symptoms, paradoxically indicating positive changes underway. On the other hand, you might not perceive immediate changes, as some individuals require more time to experience noticeable

results." Emphasizing these possibilities, we stress that any temporary discomfort the next day is likely to resolve by day's end. We offer a comprehensive understanding of the underlying reasons, reassuring our patients that this phenomenon is an integral part of their healing journey.

A Unified Goal: Swift Recovery
Amidst this diverse array of responses, our unchanging objective remains: facilitating each individual's journey to recovery as swiftly and seamlessly as possible.

The Outcomes of Our Initial Group of PEMF Patients

Celebrating Success: Sharing Patient Triumphs
The extraordinary outcomes achieved by the first group of patients who underwent our new testing protocol prompted me to take action. These achievements were so remarkable that I felt compelled to immortalize them through video testimonials. The purpose behind these recordings was to spread their success stories far and wide, within our esteemed professional community. Swiftly, I uploaded these videos to my YouTube channel and shared the corresponding link on our dedicated group's message board.

A Spirit of Sharing: Nurturing a Community of Learning

Within our group, a steadfast commitment to knowledge-sharing prevails. Whenever a fellow doctor makes a groundbreaking discovery or gains mastery over a novel technique, an informal gathering is organized. In these gatherings, interested colleagues convene to absorb, learn, and integrate this newfound knowledge. This collaborative approach is deeply ingrained in our group's culture, fostering an environment of perpetual enhancement.

A Network of Interest: Fostering Curiosity and Engagement

Intriguingly, the ripples of curiosity spread widely within our network. Approximately 30 doctors expressed keen interest in delving into the depths of our novel testing method. To facilitate this exchange of wisdom, we converged in Chicago, aligning with a seminar hosted by the manufacturer of the hybrid device pivotal to our practice.

A Shifted Perspective: From Skepticism to Advocacy

Among the attendees was the very doctor who had laid the foundation of our group. Initially skeptical about PEMF therapy due to a less-than-positive experience in the past, his attendance spoke volumes. Despite his reservations, I chose him to be one of the doctors to experience my testing method firsthand. The demonstration catalyzed a transformative shift in his perspective. This transformation prompted him to acquire not one, but six hybrid devices for his clinic, and an additional one for personal use.

Precision in Healing: The Crucial Role of Our Testing Method

In the realm of PEMF therapy, unlocking the full potential of healing hinges on precision. As we explore the intricacies of tailoring each session to the unique needs of individual patients, the significance of employing our testing method becomes clear. This test, a gateway to personalized therapy, is a powerful tool that enables practitioners to determine the correct frequencies and intensities that resonate harmoniously with each patient's distinct energy pathways.

Understanding Individual Resonance

Every individual's body is a symphony of frequencies, with various organs, tissues, and systems vibrating at specific resonant frequencies. These frequencies offer insights into the state of health and balance within the body. By conducting our unique testing method, practitioners can tap into this resonance, identifying the frequencies that promote healing for each patient's unique condition. This individualized approach not only enhances the effectiveness of PEMF therapy but also embraces the holistic nature of healing, addressing the root causes rather than merely alleviating symptoms.

Precision and Personalization

Our unique testing method offers a personalized dimension to PEMF therapy. Rather than adopting a one-size-fits-all approach, this test empowers practitioners to fine-tune therapy sessions according to the patient's needs. By

determining the correct frequencies and intensities, practitioners can optimize the therapy's impact, facilitating cellular repair, enhancing circulation, and igniting the body's innate regenerative processes. This precision-driven approach sets the stage for comprehensive healing, encouraging the body to restore its balance and vitality.

Guiding the Way: Illuminating Insights for Empowerment

Armed with the invaluable insights garnered from this testing method, practitioners become shapers of enlightenment. They guide patients toward a comprehensive understanding of how their bodies respond to these resonant therapies. This journey cultivates an empowering sense of ownership over the healing trajectory. The test's revelations not only refine the efficacy of PEMF therapy but also embrace the core ethos of holistic healing–placing the patient at the epicenter of their expedition and paving the way for profound transformation.

Navigating Frequencies, Forging Healing Paths

In the realm of PEMF therapy, our testing method emerges as a beacon of personalized healing. This method equips practitioners to navigate the intricate realm of vibrational frequencies, forging pathways that align with each patient's distinctive energy blueprint. This approach doesn't just enhance the potency of PEMF therapy; it substantiates the foundational tenets of holistic healing. It positions patients as the driving force behind their healing journey, catalyzing

a paradigm shift in wellness that is nothing short of transformative.

Resonating Beyond Borders: A Ripple of Interest
Soon after our testimonial video found its home on my YouTube channel, an unexpected phenomenon unfolded– an influx of phone calls and emails from doctors beyond our immediate network. Their eagerness to glean insights into our pioneering approach was an unforeseen response, underscoring the burgeoning intrigue surrounding our methodology and the potential reverberations it could bring.

Encountering the Creator of the Hybrid Device
Our testimonial video even managed to capture the attention of the hybrid device's creator. After witnessing the video, he reached out to me with a keen interest in visiting our clinic. Excited by the chance to explore the origins and unique features of this revolutionary device, I warmly welcomed the opportunity. The departure of this device from conventional PEMF technologies intrigued me, and I looked forward to engaging in discussions with its inventor and his wife during their visit.

Upon their arrival, he and his wife graciously treated me to a delightful dinner at a local seafood restaurant. Their down-to- earth demeanor immediately struck a chord with me. Amid the exchange of pleasantries, our conversation naturally veered toward the realm of PEMF therapy and the hybrid device itself. Curious about my journey into the

world of PEMF therapy, he delved into how I initially discovered it, especially at a time when its awareness was even less widespread than it is today. As we chatted, I recounted the experiences and insights that I've shared with you in this book, and he appeared genuinely satisfied with my perspective.

Unveiling the Motivation Behind the Hybrid Device
What sparked my curiosity was the driving force behind the creation of the hybrid device. The first question that arose was: why would someone invest such significant time, dedication, and financial resources into developing a device that was relatively unknown? Especially when most individuals who were aware of PEMF therapy tended to associate it with a popular home therapy device. This was true even among professional athletes.

Challenging Assumptions with Professional Athletes
I distinctly remember a conversation with two members of the Tampa Bay Buccaneers that highlighted this association. As I set up a hybrid device in Buccaneers' therapy room at the request of their head trainer, two players approached me, curious about the new equipment. When I explained that it was a PEMF therapy device, they responded by mentioning the popular home therapy device, implying that the hybrid was comparable to it.

Comparing Intensity and Effectiveness
In the discussion that followed, I emphasized that while both devices emitted PEMFs, the hybrid device was

thousands of times more powerful than a low-intensity home device. As a result, it could yield faster results and address issues that a low-intensity device might not effectively resolve.

Having researched PEMF therapy, they countered with references to studies supporting the efficacy of low-intensity devices. While I acknowledged the potential of low-intensity devices, I stressed that it was an unfair comparison against the capabilities of the hybrid device.

Validating Through Experience

Realizing that demonstrating was more effective than convincing, I proposed a practical solution: if they used the hybrid device three times each week during my two-week stay there, I could substantiate my claims.

Overcoming Resistance

They hesitated and inquired about other NFL players using the hybrid. Confirming that many NFL players did indeed use it, they requested the name of a specific player. I mentioned the leading rusher in the NFL, which prompted one of the players to take immediate action. Dialing his phone, he intended to inquire about the hybrid's effectiveness. As he received no response, he concluded that the player was likely still asleep due to the time difference. Determined, he vowed to call him later that day for an opinion, and if he didn’t have good things to say about the hybrid device, he wouldn’t even try it.

Validation
Evidently, their colleague had spoken highly of the hybrid device's capabilities, prompting both players to express their interest in trying it out. Following two weeks of dedicated usage, both individuals conceded that the hybrid device had greatly outperformed their low-intensity PEMF devices. The endorsement was so strong that my tenure in the Buccaneers' therapy room was extended from two weeks to six weeks.

Unveiling Personal Motivations For The Hybrid
Returning to my conversation with the hybrid's creator, he shared that his motivation was not financial, but personal. He recounted a series of unfortunate events that sent him down this path - a car accident that propelled him through a windshield, triggering excruciating pain, followed by a mugging that inflicted a severe head injury, plunging him into unrelenting agony. He recounts how he tried everything in the medical realm without results. Thus, he turned to alternative methods.

Engineering a Solution
Much like my own journey, he discovered PEMF therapy during his exploration of alternative medicine solutions and was quick to recognize its potential. However, he faced a predicament – the available PEMF devices didn't cater to his specific requirements. The low-intensity options lacked the necessary potency, and the high-intensity ones lacked flexibility. Drawing upon his engineering expertise and

resolute determination, he embarked on a quest to create a device tailored precisely to his needs.

FDA Approval Dilemma

My second inquiry centered on the matter of FDA approval. I was curious about why he hadn't pursued FDA approval for the hybrid device. It seemed apparent that the hybrid was specifically tailored for professional use, aligning perfectly with its intended purpose. Thus, the question arose - why hadn't he sought FDA approval? His response was both candid and enlightening. He delved into the intricate intricacies of the FDA approval process, shedding light on the substantial financial investment and time commitment it demanded. He elaborated on the potential risks this path might pose to his vision for the device. He articulated that seeking FDA approval would impede his ability to enhance the device during the approval process, which might take years. Furthermore, regulatory suggestions might compromise its effectiveness. And even if all went smoothly, the FDA would likely restrict its approval to a single condition, significantly limiting its versatility and potential impact.

In light of all this, he posed a crucial question to me, capturing the essence of his perspective: "Considering everything I've explained, along with the substantial evidence already available demonstrating the safety and effectiveness of PEMF therapy—including numerous double-blind, placebo-controlled medical studies and multiple FDA approvals—would you, in my position, seek FDA approval?"

I shook my head and promptly replied, "Absolutely not! Why go thought all of that just to prove something that's already been established?"

Nothing Ventured, Nothing Gained

In previous chapters, I've guided you through some of the risks I undertook as part of my unwavering dedication to find workable solutions. From making a substantial investment in the groundbreaking hybrid device to developing a testing method that unleashed its potential. These ventures represented significant strides in the direction of alleviating pain and suffering. However, these bold exploits pale in comparison to the daring odyssey undertaken by the visionary mind behind the birth of the hybrid device.

The Power of Determination: Transforming Lives Through Innovation

His journey was one of exploration, ignited by an unwavering faith in a therapeutic approach that held the promise of transforming lives. This conviction kindled the flame that drove him to conceive a device capable of delivering this transformative power with pinpoint precision, transcending the confines of pain and chronic ailments. This pursuit demanded more than mere financial investment; it required an infusion of passion, unwavering dedication, and an indomitable will. His expedition embodies the astonishing potential that emerges when the quest for relief and wellness meets resolute determination.

Emergence of Collective Impact: Freeing Individuals from Pain

The convergence of our collective risk-taking has wielded a seismic impact, setting countless individuals free from the grip of pain and the boundaries of chronic disease. It stands as a living testament to the potency that unfurls when we embrace the unknown and untested, even amid the shadows of uncertainty.

Final Call to Action: Embracing Transformation

As we draw the curtains on this book, I extend to you a compelling challenge. If you find yourself at the crossroads of your journey, having explored every avenue in search of relief from unyielding pain or persistent chronic ailments, the time for action is now. Reach out to our office and take the step to arrange an appointment. In the pursuit of well-being, the potential for transformation is boundless. After all, when the prospect of liberation beckons, what truly is there to lose?

FREQUENTLY ASKED QUESTIONS

What Is PEMF Therapy?

PEMF therapy stands for "Pulsed Electromagnetic Field" therapy. It's a non-invasive approach that involves using electromagnetic fields to stimulate the body's cells, promoting various physiological responses. This therapy aims to improve overall wellness, address pain, and aid in the recovery process for various health conditions. It's thought that these electromagnetic fields can influence cellular functions, such as enhancing circulation, reducing inflammation, and supporting the body's natural healing processes.

How Does PEMF Work?

PEMF therapy, or Pulsed Electromagnetic Field therapy, operates on the principle of electromagnetic fields to interact with the body's cells and tissues. It involves the use of electromagnetic pulses at specific frequencies to generate pulsating magnetic fields. When these magnetic fields pass through the body, they induce small electrical currents within the cells. These currents can stimulate cellular activities and biochemical processes, which in turn can have various effects on the body.

PEMF therapy is thought to influence cell behavior in several ways:

Cellular Resonance: Each cell has its own natural frequency. PEMF devices can be tuned to emit frequencies that match these

natural frequencies, leading to resonance. This resonance can promote optimal cell function and communication.

Improved Blood Flow: PEMF therapy has been shown to enhance blood flow by causing blood vessels to expand and contract rhythmically. This can lead to improved oxygen and nutrient delivery to cells and removal of waste products.

Enhanced Cellular Energy: PEMF therapy may boost the production of adenosine triphosphate (ATP), which is the primary energy molecule in cells. Increased ATP can support cellular repair and overall energy levels.

Reduction of Inflammation: Some studies suggest that PEMF therapy can help reduce inflammation by modulating inflammatory responses at the cellular level. This can be particularly beneficial for conditions like neuropathy where inflammation plays a role.

Stimulation of Healing Processes: The gentle electrical currents induced by PEMF therapy can encourage the healing of tissues, including nerves. This may promote the regeneration of damaged nerves and tissues.

Normalization of Cellular Activity: PEMF therapy can help regulate abnormal cellular processes by influencing ion flow across cell membranes. This can restore normal cellular activities and support overall health.

It's important to note that the exact mechanisms of how PEMF therapy works are still being researched and understood. The effects of PEMF therapy can vary depending on the specific parameters used, including frequency, intensity, and duration of

the sessions. While PEMF therapy has shown promise in various health conditions, including peripheral neuropathy, it's recommended to consult with a healthcare professional before starting any new treatment approach.

What Are Some Of The Benefits Associated With PEMF Therapy?

Pain relief
Improved circulation
Reduced inflammation
Enhanced tissue healing
Accelerated recovery from injuries
Increased cellular oxygenation
Relaxation and stress reduction
Better sleep quality
Enhanced muscle function
Improved range of motion
Reduction in muscle stiffness
Enhanced immune system function
Balancing of neurotransmitters
Improved mood and mental clarity
Increased energy levels
Reduction in swelling
Enhanced wound healing
Promotion of bone healing
Regulation of blood pressure
Support for nerve regeneration
Relief from chronic pain conditions
Reduction in muscle tension
Management of arthritis symptoms
Support for neurological disorders

Enhanced detoxification
Boosted cellular metabolism
Improvement in skin health
Alleviation of migraines and headaches
Support for digestive issues
Enhancement of overall well-being

How does PEMF therapy influence our cells?
Pulsed electromagnetic field (PEMF) therapy has been studied for its effects on human cells, and it is believed to have several potential impacts at the cellular level. Here are some of the effects that PEMF therapy may have on human cells:

Cellular metabolism: PEMF therapy has been suggested to enhance cellular metabolism, which refers to the biochemical processes occurring within cells to generate energy and maintain cellular function. By promoting cellular metabolism, PEMF therapy may potentially support optimal cellular activity and overall cellular health.

Calcium ion influx: PEMF therapy has been shown to influence calcium ion influx in cells. Calcium ions play a crucial role in various cellular processes, including signaling, muscle contraction, and gene expression. Modulating calcium ion levels can impact cellular function and may contribute to the effects of PEMF therapy.

Electromagnetic resonance: PEMF therapy involves the application of electromagnetic fields to the body, and these fields can interact with the charged particles within cells. This interaction can lead to

electromagnetic resonance, where the electromagnetic fields induce vibrations and oscillations within the cells, potentially influencing cellular behavior and signaling pathways.

Gene expression: Studies have suggested that PEMF therapy may modulate gene expression, influencing the activation or suppression of specific genes within cells. This modulation of gene expression can impact various cellular processes and may contribute to the therapeutic effects of PEMF therapy.

Cellular communication and signaling: PEMF therapy has been proposed to influence cellular communication and signaling pathways. It may affect the release and response to various signaling molecules, such as cytokines and growth factors, which play critical roles in cell-to-cell communication and the regulation of cellular processes.

Anti-inflammatory effects: PEMF therapy has been associated with anti-inflammatory effects in some studies. It may help reduce the production of pro-inflammatory molecules and promote a more balanced inflammatory response within cells, potentially contributing to the alleviation of inflammation-related conditions.

Cellular proliferation and differentiation: PEMF therapy has been studied for its potential effects on cellular proliferation (cell division and reproduction) and differentiation (cell specialization). It may influence the growth and differentiation of certain cell types, which can be relevant for tissue repair and regeneration processes.

Oxidative stress and antioxidant activity: PEMF therapy has been suggested to modulate oxidative stress and antioxidant activity within cells. Oxidative stress occurs when there is an imbalance between the production of reactive oxygen species (ROS) and the body's antioxidant defense mechanisms. PEMF therapy may help restore the balance by promoting antioxidant activity and reducing oxidative stress levels within cells.

It's important to note that the exact mechanisms by which PEMF therapy affects human cells are still being investigated, and the specific effects can vary depending on the parameters of the therapy, the type of cells studied, and other factors. Further research is needed to fully understand the cellular responses to PEMF therapy and its clinical implications.

Can Everyone Use PEMF Therapy?

No. While Pulsed Electromagnetic Field (PEMF) therapy is generally considered safe and well-tolerated by most individuals, there are certain groups of people who should exercise caution or avoid using PEMF therapy. It's important to consult with a healthcare professional before starting any new therapy, including PEMF, especially if you fall into any of the following categories:

Pregnant Women: Pregnant women should avoid using PEMF therapy, particularly during the first trimester, as the effects on the developing fetus are not fully understood.

Individuals with Implantable Devices: People with implantable electronic devices such as pacemakers, defibrillators, or cochlear implants should avoid PEMF therapy. The electromagnetic fields could potentially interfere with the functioning of these devices.

Epilepsy and Seizure Disorders: People with a history of epilepsy or seizure disorders should use PEMF therapy cautiously, as the electromagnetic fields could potentially trigger seizures in some individuals.

Organ Transplants: Individuals who have undergone organ transplantation might need to avoid PEMF therapy, as it could potentially affect the transplanted organ or the immune system.

Active Bleeding or Hemorrhage: People with active bleeding, or hemorrhagic conditions should avoid PEMF therapy, as it might interfere with blood clotting mechanisms.

Cancer and Tumor Growth: While some studies suggest potential benefits of PEMF therapy for cancer treatment, individuals with cancer or tumor growth should consult their oncologist before using PEMF therapy, as it might interact with certain treatments.

It's important to note that the safety and effectiveness of PEMF therapy can vary based on factors such as the device's design, frequency, intensity, and duration of use. Before starting PEMF therapy, it's advisable to consult with a qualified healthcare professional who can assess your individual health status and provide guidance on whether PEMF therapy is appropriate for your specific situation.

How Might PEMF Therapy Benefit Someone with Pain?

PEMF therapy can offer several potential benefits to individuals experiencing pain:

Pain Reduction: PEMF therapy is often used to help manage various types of pain, including chronic pain, acute pain, and musculoskeletal discomfort.

Inflammation Reduction: It may help to reduce inflammation in the body, which is a common cause of pain. By reducing inflammation, PEMF therapy can contribute to pain relief.

Enhanced Circulation: Improved blood flow and circulation can promote healing and provide nutrients to the affected area, aiding in pain reduction.

Stimulated Tissue Healing: PEMF therapy can stimulate cells to regenerate and repair, potentially speeding up the healing process and reducing pain associated with injuries.

Muscle Relaxation: It can help relax tense muscles and reduce muscle spasms, leading to pain relief in conditions like muscle strains or tension headaches.

Nerve Pain Relief: PEMF therapy may help alleviate neuropathic pain by promoting nerve cell regeneration and reducing nerve irritation.

Release of Endorphins: It could stimulate the release of endorphins, the body's natural painkillers, providing a sense of relief and well-being.

Reduced Stiffness: For conditions like arthritis or joint pain, PEMF therapy might help reduce stiffness and improve joint mobility, leading to pain relief.

Enhanced Range of Motion: By promoting tissue healing and reducing inflammation, PEMF therapy may lead to an increased range of motion and less pain during movement.

Drug-Free Pain Management: Many individuals seek alternatives to pain medications, and PEMF therapy offers a drug-free approach to pain relief.

Why Do Some People Feel Worse After Their First One Or Two Sessions?

The experience of feeling worse after the first couple of sessions of PEMF (Pulsed Electromagnetic Field) therapy, could be attributed to a phenomenon known as the "healing crisis" or "detoxification reaction." Here's a possible explanation:

Detoxification Process: PEMF therapy is believed to stimulate various processes within the body, including increased circulation and cellular activity. These processes can lead to the release of toxins that were stored in the body's tissues. As the body begins to eliminate these toxins, individuals may experience temporary symptoms such as fatigue, headache, muscle aches, and even a worsening of their existing symptoms. This initial period is often referred to as a detoxification or healing crisis.

Cellular Activation: PEMF therapy works at the cellular level to promote healing and balance. It's possible that as cells become

more active and efficient due to the therapy, they begin to process waste products and toxins more effectively. This sudden increase in cellular activity can lead to the release of accumulated toxins into the bloodstream.

Individual Variability: People's bodies respond differently to therapies, and their individual health conditions, toxin levels, and overall wellness play a role. Some individuals may have a higher toxin load or greater cellular dysfunction, leading to a more pronounced initial reaction.

Adjustment Period: As the body adapts to the changes brought about by PEMF therapy, the initial negative reactions tend to subside over time. With repeated sessions, the body's detoxification pathways become more efficient, and the healing crisis symptoms typically subsides.

Activation of Self-Healing: Over time, PEMF therapy can activate the body's self-healing mechanisms. As these mechanisms become more engaged, the body's natural ability to heal and recover improves, leading to an overall improvement in symptoms.

It's important to note that while some people may experience a temporary worsening of symptoms initially, this is not the case for everyone. Many individuals may notice immediate improvements or gradual relief from their symptoms after starting PEMF therapy. If you're considering PEMF therapy and experience a temporary worsening of symptoms, it's advisable to consult with a healthcare professional who is knowledgeable about PEMF therapy to ensure that the reactions are managed appropriately.

How Many Sessions Will I Need?

Everyone wants to know how many sessions they will need but that can vary widely based on several factors:

Condition Severity: The severity of the condition you're seeking treatment for can influence the number of sessions needed. Chronic and more severe conditions may require more sessions for noticeable improvement.

Individual Response: Each individual's body responds differently to therapies. Some people may experience significant relief after just a few sessions, while others might need more to notice a difference.

Treatment Goals: Your treatment goals also play a role. Are you seeking relief from acute pain, managing a chronic condition, or aiming to improve overall wellness? The intensity and frequency of sessions can be adjusted based on your goals.

Consistency: Consistency matters with PEMF therapy. Regular sessions spaced out over a certain period tend to yield better results compared to sporadic sessions.

Device and Intensity: The type of PEMF device used, its intensity, frequency range, and other parameters can affect the outcome. High-intensity devices might require fewer sessions than low-intensity ones.

Duration of Condition: The longer you've had a condition, the more sessions you might need. Chronic conditions that have been present for a while might take longer to respond.

Overall Health: Your general health, including factors like nutrition, sleep, exercise, and stress management, can impact how your body responds to PEMF therapy.

Combination Therapies: In some cases, PEMF therapy might be used alongside other treatments for enhanced benefits. The combination of therapies can influence the number of sessions needed.

*As a general guideline, if you're dealing with multiple issues, it's advisable to undergo thirty one-hour sessions spread over a period of ten to fifteen weeks using a hybrid device.

How Often Do I Need To Come In For Therapy?
At least twice a week until your issue is resolved. Why? Because consistency is important for the effectiveness of PEMF (Pulsed Electromagnetic Field) therapy. It helps ensure that the therapeutic benefits of the treatment can be maximized and sustained over time. Here's why consistency matters:

Cellular Response: PEMF therapy works by delivering electromagnetic pulses to cells in the body. These pulses influence cellular activity, including the exchange of ions and nutrients. Consistently applying PEMF therapy allows for a cumulative effect on cells, promoting healing, regeneration, and overall wellness.

Biological Rhythms: Many biological processes in the body follow rhythmic patterns. Consistent application of

PEMF therapy can help synchronize these rhythms, contributing to optimal physiological functioning. Regular sessions can support the body's natural rhythms and enhance its ability to respond to therapy.

Tissue Remodeling: PEMF therapy can facilitate tissue remodeling and repair. Consistent exposure to electromagnetic pulses encourages cells to engage in repair processes and remodel damaged tissues. Regular treatments are more likely to support ongoing healing.

Condition Management: For individuals using PEMF therapy to manage chronic conditions or symptoms, consistency is crucial. Many conditions require ongoing management, and consistent therapy can help maintain the improvements achieved over time.

Cumulative Effect: The effects of PEMF therapy are often cumulative. Regular sessions build on each other, creating a gradual improvement in cellular function, circulation, and overall health. Skipping sessions can disrupt this cumulative effect.

Preventing Regression: If therapy is stopped abruptly, there is a possibility that the improvements achieved could regress over time. Consistent therapy helps prevent regression and maintains the progress made.

Adaptation of Cells: Over time, cells can adapt to the stimulus provided by PEMF therapy. Consistent therapy

helps maintain the cells' responsiveness to the treatment and prevents a decrease in effectiveness.

Optimal Response: To achieve the optimal therapeutic response, PEMF therapy should be applied according to the recommended frequency and duration. Consistency in following the recommended treatment plan is essential for achieving the desired outcomes.

Individual Variation: Responses to PEMF therapy can vary from person to person. Some individuals might experience noticeable benefits sooner, while others might require more time. Consistent therapy increases the chances of achieving positive outcomes regardless of individual variation.

In summary, consistent application of PEMF therapy is important because it allows for a sustained and cumulative impact on cells and tissues. Whether used for general wellness or for managing specific conditions, adhering to a consistent treatment regimen can enhance the overall effectiveness of PEMF therapy and contribute to better health outcomes.

How Long Will The Results Last?
The duration of the results obtained from PEMF (Pulsed Electromagnetic Field) therapy can vary based on several factors, including the individual's health condition, the frequency and duration of the therapy sessions, the underlying causes of the condition being treated, and the

maintenance of a healthy lifestyle. Here are some factors to consider when evaluating how long the results of PEMF therapy might last:

1. Health Condition: The nature of the health condition being treated plays a significant role in determining the longevity of the results. Some acute conditions might respond quickly to PEMF therapy, while chronic conditions may require ongoing or periodic sessions to maintain the benefits.

2. Frequency of Treatment: Consistent and regular PEMF therapy sessions are more likely to yield longer-lasting results. Skipping sessions or not following the recommended treatment plan might reduce the sustainability of the effects.

3. Underlying Causes: Addressing the underlying causes of a condition is essential for sustained results. PEMF therapy can provide relief and support, but if the root causes are not managed, the benefits might diminish over time.

4. Maintenance of Lifestyle: A healthy lifestyle that includes proper nutrition, exercise, stress management, and adequate sleep can contribute to the longevity of the results obtained from PEMF therapy. Lifestyle factors can either enhance or detract from the effects of therapy.

5. Chronic Conditions: For chronic conditions, maintenance sessions might be necessary to manage symptoms and maintain the improvements achieved. Some individuals may choose to integrate PEMF therapy as part of their long-term wellness routine.

6. Individual Variation: Responses to PEMF therapy can vary among individuals. Some people might experience long-lasting results, while others might need additional 'maintenance' sessions.
7. Environmental Factors: Environmental factors, such as exposure to toxins or stressors, can influence the sustainability of the results. Minimizing exposure to harmful substances can support the effectiveness of therapy.
8. Combination Therapies: In some cases, combining PEMF therapy with other treatments, such as physical therapy, chiropractic care, or medication, might lead to more durable results.
9. Personal Goals: Personal goals for therapy can impact the duration of results. Some individuals might seek short-term relief, while others aim for long-term management and wellness.
It's important to note that while PEMF therapy may provide benefits, it might not offer permanent solutions for all health conditions. Consultation with a qualified healthcare professional How To Reverse Peripheral Neuropathy provide insights into the expected duration of results based on your specific condition, treatment plan, and health goals. Maintaining open communication with your healthcare provider and following their recommendations may contribute to achieving the best possible outcomes from PEMF therapy.

How Might PEMF Therapy Lessen The Symptoms Of Peripheral Neuropathy?

PEMF therapy may alleviate symptoms of peripheral neuropathy through various mechanisms:

Improved Blood Flow: PEMF therapy can enhance blood circulation, delivering more oxygen and nutrients to nerve cells in the affected area. This improved circulation can help repair damaged nerves and reduce symptoms.

Nerve Regeneration: PEMF therapy may stimulate nerve cell regeneration and growth, helping to repair damaged nerve fibers and improve nerve function.

Pain Reduction: By promoting the release of endorphins and reducing inflammation, PEMF therapy can help alleviate the pain associated with peripheral neuropathy.

Reduced Nerve Irritation: PEMF therapy might help reduce nerve irritation and inflammation, leading to a decrease in the tingling, burning, and numbness often experienced in peripheral neuropathy.

Enhanced Cellular Communication: PEMF therapy's electromagnetic fields may facilitate better communication between nerve cells, promoting healthier nerve signaling and reducing symptoms.

Muscle Relaxation: For cases where peripheral neuropathy leads to muscle stiffness or cramps, PEMF therapy's muscle-relaxing effects could provide relief.

Better Sleep: Improved pain management through PEMF therapy can lead to better sleep quality, which is essential for overall well-being and nerve healing.

Stress Reduction: Stress can exacerbate peripheral neuropathy symptoms. PEMF therapy's ability to induce relaxation and reduce stress can indirectly alleviate symptoms.

Neurotransmitter Balance: PEMF therapy may help regulate neurotransmitter levels, contributing to more stable nerve function and symptom reduction.

How Might PEMF Therapy Benefit Someone With Arthritis In Their Knees?

PEMF therapy has the potential to alleviate symptoms of peripheral neuropathy through various mechanisms:

Improved Blood Flow: PEMF therapy can enhance blood circulation, delivering more oxygen and nutrients to nerve cells in the affected area. This improved circulation can help repair damaged nerves and reduce symptoms.

Nerve Regeneration: PEMF therapy may stimulate nerve cell regeneration and growth, helping to repair damaged nerve fibers and improve nerve function.

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Neurotransmitter Balance: PEMF therapy may help regulate neurotransmitter levels, contributing to more stable nerve function and symptom reduction.

How Might PEMF Therapy Benefit Someone With Urinary Incontinence?

PEMF therapy may offer several potential benefits for individuals dealing with urinary incontinence:

Muscle Stimulation: PEMF therapy's ability to stimulate muscles could be beneficial for strengthening pelvic floor muscles, which play a crucial role in maintaining urinary continence.

Improved Nerve Function: By potentially enhancing nerve cell communication and function, PEMF therapy might contribute to better control over the bladder muscles and reduce involuntary contractions.

Enhanced Blood Circulation: PEMF therapy's effects on blood circulation could help improve the health of tissues and muscles in the pelvic region, aiding in bladder control.

Relaxation of Pelvic Muscles: Tense pelvic muscles can contribute to urinary incontinence. PEMF therapy's muscle-relaxing effects could alleviate tension and improve muscle coordination.

Inflammation Reduction: Inflammation of the bladder or surrounding tissues can worsen urinary incontinence. PEMF therapy's potential to reduce inflammation might help alleviate related symptoms.

Support for Nerve Regeneration: Some studies suggest that PEMF therapy could support nerve regeneration, which might aid in improving bladder control.

Non-Invasive Option: PEMF therapy offers a non-invasive approach to addressing urinary incontinence, potentially reducing the need for more invasive treatments.

Complementary Treatment: When used alongside other therapies such as pelvic floor exercises, dietary changes, and lifestyle modifications, PEMF therapy could provide an additional layer of support for managing urinary incontinence.

Improved Quality of Life: By addressing the underlying factors contributing to urinary incontinence, PEMF therapy might improve an individual's overall quality of life by reducing the impact of this condition on daily activities and self-esteem.

Potential for Reduced Medication Dependence: If PEMF therapy helps improve urinary control, individuals may rely less on medications or other interventions to manage their symptoms.

Explain The Differences Between Harmful and Beneficial EMFs?

Electromagnetic fields (EMFs) are generated by the movement of electrically charged particles. They are present in both natural and man-made environments. EMFs are often categorized into two main types: harmful EMFs and beneficial EMFs.

Harmful EMFs:

Harmful EMFs, also known as non-ionizing radiation, are associated with potential negative health effects when exposure levels are high or prolonged. These types of EMFs are primarily generated by sources such as power lines, electrical appliances, cell phones, Wi-Fi networks, and microwave ovens. Here are some characteristics of harmful EMFs:

Frequency and Intensity: Harmful EMFs are often generated at frequencies that are commonly encountered in daily life, such as radio frequencies and microwaves. Their intensity can vary depending on the source and proximity.

Potential Health Concerns: There is ongoing debate and research regarding the potential health effects of prolonged exposure to harmful EMFs. Some studies suggest a possible link between high exposure to certain types of EMFs and increased risk of cancer, neurological disorders, and other health issues.

Regulation: Many countries have established safety guidelines and exposure limits for harmful EMFs to protect the public from potential health risks. These limits are designed to minimize potential harm.

Beneficial EMFs (PEMF Therapy):
Beneficial EMFs, also known as pulsed electromagnetic fields (PEMFs), are specifically designed to have positive effects on biological systems. PEMF therapy involves applying electromagnetic pulses to the body to promote various health benefits. Unlike harmful EMFs, PEMF therapy is used in controlled settings and has been studied for its potential healing effects. Here are some characteristics of beneficial EMFs, as seen in PEMF therapy:

Specific Frequencies and Intensity: PEMF therapy uses specific frequencies and intensity levels that are thought to interact positively with cells and tissues. These frequencies are carefully chosen based on research and clinical studies.

Biological Response: Beneficial EMFs, when applied correctly, can stimulate cellular activities, enhance circulation, support tissue repair, reduce inflammation, and promote overall wellness.

Controlled Application: PEMF therapy is administered under controlled conditions by trained professionals. The devices used for therapy are designed to provide specific therapeutic benefits without causing harm.

Research and Clinical Studies: Over the years, there has been research into the potential therapeutic effects of PEMF therapy for various conditions, including pain management, wound healing, bone health, and more.

Individualization: The frequencies and parameters used in PEMF therapy can be tailored to the individual's needs, ensuring a personalized approach to treatment.

It's important to note that while there is ongoing research and interest in the potential benefits of PEMF therapy, it's advisable to consult with a healthcare professional before starting any new treatment. Beneficial EMFs used in PEMF therapy should not be confused with the harmful EMFs associated with some common electronic devices.

What Are The Differences Between A Magnet and PEMF Therapy?

Static magnets and Pulsed Electromagnetic Field (PEMF) therapy are both forms of magnetic therapy, but they differ in terms of their mechanisms, applications, and potential health benefits.

Here are the key differences between using a static magnet and PEMF therapy for health benefits:

1. Mechanism of Action:

Static Magnets: Static magnets work by creating a constant magnetic field. The idea is that the magnetic field interacts with the body's own magnetic fields and energy pathways to potentially promote healing and alleviate discomfort.

PEMF Therapy: PEMF therapy involves the use of pulsating electromagnetic fields that change in intensity and direction over time. These pulsed fields are believed to penetrate deeper into tissues and cells, affecting cellular activities and promoting various physiological responses.

2. Strength of Magnetic Field:

Static Magnets: The strength of the magnetic field in static magnets is relatively weaker compared to the intense and dynamic electromagnetic pulses used in PEMF therapy.

PEMF Therapy: PEMF devices are capable of producing stronger magnetic fields that can penetrate tissues more effectively, potentially influencing cellular activities.

3. Applications:
Static Magnets: Static magnets are commonly used for localized applications, such as attaching them to specific body parts. They are often used for managing pain and discomfort.
PEMF Therapy: PEMF therapy can be used for both localized and whole-body applications. It's applied through devices that emit pulsed electromagnetic fields, making it suitable for addressing a wider range of health concerns, including pain, inflammation, bone health, wound healing, and more.
4. Dynamic vs. Static Fields:
Static Magnets: The magnetic field generated by static magnets remains constant and doesn't change over time.
PEMF Therapy: PEMF therapy involves the use of dynamic and pulsating electromagnetic fields that change in intensity and direction, mimicking the body's natural electromagnetic rhythms.
5. Depth of Penetration:
Static Magnets: The magnetic field of static magnets has limited penetration and might primarily affect the skin and superficial tissues.
PEMF Therapy: PEMF therapy's dynamic fields can penetrate deeper into tissues and cells, potentially influencing cellular activities and processes.
6. Research and Clinical Studies:
Static Magnets: While static magnet therapy has been explored, the evidence supporting its effectiveness is relatively limited and controversial.

PEMF Therapy: PEMF therapy has been the subject of more extensive research, with studies investigating its potential benefits for various conditions such as pain management, wound healing, osteoarthritis, and more.

In summary, static magnets and PEMF therapy both involve the application of magnetic fields for potential health benefits. However, PEMF therapy offers a more dynamic and targeted approach with stronger and pulsating electromagnetic fields that can potentially penetrate deeper into tissues and cells. While research is ongoing for both approaches, PEMF therapy has gained more attention in the medical and scientific community due to its versatility and potential for a broader range of health applications. Always consult with a healthcare professional before using any form of magnetic therapy for health benefits.

PEMF MEDICAL STUDIES

ALZHEIMER'S DISEASE

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 5Hz-8Hz) improved visual memory and visuoperceptive functions in patients with Parkinson's disease. 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. The rapid improvement in cognitive functions in response to EMF suggests that some of the mental deficits of AD are reversible being caused by a functional (i.e., synaptic transmission) rather than a structural (i.e., neuritic plaques) disruption of neuronal communication in the central nervous system. - International Journal of Neuroscience PMID: 7960477

Repetitive transcranial magnetic stimulation applied to the dlPFC improves naming performance also in the advanced stages of AD. Moreover, in the severe group the effect is not specific for action naming, as in the case of the mild AD group. These findings suggest that rTMS can affect the intrinsic ability of the brain to restore or compensate for damaged function and may represent an useful new tool for cognitive rehabilitation. - European Journal of Neurology PMID: 19049544

AMYOTROPHIC LATERAL SCLEROSIS (LOU GEHRIG'S DISEASE)

A study of three patients with Amyotrophic Lateral Sclerosis were treated with a pulsed magnetic field administered by a Magnobiopulse apparatus. Given three times a week for approximately 75 sessions to achieve maximum benefits, all three experienced beneficial effects.
A. Bellosi & R. Berget, "Pulsed Magnetic Fields: A Glimmer of Hope for Patients Suffering from Amyotrophic Lateral Sclerosis," Second World Congress for Electricity and Magnetism in Biology and Medicine, 8-13 June 1997, Bologna, Italy.

ANKLE SPRAIN

Acutely sprained ankles represent a frequent and common injury among active duty troops in training, and are a significant source of morbidity with respect to days lost to training. In a randomized, prospective, double blind study of 50 grade I and II (no gross instability) sprained ankles, a statistically significant decrease in edema was noted following one treatment with pulsed electro magnetic field (PEMF) therapy. The application of this modality in acutely sprained ankles could result in significant decreases in time lost to military training. - Military Medicine PMID: 8441490

ARTHRITIS

A total of 33 patients were screened, and 28 patients, aged between 60 and 83 and affected by bilateral knee osteoarthritis, were enrolled in this study. They received PEMF therapy on the right leg for a total of three 30-minute sessions per week for a period of 6 weeks, while the left leg did not receive any treatment and served as control. An intravenous drip containing ketoprofen, sodium clodronate, glucosamine sulfate, calcitonin, and ascorbic acid, for a total volume of 500 mL, was administered during PEMF therapy. At baseline and 3 months post-PEMF therapy, Visual Analog Scale (VAS) was used to assess

knee pain and Western Ontario McMaster Universities Osteoarthritis Index (WOMAC) was used to measure knee pain, stiffness and physical function.
RESULTS:
Changes in VAS and WOMAC scores were calculated for both knees as baseline minus post-treatment. A two sample Student's t-test, comparing change in knee-related VAS pain for PEMF-treated leg (49.8 ± 2.03) vs control leg (11 ± 1.1), showed a significant difference in favor of PEMF therapy ($P < 0.001$). A two sample Student's t-test comparing change in knee-related WOMAC pain, stiffness, and physical function for PEMF-treated leg (8.5 ± 0.4, 3.5 ± 0.2, 38.5 ± 2.08, respectively) vs control leg (2.6 ± 0.2; 1.6 ± 0.1; 4.5 ± 0.5 respectively), also showed a significant difference in favor of PEMF therapy ($P < 0.001$). No adverse reactions to therapy were observed.
CONCLUSION:
The present study shows that PEMF therapy improves pain, stiffness and physical function in elderly patients affected by knee osteoarthritis. PMID: 24106421

Low frequency pulsed electromagnetic field (PEMF) can provide noninvasive, safe and easy to apply method to treat pain, inflammation and dysfunctions associated with rheumatoid arthritis (RA) and osteoarthritis (OA) and PEMF has a long term record of safety. This review focusses on the therapeutic application of PEMF in the treatment of these forms of arthritis. The analysis of various studies (animal models of arthritis, cell culture systems and clinical trials) reporting the use of PEMF for arthritis cure has conclusively shown that PEMF not only alleviates the pain in the arthritis condition but it also affords chondroprotection, exerts antiinflammatory action and helps in bone remodeling and this could be developed as a viable alternative for arthritis therapy. PMID: 20329696

BACK PAIN

Back pain and the whiplash syndrome are very common conditions involving tremendous costs and extensive medical effort. A quick and effective reduction of symptoms, especially pain, is required. Magnetic fields appear to have a considerable and statistically significant potential for reducing pain in cases of lumbar radiculopathy and the
whiplash syndrome. - Neuro Rehabilitation PMID: 12016348

BACK PAIN - LOW BACK

This randomized, double-blind, placebo-controlled clinical trial studied the effectiveness of pulsed electromagnetic therapy (PEMT) in patients with chronic lower back pain. PEMT produced significant pain reduction throughout the observation period compared with baseline values. The percentage change in the NRS score from baseline was significantly greater in the PEMT group than the placebo group at all three time-points measured. The mean revised Oswestry disability percentage after 4 weeks was significantly improved from the baseline value in the PEMT group, whereas there were no significant differences in the placebo group. In conclusion, PEMT reduced pain and disability and appears to be a potentially useful therapeutic tool for the conservative management of chronic lower back pain. -
Journal of International Research PMID: 16749411

We evaluate the efficacy and safety of therapeutic electromagnetic fields (TEMF) on chronic low back pain. Secondary objectives included the investigation of the effects of TEMF on psychometric measures. Both groups improved over time. Although groups were similar during the treatment period, treated subjects (TEMF of 15 mT) improved significantly over

sham treatment during the 2-week follow- up period (20.5% reduction in pain); There were no reported serious adverse events. This study demonstrates that TEMF may be an effective and safe modality for the treatment of chronic low back pain disorders. - Pain Practice PMID: 17714104

BONE DENSITY

To determine the effect of a 72 Hz pulsating electromagnetic field (PEMF) on bone density of the radii of osteoporosis-prone women, the nondominant forearms of 20 subjects were exposed to PEMF 10 h daily for a period of 12 weeks. The data suggest that properly applied PEMFs, if scaled for whole-body use, may have clinical application in the prevention and treatment of osteoporosis. - The Journal of Bone and Mineral Research PMID: 2195843

BONE FRACTURES

A group of 83 adults with ununited fractures were examined for the effects of bone grafting and pulsed electromagnetic fields for this study. Results showed a successful healing rate of 87 percent in the original 38 patients treated with bone grafts and PEMF for ununited fractures with wide gaps, malalignment, and synovial pseudarthrosis. Of the 45 patients that were not successfully treated with PEMF and had bone grafting, when re-treated with pulsing electromagnetic fields, achieved a 93 percent success rate. (I hope you can comprehend this - there was no union, meaning the bone did not heal until they used pulsed magnetic field therapy) PMID: 6752151

BPH (ENLARGED PROSTATE)

Ten patients with BPH, aging 68-78 years old (y.o), were treated for 2 weeks with a very short wave duration, pulsed electromagnetic field at radiofrequencies generated by an ion

magnetic inductor, for 30 min daily, 5 consecutive days per week. There was a significant improvement in clinical symptoms. Follow-up of the patients of this group for one year revealed that results obtained by EMFs treatment
are still remaining. PMID: 21537858

PEMF was performed on 20 dogs affected by BPH. 3 weeks of PEMF produced a significant reduction in prostatic volume (average 57%) without any interference with semen quality, testosterone levels or libido. The efficacy of PEMF on BPH in dogs, with no side effects, suggests the suitability of this treatment in humans and supports the hypothesis that impairment of blood supply to the lower urinary tract may be a causative factor in the development of BPH. PMCID:
4145661

BRONCHITIS

Results of this double-blind, placebo-controlled study indicated that both low-frequency electromagnetic field treatment and treatment with pulsed electromagnetic fields proved effective in patients suffering from chronic bronchitis when coupled with standard drug therapies. Magnetic field treatment consisted of a total of 15 15-20-minute daily exposures.
V.M. Iurlov, et al., "The Efficacy of the Use of Low-Frequency Electromagnetic Fields in Chronic Bronchitis," Voen Med Zh, 3, 1989, 35-36.

CANCER - BLADDER

The study deals with immune status of patients operated for bladder cancer and exposed postoperatively to alternating magnetic field (MF). MF application was followed by higher T- and B-lymphocyte and CD4+, CD16+ cell levels as well as

enhanced T-cell activity; no postoperative complications were registered and tumor relapse rates
were relatively low. The effect was likely to be due to antistressor influence of MF. The procedure may substitute drug therapy for immunocorrection and to avoid recurrence of bladder cancer. - Volpr Onkol PMID: 11544830

CANCER - BREAST TUMORS

The study was concerned with effect of alternating magnetic field (AMF) on immunobiological characteristics of lymphocytes from patients with locally-advanced breast tumors. Patients received infusions of treated autoblood and changes in their immunological status were followed up. Stimulation of T-, B- and NK- cells was observed. Immuno-regulating effect was apparent when autoblood was treated with 50 H/25 mT1 and 100 H/50 mT1. - Volpr Onkol PMID: 15088521

CANCER - CELLS

PEMF promotes the growth of undifferentiated cells but progressively suppresses the growth of more differentiated cells, i.e., PEMF controls cell growth depending on the degree of cell differentiation. This study also shows the potentiality of PEMF as an adjunctive treatment method for malignant tumors. - Bioelectromagnetics PMID: 10653622

No adverse side-effects were reported in an investigation of the antitumor effect of turbulent magnetic field (TMF) carried out as a component of preoperative chemoradiotherapy for breast cancer at the Center's Clinic. The study group included 114 patients with locally advanced tumors(T3, N1-N3, M0). According to the clinical, roentgenological and histological evidence on the end-results, the procedure was highly effective. Also, it was

followed by shorter and less extensive postoperative lymphorrhea. - Volpr Onko PMID: 14976921

CANCER

Results of this study found that prolonged exposure to a 7-tesla uniform static magnetic field for a period of 64 hours inhibited growth of three human tumor cell lines in vitro.
R.R. Raylman, et al., "Exposure to Strong Static Magnetic Field Slows the Growth of Human Cancer Cells in Vitro," Bioelectromagnetics, 17(5), 1996, . 358-363.

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This study examined the effects of a rotational magnetic field on a group of 51 breast cancer patients. Results showed a significant positive response in 27 of them.
N.G. Bakhmutskii, et al., "The Assessment of the Efficacy of the Effect of a Rotational Magnetic Field on the Course of the Tumor Process in Patients with Generalized Breast Cancer," Sov Med, (7), 1991, . 25-27.

Results of this study indicated that pulsed magnetic field stimulation increased the incorporation of antitumor agents into cells, and thus increased antitumor activity shifting the cell cycle to a proliferative from a nonproliferative phase.
Y. Omote, "An Experimental Attempt to Potentiate Therapeutic Effects of Combined Use of Pulsing Magnetic Fields and Antitumor Agents,"Nippon Geka Gakkai Zasshi, 89(8), August 1988, .. 1155-1166.

Results of this study found that 20-30 sessions of magnetotherapy administered preoperatively exhibited antitumor effects in patients suffering from lung cancer.

L.S. Ogorodnikova, et al., “Morphological Criteria of Lung Cancer Regression Under the Effect of Magnetotherapy,” Vopr Onkol, 26(1), 1980, . 28-34.

This study examined the effects of microwave resonance therapy (MRT) in patients suffering from various forms of cancer. Results showed that MRT treatment prior to surgery reduced the spread of cancer-associated conditions and reduced the risk associated with surgery in 87 percent of patients. MRT applied postoperatively had beneficial effects in 68 percent.
D.V. Miasoedov, et al., “Experience with the Use of Microwave Resonance Therapy as a Modifying Factor in Oncological Therapy,” Abstracts of the First All-Union Symposium with International Participation, May 10-13, 1989, Kiev, Ukraine, .. 313-315.

Results of this study proved that the combination of weak pulsed electromagnetic fields with antioxidant supplementation is beneficial in the treatment of patients suffering from tongue cancer, improving speech, pain control, and tolerance to chemotherapy.
U. Randoll & R.M. Pangan, “The Role of Complex Biophysical-Chemical Therapies for Cancer,”Bioelectrochem Bioenerg, 27(3), 1992, 341-346.

Results of this controlled study indicated that treatment with a constant magnetic field significantly improved long-term (3-year) survival time in patients undergoing radiation therapy for cancer of the throat. Constant magnetic field therapy consisted of the application of 300 mT for 30 minutes to tumor and metastasizing regions immediately prior to each irradiation.
V.G. Andreev, et al., “Radiomodifying Effect of a Constant Magnetic Field in Radiation Therapy of Patients with Cancer of the Throat,” Fizicheskaia Meditzina, 4(1-2), 1994,. 92.

Results of this Russian study indicated that the use of whole body eddy magnetic fields, coupled with more conventional cancer therapies (including magnetotherapy) is effective in the treatment of patients suffering from a variety of different malignancies. V. Smirnova, "Anti-Tumorigenic Action of an Eddy Magnetic Field,"Vrach, 2, 1994, . 25-26

This article reports on the case of a 48-year-old-woman with breasT cancer who was treated successfully with magnetotherapy. Infiltration showed a marked decrease following 30 whole body exposures to an eddy magnetic field for 60 minutes. One metastatic node disappeared while the size of others was reduced following 60 such exposures. A total regression of tumor and metastases was seen following the completion of a course of 110 exposures.
N.G. Bakhmutskii, et al., "A Case of Successful Treatment of a Patient with Breast Cancer Using a Rotating Electromagnetic Field," Soviet Medicine, 8, 1991, . 86-87.

This study examined the effects of whole body magnetic fields (16.5-35 G, 50- 165 Hz) on patients suffering from different forms of cancer. Treatment consisted of 15 cycles, each 1-20 minutes in duration, and was coupled with more traditional cancer therapies. Results showed that the magnetotherapy had overall beneficial effects, particularly with respect to improved immune status and
postoperative recovery.
V.A. Lubennikov, et al., "First Experience in Using a Whole-Body Magnetic Field Exposure in Treating Cancer Patients," Vopr Onkol, 41(2), 1995, . 140-141.

CARPAL TUNNEL SYNDROME

PEMF exposure in refractory carpal tunnel syndrome provides statistically significant short and long-term pain reduction and mild improvement in objective neuronal functions. Neuromodulation appears to influence nociceptive-C and large A-fiber functions, probably through ion/ligand binding. - Pain Medicine PMID: 18777606

CARTILAGE

Severe joint inflammation following trauma, arthroscopic surgery or infection can damage articular cartilage, thus every effort should be made to protect cartilage from the catabolic effects of pro- inflammatory cytokines and stimulate cartilage anabolic activities. Previous pre-clinical studies have shown that pulsed electromagnetic fields (PEMFs) can protect articular cartilage from the catabolic effects

CHRONIC PAIN

Specific pulsed electromagnetic fields (PEMFs) have been shown to induce analgesia (antinociception) in healthy human volunteers. These findings provide some initial support for the use of PEMF exposure in reducing pain in chronic pain populations and warrants continued investigation into the use of PEMF exposure for short-term pain relief. - Pain Research & Management PMID: 16770449

DENTAL PAIN

Two hours of exposure to a weak, oscillating magnetic fields induced a significant decrease in three parameters (dental sensory and cutaneous pain and tolerance thresholds), whereas the other two parameters showed a similar tendency. When the same subjects were exposed to a sham treatment, only marginal, nonsignificant variations in all parameters were observed. These results represent the first piece of evidence that weak alterations

of the magnetic field may induce hyperalgesia in humans. - Bioelectromagnetics PMID:8554630

DEPRESSION

This review article examined the literature concerning the use of transcranial magnetic stimulation in the treatment of depression. Results showed the high-frequency, repetitive transcranial magnetic stimulation treatment to be an effective, side-effect free therapy for depression that may hold promise for treating related psychiatric disorders as well. M.T. Kirkcaldie, et al., Transcranial Magnetic Stimulation as Therapy for Depression and Other Disorders." Aust N Z J Psychiatry, 31(2), April 1997, . 264- 272.

Noting that there is good reason to believe the pineal gland is a magnetosensitive system and that application of magnetic fields in experimental animals has a similar effect to that of acute exposure to light with respect to melatonin secretion, the authors propose that magnetic treatment could be a beneficial new therapy for winter
depression in humans.
R. Sandyk, et al., "Magnetic Felds and Seasonality of Affective Illness: Implications for Therapy," International Journal of Neurosci, 58(3-4), June 1991, . 261-267.

This review article notes that transcranial magnetic stimulation has been shown to elicit antidepressant effects, electically stimulating
deep regions of the brain.
C. Haag, et al., "Transcranial Magnetic Stimulation. A Diagnostic Means from Neurology as Therapy in Psychiatry?" Nervenarzt, 68(3), March 1997, . 274-278.

In this theoretical paper, the author argues that deep, low-rate transcranial magnetic stimulation can produce therapeutic effects equivalent to those of electroconvulsive therapy but without the
dangerous side effects.
T. Zyss, "Will Electroconvulsive Therapy Induce Seizures: Magnetic Brain Stimulation as Hypothesis of a New Psychiatric Therapy," Psychiatr Pol, 26(6), November-December 1992, . 531-541.

This study examined the effects of millimeter wave (MW) therapy as a supplemental treatment in patients suffering from various types of depression. MW therapy involved the use of a "Yav'-1? apparatus (5.6 mm wavelength, 53 GHz), and consisted of up to 60 minutes of exposure per day, 2 to 3 times per week, for a total of as many as 15 exposures. Results showed that combined MW/ conventional treatment produced a complete recovery in over 50 percent of cases studied, a significant improvement in 41 percent, and some improvement in 8 percent. Recovery rates among controls (conventional treatment only) were 4, 48, and 41 percent, respectively.
G.V. Morozov, et al., "Treatment of Neurotic Depression with a Help of Extremely High Frequency Electromagnetic Radiation," Zh Nevropatol Psikhiatr Im S S Korsakova, 96(6),1996, . 28-31.

Results of this study led researchers to conclude that patients suffering from major depression experienced a significant reduction of depressive symptoms following treatment with transcranial magnetic stimulation coupled with standard medication relative to patients taking the medicine. This was true after just three TMS treatments.

Conca, et al., "Transcranial Magnetic Stimulation: A Novel Antidepressive Strategy?" Neuropsychobiology, 34(4), 1996, . 204-207.

DERMATITIS

This study examined the effects of conventional treatments combined with millimeter wave (MW) therapy (54- to 70-GHz frequency, 8-15 daily exposures of 15-30 minutes each) on patients suffering from atopic dermatitis. Results indicated that the MW therapy was well- tolerated all patients, with the rash generally regressing after 7-8 exposures. Marked recovery was seen among 78 percent of patients receiving the combination treatments. Two-year follow-up showed a 23-percent relapse rate among combination patients, compared to 54 percent among controls.

V.P. Adaskevich, "Effectiveness of the Use of Millimeter-Range Electromagnetic Radiation in Complex Treatment of Atopic Dermatitis

Patients," Millimetrovie Volni v Biologii I Meditcine, (3), 1994, . 78-81

DIABETES

In this study, 320 diabetics received impulsed magnetic field treatment while 100 diabetics (controls) received conservative therapy alone. Results showed beneficial effects with respect to vascular complications in 74 percent of the patients receiving magnetotherapy combined with conservative methods, compared to a 28-percent effectiveness rate among controls.

I.B. Kirillovm, et al., "Magentotherapy in the Comprehensive Treatment of Vascular Complications of Diabetes Mellitus," Klin Med, 74(5), 1996, . 39-41.

This study involving 72 diabetics with purulent wounds found that
magnetic fields aided healing significantly.
R.A. Kuliev & R.F. Babaev, "A Magnetic Field in the Combined Treatment of Suppurative Wounds in Diabetes Mellitus," Vestn Khir I I I Grek, 148(1), January 1992, . 33-36.

DIABETIC NEUROPATHY/ANGIPATHY

Significant improvement of symptoms, and of all registered parameters of peripheral circulation was established after the therapy. High-frequency pulsating electromagnetic field is recommended for the treatment of diabetic angiopathy. In patients with neuropathic changes it can be used as an introduction procedure. Srpski arhiv za celokupno lekarstvo PMID: 7725151

This study demonstrates that pulsed electromagnetic fields are able to accelerate wound healing under diabetic and normal conditions by up- regulation of FGF-2-mediated angiogenesis. They also prevented tissue necrosis in response to a standardized ischemic insult, suggesting that noninvasive angiogenic stimulation by pulsed electromagnetic fields may be useful to prevent ulcer formation, necrosis, and amputation in diabetic patients. - Plastic and Reconstructive Surgery PMID: 18176216

DUCHENNE-ERB DISEASE

This study examined the effects of electromagnetic fields in the treatment of 5- year-old children suffering from Duchenne-Erb disease. Children were exposed to either UHF or DMW therapy for 8-12 minutes per day on alternating days over a period of approximately 10 days. Following the electromagnetic fields course, children received mud applications on the collar area

and injured extremity. Results showed that treatment decreased contractures in shoulder and elbow joints, increased mobility and muscle strength, and improved general function of the arm.
A.D. Burigina, et al., "Electromagnetic Waves in Complex Therapy of Children with Birth Trauma: Effects of Ultra-High-Frequency Electric Fields on Central Hemodynamics and the Shoulder Plexus," Vopr Kurortol Fizioter Lech Fiz Kult, (4),1992, 35-38.

ENDOMETRIOSIS

This study found that a combined treatment consisting of magnetic-infrared-laser therapy (10-15 min/day ever other day over a period of 10-14 exposures, then repeated in 2-3 months) and conventional drug therapy proved highly effective in women suffering from endometriosis.
M. Damirov, et al., "Magnetic-Infared-Laser Therapeutic Apparatus (MILTA) in Treatment of Patients with Endometriosis," Vrach, 12, 1994, . 17-19.

ENDOMETRITIS

Results of this study found that the administration of constant magnetic field in combination with other treatment modalities led to significant beneficial effects in patients suffering from acute
endometritis following abortion.
V.M. Strugatskii, et al., "A Permanent Magnetic Field in the Combined Treatment of Acute Endometritis After an Artificial Abortion," Vopr Kurortol Fizioter Lech Fiz Kult, (6), November-December 1996, 21-24.

EPILEPSY

This article reports on the cases of three patients with partial seizures who received treatment with external artificial magnetic

fields of low intensity. Such treatment led to a significant attenuation of seizure frequency over a 10-14- month period.
P.A. Anninos, et al., "Magnetic Stimulation in the Treatment of Partial Seizures," International Journal of Neurosci, 60(3-4), October 1991, . 141-171.

Experimental results indicated that the administration of modulated electromagnetic fields of 2-30 Hz suppressed epilepsy in rats.
G.D. Antimonii & R.A. Salamov, "Action of a Modulated Electromagnetic Field on Experimentally Induced Epileptiform Brain Activity in Rats," Biull Eksp Biol Med, 89(2),February 1980.

This review article cites one study in particular in which results showed that pretreatment with 30 minutes of exposure to a 75-mT pole strength, DC-powered magnetic field significantly prevented experimentally induced seizures in mice.
M.J. McLean, et al., "Therapeutic Efficacy of a Static Magnetic Device in Three Animal Seizure Models: Summary of Experience," Second World Congress for Electricity and Magnetism in Biology and Medicine, 8-13 June 1997, Bologna, Italy.

This double-blind, placebo-controlled study examined the effects of 2- hour exposure to weak magnetic fields (0.2-0.7 G, irregularly oscillating 0.026-0.067 Hz) produced 3 pairs of orthogonal Helmholtz coils on pain perception in healthy subjects. Results showed that magnetic treatment significantly reduced the perception of pain.
F. Sartucci, et al., "Human Exposure to Oscillating Magnetic Fields Produces Changes in Pain Perception and Pain-Related Somatosensory Evoked Potentials," Second World Congress for

Electricity and Magnetism in Biology and Medicine, 8-13 June 1997, Bologna, Italy.

This article reports on the case of a severe epileptic who experienced a significant lessening of behavior disturbances and seizure frequency following treatment with low-frequency, external artificial magnetic
fields.
R. Sandyk & P.A. Anninos, "Magnetic Fields Alter the Circadian Periodicity of Seizures," International Journal of Neurosci, 63(3-4), April 1992, . 265-274.

ERECTILE DYSFUNCTION

Combined treatment with local negative pressure and pulsating magnetic field conducted in 116 patients with erectile dysfunction aged 20-60 years produced optimal treatment results. Recovery and improvement of the erectile function were achieved in 85.7% patients given local vacuum magneto-therapy. - Vopr Kurortol Fizioter Lech Fiz Kult PMID: 17882824

An effect was studied of appliances for magneto-therapy on sexual function of 105 men presenting with sexual problems. A total of 96 sexological patients were examined according to a general program, to study placebo-effect. The magnetic field beneficial effect was recordable in 70-80 % of the patients, that of placebo in 33 % men. It is suggested that augmentation of sexual activity is associated with an increase in cavernous blood flow. - Lik Sprava PMID: 8819933

FIBROMYALGIA

Exposure to a specific pulsed electromagnetic field (PEMF) has been shown to produce analgesic (antinociceptive) effects in

many organisms. In a randomized, double-blind, sham-controlled clinical trial, patients with either chronic generalized pain from fibromyalgia (FM) or chronic localized musculoskeletal or inflammatory pain were exposed to a PEMF (400 microT) through a portable device fitted to their head during twice-daily 40 min treatments over seven days. PEMF may be a novel, safe and effective therapeutic tool for use in at least certain subsets of patients with chronic, nonmalignant pain. -
Pain Research & Management PMID: 18080043

GASTRODUODENITIS

Results of this study indicated that treatment with decimeter-band electromagnetic fields improved motor function of the stomach and reduced dyspepsia and pain in children suffering from chronic gastroduodenitis. Treatment made use of the "Romashka" apparatus (a cylinder applicator, 100 mm in diameter, power of 6-8 W) applied to the gastroduodenal region, and consisted of 6-12 minute exposures every other day for a total of 8-12 exposures.
L.M. Petrukhina, et al., "Effect of a Decimeter Wave Electromagnetic Fields on the Motor Function of the Stomach in Children with Strong Gastroduodenitis," Vopr Kurortol Fizioter Lech Fiz Kult, (1),1987, . 54-56.

This controlled study examined the effects of sinusoidally modulated currents (100 Hz) coupled with conventional therapy in children suffering from chronic gastroduodenitis. Children received 8-10 exposures lasting between 6 and 10 minutes. Results showed that the treatment reduced inflammation in 72 percent of patients relative to just a 45-percent rate among controls. About 77 percent of treatment patients experienced elimination of gastro-esophageal and duodeno-gastral refluxes, compared to 29 percent of controls.

O.V. Bukanovich, et al., “Sinusoidally-Modulated Currents in the Therapy of Chronic Gastroduodenitis in Children,” Vopr Kurortol Fizioter Lech Fiz Kult, 2, 1996, . 22-26.

General Results of this study indicated that the optimal frequency of pulsed magnetic fields ranges between 10.0 and 25.0 Hz in the treatment of chronic inflammatory conditions of the locomotor apparatus, ischemia of the blood vessels of the lower extremities, dyspeptic syndrome, lactation mastitis, and other diseases. Treatment proved best when the therapeutic cycle was repeated after a 2-3 month period.
L. Navratil, et al., “Possible Therapeutic Applications of Pulsed Magnetic Fields,” Cas Lek Cesk, 132(19),October 11, 1993, . 590-594.

This article reviews the use of magnetotherapy in Czechoslovakia. Noting that this modality has been used for more than a decade, the author states that magnetotherapy has been shown to be effective in treating rheumatic diseases, sinusitis, enuresis, and ischemic disorders of the lower extremities. Positive findings have also been shown with respect to multiple sclerosis and degenerative diseases of the retina.
J. Jerabek, “Pulsed Magnetotherapy in Czechoslovakia–A Review,” Rev Environ Health, 10(2), April-June 1994, . 127-134.

This review article notes that pulse-type electromagnetic fields (PEMF) are the most frequently used type of electromagnetic therapy. Another form is pulsed radio frequency; PRF therapy generally includes daily sessions of 30-minute exposure and is primarily used in cases of pain and edema, with results being apparent quickly when the therapy is effective. PEMF treatment

is most successful when used in bone healing, with results occurring over a longer period of time.
A.A. Pilla, "State of the Art in Electromagnetic Therapeutics: Soft Tissue Applications," Second World Congress for Electricity and Magnetism in Biology and Medicine, 8-13 June 1997, Bologna, Italy.

This study examined the effects of electromagnetic fields administered over a period of 10 days on 354 patients suffering from various orthopedic conditions. Results showed the effects to be positive, with the greatest benefit experienced among patients with acute lesions.
G. Annaratone, et al., "Magnetotherapy in Clinical and Ambulatory Practice," Minerva Med, 74(14-15), April 7, 1983, . 823-833.

GLAUCOMA

In this study, patients with primary open-angle glaucoma with compensated intraocular pressure were administered magnetotherapy using an ATOS device with 33-mT magnetic field induction. The procedure was administered to a patient in a sitting posture with a magnetic inductor held before the eye. Sessions lasted 10 minutes and each course included 10 sessions. Following 4-5 months of therapy, results showed improved vision acuity 0.16 diopters, on an average of 29 out of 30 eyes with vision acuity below 1.0.
Bisvas, et al., "Possibilities of Magnetotherapy in Stabilization of Visual Function in Patients with Glaucoma," Vestn Oftalmol, 112(1), Jauary-March 1996, p. 6-8.

HAIR LOSS

This double-blind, placebo-controlled study examined the effects of pulsed electromagnetic fields on hair loss in men

suffering from male pattern baldness. PEMF exposures were administered to the head for 12 minutes and were given weekly or twice weekly over a period of 36 weeks. Results found the PEMF treatment both prevented hair loss and promoted regrowth without side effects.
W.S. Maddin, et al., "The Biological Effects of a Pulsed Electrostatic with Specific Reference to Hair: Electrotrichogenesis," International Journal of Dermatology, 29(6), 1990, p. 446-450.

HEADACHE

Results of this double-blind, placebo-controlled study demonstrated that the administration of a pulsed magnetic field for less than one hour to headache patients produced significant beneficial effects, as shown subjective patient reports, as well as EEG activity.
O. Grunner, et al., "Cerebral Use of a Pulsating Magnetic Field in Neuropsychiatry Patients with Long-term Headache," EEG EMG Z Elektroenzephalogr Verwandte Geb, 16(4),December 1985, p. 227-230

This article reports on the case of an acute migraine patient who was successfully treated with external magnetic fields.
R. Sandyk, "The Influence of the Pineal Gland on Migraine and Cluster Headaches and Effects of Treatment with picoTesla Magnetic Fields," International Journal of Neurosci, 67(1-4),November- December 1992, p. 145-171.

This article examined the effects of millimeter wave therapy in the treatment of 107 patients suffering from headaches of varying causes. Treatment consisted of the Nao-Hu, Bai-Huei, and Hua-Chai acupuncture points being exposed to 5.6- and 4.9-mm wavelengths via the use of "Yav'-1-5.6? or

"Electronka-KVCh" devices, respectively. Exposure lasted up to 60 minutes per day over a course of 10 days. All patients experienced positive results following 3-5 exposures. After one year, 48 percent of patients remained free of headaches, with a significant decrease in another 41 percent.
B.M. Popov & T.A. Al'shanskaya, "Use of Traditional and Non-traditional Methods in the Treatment of Headache," Millimeter Waves in Medicine and Biology. Digest of Papers of the 11th Russian Symposium with International Participation,April 21-24, 1997, Zvenigorod, Moscow Region, Russia, p. 68-71.

In this study, 90 headache patients were treated with pulsating electromagnetic fields via large coils to the body for 20 minutes per day for a total of 15 days. Results found the treatment to be either excellent or good for those patients suffering from migraine, tension, and/or cervical headaches. Patients experiencing post-traumatic or
cluster headaches did not experience such benefits.
A. Prusinksi, et al., "Pulsating Electromagnetic Field in the Therapy of Headache," Journal of Bioelectr., 7(1), 1988, p. 127-128.

HEART DISEASE

Results of this study found that the addition of magnetotherapy to the treatment of patients suffering from ischemic heart disease and osteochondrosis led to clinical improvements.
I.Rodin, et al., "Use of Low-Intensity Eddy Magnetic Field in the Treatment of Patients with Skin Lymphomas," Voen Med Zh, 317(12), 1996, . 32-34.
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HEART RATE VARIABILITY

Exposure to PEMF for 20 minutes resulted in more rapid recovery of heart rate variability, especially in the very low frequency range after physical strain. The study also showed the moderating influence of the subjects' constitutional VLF power on their response to PEMF treatment. These findings have since been replicated in a clinical study and should be taken into consideration when PEMF treatment is chosen. - European Journal of Applied Physiology PMID: 17674028

HERNIATED DISK

This double-blind, placebo-controlled study examined the effects of magnetotherapy in patients following herniated disk surgery. Results showed that 52 percent of patients receiving the treatment compared to 30 percent of controls reported being free of symptoms at the time of hospital release.
K. Perjes, et al., "Effect of Magnetotherapy on Recovery After Herniated Disk Surgery," Hungarian Symposium on Magnetotherapy, 2nd Symposium, May 16-17, 1987, Szekesfehervar, Hungary, p. 159-162

HIP PROBLEMS

This double-blind study examined the effects of pulsed electromagnetic fields on loosened hip prostheses. Results showed an increase of bone density in all patients receiving PEMF treatment compared to only 60 percent of controls. The authors argue such findings suggest PEMF elicits early bone reconstruction, which enhances early weight bearing.
G. Gualtieri, et al., "The Effect Pulsed Electromagnetic Field Stimulation on Patients Treated of Hip Revesions with Trans-Femoral Approach," Second World Congress for Electricity and Magnetism in Biology and Medicine,8-13 June 1997, Bologna, Italy.

JOINT DISEASE

Results of this 11-year study involving 3014 patients found pulsed magnetic field treatment at low frequencies and intensities to be a
highly effective, side-effect free therapy for joint disease.
E. Riva Sanseverino, et al., "Therapeutic Effects of Pulsed Magnetic Fields on Joint Diseases," Panminerva Med, 34(4), October- December 1992, p.187-196.

KIDNEY PROBLEMS

This review article notes that placebo-controlled studies have shown positive results concerning the use of pulsed magnetic field therapy in the treatment of secondary chronic pyelonephritis.
V.A. Kiyatkin, "Pulsed Magnetic Field in Therapy of Patients with Secondary Chronic Pyelonephritis," Second World Congress for Electricity and Magnetism in Biology and Medicine,8-13 June 1997,Bologna, Italy.

INFLAMMATION

It is well known that electromagnetic fields (EMFs) can induce repair of non-healing bone fractures. It is generally believed that non- invasive, EMF therapy might have a broad, albeit currently unrecognized clinical potential. Since T cells are key modulators of inflammation, the development of EMF based therapeutic devices to regulate their activity can be expected to provide important tools to treat numerous human inflammatory diseases such as psoriasis and arthritis. - Biomedical Sciences Instrumentation PMID: 10834201

KNEE PAIN

Low-amplitude, extremely low frequency magnetic fields are safe and effective for treating patients with chronic knee pain due to osteoarthritis. Reduction in pain after a treatment session was significantly greater in the magnetic field-on group (46%) compared to the magnetic field-off group (8%). - Alternative Therapies in Health and Medicine PMID: 11565402

KNEE ARTHRITIS

In patients with symptomatic osteoarthritis of the knee, PEMF treatment can reduce impairment in activities of daily life and improve knee function. - Wiener Klinische Wochenschrift PMID: 12602111

LUMBAR FUSION

Sixty-one randomly selected patients who underwent lumbar fusion surgeries for discogenic low back pain between 1987 and 1994 were retrospectively studied. All patients had failed to respond to preoperative conservative treatments. Forty-two patients received adjunctive therapy with pulsed electromagnetic field (PEMF) stimulation, and 19 patients received no electrical stimulation of any kind. Average follow-up time was 15.6 months postoperatively. Fusion succeeded in 97.6% of the PEMF group and in 52.6% of the unstimulated group. The use of PEMF stimulation enhances bony bridging in lumbar spinal fusions. Successful fusion underlies a good clinical outcome in patients with discogenic low back pain. - Advances in Therapy PMID: 11010056

LUNG DISEASE

This study examined the effects of low-frequency magnetic fields coupled with conventional therapies in rats suffering from inflammatory lung disease. Results showed that rats receiving the magnetic fields experienced significant reductions in lung

abscesses and associated symptoms, and similar beneficial effects were seen among a group of 165 human patients receiving comparable treatment.
L.V. Iashchenko, "Low-Frequency Magnetic Fields in the Combined Therapy of Inflammatory Lung Diseases," Probl Tuberk, 3, 1988, p.53-56.

LUPUS ERYTHEMATOSUS

This review article examined the data concerning impulsed magnetic fields in the treatment of lupus erythematosus. Studies indicate that the treatment can be beneficial due to its anti-inflammatory and analgesic effects, its positive action on microcirculation, and immunological reactivity.
I.V. Khamaganova, et al., "The Use of a Pulsed Magnetic Field in the Treatment of Lupus Erythematosus," Ter Arkh, 67(10), 1995, p. 84-87.

MIGRAINE/HEADACHES

In the active-treatment group, all assessed criteria were significantly improved at the end of the migraine/headache study. 76% of active-treatment patients experienced clear or very clear relief of their complaints. Only 1 placebo-patient (2.5%) felt some relief; 8% noted slight and 2% reported significant worsening of symptoms. No side effects were noted. - Advances in Therapy PMID: 11571822

Ten of the 22 subjects who had actual exposure received 2 additional weeks of actual exposure after their initial 1-month follow-up. All showed decreased headache activity (50% good, 38% excellent). Thirteen subjects from the actual exposure group elected not to receive additional exposure. Twelve of them showed decreased headache activity by the second month (29%

good, 43% excellent). Eight of the subjects in the placebo group elected to receive 2 weeks of actual exposure after the initial 1-month follow-up with 75% showing decreased headache activity (38% good, 38% excellent). In conclusion, exposure to pulsing electromagnetic fields for at least 3 weeks is an effective, short-term intervention for migraine, but not tension headaches. - Headache PMID: 11279973

MULTIPLE SCLEROSIS

There is a growing literature on the biological and clinical effects of pulsed electromagnetic fields. Some studies suggest that electromagnetic therapies may be useful in the treatment of chronic illnesses. This study is a follow-up to a placebo controlled pilot study in which multiple sclerosis (MS) patients exposed to weak, extremely low frequency pulsed electromagnetic fields showed significant improvements on a composite symptom measure. Evidence from this randomized, double-bind, placebo controlled trial is consistent with results from smaller studies suggesting that exposure to pulsing, weak electromagnetic fields can alleviate symptoms of MS. - Alternative Therapies in Health and Medicine PMID: 12868251

Fatigue is the most common symptom of multiple sclerosis. 75%-90% of patients with multiple sclerosis report having fatigue, and 50%-60% describe it as the worst symptom of their disease. Fatigue is significantly associated with reduced quality of life and is also a major reason for unemployment, especially for patients with otherwise minor disability. There is evidence that pulsing electromagnetic fields may improve fatigue associated with multiple sclerosis. - Wien Med Wochenschr. PMID: 12658965

Recent clinical reports have suggested that treatment with extremely weak magnetic fields (MF) in the picoTesla range is an efficacious modality for the symptomatic therapy in patients with multiple sclerosis (MS) during the remission and exacerbation periods of the disease. The report attests to the unique efficacy of extremely weak MF in the symptomatic treatment of patients with MS including those patients with a chronic progressive course of the disease and supports the hypothesis that dysfunction of synaptic conductivity due to neurotransmitter deficiency specifically of serotonin rather than demyelination underlies the neurologic deficits of the disease. - International Journal of Neuroscience PMID: 8063544

MUSCLE INJURY

This study examined the effects of pulsed electromagnetic fields on recovery following muscle injury in rats. Results showed that both pulsed and constant magnetic fields were equally effective, with the constant field being more intense.

I.E. Detlav, The Influence of Constant and Pulsed Electromagnetic Fields on Oxidation Processes in Muscle, in I.E. Detlav, (ed.),

Electromagnetic Therapy of Injuries and Diseases of the Support-Motor Apparatus. International Collection of Papers, Riga, Latvia: Riga Medical Institute, 1987, p. 12-16.

MYOFASCIAL PAIN

The repetitive magnetic stimulation (rMS) group showed a significant improvement in VAS, NPDVAS, algometry, as well as in the characteristics of the therapy device after conclusion of treatment. Improvements in the ROM were also present in rotation and controlateral bending. This improvement persisted after 1 month. On the other hand, the placebo group did not show any significant improvement in the tests considered. The

results of this study show that peripheral repetitive magnetic stimulation (rMS) may have positive short- and medium-term therapeutic effects on myofascial pain. -
Clinical Neurophysiology PMID: 12559244

NERVE DAMAGE

This controlled study found that exposure to pulsed electromagnetic fields enhanced the speed and degree of peripheral nerve regeneration twofold in rats with experimentally severed sciatic
nerves.
H. Ito C.A. Bassett, Effect of Weak, Pulsing Electromagnetic Fields on Neural Regeneration in the Rat, Clin Orthop, (181), December 1983, p. 283-290.

Results of this study indicated that the use of pulsed electromagnetic fields on experimentally divided and sutured nerves in rats sped up regeneration of damaged nerves and the time it took for limb use to be recovered.
A.M. Raji, An Experimental Study of the Effects of Pulsed Electromagnetic Field (Diapulse) on Nerve Repair, Journal of Hand Surg, 9(2), June 1984, p. 105-112.

This study examined the effects of a Soviet Polyus-1 low-frequency magnet therapy device used to administer approximately 10 mT for approximately 10 minutes in patients with optic nerve atrophy. Patients underwent 10-15 sessions per course. Results showed that vision acuity in patients with low acuity values (below 0.04 diopters) improved in 50 percent of cases. It was also found that the treatment
improved ocular blood flow in cases of optic nerve atrophy. Optimal benefits were experienced after 10 therapy sessions.

L.V. Zobina, Effectiveness of Magnetotherapy in Optic Nerve Atrophy. A Preliminary Study, Vestn Oftalmol, 106(5), September-October 1990, p. 54-57

NEUROLOGICAL DISORDERS

This article summarizes clinical results obtained the authors in using pulsed electromagnetic fields (Gyuling-Bordacs device) in the treatment of neurological and locomotor disorders among a group of 148 patients in a hospital setting over a period of 3 years. The authors claim that 58-80 percent of such patients experienced benefits of some kind over the course of magnetotherapy.

G. Terlaki, Clinical Experiences Magnetotherapy, Hungarian Symposium on Magnetotherapy, 2nd Symposium, 16-17 May 1987, Szekesfehervar, Hungary, p. 175-179.

This study examined the effects of magnetotherapy on patients suffering from nervous system diseases. Treatment consisted of 10-12 6-minute exposures (10- 20 kG, 0.1-0.6 Hz). Results indicated
beneficial effects in 25 of the 27 patients receiving the treatment.

A.A. Skorometz, Magnetic Impulse Therapy of Patients with Spondylogenic Diseases of the Nervous System, Fizicheskaia Meditzina, 3(1-2), 1993, p. 41-43.

Results of this study found that the use of magnetic fields (30-35 mT, 10 and 100 Hz) produced beneficial effects in 93 percent of patients suffering from nerve problems.

A.G. Shiman, Use of Combined Methods of agnetoelectrotherapy in the Treatment for Polineuropathies, Vopr Kurortol Fizioter Lech Fiz Kult, (5), 1993, p, 38-41.

NEURALGIA

Pulsed radiofrequency treatment has been described as a minimal invasive alternative to radio-frequency thermocoagulation for the management of chronic pain syndromes. We present here our first five high-risk patients with idiopathic trigeminal neuralgia who were treated with pulsed radiofrequency after multidisciplinary assessment; with a mean follow-up of 19.2 months (range 10-26). These patients were at high risk due to age, co-morbidities or previous interventional and surgical treatments. An excellent long-term effect was achieved in three of the five patients, a partial effect in one patient and a short- term effect in one patient. No neurological side effects or complications were reported. - International Association for the Study of Pain PMID: 12927617

NEUROPATHY

Ilioinguinal neuropathy is a rare but disabling condition. The condition may arise spontaneously or in the setting of pelvic surgery. To date, most therapeutic options have been limited to neuropathic pain medications, anti-inflammatory medications, nerve blocks with local anesthetics, or neurectomy. Long-term results of non-surgical interventions are fair at best. Pulsed radio frequency lesioning may be a good treatment for chronic ilioinguinal neuropathy in cases refractory to conservative management. - Journal of Hernias and Abdominal Wall Surgery PMID: 17273814

The largely unsatisfactory results reported for the pharmacological treatment of diabetic neuropathy has spurred the search for alternative therapies. Frequency-modulated

electromagnetic neural stimulation (FREMS) induced a significant reduction in daytime and night-time VAS pain score (all $p<0.02$). Furthermore, FREMS induced a significant increase in sensory tactile perception, as assessed by monofilament; a decrease in foot vibration perception threshold, as measured by a biothesiometer; and an increase in motor nerve conduction velocity (all $p<0.01$). No significant changes were observed after placebo. Comparison of measurements at the 4-month follow-up with those at baseline revealed that a significant benefit persisted for all measures that showed an improvement at the end of treatment, with an additional improvement in quality of life (Short Form-36 questionnaire) No significant side effects were recorded
during the study. Frequency-modulated electromagnetic neural

stimulation (FREMS) is a safe and effective therapy for neuropathic pain in patients with diabetes and is able to modify some parameters of peripheral nerve function. - Diabetologia PMID: 15834546

Clinical and electroneuromyographic studies were performed in 121 patients with diabetic polyneuropathy (DPN) before and after courses of treatment with pulsed electromagnetic fields with complex modulation (PEMF-CM) at different frequencies (100 and 10 Hz). The earliest and most significant electroneuromyographic signs of DPN were found to be decreases in the amplitude of the H reflex and the Hmax/Mmax ratio in the muscles of the lower leg. Application of PEMF-CM facilitated regression of the main clinical symptoms of DPN, improved the conductive function of peripheral nerves, improved the state of la afferents, and improved the reflex excitability of functionally diverse motoneurons in the spinal cord. PEMF-CM at 10 Hz was found to have therapeutic efficacy,

especially in the initial stages of DPN and in patients with diabetes mellitus for up to 10 years. - Neuroscience and Behavioral Physiology PMID: 14635988

Neuropathic pain (NP) from peripheral neuropathy (PN) arises from ectopic firing of unmyelinated C-fibers with accumulation of sodium and calcium channels. Because pulsed electromagnetic fields (PEMF) safely induce extremely low frequency (ELF) quasirectangular currents that can depolarize, repolarize, and hyperpolarize neurons, it was hypothesized that directing this energy into the sole of one foot could potentially modulate neuropathic pain. These pilot data demonstrate that directing PEMF to refractory feet can provide unexpected short term analgesic effects in more than 50% of individuals. The role of placebo is not known and was not tested. The precise mechanism is unclear yet suggests that severe and advanced cases are more magnetically sensitive. Future studies are needed with randomized placebo-controlled design and longer treatment periods. - Neurorehabilitation and Neural Repair PMID: 15035963

OSTEOARTHRITIS

An average improvement of 23-61% occurred in the clinical variables observed with active treatment, while 2 to 18% improvement was observed in these variables in placebo treated control patients. No toxicity was observed. The decreased pain and improved functional performance of treated patients suggests that this configuration of PEMF has potential as an effective method of improving symptoms in patients with OA. This method warrants further clinical investigation. - Journal of Rheumatology PMID: 8478852

OSTEOARTHRITIS – KNEE/CERVICAL SPINE

We conducted a randomized, double blind clinical trial to determine the effectiveness of pulsed electromagnetic fields (PEMF) in the treatment of osteoarthritis (OA) of the knee and cervical spine. Matched pair t tests showed extremely significant changes from baseline for the treated patients in both knee and cervical spine studies at the end of treatment and the one month follow up observations, whereas the changes in the placebo patients showed lesser degrees of significance at the end of treatment. PEMF has therapeutic benefit in painful OA of the knee or cervical spine. –

Journal of Rheumatology PMID: 7837158

OSTEOCHONDROSIS

This study examined the effects of alternating magnetic fields (50 Hz, 10-50 mT) combined with conservative therapy in patients suffering from spinal osteochondrosis. Treatment consisted of 20-minute exposures over a total of 20- 25 such exposures per course. Results showed clinical benefits in 95 percent of patients receiving the combination treatment compared to just 30 percent among controls.

L.L. Butenko, The Use of Alternating Magnetic Fields in Spinal Osteochondrosis, Mechanisms of Biological Action of Electromagnetic Fields, 27-31 October 1987, Pushchino, USSR, USSR Academy of Sciences, Research Center for Biological Studies, Inst. of Biological Physics, Coordination Council of Comecon Countries and Yugoslavia for Research in the Fields of Biological Physics, p. 183.

OSTEONECROSIS

An average improvement of 23-61% occurred in the clinical variables observed with active treatment, while 2 to 18%

improvement was observed in these variables in placebo treated control patients. No toxicity was observed. The decreased pain and improved functional performance of treated patients suggests that this configuration of PEMF has potential as an effective method of improving symptoms in patients with OA. This method warrants further clinical investigation. - Journal of Rheumatology PMID: 8478852

OSTEOPOROSIS

The objective was to understand the effects of low-frequency pulsed electromagnetic fields (PEMFs) on chronic bony pain, bone mineral density (BMD), bone strength and biochemical markers of bone metabolism in the patients of osteoporosis. Low-frequency PEMFs relieves the pain of primary osteoporosis quickly and efficiently, enhances bone formation and increases BMD of secondary osteoporosis. - Chinese Medical Journal PMID: 19080282

Results of this double-blind, placebo-controlled study indicated that exposure to pulsed electromagnetic fields had beneficial effects in the treatment of patients suffering from painful osteo arthritis of the knee or cervical spine. PEMF therapy consisted of 18 exposures lasting 30 minutes and administered 3-5 times per week.
D.H. Trock, The Effect of Pulsed Electromagnetic Fields in the Treatment of Osteoarthritis of the Knee and Cervical Spine. Report of Randomized, Double Blind, Placebo Controlled Trials," Journal of Rheumatology, 21(10), 1994, p. 1903-1911.

PAIN

PEMF exposure in refractory CTS provides statistically significant short- and longterm pain reduction and mild improvement in objective neuronal functions. Neuromodulation appears to

influence nociceptive-C and large A-fiber functions, probably through ion/ligand binding. - Pain Medicine PMID: 18777606

PANCREATITIS

This study found that sinusoidal and continuous low-frequency alternating magnetic field generated a Polius-1 apparatus exhibited beneficial effects in patients suffering from chronic pancreatitis.
A.A. Fedorov, The Use of a Low-frequency Magnetic Field in the Combined Therapy of Chronic Pancreatitis, Vopr Kurortol Fizioter Lech Fiz Kult, (5), September-October 1990, p. 28-30.

PARKINSON'S DISEASE

Since brief, extracerebral applications of pico-tesla (pT) range flux intensity electromagnetic fields (EMFs) of low frequency have been shown to produce rapid improvement in motor and cognitive symptoms in PD, it is expected that application these EMFs would lead also to an increase in the amplitude of visual evoked potential (VEP) response. The study demonstrates that in Parkinsonian patients extracerebral application of these EMFs rapidly increases in amplitude of the VEP response and, by inference, cerebral dopamine levels presumably by increasing dopamine release. - International Journal of Neuroscience PMID: 8707479

This article reports on the case of a 73-year-old male Parkinson's patients suffering from disabling resting and postural tremors in the right hand, as well as other symptoms. Two successive 20-minute treatments with AC pulsed electromagnetic fields of 7.5-picotesla intensity and 5-Hz frequency sinusoidal wave led to improvements in visuospatial performance and a legible

signature. Significant improvements in Parkinsonian motor symptoms were also seen following additional treatments.
R. Sandyk, Brief Communication: Electromagnetic Fields Improve Visuospatial Performance and Reverse Agraphia in a Parkinsonian Patient, International Journal of Neurosci, 87(3-4), November 1996, p. 209-217

This article reports on the case of a medicated 61-year-old Parkinson's patient who experienced rapid reversal of symptoms following a single external application of picotesla-range magnetic fields.
R. Sandyk R.P. Iacono, Reversal of Visual Neglect in Parkinson's Disease Treatment with picoTesla Range Magnetic Fields,International Journal of Neurosci, 73(1-2), November 1993, p. 93-107.

This article reports on four Parkinson's patients who experienced significant improvement in symptoms following treatment with picotesla-range magnetic fields. Two additional patients suffering from Parkinson's-related dementia experienced significant improvements in visuospatial impairment.
R. Sandyk, Magnetic Fields in the Therapy of Parkinsonism, International Journal of Neurosci, 66(3-4), October 1992, p. 209-235.

Noting that transcranial magnetic stimulation (TMS) is a new and noninvasive method of direct cortical neuron stimulation, this review article discusses recent studies showing that TMS has led to improvements in symptoms associated with Parkinson's disease and depression.

M.S. George, et al., "Transcranial Magnetic Stimulation: A Neuropsychiatric Tool for the 21st Century," Journal of Neuropsychiatry Clin Neurosci, 8(4), Fall 1996, p. 373-382.

This article reports on the cases of two Parkinson's patients who experienced improvements in motor symptoms following treatment with external application of weak electromagnetic fields in the picotesla range.
Parkinsonian Micrographia Reversed Treatment with Weak Electromagnetic Fields, International Journal of Neurosci, 81(1-2), March 1995, p. 83-93.

PELVIC PAIN
Unusually effective and long-lasting relief of pelvic pain of gynecological origin has been obtained consistently by short exposures of affected areas to the application of a magnetic induction device producing short, sharp, magnetic-field pulses of minimal amplitude to initiate the electrochemical phenomenon of electroporation within a 25 cm2 focal area. Treatments are short, fasting-acting, and economical and in many instances have obviated surgery. - European Journal of Surgery PMID: 7531030

PERIPHERAL NEURITIS
In this study, patients suffering from peripheral neuritis were exposed to high-frequency electromagnetic radiation on acupuncture points. EMR was generated Electronica-EnF, Aria, and Porog devices with tunable frequencies ranging between 53 and 78 GHz. Treatments were daily and lasted 25 minutes. Results showed full restoration of nerve function in 87 percent of patients.
O. Vassilenko and N.F. Vassilenko, Use of Extremely High Frequency Electromagnetic Radiation for Treating Peripheral

Neuritis, Second World Congress for Electricity and Magnetism in Biology and Medicine,8-13 June 1997, Bologna, Italy.

PERIPHERIAL NEUROPATHY

The efficacy of different types of electrotherapy for painful diabetic peripheral neuropathy has been evaluated in 15 studies; the effects of transcutaneous electrical nerve stimulation are consistent. The beneficial effects of prolonged use have been reported in three large studies and one small study. The effects of frequency-modulated electromagnetic neural stimulation were assessed in one large study, and a significant reduction in pain was reported. Treatment with pulsed and static electromagnetic fields has been investigated in two small and three large studies, and analgesic benefits have been
reported. PMID:20461329

PNEUMONIA

Results of this study showed that magnetic laser therapy decreased the severity of acute respiratory insufficiency and treatment course, and prevented destructive complications in children with infiltrative acute destructive pneumonia between the ages of 1 and 12 years.
E.A. Gaidashev, An Evaluation of the Effect of Magnetic-laser Therapy on External Respiratory Function in Complicated Forms of Acute Pneumonia in Children, Vopr Kurortol Fizioter Lech Fiz Kult, (3),May-June 1995, p. 2-14.

POST-HERPETIC NEURALGIA

This study found both pulsed magnetic field treatment (20-30 minutes per day) and whole body alternating current magnetic field treatment (30 minutes per day) to be effective therapies for post-herpetic neuralgia in older patients. Pulsed magnetic field treatment consisted of 0.6-T (6-kG) samarium/cobalt magnets

surrounded spiral coils generating a maximum 0.1-T pulse. Pads were pasted on the sensory

PROSTATE

Therapeutic use of pulsed electromagnetic field therapy reduces prostate volume and lower urinary tract symptoms in benign prostatic hyperplasia.
Tenuta M, Tarsitano MG, Mazzotta P, Lucchini L, Sesti F, Fattorini G, Pozza C, Olivieri V, Naro F, Gianfrilli D, Lenzi A, Isidori AM, Pofi R. Andrology. 2020 Sep;8(5):1076-1085. doi: 10.1111/andr.12775. Epub 2020 Mar 16. PMID: 32090492

PSYCHIATRIC DISORDERS

Noting the well-established dangers associated with electroconvulsive therapy, the author, in this theoretical article, argues that transcranial magnetic stimulation should be looked at as an alternative psychiatric treatment. The author asserts that TMS has several advantages over ECT in that it is painless, noninvasive, and more effective on deep structures of the brain.
T. Zyss, Deep Magnetic Brain Stimulation - The End of Psychiatric Electroshock Therapy? Medical Hypotheses, 43(2),1994, p. 69-74.

RESPIRATORY PROBLEMS

Results of this study showed that the use of low-frequency magnetic fields helped to prevent and treat critically ill patients suffering from pyoinflammatory bronchopulmonary complications, and to prevent such complications as well.
G.A. Mozhaev IIu Tikhonovskii, The Prevention and Treatment of Suppurative-inflammatory Complications in the Bronchopulmonary System During Prolonged Artificial

Ventilation, Anesteziol Reanimatol, (4), July-August 1002, p. 47-51.

ROTATOR CUFF TENDONITIS

The value of pulsed electromagnetic fields (PEMF) for the treatment of persistent rotator cuff tendonitis was tested in a double-blind controlled study in 29 patients whose symptoms were refractory to steroid injection and other conventional conservative measures. At the end of the study 19 (65%) of the 29 patients were symptom-less and 5 others much improved. PEMF therapy may thus be useful in the treatment of severe and persistent rotator cuff and possibly other chronic tendon lesions. - The Lancet PMID: 6143039

SACRAL PAIN

Magnetic stimulation of the sacral nerve roots is used for neurologic examination. However, no one has reported therapeutic efficacy of pain relief from pudendal neuralgia with sacral magnetic stimulation. Sacral magnetic stimulation immediately eliminated the pain. The pain relief lasted between 30 minutes and 56 days (median, 24 hours). Adverse effects were not observed. This pilot study indicates that magnetic stimulation of the sacral nerve roots may be a promising therapeutic modality for pain relief from pudendal neuralgia and sciatica. Further studies should be performed to determine the appropriate intensity and frequency, as well as the utility of a second course, of magnetic stimulation treatment. - Diseases of the Colon
and Rectum PMID: 11852346

SEXUAL DISORDERS

Results of this placebo-controlled study showed that magnetotherapy exhibited beneficial effects with respect to cavernous blood flow in male patients suffering from sexual problems.
I.I. Gorpinchenko, The Use of Magnetic Devices in Treating Sexual Disorders in Men, Lik Sprava, (3-4),March-April 1995, p. 95-97.

This study examined the effects of a combination pulsing magnetic field (PMF)/vacuum therapy in the treatment of impotence. Vacuum therapy consisted of the penis being placed into a hermetic cylinder with a negative pressure of 180-260 mmHg for 10-12 minutes per exposure for a total of 12-15 exposures. PMF therapy consisted of the same length and number of exposures, with 6 Hz, 30mT being applied to the penile area at the same time as vacuum therapy. Results showed that, following the combination therapy, sexual function was restored in about 71 percent of patients, was improved in 17 percent, and did not change in 17 percent. For those patients receiving vacuum therapy only, the numbers were 51, 24, and 24 percent, respectively.
I.V. Karpukhin V.A. Bogomol'nii, Local Vacuum-Magnetotherapy of Impotency Patients, Vopr Kurortol Lech Fiz Kult, (2), ` 1996, p. 38-40.

This double-blind, placebo-controlled study examined the effects of weak magnetic fields in men suffering from various sexual disorders, including decreased erection and premature ejaculation. The three different magnetic stimulators used included the BiopotenzorEros, Bioskan-1 devices. All patients wore one of the three devices for a 3- week period. Results showed full restoration of sexual function in 38 percent of patients in the Biopotenzor group, 31 percent in the Eros group,

36 parent in the Bioskan-1 group, and in just 15 percent of the controls. Improvements in sexual function were seen among 42 percent, 39 percent, 47 percent, and 18 percent, respectively. I.I. Gorpinchenko, The Use of Magnetic Devices in Treating Sexual Disorders in Men," Lik Sprava, (3-4),1995, p. 95-97.

SLEEP DISORDERS

Results of this double-blind, placebo-controlled study indicated that low-energy emission therapy significantly improved sleeping patterns among patients suffering from chronic psychophysiological insomnia. Therapy was administered 3 times per week, always in late afternoon and for 20 minutes, over a period of 4 weeks.
R. Hajdukovic, Effects of Low Energy Emission Therapy (LEET) on Sleep Structure, First World Congress for Electricity and Magnetism in Biology and Medicine, 14-19 June 1992, Lake Buena Vista, FL, p. 92.

This double-blind, placebo-controlled study examined the effects of low-energy emission therapy (27 MHz amplitude-modulated electromagnetic fields) in patients suffering from insomnia. Treatment consisted of 3 exposures per week over a 4-week period. Results showed significant increases in total sleep time among patients in the treatment group relative to controls.
M. Erman, Low-Energy Emission Therapy (LEET) Treatment for somnia," Bioelectromagnetics Society, 13th Annual Meeting, 23-27 June 1991, Salt Lake City, UT, p. 69.

SPINAL CORD INJURY

The use of oscillating field stimulator treatment in patients with spinal cord injury is safe, reliable, and easy. Compared with the outcomes obtained in compliant National Acute Spinal Cord

Injury Study III plegic patients, the results of the present study indicate efficacy, and the FDA has given permission for enrollment of 10 additional patients. - Journal of Neurosurgery: Spine PMID: 15658119

Results of this study found that exposure to constant magnetic fields improved healing in rats with experimentally induced spinal cord injury, and in human patients suffering from spinal cord trauma as well.
E.V. Tkach,Characteristics of the Effect of a Constant Electromagnetic Field on Reparative Processes in Spinal Cord Injuries, Zh Nevropatol Psikhiatr, 89(5), 1989, p. 41-44.

This study examined the effects of functional magnetic stimulation used to treat spinal cord injury in seven male patients. Results showed the treatment to be an effective noninvasive approach.
M.K. Sheriff, Neuromodulation of Detrusor Hyper-reflexia Functional Magnetic Stimulation of the Sacral Roots, British Journal of Urology, 78(1), July 1996, p. 39-46.

STROKE
New methods of rehabilitation should be introduced in order to reduce disability resulting from stroke. During the twelve months of follow-up, effect of low frequency magnetic field on the course of patient rehabilitation following ischemic stroke was evaluated on in-patient (acute and subacute period of the stroke) and outpatient (chronic period) basis. The results obtained indicate beneficial effects of groups of patients. - Przeglad Lekarski PMID: 17892036
There is evidence that electromagnetic stimulation may accelerate the healing of tissue damage following ischemia. We undertook this study to investigate the effects of low frequency

pulsed electromagnetic field (PEMF) exposure on cerebral injury. Exposure to pulsed electromagnetic field attenuated cortical ischemia edema on MRI at the most anterior coronal level by 65% On histologic examination, PEMF exposure reduced ischemic neuronal damage in this same cortical area by 69% and by 43% in the striatum. Preliminary data suggest that exposure to a PEMF of short duration may have implications for the treatment of acute stroke. - Bioelectromagnetics PMID: 8074737

Results of this study pointed to the efficacy of magnetic field therapy in the treatment of patients suffering from a variety of conditions associated with different brain vascular diseases. N.Y. Gilinskaia, Magnetic Fields in Treatment of Vascular Diseases of the Brain, Magnitologiia, 1, 1991, p. 13-17.

TENDONITIS

Results of this double-blind, placebo-controlled study indicated that pulsed electromagnetic field therapy exhibited significant beneficial effects in the treatment of patients suffering from persistent rotator cuff tendonitis. PMID: 6143039

TINNITUS (Ringing or buzzing in ears)

At the end of one week of treatment, each patient noted whether their tinnitus had completely disappeared, was improved, unchanged or made worse by the treatment. 45% of the patients who completed the trial were improved by the active device, but only 9% by placebo). We suggest that electromagnetic stimulation may be an effective treatment in some tinnitus sufferers. - Clinical Otolaryngology and Allied Sciences PMID: 8877185

TMJ

The experimental group showed a significant increase in mouth opening (mean = 34.95 to 41.70 mm, p = 0.002), right lateral movement (mean = 7.85 to 10.80 mm, p = 0.001) and left lateral movement (mean = 7.65 to 10.85 mm, p < 0.0001). No significant (p > 0.1) change in the control group occurred for mouth opening (mean = 38.50 to 39.65 mm), right lateral movement (mean = 8.60 to 8.75 mm) and left lateral movement (mean = 8.50 to 8.80 mm). No side effects were reported during the treatment and the two week follow-up. These results suggest strongly that PRFE is a safe and effective treatment for TMJ arthralgia as well as for increasing mandibular range of
motion. - Cranio PMID: 14964334

ULCERS (GASTRIC AND DUODENAL)

Results of this study showed that the administration of mill metric electromagnetic waves helped to normalize blood properties, subsequently improving the effectiveness of more conventional gastric and duodenal ulcer treatment.
M.V. Poslavskii, Treatment of Peptic Ulcer Electromagnetic Irradiation of the Millimetric Range, Sov Med, (1),1989, p. 29-31.

ULCERS (TROPHIC)

This study examined the use of magnetotherapy coupled with galvanization and intratissue electrophoresis in 86 patients suffering from trophic ulcers. A “Potok1? apparatus with a density of current equal to 0.05-0.1 mA/cm2 was used to create an electrical field. The “MAG-30 apparatus for low-frequency magnetotherapy with induction of 30 mT and area of exposure of 20 cm2 was applied to a trophic ulcer site at the same time. Results led the authors to conclude that magnetogalvanotherapy is the recommended treatment for trophic

ulcers of the lower extremities.
A.V. Alekseenko, Use of Magnetic Therapy Combined with Galvanization and Tissue Electrophoresis in the Treatment of Trophic Ulcers, Klin Khir, (7-8), 1993, p. 31-34.

VENOUS INSUFFICIENCY (CHRONIC)
This study examined the effects of alternating magnetic fields (15-20 minutes per day over a period of 20 days) in patients suffering from chronic venous insufficiency, varicose veins, and trophic shin ulcers. Results showed good effects in 236 of the 271 patients receiving the treatment. Thirty-four patients reported satisfactory effects. Only one patient experienced no effects.
E.I. Pasynkov, et al., "Therapeutic Use of Alternating Magnetic Field in the Treatment of Patients with Chronic Diseases of the Veins of the Lower Limbs," Vopr Kurortol Fizioter Lech Fiz Kult, 5,1976, . 16-19

WOUNDS
Treatment for wounds included two modalities: standard medication and alternating or pulsating magnetic field. Magnetic therapy proved highly effective: wound healing was 3-3.5 times faster while duration of treatment-2-3 times shorter than in standard procedure. Clinically- verified partial adhesion-related intestinal obstruction was eliminated by magnetic procedure in 18 children after combined treatment for lymphosarcoma involving the ileum. - Volpr Onkol PMID: 11147428

Pulsed radio frequency energy was used as an adjunct to basic wound care of 3 large, long-standing (6 years) stage III and IV pressure ulcers that were unresponsive to conventional therapy. The ulcer on the right foot healed within 4 weeks, the left heel ulcer reduced in size by 95% at 7 months, and the large sacral

ulcer healed to closure in 11 months. Conclusion: Pulsed radio frequency energy treatment with basic wound care, if administered early in the course of pressure ulcer therapy, might avoid the lengthy hospitalizations and repeated surgical procedures necessary for treatment of uncontrolled ulcers, reducing the overall cost of treatment and improving the quality of life for chronically ill or injured patients. - Journal of Plastic and Reconstructive Surgery PMID: 19008935