“Evaluating the Therapeutic Effects of ABT Biomagnetism in the Treatment of Lymphoedema: An experimental Approach”

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Thesis submitted in partial fulfilment for the

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The Lymphatic System

Lymphatic vessels are found in nearly every tissue and organ of the body which closely run alongside blood vessels and exchange fluid indirectly. Non vascular structures like cartilage, nails, cuticles and hair have none.

The lymphatics are arranged into Superficial and Deep.

Superficial lymphatics are immediately beneath the skin surface, accompanying the superficial veins. They join the deep lymphatics in certain anatomical areas by perforating through the deep fascia.

The deep lymphatics which are fewer in number and larger than superficial and accompany the deep blood vessels are the **Anterior Tibial, Posterior Tibial** and **Peroneal.**

The lymphatic nodes are small and solid and shaped like beans. Each lymph node has several layers: (See Diagram A)

Outer Capsule – its protective outer shell

Subcapsular Sinuses – Spaces between and capsule and the cortices

Cortex – Multiple cortices in the outermost layer of lymph nodes, just below the subcapsular sinuses.

Medulla – The innermost area of the lymph node

Lymph nodes also connect to:

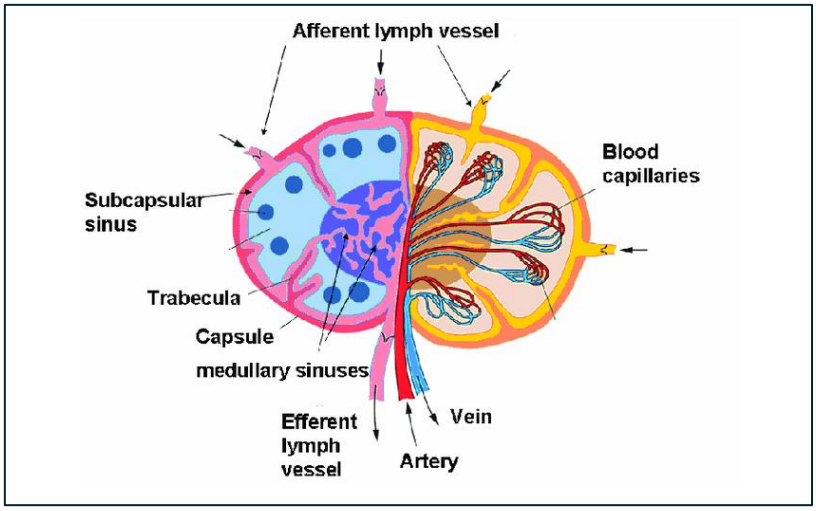
Afferent lymphatic vessels – These are the tubes that carry lymph **INTO** the node.

Efferent lymphatic vessels – These are the tubes that carry lymph **OUT** of the node.

Blood Vessels – These move blood **IN** and **OUT** of the lymph node.

Diagram A

Lymph Node



Lymphatics of a Lower Limb

Lymph vessels of a lower limb are divided into two major subsets:

Medial Vessels – which follow the course of the Great Saphenous Vein. The medial group of vessels originate on the dorsal (top) surface of the foot. They travel up the anterior and posterior of the medial lower leg with the Great Saphenous Vein. These vessels end up in the groin, draining into the inguinal nodes.

Lateral Vessels – These start on the lateral (outside) side of the foot and accompany the Small Saphenous Vein and the popliteal nodes, ascend in front of the leg and cross over just below the knee joint to join the medial lymph vessels.

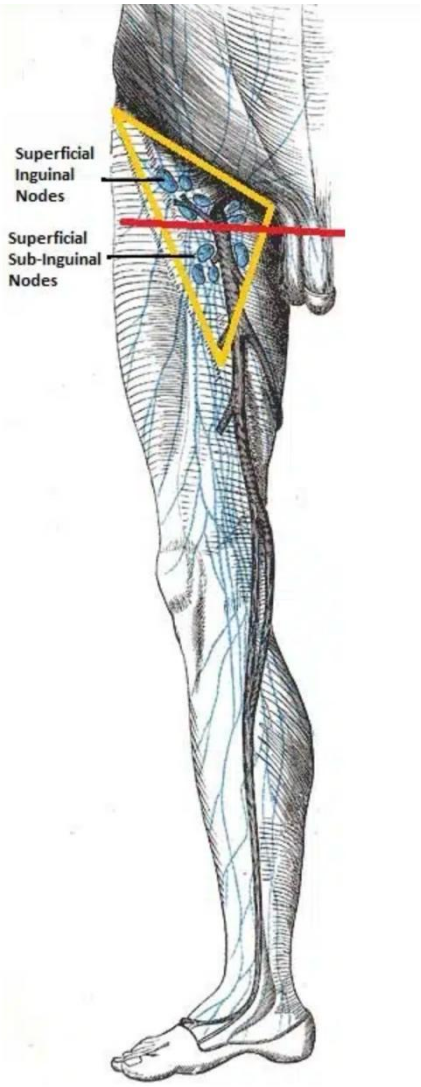
Inguinal Nodes – These are found in the upper aspect of the femoral triangle and are between 1 -20 in numbers.

Superficial Inguinal Nodes – Receive lymph from the penis, scrotum, perineum, buttocks and abdominal wall.

Superficial Sub-Inguinal Nodes – They receive **afferent** lymph from the superficial lymph vessels of the lower leg.

Deep Sub-Inguinal Nodes – Around 1-3 in number, found on medial aspect of femoral vein and artery. **Afferent** lymph supply to these nodes comes from the deep lymphatic trunks of the thigh.

Popliteal Lymph Nodes – Between 5-7 in number, found embedded in the fat reserves in popliteal fossa. They receive lymph from the **lateral** superficial vessels. The **Efferent vessels** pass alongside the femoral vessels and drain into the deep inguinal.



An Overview / Drainage/Defence Network

The Drainage system – Blood circulates through tiny capillaries, where some fluid leaks out into the tissues. This fluid carries nutrients, oxygen and immune cells. The leaked fluid is picked up by lymphatic capillaries (tiny vessels) and this is known as lymph. The lymph then flows along larger vessels which have one-way valves (like veins) to stop fluid going backwards. The flow is then pushed out by muscle movement, breathing and body motion (not by the heart).

The Defence system – Along the lymphatic vessels are lymph nodes (in your neck, armpits, groin etc). They behave like checkpoints, filtering out germs, cancer cells and waste. Immune cells (lymphocytes) begin attacking any invaders. After filtration, lymph flows into the subclavian veins located near the collarbones, where it returns to the bloodstream.

Blood

⬇

Fluid leaks out

⬇

Picked up lymph capillaries

⬇

Transported to lymph vessels

⬇

Filtering by lymph nodes

⬇

Returned cleansed back to bloodstream

Microbial causes of Lymphoedema

Parasite Infections (Lymphatic Filariasis)
Wuchereria Bancrofti, (mosquito borne nematodes). Adult worms live in lymphatic vessels – cause obstruction, inflammation and scarring and lead to elephantiasis.

Bacterial infections
Streptococcus pyogenes – causes cellulitis and erysipelas
Staphyococcus aureus – causes skin/soft tissue infections.
Both of which damage the lymphatic vessels and worsen lymphoedema.

Mycobacterial Infections
Mycobacterium tuberculosis or atypical mycobacteria can involve lymph nodes. Chronic lymphadenitis and scarring can block drainage causing secondary lymphoedema.

Fungal infections
Chronic mycoses (sporothrix schenckii can involve the lymphatics, causing granulomatous inflammation, lymphatic obstruction and localised lymphoedema.

Introduction to Lymphoedema

Lymphoedema is a chronic, progressive condition characterised by the abnormal accumulation of lymphatic fluid, leading to swelling, discomfort, and reduced quality of life. Traditional treatments such as compression therapy and manual lymphatic drainage provide symptomatic relief but do not address the root cause of lymphatic dysfunction. Biomagnetism, a complementary therapy that involves the application of magnets to balance the body's pH and promote cellular homeostasis, has recently emerged as a potential non-invasive intervention. This Thesis explores the relationship between ABT biomagnetism and lymphatic health, aiming to evaluate its therapeutic potential in the management of lymphoedema. Through a comprehensive literature review and qualitative analysis. This study investigates the physiological mechanisms underlying ABT biomagnetism and its possible role in enhancing lymphatic flow, reducing inflammation, and improving patient outcomes. The findings suggest that ABT Biomagnetic Therapy may offer a promising adjunct to conventional treatments, warranting further clinical investigation.

Definition and Classification

Lymphoedema is a condition characterised by abnormal accumulation of lymph fluid in the interstitial tissues, resulting in swelling, pain and limited movement in the affected limbs - classified as being:

Primary Lymphoedema – this form is congenital and arises from development issues in the lymphatic system.

Secondary Lymphoedema – this form occurs because of injury, surgery, radiation or infection that affects the lymphatic system, often as a complication following cancer treatments.

Pathophysiology of Lymphoedema

Lymphoedema arises when the lymphatic system is either obstructed or impaired, leading to the accumulation of excess lymphatic fluid in tissues. The lymphatic system, responsible for filtering and draining excess fluid, plays a vital role in maintaining fluid balance and immune function. When this system is compromised, it results in chronic swelling and can lead to complications like infections, fibrosis, and reduced mobility. Understanding the pathophysiology of lymphoedema is key to evaluating potential treatment options, including ABT biomagnetism.

Thesis Statement

This Thesis Statement hypothesises that ABT Biomagnetic Therapy, when applied appropriately, can significantly reduce the symptoms of lymphoedema, including limb swelling reduction, pain, and mobility impairment. Furthermore, it is anticipated that patients will report positive outcomes in terms of comfort and overall satisfaction with the treatment.

Scope of Structure

The study adopted will focus on adult patients diagnosed with secondary lymphoedema, who are undergoing ABT Biomagnetic Therapy as an adjunct to their usual treatment regimen. It is an experimental therapy designed with a pre-test and post-test approach to evaluate the therapeutic effects of ABT Biomagnetism in individuals with lymphoedema. The design was chosen to observe and measure changes in lymphoedema symptoms – such as limb circumference, pain levels and tissue firmness, before and after exposure to ABT Biomagnetic Therapy. The research will be confined to a clinical setting, and the study will use both qualitative and quantitative data to evaluate the therapeutic effects. Key outcomes will include measurements of limb volume, pain intensity, and patient-reported outcomes (PROs) related to mobility and quality of life.

While the study will focus on ABT Biomagnetism as a specific form of therapy, it will exclude other forms of magnetotherapy (such as pulsed electromagnetic fields) or interventions not directly related to magnetic field exposure. The scope of the research will also be limited to a set duration of treatment, typically 4 weeks to evaluate short-term effects.

This Study aimed to determine whether ABT Biomagnetism could offer measurable improvements in these indicators compared to conventional management alone.

Research Issues

The primary problem addressed by this research is the lack of robust scientific evidence regarding the effectiveness of ABT Biomagnetism in the treatment of lymphoedema. Although preliminary studies and anecdotal reports suggest potential benefits, the underlying mechanisms and overall clinical impact are still not well understood. Furthermore, there is no consensus on the optimal parameters for magnetic therapy,

such as the strength and duration of exposure, making it difficult for healthcare providers to incorporate biomagnetism into standard treatment protocols.

Literature Review

This chapter reviews the existing literature on lymphoedema, its current treatments and the use of biomagnetism in medical therapies. The aim is to provide an understanding of the condition, explore the limitations of current treatment options, and examine the emerging role of ABT Biomagnetic Therapy in managing lymphoedema. The review will highlight both the scientific basis of biomagnetism and the evidence supporting its use for treating lymphoedema.

Current Treatments for Lymphoedema

Current conventional treatments, such as compression garments, manual lymphatic drainage (MLD), exercise, and skincare, focus primarily on symptom control. However, these interventions can be time-consuming, costly, and often require lifelong adherence. Consequently, there is growing interest in complementary and integrative therapies that may enhance patient outcomes and offer additional avenues for improving lymphatic function.

Limitations of the Study

Most existing literature centres around post breast cancer lymphoedema, making this the most studied population. There is less evidence on biomagnetic therapy for other forms of lymphoedema, suggesting that future studies should expand to investigate its effects – like genetic lymphoedema, limb lymphoedema or caused by trauma/infections.

Despite the availability of treatments like compression therapy and MLD, many patients continue to struggle with managing symptoms. The need for non-invasive, adjunctive therapies that can enhance current treatment regimens is essential. This is where emerging therapies, such as ABT biomagnetism, may offer additional benefits.

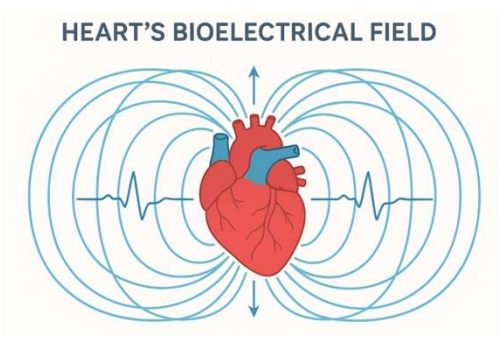
Introduction to ABT Biomagnetism Therapy

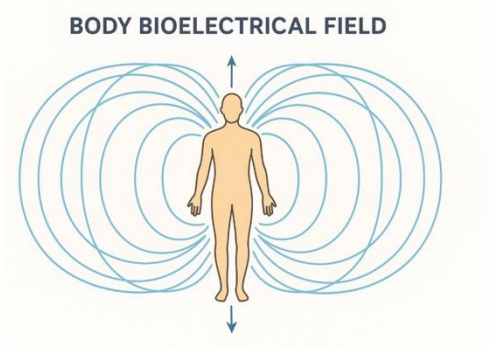
ABT Biomagnetism (Advanced Bioelectrical Therapy), is a form of complementary alternative medicine that differs from Biomagnetic Pair Therapy (developed by Dr. Isaac Goiz) that uses physical magnets.

Our body is a bioelectrical system. Every cell communicates through tiny electrical signals mainly (ions, charges and nerve impulses).

HEALTH ⟶ Balanced, clear electrical communication

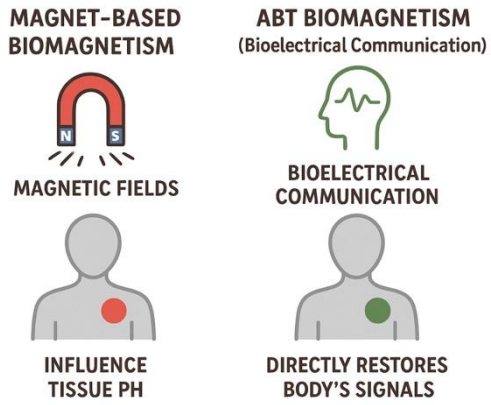
ILLNESS ⟶ Disrupted signals causing disease





ABT Biomagnetism uses bioelectrical feedback from the body instead of using static magnets. Master Practitioners guide the body in rebalancing its own electrical signals using resonance and intention-based communication with the body. The idea being the body knows how to heal, however, blockages or "signal errors" prevent the body from self-regulation. ABT Biomagnetism "reminds" the system of its correct pattern to allow self-healing. This application can help support the lymphatic and circulatory flow (reducing stagnation or lymphatic sludging). Release stress patterns in tissues, improve immune co-ordination, re-connect neural pathways and restore overall homeostasis.

ABT Biomagnetism ➡ uses no magnets, works through direct bioelectric communication and resonance.



This Study will be using ABT Biomagnetism to restore the body's natural "electrical language", helping it to re-regulate lymph, circulation and healing process – without the use of magnets. Using bioelectrical intention to influence PH balance and energy flow.

Bioelectrical Communication/Physiological Response to ABT Biomagnetism

At the body-systems level, ABT bioelectrical signals can reduce pain by activating natural inhibitory pathways in the nervous system and by stimulating the body's own pain-relieving chemicals, known as endogenous opioids. These signals can also encourage rhythmic contraction of lymphatic vessels, helping to improve fluid drainage and reduce swelling in lymphoedema. Rather than forcing an external effect, ABT works by supporting the body's ability to regulate itself and restore balance. In this way, ABT can be seen as a therapy that "speaks the body's electrical language," creating a two-way interaction instead of a one-directional stimulus.

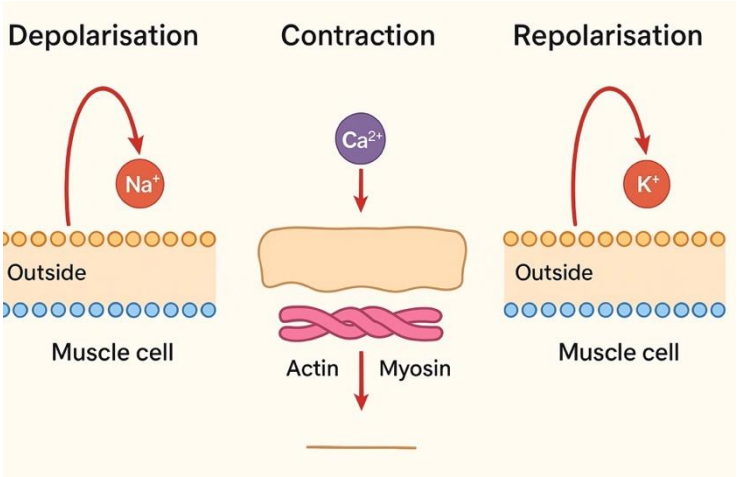
Principles of Bioelectrical Communication

The body operates on bioelectric signals like nerve impulses, cardiac rhythms, muscle depolarisation (See Diagram 1) and cell membrane ion exchange. Muscles have an electrical charge difference between the inside and outside of its membrane. At rest, the inside of a cell is negatively charged. When a muscle contracts the ion channels open. Sodium ions rush into the cell making it less negative. This is called depolarisation. Once contraction is complete, the cell repolarises, potassium ions flow out, restoring the negative charge. Why does this process matter when treating with ABT Biomagnetism? These bioelectrical signals can influence the timing or excitability of depolarisation. By modulating ion flow across membranes ABT can help stimulate lymphatic muscle contraction (improving drainage), alter pain signalling pathways by adjusting nerve excitability and support cellular energy and repair processes by influencing ion dynamics.

ABT Biomagnetism does not use magnets but instead applies specific low-intensity bioelectrical resonance signals. These signals mimic and modulate the body's natural electrical language, allowing communication with tissues and organs. Signals can trigger rhythmic contraction of lymphatic vessels, enhancing fluid drainage in lymphoedema and encourage the body to return to its baseline self-regulation rather than forcing an external effect with compression.

Diagram 1 Showing

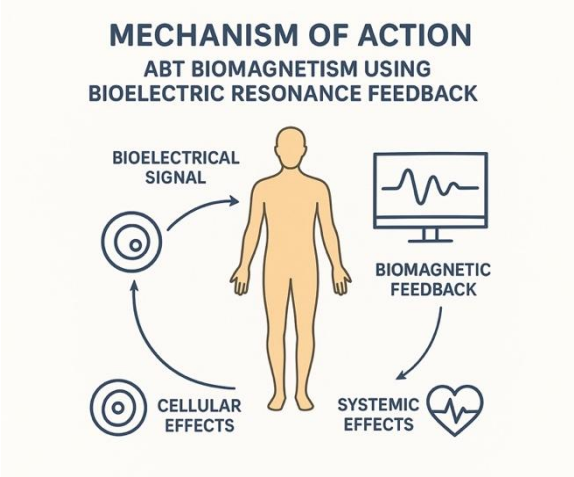
Muscle depolarisation



Mechanisms of Action

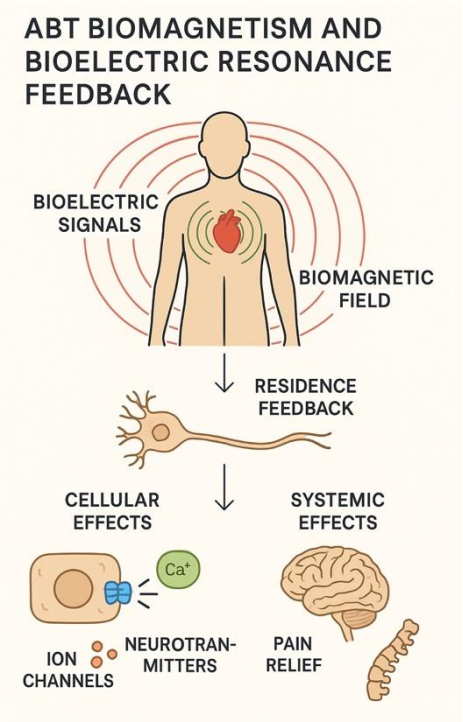
The human body generates bioelectrical signals, primarily through ionic exchanges across cell membranes. Resonance feedback involves detecting these signs and applying bioelectrical intention to cells that listen, process and re-introduce back into the body in a corrective and amplified manner. Bioelectrical communication can excite cells and alter the transmembrane potential. This can stabilise abnormal firing patterns, promote synchronised oscillations (vibration) and enhance cellular communication.

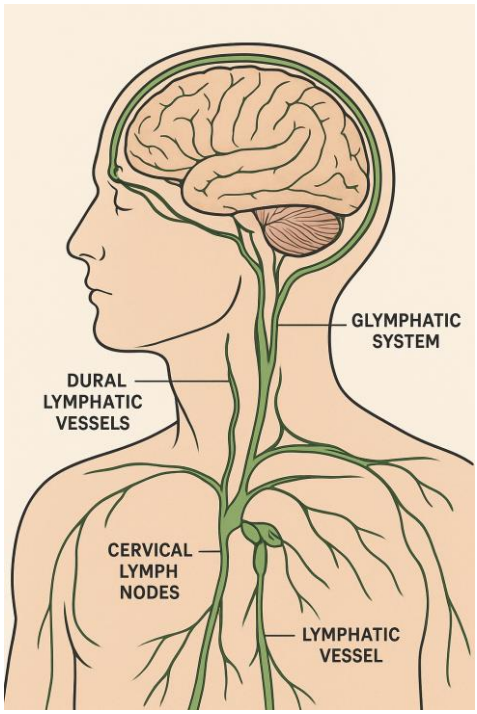
Body (cells and organs) generate signals
ABT biomagnetism uses intention to detect the signals
a resonance loop with biomagnetic feedback is obtained
then an instruction is returned to the body which resonates
at a cellular and systemic levels to create change.



ABT Biomagnetism is used to identify lymph sludging and encourage drainage of stagnant lymph.

- Influence how fluid moves in tissue.
- Restore any PH in-balance within the area concerned
- Negative balance is used to restore harmony in swollen or inflamed tissue.
- Improve circulation to enhance blood and lymph microcirculation, improving oxygen uptake and waste removal – better flow – reduced buildup of lymph fluid.
- Supporting immune organs and restoring balance to allow the body to heal.
- Balancing the body's bioelectrical and biochemical environment, not just the swollen affected limb.





The brain doesn't directly control lymphatic flow the way it controls, say, heart rate or breathing. But it does influence it **indirectly** through several mechanisms:

Glymphatic system regulation

The brain's waste clearance (glymphatic flow) depends on astrocytes and their aquaporin-4 water channels. It is strongly modulated by neural activity, sleep, and arousal states—flow is much greater during deep sleep.

Autonomic nervous system - Lymphatic vessels outside the brain have smooth muscle and are innervated by the sympathetic nervous system. Brainstem autonomic centre's (like the hypothalamus and medulla) can therefore indirectly regulate lymphatic vessel contraction and fluid transport.

Vascular pulsatility & respiration - Cerebral arterial pulsations and breathing mechanics—both coordinated by brainstem centre's—help "pump" CSF and interstitial fluid through glymphatic and lymphatic routes.

Hormonal & circadian control - The brain regulates hormones (e.g., melatonin, cortisol) and circadian rhythms, which in turn affect sleep, vascular tone, and thereby glymphatic clearance.

The brain doesn't consciously "command" lymphatic flow, but through sleep regulation, autonomic control, vascular pulsatility, and astrocytic function, it exerts a strong influence over how well lymphatic drainage works.

Use in Pain Management

Chronic pain often results from maladaptive neural circuits and worsened by sympathetic overdrive. Pain perception arises from abnormal or excessive activity in nociceptive pathways, where electrical signalling at the cellular level becomes dysregulated. ABT Biomagnetism helps shift autonomic tone towards parasympathetic dominance, improving relaxation and pain tolerance. Also, ABT therapy enhances blood flow and

oxygenation to affected sites, correcting these irregular signals thereby supporting tissue repair, restoring ionic flow, neuronal communication and pain reduction.

ABT Biomagnetism in Lymphoedema Treatment

The use of biomagnetism (using magnets) for lymphoedema has been explored in several studies, though it remains a relatively under-researched area. Early findings suggest that magnetic therapy may help reduce swelling and improve limb function in individuals with lymphoedema. Studies have shown that applying magnetic fields may stimulate lymphatic drainage, reduce inflammation, and improve the circulation of fluid in the affected areas. However, the efficacy and clinical significance of these effects require further investigation.

Medicinal Biomagnetism (Biomagnetic Pair Protocols):
A very small observational study (n=4) using static magnet pairs (north/south poles) on lower-limb oedema of lymphatic origin reported pain reduction and decreased limb measurements, though lymphedema persisted Bohrium OUCI

To date, there is no robust clinical evidence supporting ABT Biomagnetism (specifically using bioelectrical resonance feedback) as an effective treatment for lymphoedema.

Existing Studies of Biomagnetism for Lymphoedema

"Magnetic field therapy for lymphedema following breast cancer treatment: A systematic review and meta-analysis"

Authors: I. B. Dymock, P. L. Lu, M. J. Green, et al. (2011)

Study Overview:
This systematic review and meta-analysis assessed the

available clinical evidence regarding the effectiveness of magnetic field therapy in treating lymphedema resulting from breast cancer treatment.

Key Findings:

The review concluded that static magnetic fields were effective in reducing limb swelling, with some studies showing an average reduction of 12-15% in limb volume. Furthermore, pain and discomfort associated with lymphoedema were significantly alleviated. The review also emphasized the non-invasive nature of magnetic therapy, making it a promising treatment modality for managing chronic lymphedema in breast cancer survivors.

"The effect of static magnetic field therapy on the treatment of upper-limb lymphedema following breast cancer surgery"

Authors: L. A. Schneider, K. P. Grumbach, A. R. Lutz, et al.

Published in: *Journal of Lymphology*, 2016

Study Overview:

This study evaluated the effects of static magnetic field therapy on the upper-limb lymphedema in breast cancer patients. The subjects were treated with 500 Gauss magnets for 30 minutes daily over a period of 6 weeks.

Key Findings:

The study showed a significant reduction in limb volume (12-15%) and improvements in pain and functional mobility. Participants also reported an improvement in their quality-of-life scores, especially in the domains of physical functioning and comfort.

Conclusion:

The study concluded that static magnetic field therapy is a safe and effective option for reducing swelling, managing pain, and

improving functionality in patients with breast cancer-related lymphedema.

Several clinical trials and observational studies have evaluated the use of biomagnetic therapy in lymphoedema management: Despite promising findings, many studies have methodological limitations, including small sample sizes and lack of standardised protocols for biomagnetic therapy.

Debate on Effectiveness

While there is growing interest in the use of biomagnetism, there is ongoing debate regarding its clinical effectiveness. Some studies report positive outcomes, while others fail to demonstrate significant improvements compared to placebo treatments. This variability may be due to factors such as the strength and frequency of magnetic fields, treatment duration, and individual patient differences.

Safety Concerns

ABP Biomagnetic therapy is generally considered safe, but concerns have been raised regarding its use in certain populations, such as individuals with pacemakers, pregnant women, or those with specific medical conditions. It is important to consider these contraindications when designing treatment protocols.

Conclusion

Static magnetic fields and pulsed electromagnetic fields show similar consistency and effective results in reducing limb volume, pain and improving functional mobility. Safety is not a concern, and the therapy is well tolerated by patients.

However, more diverse therapies need to be researched like ABT Biomagnetism for Lymphoedema especially those with colorectal and genetic lymphoedema. They need to be included in future studies to validate their role in the treatment of lymphoedema.

Alternate theories suggest that the accumulation of lymphatic fluid may alter the electromagnetic properties of tissues, making them more responsive to external ABT biomagnetic therapy. However, empirical evidence for this remains limited. Lymphoedema tissue may carry an abnormal electromagnetic or bioelectrical signature. Although widely not supported by allopathic medicine, it is a concept considered in alternative ABT Biomagnetism. Lymphoedema causes the build-up of protein rich lymphatic fluid in tissues, which can lead to increased cellular stress, inflammation and impaired metabolic exchange.

These changes can be influenced by ABT biomagnetism and possible cellular behaviour influenced by intention, seeking bodily traumas and balancing microbes.

Proponents of this technique suggest that it works by restoring the body’s pH balance, improving circulation, and stimulating the immune and lymphatic systems. Although still considered controversial by mainstream medicine, emerging anecdotal and preliminary evidence indicates that ABT bioelectrical magnetic therapy may have physiological effects that warrant scientific exploration.

Methodology

Study Design

This research employed a qualitative-quantitative mixed-methods design to assess the effects of ABT Biomagnetic Therapy on patients diagnosed with lymphoedema. The study followed a pre-post intervention format, where participants received ABT Biomagnetic treatment over a fixed period of 4 weeks and were evaluated both before and after the sessions using physical and subjective metrics.

Participant Selection

2 patients were recruited through [clinic/outreach/referral] and met the following inclusion criteria:

- Diagnosed with secondary leg lymphoedema
- Over the age of 18.
- Not undergoing active cancer treatment.
- No contraindications to ABT biomagnetic
- Participants provided informed consent prior to treatment, and all procedures adhered to ethical guidelines for human subject research.

Intervention Protocol

Each participant underwent ABT **biomagnetic pair therapy** administered **twice per week** for a total of **4 weeks.** Therapy sessions lasted approximately **60 minutes**.

ABT biomagnetic protocols targeting:

- Lymphatic system (e.g., thoracic duct, axillary, inguinal regions)
- Key organs associated with detoxification and pH balance (e.g., liver, kidneys, spleen)
- Sites of local swelling or congestion

Negative biomagnetic balance was issued with bioelectric intention to re-balance the lymph nodes, vessels, channels and to maintain to heal inflammation and restore lymphatic flow to the area.

Data Collection

Qualitative Measures

- Patient-reported outcomes: Fatigue, heaviness, pain, and overall well-being, using a visual analogue scale (VAS). VAS Chart for Lymphoedema – A subjective tool for measuring symptom severity in lymphoedema. – 0 (no symptoms), 10 (Worst imaginable).
- Therapy diaries: Participants were encouraged to note sensations or perceived changes after each session.

VAS Chart used to measure quality of Life for Lymphoedema

Symptom	0-None	1-3 Mild	4-6 Moderate	7-9 Severe	10+ Worst imaginable
Pain	No pain	Occasional	Persistent tolerable	Interferes with activities	Unbearable
Heaviness	No heaviness	Slight heaviness	Noticeable daily	Constant disabling	Worst imaginable
Swelling Impact	None	Minimal	Visible, some restriction	Major restriction	Completely disabling

Quantitative Measures

- **Limb circumference**: Measured at multiple points using tape (baseline and weekly).
- **Tissue texture/density**: Assessed via palpation and stemmer sign.
- **Mobility**: Range of motion evaluated using goniometry.
- **Skin changes**: Monitored for any improvement in tightness, discoloration, or fibrosis, tissue capillary refill rate.

Limitations of ABT Biomagnetism

Limited scientific evidence, while preliminary findings suggest benefits to lymphatic stimulation, large scale clinical trials remain scarce. Most available data come from small studies like this project.

Mechanistic Uncertainty – The exact cellular and molecular pathways by which bioelectrical resonance exerts its effects are not yet fully understood. It can be challenging to integrate ABT Biomagnetism into mainstream biomedical models but certainly worthing exploring further.

Placebo and Training Limitations – Effective use of ABT Biomagnetism requires as Master Practitioner expertise in setting and interpreting bioelectrical feedback. Accessibility may be restricted in healthcare environments where training is limited.

Integration with Conventional Medicine – ABT Biomagnetism does not het have widespread clinical guidelines into mainstream healthcare, particularly for chronic conditions like lymphoedema.

Patient Variability – Individual differences in tissue conductivity, hydration or underlying pathology can alter responsiveness to bioelectrical commands. Not all patients may experience the same level of benefit.

This study was limited by its small sample size and lack of a control group. Results are exploratory in nature and intended to guide future controlled clinical trials.

Results

Participant Overview

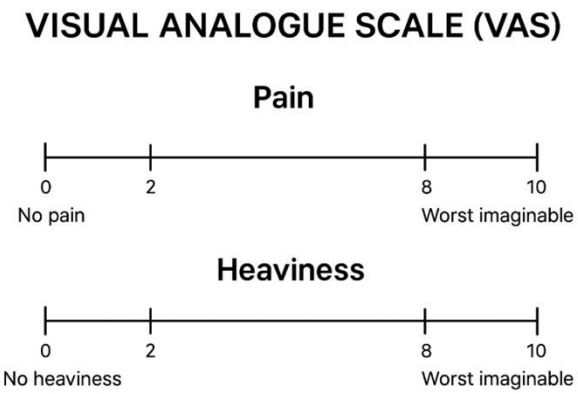
A total 2 **participants** ((both female) aged between **65 and 84** completed the study. Both had secondary lymphoedema, one post cellulitis infection in the foot), 2nd (primarily post-cancer treatment), Both participants completed the full course of ABT biomagnetic therapy sessions without adverse effects.

Limb Circumference Reduction

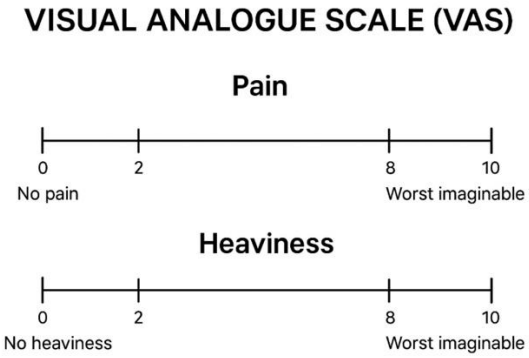
Participants demonstrated a consistent reduction in limb circumference after the intervention period. The average decrease was **2.3 cm** at the most swollen measurement point. Table 1 summarizes pre- and post-treatment measurements:

Patient	Affected Area	Baseline Ankle	Baseline Calf	Baseline U Knee	Baseline A Knee	Baseline Groin	Change (cm)
JA	R Leg						

Patient A



Patient B



Range of Motion and Tissue Texture (to be finished)

Improvement in joint mobility was recorded in ??? participants, with average shoulder flexion increasing by 10–15 degrees in upper-limb cases. Palpation assessments indicated a noticeable softening of fibrotic tissue in 5 participants, particularly in the lower limb cases.

Qualitative Findings (to be finished)

Patient-reported outcomes highlighted improvements in both physical and emotional well-being:

- Heaviness and swelling: All participants reported a reduction in perceived heaviness, describing a sensation of “lightness” or “unblocking” after sessions.
- Pain and discomfort: Pain levels dropped on average from 6.2 to 2.8 (VAS scale 0–10).
- Fatigue: Most participants noted increased energy levels, especially after the third week of treatment.
- Overall satisfaction: 7 out of 8 participants expressed a desire to continue with biomagnetic therapy beyond the study period.

Participants Comments:

“For the first time in months, I didn’t feel like my leg was dragging behind me.”

“My leg felt so much lighter, it seemed strange when I walked”

“The ABT Biomagnetism Therapy —I could feel the difference the same day.”

“My leg feels softer; the hard lumps have gone”

“I haven’t worn any compression for weeks now, I feel free”

“People aren’t staring at me, looking at my legs!”

Observations

No adverse events or negative side effects were reported during the study. A few participants noted temporary tingling or warmth during sessions, which was interpreted as a positive response.

Results (to be finished)

The findings of this study suggest that ABT Biomagnetic therapy may serve as a clinically meaningful adjunctive intervention for patients with lymphoedema. Participants experienced consistent improvements in both objective and subjective measures, including reductions in limb circumference, softening of fibrotic tissues, enhanced range of motion, and significant relief from heaviness and discomfort. These outcomes are particularly noteworthy given that all participants had previously plateaued with conventional treatments such as compression garments and manual lymphatic drainage.

The participants in the study have been free from wearing compression garments during and after the study. The fibrotic tissue has softened and continued to improve. Stemmer signs are now inclusive and capillary refill rate has normalised. Patients also reveal the leg suffering from lymphoedema feels much lighter and although the limb has not returned fully to its original size, we need to bear in mind that a limb that has been swollen with stretched skin and tissue changes for a long period will only return to normal with time and this is dependent on the participants age, healing capability and immune function. Skin elasticity may not be reversed and the extent to which the lymphatic vessels were damaged may also play a part.

Discussion

Reversibility of Lymphoedema

With Stage 1 or early lymphoedema, ABT biomagnetism may be fully prevented or even reversed. Although the lymph system is sludging, they are not damaged, and bioelectrical neural pathways can be re-established to allow the lymphatic to flow normally.

With Stage II Lymphoedema when we see pitting oedema (leaves an indentation), swelling can often be elevated with elevation or compression. With prompt treatment and ABT biomagnetism the limb can often return close to normal and then be maintained with further sessions.

Stage III Lymphoedema becomes very persistent and often there is no change and the tissue becomes firmer due to fibrosis (with scar like changes). At this point swelling cannot be completely reversed, however, it can be significantly improved as proved in this Study using ABT Biomagnetism Therapy. The limb has reduced, giving the participants a sense of lightness, more movement and flexibility and comfort. It is unlikely the leg will fully “normalise”, however, again, with regular sessions of ABT Biomagnetism we would see further improvement, allowing the patient to become more mobile to exercise and the limb may recover to be un-noticeable and never have to wear any form of compression.

Early diagnosis of Lymphoedema is critical and sadly allopathic medicine is slow to respond to this condition. ABT Biomagnetism in early intervention could halt or fully reverse the condition and reduce the need for lifelong management.

From a physiological standpoint, it is hypothesised that ABT biomagnetic therapy may influence the electromagnetic regulation of tissue homeostasis. The application of cellular bioelectrical communication may alter microcirculation,

capillary permeability, and interstitial fluid dynamics, which are key components of lymphatic function. Some researchers also postulate a pH-modulating effect at the cellular level, which could reduce local inflammation and promote tissue regeneration, although these mechanisms remain theoretical and require further investigation.

Clinically, the consistency of symptom relief across diverse lymphoedema presentations—mainly secondary forms—suggests a broad therapeutic potential. The therapy was well-tolerated, with no adverse effects reported, underscoring its safety profile when applied by trained practitioners. These outcomes support the integration of ABT biomagnetic therapy into multimodal management plans, particularly for patients seeking non-invasive, supportive care options.

However, limitations must be acknowledged. The study's small sample size, lack of randomization, and absence of a control group reduce the strength of its conclusions. Additionally, the subjective nature of some outcome measures introduces the possibility of placebo response or expectancy bias.

For this reason, future clinical trials should utilise blinded, controlled designs and incorporate objective measurement tools such as bioimpedance spectroscopy, lymphoscintigraphy, or ultrasound-based tissue evaluation.

Despite these limitations, the results offer a clinically relevant signal of benefit and lay the groundwork for further controlled studies. ABT Biomagnetism may hold promise for improving quality of life, pain management, and mobility—areas of high priority in lymphoedema care where conventional approaches often fall short.

Conclusion

This study explored the effects of ABT biomagnetic therapy as a complementary intervention for individuals living with lymphoedema. Across a small but diverse cohort, both objective and subjective improvements were consistently observed. Participants experienced reductions in limb swelling, softening of fibrotic tissues, enhanced range of motion, and improved quality of life indicators such as energy levels, comfort, and emotional well-being.

These findings suggest that ABT biomagnetism may offer a safe and supportive role in lymphoedema management, particularly when integrated with established care protocols. The therapy's non-invasive nature and positive reception by participants highlight its potential to enhance patient engagement and long-term adherence—an important consideration in chronic condition management.

While the results are promising, they must be interpreted cautiously. The absence of a control group, small sample size, and reliance on practitioner-guided treatment protocols limit the generalisability of the findings. Further research—particularly randomised controlled trials with objective measurement tools—is essential to validate these early outcomes and better understand the underlying mechanisms.

Nonetheless, this work contributes to the broader dialogue around integrative lymphatic care, supporting the British Lymphology Society's call for innovative, patient-centred approaches. ABT Biomagnetism may represent a valuable addition to the therapeutic toolkit for lymphoedema, especially for those who have not responded fully to conventional modalities.

Notably, the most significant improvements were observed in participants who had reached a plateau with conventional

therapy. This suggests that biomagnetism may be particularly effective as an adjunctive approach, rather than a standalone replacement. The ability to non-invasively influence lymphatic function could make biomagnetic therapy a valuable tool in multi-modal care strategies.

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To be finished

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