

Review Article

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Combating the Opioid Crisis Through the Body Rejuvenation System (BRS): A Regenerative Approach to Pain Resolution

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ABSTRACT

The opioid crisis continues to devastate global health systems, with over 100,000 annual overdose deaths in the United States alone. At its root lies the medical community's struggle to address intractable pain effectively without dependency-forming analgesics. This presentation introduces the Body Rejuvenation System (BRS)—a novel, non-invasive nano- microcurrent biofeedback therapy that aims to restore function by regenerating pathological tissue, rather than merely suppressing pain signals.

The BRS approach identifies and targets dysfunctional cell populations exhibiting altered membrane potential (V_{mem}), a hallmark of chronic inflammation, degeneration, or nerve injury. Unlike TENS (transcutaneous electrical nerve stimulation) or frequency-specific microcurrent devices, BRS applies a battery-powered Alternating Current (AC) that reverses polarity every 2.5 seconds and utilizes a uniform regenerative frequency across the body. This allows for whole-system neuro-electrical rebalancing, enhancing the body's intrinsic healing response.

Clinical case observations have shown successful resolution of intractable pain conditions— including severe migraines, postoperative infections, acute pleuritis, and joint deformity pain —without pharmacological intervention. Patients reported rapid functional recovery, restored sensation, and return to daily activities after just days to weeks of BRS therapy.

This paper outlines the mechanism of action, clinical applications, and potential role of BRS in outpatient and rehabilitation settings. The technology aligns with national calls to find opioid-sparing pain solutions and opens new possibilities for personalized, regenerative pain care.

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Introduction

The Opioid Crisis in Context

The opioid epidemic is no longer an emerging threat—it is a public health emergency. Originally fueled by well-intentioned but excessive prescription practices, the crisis has expanded due to synthetic opioids like fentanyl. Despite awareness, millions of chronic pain patients continue to rely on opioids as a last resort, often due to limited access to curative pain solutions.

As a result, physicians face a painful paradox: relieve suffering with opioids and risk dependency, or withhold treatment and risk reduced quality of life.

The Search for a New Paradigm

While many non-opioid alternatives have emerged—such as TENS, mindfulness, physical therapy, and even cannabis—none have been universally effective for intractable or unexplained pain. There remains a need for a physiologically grounded, reproducible, and non-invasive therapy that treats the source of pain, not just the symptom.

The Body Rejuvenation System (BRS) was developed to fulfill this unmet need.

Overview of the Body Rejuvenation System (BRS)

Core Technology and Innovation

BRS is a proprietary, biofeedback-guided, nano-microcurrent therapy that uses Alternating Current (AC) to regenerate damaged or pathological tissues. Its key innovations include:

- Nano-microcurrent delivery: Gentle yet powerful enough to stimulate change at the cellular level.
- AC with polarity reversal every 2.5 seconds: Unlike DC systems, this promotes dynamic energy balance.
- Single universal frequency: Optimizes systemic bioelectric harmony rather than organ- specific targeting.
- Battery-powered device: Ensures safety and portability while delivering therapeutic- grade energy.

The BRS system is applied externally via conductive pads or probes, guided by an intuitive biofeedback scan that detects and responds to dysfunctional areas in real-time.

Scientific Basis: V_{mem} Dysfunction and Pain

Emerging research shows that cell membrane potential (V_{mem}) plays a critical role in cell function, inflammation, and regeneration. In injured or diseased tissues, V_{mem} becomes depolarized,

preventing normal cellular repair and communication.

BRS targets these “stuck” or “blocked” zones, delivering regulated current to repolarize the cells, restart ion transport, and trigger regenerative signaling cascades. This is not symptomatic pain suppression—it is biological tissue correction.

Clinical Applications in Pain Care
Intractable Migraine Pain

In one case, a patient with daily migraines unresponsive to multiple drug regimens received BRS therapy over five days. By Day 2, pain intensity dropped from 9/10 to 3/10; by Day 5, the patient was pain-free with restored energy, appetite, and concentration. No medications were required.

Post-Surgical Pain and Infection

A patient who underwent total knee replacement 6 years developed unexplained postoperative joint pain and swelling, resistant even to heavy morphine. BRS therapy initiated drainage of infection, reduced swelling, and eliminated the need for surgical debridement.

Acute Pleuritis

In a case of pleuritis following respiratory illness, the patient reported severe chest pain for 6 months with each breath. After 1 sessions of BRS therapy, the pain was completely eliminated, and normal respiratory function was restored.

Chronic Joint Deformity and Pain

Using BRS, we achieved non-surgical correction of joint deformity in several cases—rebalancing tissue alignment while simultaneously resolving pain.

Mechanism of Action

Differentiation from TENS and FSC
Hi

	BRS	TENS	Frequency-Specific Microcurrent
Current Type	AC	DC or pulsed	DC
Frequency Strategy	Single universal	Varies	Tissue-specific
Primary Effect	Regeneration	Pain blocking	Metabolic modulation
Cell Polarity Rebalancing	Yes	No	Limited
Pain Relief Duration	Long-term / permanent	Temporary	Short to medium-term

Cellular Regeneration and Pain Elimination

BRS restores cell polarity, promoting:

- Mitochondrial activation
- Anti-inflammatory gene expression
- Tissue matrix remodeling
- Neuronal rewiring and reconnection

This leads to permanent resolution of pain triggers, allowing the patient to discontinue pain medications—including opioids—entirely.

System Integration into Rehabilitation Settings
Outpatient and Physical Therapy Clinics

BRS is designed for easy integration into PT and rehab centers. Sessions are brief (15–30 minutes), non-invasive, and well

tolerated. Therapists can use BRS adjunctively with manual therapy, gait training, or neurorehabilitation.

Home-Based Pain Recovery Programs

The battery-powered BRS device supports home use under supervision, enabling pain relief and tissue repair without travel or dependency on pharmaceuticals.

Impact on the Opioid Crisis
Reduction in Opioid Prescriptions

BRS offers physicians a credible non-opioid treatment option, reducing pressure to prescribe. Patients who would otherwise face long-term opioid regimens may resolve their pain in days to weeks.

Liberation from Dependency

In early pilot observations, patients previously dependent on opioids for years stopped all pain medication after 1–3 weeks of BRS therapy, with no rebound pain. This presents an enormous public health opportunity.

Cost Savings and Societal Benefits

Eliminating opioid dependency:

- Saves thousands per patient in prescription costs
- Reduces overdose risks
- Restores workforce participation and family stability

Future Research and Call for Collaboration

We are currently preparing:

- A Q-submission for FDA Breakthrough Device Designation
- IRB proposals for clinical trials in pain care
- Grant applications to NIH and DARPA

We invite rehabilitation clinics, academic institutions, and public health agencies to collaborate on large-scale validation studies to quantify BRS impact across different pain populations [1-4].

Conclusion

The Body Rejuvenation System represents a paradigm shift in pain care—from suppression to regeneration. Its novel approach to correcting cell-level dysfunction offers an unprecedented opportunity to combat the opioid crisis at its root: the failure to resolve pain.

As our healthcare system searches for scalable, affordable, and effective solutions, BRS may emerge not just as a device—but as a movement toward healing without harm.

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