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Case Report

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Observational Case Series of Three Individuals with Amyotrophic Lateral Sclerosis Using Biophoton Generators

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ABSTRACT

Background: Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disorder characterized by degeneration of upper and lower motor neurons, leading to progressive weakness, bulbar dysfunction, and respiratory failure. Current therapeutic options provide limited benefit, and management remains largely supportive. Observational case reports may contribute to hypothesis generation in conditions with significant unmet clinical need.

Objective: To document and descriptively analyze patient- and caregiver-reported observations temporally associated with proximity use of wellness devices in individuals diagnosed with ALS.

Methods: We report a three-case observational series derived from patient and caregiver correspondence. In each case, individuals diagnosed with ALS used Tesla BioHealing® BioHealers intended for general wellness, near the body. Use occurred outside of formal clinical protocols. No standardized neurological scales (e.g., ALSFRS-R), quantitative motor testing, electrophysiological monitoring, or blind assessments were performed. Outcomes were based exclusively on self-report.

Results: Across cases, reported domains included perceived improvements in peripheral circulation, hand mobility, swallowing coordination, speech clarity, bowel regularity, sleep quality, and energy levels. One case described a reported four-year period of clinical stability with preserved energy. Sensory changes (e.g., tingling, altered limb perception) were also described. No device-related adverse effects were reported. However, no objective clinical measurements were obtained to confirm functional change or disease stability.

Conclusion: This three-case observational series documents patient-reported positive experiences associated with proximity use of wellness devices in individuals diagnosed with ALS. Due to the uncontrolled design, reliance on self-report, and absence of objective outcome measures, no conclusions regarding causality or clinical efficacy can be drawn. These observations are hypothesis-generating and support the rationale for prospective, controlled feasibility studies incorporating standardized neurological metrics and appropriate comparators.

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Introduction

Amyotrophic lateral sclerosis (ALS) is a fatal, progressive neurodegenerative disease characterized by the selective degeneration of upper and lower motor neurons in the motor cortex, brainstem, and spinal cord. Clinically, ALS manifests as progressive muscle weakness, muscle atrophy, dysarthria, dysphagia, and ultimately respiratory failure, leading to loss of voluntary motor function and reduced survival [1,2]. Despite extensive research, currently approved therapeutic options provide only modest benefits, and management remains largely supportive and palliative in nature [3].

Tesla BioHealing® Biophoton Generators are non-electrically powered wellness devices intended to support general health and well-being. These devices do not contain electronic components and do not produce heat. At the time of the observations described in this report, the devices were used in a wellness context. Thousands of users voluntarily shared their personal experiences following use of the devices, often describing perceived improvements in overall quality of life. The following section presents observational descriptions from three individuals with ALS.

Case 1

Patient Information

- **Clinical Diagnosis:** Amyotrophic lateral sclerosis (ALS)
- **Sex:** Male
- **Date of Observation:** January 2022
- **Setting:** Home use
- **Reporting Parties:** Patient and spouse

Intervention

The patient used four Tesla BioHealing® BioHealers for Adults simultaneously. According to caregiver correspondence, the devices were kept near the patient's body approximately 24 hours per day.

Duration of Use
- Initial observations reported after 4 days
- More comprehensive observations reported on day 19 of continuous use

Observed Outcomes (Patient- and Caregiver-Reported)
By day 19 of use, the following changes were reported:
- **Peripheral Circulation**
  - o Improved coloration of face and extremities
  - o Increased visibility of veins with perceived normalization of blood flow
  - o Generalized warmth throughout the body
- **Motor Function**
  - o Increased hand and finger mobility
  - o Fingers reported to have returned to a size comparable to approximately two years prior
- **Bulbar Function**
  - o Tongue no longer persistently resting at the end of the mouth
  - o Improved ability to direct food while eating
  - o Easier swallowing reported
- **Speech and Communication**
  - o Improved speech clarity
  - o Easier verbal expression and comprehension by others
- **Energy and Sleep**
  - o Increased daytime energy levels
  - o Improved sleep quality

The caregiver described the changes as meaningful and unexpected given the progressive nature of ALS.

Safety and Tolerability
No adverse effects were reported during the observation period. The patient continued routine daily activities while using the devices.

Case 2
This case report is based on self-reported observational experiences from an adult female diagnosed with ALS in 2025.

Background: In 2023, the patient experienced a traumatic accident resulting in multiple orthopedic and neurological injuries, including back and knee injury, a sprained ankle, and foot drop. A nerve conduction study revealed peripheral neuropathy. She underwent nerve repair and therapy with expectations of functional recovery.

Subsequently, following additional environmental stressors and another fall during regional hurricanes, her mobility significantly declined. She required the use of a walker and reported progressive difficulty maintaining muscle strength. Imaging studies (MRI and X-ray) reportedly identified spinal column narrowing and a pinched nerve. Two neurosurgical procedures were recommended.

Following further neurological evaluation, including electromyography (EMG), repeat nerve conduction studies, and a second opinion consultation with University of Florida Neurology, she received a diagnosis of ALS on October 13, 2025.

Search for Supportive Wellness Approaches: According to patient and caregiver correspondence, following the ALS diagnosis and in the absence of curative options, the family sought complementary wellness-oriented support. This led to attendance at the Tesla BioHealing® Center in Leesburg, Florida.

Exposure Description: The patient attended sessions twice weekly for approximately two hours per session over a 60-day period. The specific configuration of devices was not part of a controlled clinical protocol, and no objective neurological measurements were collected in association with these visits.

The devices used are wellness devices intended for general well-being and are not cleared or approved for the treatment of ALS.

Patient-Reported Observations (60-Day Period)
According to Self-Report:
- **Hand Function**
  - – A previously contorted left hand reportedly demonstrated gradual opening
  - – Joints were described as less uncomfortable
  - – Reduced perceived stiffness
- **Gastrointestinal Function**
  - – Normalized frequency of bowel movements
  - – Reduced constipation
- **Skin Appearance**
  - – Face described as more vibrant
  - – Improved coloration
- **General Well-being**
  - – Overall positive experience at the facility
  - – Supportive environment noted
  - – Appreciation expressed for center staff assistance with wheelchair accommodations

No adverse effects were reported during the 60-day period.

Important Context: This case represents patient-reported experiential observations only. No standardized scales (e.g., ALSFRS-R), objective motor assessments, imaging comparisons, or blinded evaluations were performed. The natural variability of ALS symptoms, supportive care effects, environmental influences, placebo responses, or regression to the mean cannot be excluded. No conclusions regarding disease modification, slowed progression, or therapeutic efficacy can be drawn from this report.

Relevance: This second case further supports the rationale for structured feasibility research investigating (1) safety and tolerability, (2) standardized patient-reported outcome collection, (3) objective neuromuscular metrics, and (4) reproducibility under controlled conditions.

Case 3
Patient-Reported Longitudinal Stability and Energy Perception in an Individual Diagnosed with ALS

Background: This case is derived from direct written correspondences dated from June 2021 and February 2026 from a female nurse diagnosed with ALS. Communication was composed using a voice-assisted computer due to advanced motor impairment.

The patient reported using two large and four small Tesla BioHealing® biophoton generators positioned near the body while resting in bed. Device use occurred outside of any formal clinical

study or regulated protocol. No objective clinical measurements were collected in association with this observation.

Patient-Reported Experience: According to the patient's written account:

- All devices were placed very close to the body during the day and night.
- The patient reported tingling sensations in the fingers.
- The right leg was described as "feeling different," perceived as stronger, and more noticeable.
- The patient described a subjective impression that movement might be possible, although no actual restoration of voluntary movement occurred.
- A change in body perception was noted.

Importantly, no objective improvement in motor function was documented. The patient clearly stated that voluntary leg movement did not occur despite perceived sensory changes.

Longitudinal Course: According to family reports (separate caregiver communication), the patient's ALS condition remained clinically stable over approximately four years, with maintenance of a certain level of perceived good energy during that period.

No standardized neurological scales (e.g., ALSFRS-R), imaging comparisons, pulmonary function tests, or electrophysiological follow-up data were available to objectively confirm disease stability.

Safety: No adverse device-related effects were reported in the correspondence.

Summary: Case 3 documents patient-reported sensory changes and a reported period of clinical stability over four years in an individual with ALS using non-powered wellness devices in proximity. No objective functional recovery was documented, and no conclusions regarding disease modification or therapeutic efficacy can be drawn.

The observations are hypothesis-generating only and underscore the importance of rigorous, controlled investigation before any clinical interpretation can be made.

Discussion

This observational case series describes a series of patient and caregiver-reported functional changes temporally associated with the continuous proximity use of four Tesla BioHealing® BioHealers in an individual diagnosed with amyotrophic lateral sclerosis (ALS). Given the uncontrolled nature of this three-subject observation, no conclusions regarding causality can be drawn. Placebo effects, spontaneous symptom variability, reporting bias, regression to the mean, or other unmeasured confounding factors cannot be excluded [4,5].

Nevertheless, the reported changes, including perceived improvements in peripheral circulation, swallowing coordination, speech clarity, and sleep quality, are notable when considered against the well-documented natural history of ALS, which is typically characterized by progressive, irreversible motor and bulbar dysfunction with limited periods of spontaneous improvement [6,7]. While transient fluctuations in symptoms may occur, sustained functional gains are uncommon in later stages of the disease [8].

Observational case reports such as this play an important role in hypothesis generation, particularly in conditions with high unmet medical need and limited therapeutic options [9]. The temporal association observed in this case supports the rationale for future controlled feasibility studies to systematically evaluate safety, tolerability, and reproducibility of patient-reported outcomes, as well as to explore potential biological or biophysical mechanisms under rigorously defined experimental conditions. Such investigations would be required before any clinical relevance or therapeutic implications could be assessed.

Mechanistic Considerations (Hypothesis-Generating)

ALS pathophysiology is multifactorial, involving convergent mechanisms such as mitochondrial dysfunction, oxidative stress, glutamatergic excitotoxicity, calcium dysregulation, neuroinflammation, impaired axonal transport, and protein misfolding (e.g., TDP-43 pathology). These pathways are tightly linked to cellular bioenergetics, redox balance, and inflammatory signaling. Although the devices described in these cases are non-electrically powered and not characterized within established photobiomodulation (PBM) frameworks, several speculative biological domains may be considered for future exploration as illustrated in Figure 1.

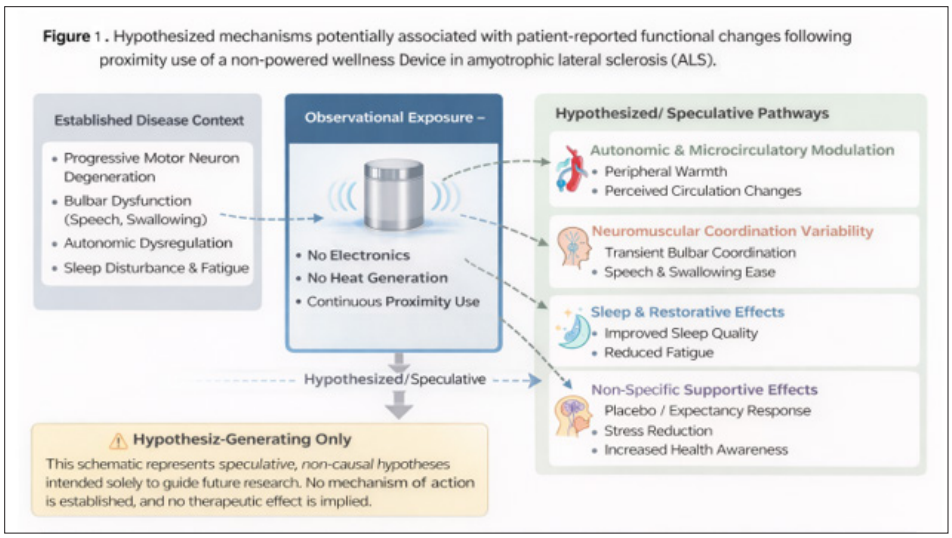

Figure 1: Hypothesized mechanisms potentially associated with patient-reported functional changes following proximity use of a non-powered wellness device in amyotrophic lateral sclerosis (ALS).

This conceptual schematic illustrates speculative pathways that may be explored in future controlled studies, including autonomic or microcirculatory modulation, neuromuscular coordination variability, sleep-related effects, and non-specific supportive influences such as placebo or expectancy effects. All pathways are hypothetical and presented solely for hypothesis generation. No causal relationship or therapeutic mechanism is implied.

Bioenergetic and Mitochondrial Signaling

Mitochondrial dysfunction is widely recognized as a central component of ALS pathogenesis, contributing to impaired cellular energy production, oxidative stress, and neuronal vulnerability. Prior investigations in other neurological and biological contexts have explored whether light-based biophysical exposures, when delivered under defined wavelength and dosing conditions, may influence mitochondrial respiration and downstream signaling pathways. If reproducible tissue-level effects were demonstrated under controlled experimental conditions, theoretical mechanisms could include modulation of cellular redox balance, ATP production, and stress-response signaling pathways that are closely linked to mitochondrial function [14-16].

More recently, exploratory clinical studies in other neurodegenerative disorders have reported associations between biophysical light-based exposures and changes in cerebral electrophysiological activity, as measured by quantitative electroencephalography (qEEG), as well as improvements in patient-reported quality of life in conditions such as Parkinson's disease and Alzheimer's disease [17-20]. While these findings remain preliminary and are specific to those disease populations, they highlight biological domains, including bioenergetics, neural signaling, and systemic physiological regulation, that may warrant further structured investigation. However, extrapolation of such observations to ALS must be approached with caution. Rigorous, controlled studies incorporating objective outcome measures would be necessary to determine whether any reproducible biological or clinical effects exist in the ALS population and to clarify their potential mechanistic basis.

Microcirculatory and Autonomic Regulation

Across Cases 1 and 2, patients reported perceived changes in peripheral warmth, skin coloration, and circulation. Autonomic dysfunction and microvascular alterations have been documented in ALS and may contribute to symptom burden, including impaired thermoregulation and reduced tissue perfusion. In other neurological populations, exploratory observational studies have reported associations between biophysical light-based exposures and changes in circulation-related parameters and patient-reported physiological function in conditions such as Parkinson's disease, Alzheimer's disease, and chronic stroke (21-23). While these findings are preliminary and derived from different disease contexts, they identify vascular and autonomic regulation as potential physiological domains for further investigation in patients with ALS. If reproducible changes in autonomic tone or microcirculatory function were demonstrated under controlled conditions, such modulation could theoretically influence tissue perfusion or perceived energy levels.

However, subjective perceptions of warmth and circulation are also known to be influenced by non-specific factors, including expectancy effects, relaxation, and attentional shifts. Therefore, without objective physiological measurements such as microvascular imaging, perfusion studies, or autonomic function testing, it is not possible to determine whether the reported changes reflect measurable vascular modulation or altered sensory perception.

Neuromuscular Coordination Variability

Reports of perceived improvements in swallowing coordination, speech clarity, and hand mobility raise questions regarding the potential role of transient neuromuscular variability. ALS is characterized by progressive motor neuron degeneration. However, symptom expression may fluctuate over time due to factors such as fatigue, inflammation, sleep quality, metabolic state, and compensatory neural or behavioral adaptations. Improvements in sleep quality, energy levels, or overall physiological state could secondarily influence functional performance without altering the underlying neurodegenerative process.

Exploratory observational studies conducted in other neurological conditions, including chronic stroke and traumatic brain injury, have reported associations between biophysical light-based exposures and changes in neuromuscular function, motor coordination, and patient-reported neurological performance [24,25]. While these findings are preliminary and derived from distinct disease populations with different pathophysiological mechanisms, they highlight the interconnected relationship between central nervous system function and peripheral motor performance. These domains may warrant further investigation to determine whether similar physiological pathways are relevant in ALS.

To distinguish perceived functional changes from expected disease variability, future studies should incorporate objective and standardized outcome measures. These may include quantitative bulbar function assessments, grip strength testing, electrophysiological measurements, and longitudinal evaluation using validated clinical instruments such as the ALS Functional Rating Scale–Revised (ALSFRS-R). Such approaches would be necessary to determine whether any reproducible neuromuscular effects can be observed under controlled conditions.

Neuroinflammatory and Stress-Response Pathways

Neuroinflammation and glial activation amplify neuronal vulnerability in ALS. In other neurological conditions, biophysical exposures have been explored for potential modulation of inflammatory signaling [26-27]. Hypothetically, if a non-thermal biophysical stimulus influenced systemic inflammatory tone or stress-response pathways, downstream effects on fatigue, perception, or functional capacity might occur.

Such possibilities remain speculative and untested in the context of non-powered wellness devices.

Sleep and Energy Regulation

Sleep disturbance is common in ALS and significantly impacts fatigue, cognition, and quality of life. Across cases, improved sleep quality and preserved energy were recurrent themes. Similar results were observed in patients with Lyme disease after biophoton therapy [28]. Improvements in sleep, whether mediated by relaxation, expectancy effects, environmental factors, or autonomic modulation could secondarily enhance daytime function and subjective well-being.

Given that fatigue is multifactorial in ALS (respiratory mechanics, muscle inefficiency, inflammation, psychological stress), future studies incorporating validated fatigue and sleep instruments would be essential.

Disease Stability

Case 3 described a reported four-year period of clinical stability with maintained energy levels. ALS progression rates vary widely among individuals, and slow-progressing phenotypes

are recognized. Without standardized longitudinal metrics, it is not possible to determine whether reported stability exceeded expected natural history. Nonetheless, future controlled studies incorporating time-to-event analyses, progression slope modeling, and stage-adjusted comparisons could evaluate whether any reproducible signal exists.

Research Implications

Future investigations, if pursued, should prioritize:

- Prospective feasibility studies
- Standardized ALSFRS-R scoring
- Quantitative muscle testing
- Pulmonary function measures
- EMG monitoring
- Autonomic and microcirculatory metrics
- Sleep and fatigue scales
- Sham-controlled designs
- Independent physical characterization of device emissions

Ethical oversight, transparent reporting, and conservative interpretation would be essential.

Limitations

The primary limitations of this case series include single-subject observations, retrospective self-reporting, absence of objective neurological measurements, lack of a sham comparator, absence of blinded assessment, lack of a standardized dosing protocol, and potential reporting and selection bias. Given these constraints, the current report serves exclusively as hypothesis-generating material.

Conclusion

The integration of three observational cases identified recurring patient-reported themes, including perceived improvements in circulation, energy levels, sleep quality, bulbar function, and overall functional stability. Although these observations were temporally associated with proximity use of non-electrically powered wellness devices, the uncontrolled nature of the reports and reliance on subjective outcomes preclude any determination of causality or clinical efficacy.

These findings highlight physiological and functional domains that may warrant further evaluation in rigorously designed prospective studies incorporating objective neurological assessments, standardized outcome measures, and appropriate control conditions. Until such evidence is available, the observations presented here should be interpreted as hypothesis-generating and exploratory, and not as evidence of disease modification or therapeutic effect.

Source Documentation

This case series is derived exclusively from contemporaneous email correspondence from the patient and/or caregiver and Tesla BioHealing representatives, documenting real-time observations during device use from 2021 to 2026.

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