

Introducing SpineMaster® iPROBE

SpineMaster® Reset the Spine - Reset the Body

True Microcurrent Interferential for Pain Control and Healing

& Nervous System Reset



For the Doctor:

The SpineMaster® iPROBE delivers targeted low-frequency microcurrent impulses along the paraspinal regions, with the intent of activating afferent neural pathways that ascend toward central nervous system structures, particularly the brainstem and higher cortical centers.

By applying microcurrent stimulation bilaterally adjacent to the spinal column, the iPROBE engages **mechanoreceptors**, **proprioceptors**, **and cutaneous afferents** in the dermatomal and myotomal distributions. This afferent input is designed to facilitate **neuromodulation** via dorsal root and spinothalamic tract activity, potentially enhancing **synaptic plasticity**, improving **signal fidelity**, and restoring the integrity of **sensorimotor loops**.

The clinical hypothesis is that suboptimal afferent signaling — often seen in the presence of vertebral subluxation or segmental dysfunction — may result in **functional disconnection** or altered processing within central integrative structures. By "priming the pump" with non-invasive bioelectric stimulation, the iPROBE aims to **re-establish afferent flow**, reduce central sensitization, and support the normalization of downstream autonomic and somatic outputs.

In this framework, the SpineMaster® iPROBE serves not as a direct effector of motor change, but rather as a **neurological facilitator**, restoring the environment needed for the nervous system to resume optimal self-regulation and healing.

For the Patient:

When there's stress or misalignment in the spine, your nervous system's ability to send clear signals to and from the brain can become disrupted. The SpineMaster® iPROBE gently delivers healing energy (microcurrent) to the nerves alongside your spine.

This current helps "wake up" the communication pathways that may have been slowed down due to irritation or blockage in the spinal area. Think of it like giving your nervous system a nudge to start working at full speed again.

The current travels upward toward your brain and helps your body recognize and correct areas that need healing. It's like turning the lights back on in places where the circuits were dim.

This approach supports the work of your chiropractor by helping your brain and body reconnect naturally—from above, down, inside, and out.



The SpineMaster® iPROBE system is a completely stand-alone, dual-function microcurrent device powered by a unique configuration of **twin independent microcurrent stimulators**. These stimulators are housed within the iPROBE gun, delivering controlled, low-frequency microcurrent impulses bilaterally along the paraspinal regions.

This modular design allows the stimulators to be used in two ways:

- 1. **Integrated into the iPROBE gun** for spinal and neural stimulation
- 2. **Removed and used independently** as a conventional microcurrent system with probes or pads

This versatility adds significant clinical and practical value, making the SpineMaster® iPROBE ideal for multi-purpose treatment across spinal, muscular, and neurological applications.

The iPROBE stimulates cutaneous and deep-tissue afferent nerve fibers, particularly those associated with the dorsal columns and spinothalamic tracts. The goal of stimulation is to facilitate upward (ascending) neural signaling toward central nervous system structures, including the brainstem, thalamus, and cortex. This afferent activation may support synaptic plasticity, modulate central sensitization, and improve the transmission of proprioceptive and mechanosensory data that may be compromised by vertebral subluxation or segmental dysfunction.

Rather than directly initiating motor output, the SpineMaster® iPROBE acts as a neurological primer—optimizing sensory input to encourage normalization of neural flow through somatosensory integration. This may assist in resetting dysfunctional neural circuits and improving autonomic regulation.

Introducing the SpineMaster® iPROBETM

The First Modality Completely Congruent with Chiropractic Philosophy—And the Pioneers of Bioelectric Healing

"Nature needs no help—just no interference."

The SpineMaster® iPROBETM is the embodiment of that principle—powered by science, philosophy, and the timeless wisdom of the body itself.

both 0.3Hz and 7.83Hz simultaneously through a uniquely engineered quad-tip iPROBE TM , creating four converging microcurrents designed to clear nerve interference, stimulate healing, and restore communication throughout the body.
☐ The Current of Healing, Perfected
In <i>The Body Electric</i> , Dr. Robert Becker described the Current of Injury —a direct current signal the body generates to trigger tissue repair. ☐ The SpineMaster® iPROBE TM delivers that same biologically appropriate current to support regeneration and repair without overwhelming the system.
In the groundbreaking Cheng study , it was found that continuous direct current could increase ATP production by up to 500%—the energy source for all healing. ☐ The iPROBE™ uses this same type of current to energize cells , reduce inflammation , and promote faster recovery .
Pioneering chiropractor Dr. Thomas Wing identified a unique waveform—the Tsunami Wave —as a slowly building current that accumulates healing energy throughout the treatment. □ The SpineMaster® iPROBE TM integrates this Tsunami Wave pattern to create a deeply restorative experience with lasting results.
□ System Highlights:
 Integrated AXION Wave Microcurrent Module Dual outputs: 0.3Hz and 7.83Hz for optimal healing and regulation Creates an interferential field of four therapeutic currents Quad-Tip iPROBETM Designed to deliver current across spinal segments and to any area of the body Targets nerve roots, joints, fascia, trigger points, and more Broad Clinical Application Originally developed for neurological reset through the spine Now widely used for pain relief, injury recovery, and full-body healing protocols Non-invasive, No Force No pressure, no mechanical manipulation—just precise energy that restores balance
□ More Than Just Spinal

This breakthrough system combines dual AXION Wave microcurrent generators, delivering

While the name SpineMaster \mathbb{R} reflects its roots in neuro-focused care, the **iPROBE** \mathbb{R} is not limited to the spine.



ts unique quad-tip delivery makes it **ideal for ise anywhere on the body**—from shoulders,
snees, and joints to localized pain sites and
injury areas.

Whether you're addressing nerve regulation, inflammation, or tissue repair, the

iPROBETM delivers targeted healing where it's needed most.

"We're not overriding the nervous system—we're restoring its voice—across the entire body."

SpineMaster® and ADIO Chiropractic Philosophy

In Chiropractic philosophy, the core belief is that **healing flows from Above-Down, Inside-Out** (ADIO). This means that the **innate intelligence of the body originates in the brain**, flows **down the spinal cord**, and radiates **outward through the nerves** to every cell, tissue, and organ. Health is not something that comes from the outside in — it's expressed from within.

When spinal subluxations disrupt this innate flow, the result is **interference**—reduced neural expression, miscommunication between the brain and body, and ultimately dysfunction or disease.

The **SpineMaster** honors this philosophy by providing a precise, gentle microcurrent impulse to the spinal cord's neural pathways. It doesn't override the body's intelligence — it simply removes interference and **restores communication**, allowing the body's natural healing systems to function at 100%.

As B.J. Palmer said:

"Nature needs no help. Just no interference."

The **SpineMaster is a true ADIO modality** — not a therapy, but a tool for awakening the full expression of life and function within.

Join the New Wave of Healing

This is more than a modality. It's a movement—where energy medicine, chiropractic principle, and scientific evidence finally align.

Investing \$1995 in the SpineMaster® iPROBE™ System is not just a purchase—it's a strategic upgrade for any healthcare practice seeking to elevate outcomes, increase revenue, and differentiate in a competitive market. Here's a breakdown of the benefits and value this system brings:

☐ 1. Clinically Powerful, Yet Non-Invasive

The SpineMaster iPROBE delivers four bio-identical healing currents using interferential microcurrent, providing deep therapeutic effects without force, manipulation, or discomfort. This opens the door to treating:

- Neurological dysfunction
- Chronic and acute pain
- Soft tissue injuries
- Stress-related conditions
- Post-surgical scarring ...all with one versatile tool.

☐ 2. Immediate Return on Investment

Even at \$80-\$120 per session, a practitioner can recoup the cost in as little as 20-25 sessions. With common treatment plans running 6-12 sessions, the system pays for itself quickly—then becomes a revenue-generating asset.

☐ 3. Aligned with Philosophy and Science

For chiropractors, bodyworkers, and integrative practitioners, the iPROBE is 100% congruent with the principle of removing interference and letting the body heal itself. Built on the work of Becker, Cheng, and Wing, this system delivers what your hands can't—electrical restoration at the cellular and neurological level.

\Box 4. Versatility = More Clients Helped

Not limited to spinal use, the iPROBE treats:

- Shoulders, knees, elbows, TMJ, fascia, scars, vagus nerve points
- Pediatric, geriatric, athletic, and pain-sensitive populations You can now help clients who don't want, or can't receive, manual adjustments.

☐ 5. No Disposables, No Downtime, No Risk

- Lifetime warranty on probes
- Zero consumable cost per treatment
- Painless, drug-free, and side-effect-free

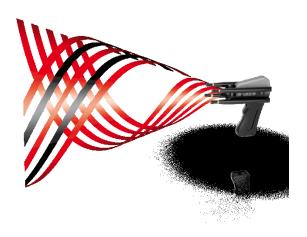
☐ 6. Professional Edge & Differentiation

Add "SpineMaster Certified" to your credentials. Market a service no one else in your region offers. Whether you run a chiropractic clinic, wellness spa, or integrative center—you stand out immediately.

\Box 7. Limited Access = Exclusive Value

This is **not a mass-market product.** SpineMaster systems are only sold to trained professionals. You're part of a **select group offering next-level care** backed by research, results, and respect for the body's design.

For under \$2,000, you're not buying a device—you're unlocking a new tier of results, revenue, and reputation.



Client Intake & Documentation

Client Intake Form (Sample)
Client Name:
Date:
Date of Birth:
Phone:
Email:
Primary Concern(s):
Rate the Following (1 = Poor, 10 = Excellent):
• Energy Levels:
Energy Levels:Sleep Quality:
Pain Level (current):
Stress Level:
Mood/Emotional State:
Digestion/Gut Health:
Areas of Discomfort or Pain: [] Neck [] Shoulders [] Back [] Joints [] Headaches [] Jaw Other:
Relevant Medical History (check all that apply): [] Pacemaker [] Diabetes [] Recent Surgery [] Epilepsy [] Pregnancy [] Metal Implants [] Cancer (past or present) [] Autoimmune Disorders Other:
Goals for Treatment:
[] Pain Relief [] Stress Reduction [] Energy Recovery
[] Improved Sleep [] Athletic Recovery [] Neurological Reset Other:
Client Signature: Date:
Progress Notes (Per Session)
• Session #:
• Date:
• Treated Areas:
• Frequency Used: [] 0.3Hz [] 7.83Hz [] Both

•	Duration:	_ minutes
•	Client Response:	
•	Practitioner Notes:	

SpineMaster iPROBETM – Frequently Asked Questions (FAQ)

Q: What is the SpineMaster iPROBE?

A: The SpineMaster iPROBE is a handheld, dual-probe microcurrent device that delivers precise, low-frequency stimulation to both sides of the spinal column simultaneously. It is powered by two independent AXION Wave microcurrent stimulators embedded within the device.

Q: How does the iPROBE work?

A: It uses a unique cross-current microcurrent delivery system that stimulates afferent nerves along the spine. This encourages the upward flow of sensory input toward the brain, helping restore communication in the nervous system — a concept rooted in the chiropractic ADIO (Above-Down-Inside-Out) healing philosophy.

Q: Is the SpineMaster iPROBE a stand-alone system?

A: Yes. The iPROBE is completely self-contained. The twin AXION Wave stimulators can also be removed and used independently as conventional microcurrent units, offering added versatility and clinical value.

Q: What frequencies does it use?

A: The iPROBE uses AXION Wave technology delivering dual-frequency output at **0.3Hz** and **7.83Hz**, creating an interferential pattern ideal for spinal applications.

Q: What are the clinical applications of the iPROBE?

A: The iPROBE is used for:

- Nervous system resets
- Stress and tension relief
- Chronic spinal dysfunction
- Parasympathetic tone restoration
- Pediatric and geriatric neuro support
- Enhancing vagus nerve flow (cervical application)

O: Is it safe for use on children?

A: Yes. The iPROBE delivers microcurrent at extremely low intensities — well below sensory thresholds — making it safe and effective for pediatric care under practitioner supervision.

Q: How long is a typical session?

A: Most protocols involve applying the probes along the spine in a stepwise fashion for **10** seconds per level, moving from the upper cervical spine (C1) down to the sacrum.

Q: Can the iPROBE be used for non-spinal applications?

A: Absolutely. Once the twin AXION Wave stimulators are removed from the gun, they can be used with any standard AXION probes, wands, or pads for facial, joint, or acupoint treatments.

Q: Does the iPROBE use LED light?

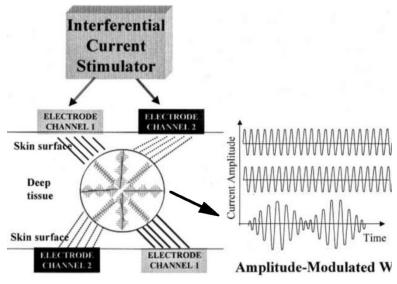
A: Yes. The SpineMaster iPROBE includes a built-in 635nm red LED that can be used in **continuous or pulsed mode**, further supporting tissue response and neuromodulation.

Q: Who can use the SpineMaster iPROBE?

A: It is designed for licensed professionals including chiropractors, physical therapists, massage therapists, and advanced bodyworkers trained in neuromodulation and spinal techniques.

Q: How do I learn the protocols?

A: A complete protocol manual and video training series is available with purchase. Certification training is also offered for professionals seeking deeper mastery.



History of Interferential Signals

Interferential Therapy (IFT) was developed by Dr. Hans
Nemec, an Austrian physician, in the 1950s. He pioneered the use of medium-frequency currents to create therapeutic low-frequency beat frequencies within the body, a principle that is

fundamental to interferential therapy today.

Dr. Hans Nemec's Contribution:

- Why Medium-Frequency? Early forms of electrotherapy often used low-frequency currents, but these could be uncomfortable for patients. Dr. Nemec discovered that by using two medium-frequency currents (typically 1,000 to 10,000 Hz) and allowing them to cross within the tissue, he could create a low-frequency therapeutic effect with deeper tissue penetration and minimal discomfort.
- Beat Frequencies: His technique generated beat frequencies that are the sum and difference of the original frequencies, allowing customized treatment effects such as pain relief, muscle stimulation, and inflammation reduction.

The Pioneer of Microcurrent Interferential Therapy: Dr. Joe Ventura

Dr. Joe Ventura revolutionized electrotherapy with the invention of Microcurrent Interferential Therapy in 1990, introducing the AXION Micro5. This groundbreaking device featured:

- Two Channels of True Microcurrent: Providing precise and effective therapy for pain relief, healing, and cellular regeneration.
- Innovative SpineMaster® iPROBE: The first tool of its kind to deliver cross-currents of different frequencies, allowing for customizable beat frequencies within the body.

Fast Forward to Today: The SpineMaster® iPROBE



Dr. Ventura has taken his innovation to the **next** level with the introduction of the **SpineMaster®** iPROBE, a completely self-contained, portable dual-channel microcurrent device that:

Portability: The SpineMaster® iPROBE eliminates the need for external devices, offering on-the-go therapy for humans and animals alike.

Advanced Interferential Technology: Delivers dual microcurrent channels with interferential currents, creating therapeutic beat frequencies that:

• Reduce pain by stimulating endorphin

release.

- Promote deep tissue healing through cellular regeneration.
- Enhance muscle relaxation and lymphatic drainage.

Redesigned SpineMaster® iPROBE Gun:

- The new design offers **ergonomic control** and **precise application** of **microcurrent** interferential therapy.
- Ideal for **sports medicine**, **physical therapy**, and **veterinary therapy**, especially with the use of the **SpineMaster Gel**.

What Sets Dr. Ventura's Technology Apart:

- 1. True Microcurrent Delivery:
 - o Uses frequencies below 1 Hz, which are optimal for cellular repair and healing.
- 2. Interferential Beat Frequencies:
 - o Generates both sum and difference frequencies, offering a unique therapeutic approach not possible with traditional TENS or EMS devices.
- 3. Versatility:
 - Effective for treating muscle injuries, inflammation, and chronic pain in both humans and animals.

The SpineMaster® iPROBE System: Proudly Made in the USA

When you choose the **SpineMaster® iPROBE** System, you're investing in a product that offers the **highest quality**, **superior service**, and **exceptional value**. As a **Made in the USA** product, the **SpineMaster® iPROBE** not only supports **domestic manufacturing** but also provides tangible benefits to **professionals**, **clinics**, and **animal care specialists**.

Key Benefits of a USA-Made SpineMaster® iPROBE System:

1. Higher Quality Standards:

- Stringent Manufacturing: The SpineMaster® iPROBE is produced under strict quality control, ensuring consistency and reliability in every device.
- Advanced Technology: Built with premium components, delivering precise microcurrent therapy with long-lasting performance.
- Compliance and Safety: Meets U.S. regulatory standards, offering peace of mind for healthcare professionals and veterinary practitioners.

2. No Tariffs or Import Fees:

- Cost Savings: Since the SpineMaster® iPROBE is manufactured domestically, you avoid costly import tariffs, customs fees, and international shipping surcharges.
- Stable Pricing: No exposure to currency fluctuations or trade disruptions, allowing you to budget accurately for your business needs.
- Faster Delivery: Enjoy shorter lead times, with faster shipping and restocking when needed.

3. Superior Repairs and Service:

- Quick Turnaround: With service centers in the U.S., repairs are handled locally, minimizing downtime and keeping your practice running smoothly.
- Readily Available Parts: Access to genuine replacement parts without the wait times associated with overseas suppliers.
- Personalized Support: Work directly with U.S.-based technical support, ensuring clear communication and efficient problem resolution.

4. Supporting Local Economies:

- Job Creation: Every purchase of an SpineMaster® iPROBE helps support American workers and strengthen local businesses.
- Sustainable Practices: Many U.S. manufacturers prioritize environmentally friendly practices, adding an ethical choice to your business operations.

What's in the SpineMaster® iPROBE Package? 22



The SpineMaster® iPROBE Package offers everything you need to provide cutting-edge Microcurrent Interferential Therapy to humans and animals alike. Designed for professional use, this all-inclusive kit combines advanced technology with ease of use, delivering powerful therapeutic results for healing, pain relief, and calming effects.

The Complete SpineMaster® iPROBE Package Includes:

1. Redesigned SpineMaster® iPROBE

Gun:

- Innovative Design: Holds the Wave Dual Microcurrent device securely, allowing for precise control and comfortable handling.
- Magnetic Tip Probes: Delivers cross-currents via magnetic tips, enhancing cellular regeneration and therapeutic effects.
- Ergonomic Grip: Perfect for professional treatments, offering smooth application to targeted areas.

2. Wave Dual Microcurrent Device:

- True Microcurrent Technology: Delivers simultaneously or independent frequencies of:
 - o **0.3 Hz:** Ideal for deep tissue healing and cellular repair.

- 7.83 Hz: Matches the Schumann Resonance, promoting relaxation and natural body rhythms.
- Customizable Settings: Offers dual-channel control, allowing personalized treatments to meet specific therapeutic goals.

3. All Necessary Cables:

- Includes high-quality connection cables, ensuring consistent energy flow and reliable performance.
- Designed for ease of setup and durability, perfect for busy clinics or mobile therapy practices.

4. Gel Holder:

- Convenient Design: Keeps the SpineMaster Gel easily accessible during treatments.
- Efficient Application: Allows for quick and consistent wetting of probe tips, maintaining optimal conductivity.

5. One Bottle of SpineMaster Gel:

- Essential Oil Blend: Formulated with Lavender, Turmeric, Clary Sage, and Peppermint for calming, pain relief, and anti-inflammatory benefits.
- Conductive Media: Ensures effective delivery of microcurrent energy, enhancing the therapeutic impact of treatments.
- Versatile Use: Safe for human and animal therapy, supporting wound healing, muscle recovery, and stress reduction.

Ideal For:

- Chiropractors, reset neurological systems, speed healing, control pain.
- Veterinary Professionals: Enhance animal rehabilitation and performance care.
- Sports Therapists: Provide non-invasive pain relief and faster recovery for athletes.
- Physical Therapists: Integrate microcurrent therapy into treatment protocols for injuries and chronic pain management.
- Holistic Practitioners: Deliver calming therapies and lymphatic support, using the natural benefits of essential oils

Understanding the Frequencies:

1. 0.3 Hz (Original Signal):

- o **Effect:** Deeply stimulates cellular repair and regeneration.
- **Benefit:** Ideal for wound healing, reducing inflammation, and promoting ATP (cellular energy) production.

2. 7.83 Hz (Original Signal - Schumann Resonance):

- **Effect:** The Earth's natural electromagnetic frequency, often linked to grounding and relaxation.
- o **Benefit:** Known to reduce stress, promote healing, and enhance mental clarity.

Therapeutic Benefits of the Beat Frequencies:

1. 8.13 Hz (Sum Frequency):

- Neurological Impact: Frequencies in the 8 Hz range are close to alpha brainwaves (8-12 Hz), which are associated with:
 - **Deep relaxation:** Similar to a meditative state.
 - **Stress reduction:** Helps calm the nervous system.
 - **Enhanced healing environment:** The body is more receptive to repair during relaxation.
- o Physical Benefits: May assist in:
 - Muscle relaxation and reduction of spasms.
 - Improving blood flow and oxygenation.
 - Supporting **lymphatic drainage**, which is great for reducing inflammation.

2. 7.53 Hz (Difference Frequency):

- o **Grounding and Stability:** Very close to the **Schumann Resonance** (7.83 Hz), this frequency:
 - Promotes a sense of calm and balance.
 - May enhance the body's natural healing processes by syncing with the Earth's frequency.
- o Healing Properties: Beneficial for:
 - **Reducing inflammation**, a key factor in healing injuries.
 - Alleviating pain, especially for chronic conditions.
 - Supporting mental focus and clarity, which can aid in recovery.

Practical Application in Interferential Therapy:

1. For Athletic Injuries:

- Muscle Recovery: These frequencies can reduce soreness and improve recovery times
- o **Joint Injuries:** Helps decrease swelling and improve joint mobility.

2. For Inflammation and Pain Management:

- The 7.53 Hz frequency can help manage chronic pain and reduce inflammation in soft tissues.
- The 8.13 Hz frequency promotes a healing state by inducing a relaxed, parasympathetic response.

3. For General Wellness:

- Promotes overall balance and stress reduction, which is beneficial for holistic recovery.
- Can be used as part of a post-treatment routine to maintain results and enhance wellbeing.

The SpineMaster® iPROBE System: Advanced Microcurrent Interferential Therapy for Human Health

The SpineMaster® iPROBE System offers a powerful and versatile solution for pain relief, healing, and calming therapies in human health care. Utilizing true microcurrent technology with interferential therapy, the SpineMaster® iPROBE delivers gentle, therapeutic frequencies that support the body's natural healing processes.

Key Benefits for Human Use:

1. Non-Invasive Pain Relief:

- o Reduces acute and chronic pain without the need for medications.
- Effective for arthritis, neuropathic pain, musculoskeletal injuries, and postsurgical recovery.

2. Accelerated Healing:

- Microcurrent frequencies (especially 0.3 Hz) stimulate cellular regeneration and promote tissue repair.
- o Ideal for treating wounds, scars, muscle tears, and soft tissue injuries.

3. Muscle Relaxation & Spasm Reduction:

- The 7.83 Hz frequency helps relax muscles, reduce spasms, and improve flexibility.
- o Supports post-exercise recovery and helps manage muscle stiffness.

4. Calming and Stress Relief:

- Helps calm the nervous system, reducing stress and promoting a sense of wellbeing.
- Can be used for relaxation therapy, sleep improvement, and anxiety management.

5. Enhanced Product Absorption:

 When combined with SpineMaster Gel, which contains Lavender, Turmeric, Clary Sage, and Peppermint, the SpineMaster® iPROBE enhances the delivery of essential oils, providing anti-inflammatory and soothing effects.

Practical Application in Interferential Therapy:

4. For Athletic Injuries:

- **Muscle Recovery:** These frequencies can reduce soreness and improve recovery times
- o **Joint Injuries:** Helps decrease swelling and improve joint mobility.

5. For Inflammation and Pain Management:

- The 7.53 Hz frequency can help manage chronic pain and reduce inflammation in soft tissues.
- o The **8.13 Hz** frequency promotes a **healing state** by inducing a relaxed, parasympathetic response.

6. For General Wellness:

- Promotes overall balance and stress reduction, which is beneficial for holistic recovery.
- Can be used as part of a **post-treatment routine** to maintain results and enhance wellbeing.



Treatment Protocols and Usage:

1. Muscle Pain & Injury Recovery:

Common Uses:

• Back pain, neck pain, shoulder injuries, knee pain, tendonitis, sprains, and strains.

Protocol:

1. Preparation:

- Apply SpineMaster Gel to the SpineMaster® iPROBE tips and directly to the treatment area.
- 2. Microcurrent Settings:
 - o Set the SpineMaster® iPROBE to 0.3 Hz & 7.83 Hz for deep tissue healing.
 - o Use circular motions or slow sweeps along the muscle fibers.
- 3. Treatment Duration:
 - o 15-20 minutes per session.
 - o Daily for acute injuries, 3 times weekly for maintenance.
- 4. Post-Treatment Care:
 - Encourage gentle stretching and hydration to support lymphatic drainage.

2. Calming & Stress Management:

Common Uses:

• Helps with anxiety, sleep disorders, nervous tension, and emotional stress.

Protocol:

- 1. Targeted Areas:
 - o Focus on forehead, temples, neck, and upper back.
- 2. Frequency Setting:
 - Use 7.83 Hz, which aligns with the Schumann Resonance, known for calming effects.
- 3. Application Technique:
 - Apply light pressure with SpineMaster® iPROBE, using slow, rhythmic motions.
 - o For **sleep support**, use around the **head and neck** before **bedtime**.
- 4. **Duration:**
 - o 10-15 minutes, as needed, to promote relaxation.

3. □ Joint Pain & Arthritis Relief:

Common Uses:

• Effective for knee pain, hip pain, elbows, and small joints affected by arthritis.

Protocol:

- 1. Preparation:
 - o Apply SpineMaster Gel generously to the joints.

2. Frequency & Settings:

- Use a combination of 0.3 Hz and 7.83 Hz to provide pain relief and joint mobility support.
- 3. Application Method:
 - Use the **SpineMaster® iPROBE** in **small**, **circular motions** around the **joint** area.
 - o Focus on muscle attachments and soft tissues surrounding the joint.
- 4. Session Length:
 - o 20 minutes, 2-3 times per week or as needed.

4. Wound Healing & Scar Reduction:

Common Uses:

• Ideal for post-surgical scars, minor wounds, bruises, and skin regeneration.

Protocol:

- 1. Preparation:
 - o Gently clean the area and apply a thin layer of **SpineMaster Gel**.
- 2. Microcurrent Delivery:
 - Set to **0.3 Hz** to **stimulate cellular repair**.
 - Use light, non-invasive contact to avoid irritating the skin.
- 3. Treatment Duration:
 - o Short sessions of 10-15 minutes, repeated daily if needed.
- 4. Special Tip:
 - Combining with scar massage techniques can enhance collagen remodeling and improve skin texture.

5. Performance Recovery for Athletes:

Common Uses:

 Supports post-exercise muscle recovery, reduces lactic acid buildup, and prevents soreness.

Protocol:

1. Application Areas:

- Apply to major muscle groups, including quads, hamstrings, calves, biceps, and triceps.
- 2. Frequency Setting:
 - Use **7.83 Hz** to improve circulation and promote muscle relaxation.
- 3. Treatment Method:
 - Perform sweeping motions with the SpineMaster® iPROBE, focusing on long muscle fibers.
- 4. Duration:
 - o 15 minutes, especially effective immediately after workouts or before bed.

Pro Tips:

- Combine microcurrent therapy with massage techniques or stretching for enhanced benefits.
- Use the **gel holder** for **easy access** to **SpineMaster Gel**, maintaining **consistent conductivity**.
- Integrate microcurrent sessions into a regular wellness routine to promote long-term benefits.



SpineMaster iPROBE

Protocol Manual

Evidence-Based Microcurrent Applications for Wellness, Pain Relief, and Nervous System Regulation

☐ ☐ Device Overview: SpineMaster iPROBE
The SpineMaster iPROBE delivers built-in cross-currents of:
 0.3 Hz – For deep tissue healing, inflammation reduction, and lymphatic stimulation 7.83 Hz – For nervous system balancing and resonance with natural biological rhythms (Schumann Frequency)
Paired with SpineMaster Gel, containing Lavender, Turmeric, Clary Sage, and Peppermint for enhanced anti-inflammatory and healing effects.
☐ General Instructions
 Apply a thin layer of SpineMaster Gel to the treatment area. Turn on the iPROBE, ensuring current is active. Use gentle contact—gliding or holding depending on the protocol. Recommended session frequency: 3–5x per week initially, then 1–2x per week for maintenance.
☐ 1. Nervous System Reset Protocol (C1 to Sacrum)
Purpose: Calm the autonomic nervous system, support vagus nerve activity, and promote whole-body regulation.
☐ Step-by-Step Instructions:
 Begin at C1 (just below the base of the skull). Hold the iPROBE in place for 10 seconds at each spinal level, moving downward slowly: C1 to C7 (Cervical Spine) T1 to T12 (Thoracic Spine) L1 to L5 (Lumbar Spine) Optional: Pause at S1/S2 (Sacrum) Repeat the full sequence once or twice per session as needed.
□ Total time: ~5–6 minutes □ Use for: General nervous system reset, post-trauma calming, sleep preparation, autonomic balancing.

☐ 2. Vagus Nerve / Autonomic Support Protocol

Application Area:

- Start behind the **left ear** (mastoid region)
- Move down along the **cervical spine** (C1–C7)
- Optional hold over sternum or solar plexus

Duration: 2–3 minutes

Benefits: Stress relief, digestion support, parasympathetic activation

☐ 3. Musculoskeletal Pain Relief Protocol

Application Area:

- Local spinal region related to pain (cervical, thoracic, lumbar)
- Include overlying muscles and trigger points

Duration: 3 minutes per area

Benefits: Pain relief, muscle relaxation, inflammation reduction

☐ 4. Lymphatic Drainage Protocol

Application Area:

- Full spinal sweep from base of skull to tailbone
- Follow with outward sweeps from spine to flanks

Duration: 5–7 minutes

Benefits: Detoxification, swelling reduction, immune support

☐ 5. Sleep & Stress Regulation Protocol

Application Area:

- Focus on C1–T4
- Optional hold at occiput, sternum, or heart center

Duration: 2–4 minutes

Use before: Bedtime, meditation, massage therapy

\square \square 6. Autoimmune & Chronic Fatigue Support Protocol

Application Area:

• Full spine sweep

• Pause around **T5–T9** for adrenal regulation

Duration: 5–6 minutes

Supports: Lupus, fibromyalgia, CFS, adrenal fatigue, post-viral recovery

SpineMaster® iPROBETM Treatment Area Chart

Application Goal	Target Area(s)	Benefits / Outcomes
Neurological Reset	Full spine (C1 to sacrum)	Clears nerve interference, balances autonomic nervous system, enhances regulation
Pain Relief	Neck, lower back, shoulders, knees, joints	Reduces inflammation, increases circulation, relieves acute and chronic pain
Muscle Recovery	Calves, quads, hamstrings, arms	Accelerates repair, reduces soreness, improves tissue oxygenation
Joint Support	Elbows, wrists, knees, ankles	Reduces joint inflammation, supports synovial fluid movement, enhances mobility
Fascia & Connective Tissue	IT band, plantar fascia, thoracolumbar area	Releases restrictions, improves flexibility, reduces tightness
Trigger Point Therapy	Shoulders, traps, glutes, midback	Relieves tension, improves range of motion, resets local neuromuscular patterns
Scar Tissue Treatment	Surgical areas, injury sites	Promotes softening, supports realignment of collagen, improves tissue resilience
Vagus Nerve Stimulation	Upper cervical spine, behind the ear	Reduces stress, improves digestion, enhances parasympathetic tone
TMJ & Jaw Tension	Temporomandibular region	Eases jaw tightness, reduces clenching, relieves referred headaches
Athletic Performance Recovery	Full-body protocols after exertion	Enhances circulation, reduces downtime, optimizes post-workout recovery

1. Neurological Reset

• Frequency: 7.83Hz

- **Application**: Follow entire spine (C1–sacrum), treating bilaterally, one level at a time
- **Duration**: \sim 10 seconds per level (total \sim 3–5 minutes)
- **Notes**: Use the quad-tip iPROBE to stimulate each vertebral segment. Begin at the occiput and move inferiorly. This balances sympathetic/parasympathetic tone.

☐ 2. Pain Relief

• **Frequency**: 0.3Hz

- Application: Localized to the area of pain (e.g., lumbar spine, shoulder, or knee)
- **Duration**: 3–6 minutes per region
- **Notes**: Apply directly over trigger points, inflamed areas, or painful joints. Use light pressure to allow deep current penetration. Repeat 2–3x per week until pain subsides.

☐ 3. Muscle Recovery

• Frequency: 0.3Hz

- Application: Large muscle groups (quads, glutes, hamstrings)
- **Duration**: 5–8 minutes per muscle group
- **Notes**: Use broad gliding passes along the muscle fibers. Best used post-workout or after athletic exertion to promote recovery and reduce soreness.

☐ 4. Joint Support

- **Frequency**: 0.3Hz + 7.83Hz (Interferential mode)
- Application: Surround affected joint (elbows, wrists, knees, ankles)
- **Duration**: 4–6 minutes
- **Notes**: Place probes around the joint in opposing positions to "sandwich" the current. Excellent for swelling, stiffness, and range-of-motion recovery.

☐ 5. Fascia & Connective Tissue

• Frequency: 0.3Hz

- Application: Long strokes along restricted fascial lines (IT band, thoracolumbar fascia)
- **Duration**: 5–7 minutes per region
- **Notes**: Use steady movement with light contact along tight or adhesed fascia. Combine with stretching or manual fascial work for enhanced outcomes.

☐ 6. Trigger Point Therapy

• Frequency: 7.83Hz

• Application: Hold stationary over active trigger points

• **Duration**: 1–2 minutes per point

• **Notes**: Stimulate until you feel a softening or relaxation in the tissue. Use breathing techniques with the client for parasympathetic activation.

☐ 7. Scar Tissue Treatment

• Frequency: 0.3Hz

- **Application**: Trace across the scar in multiple directions
- **Duration**: 3–5 minutes depending on scar size
- **Notes**: Apply after hydration with serum or gel. Over time, repeated use may help soften and realign collagen fibers.

□ 8. Vagus Nerve Stimulation

• Frequency: 7.83Hz

• Application: Behind the ear, along the mastoid process, and upper cervical spine

• **Duration**: 2–4 minutes total

• **Notes**: Engage both sides of the head and upper cervical area. Encourage deep breathing during treatment. Enhances calm and gut-brain regulation.

☐ 9. TMJ & Jaw Tension

• Frequency: 7.83Hz

• **Application**: Along the jawline, masseter, and temporalis muscle

• **Duration**: 2–3 minutes per side

• **Notes**: Use slow circles or gentle stationary holds. Excellent for clenching, grinding, or post-dental tension.

☐ 10. Athletic Performance Recovery

Frequency: Start with 7.83Hz, finish with 0.3Hz
 Application: Full body pass—spine, legs, arms

• **Duration**: 10–15 minutes

• **Notes**: Use iPROBE in sweeping or gliding motions. Helps flush metabolic waste, restore parasympathetic tone, and prepare the body for next training session.



SpineMaster® iPROBETM Pediatric Treatment Protocols

□□ Important: Always use minimum intensity, monitor for skin sensitivity, and ensure the child is calm and relaxed. Session durations are shorter than adults. For children under 3, use only with medical supervision.

1. Neurological Reset (General Balance & Behavior Support)

• Frequency: 7.83Hz

• **Application:** Light touch over the spinal column (C1–S2)

• **Duration:** 5 seconds per level, total ~2 minutes

• Goal: Improves brain-body communication, focus, and emotional regulation

• Use For: ADD/ADHD, sensory issues, general neurodevelopmental support

2. Immune System Support

• Frequency: 0.3Hz

• **Application:** Along thoracic spine (T1–T12), light gliding strokes

• **Duration:** 3–4 minutes

• Goal: Supports thymus and lymphatic regulation

• Use For: Frequent colds, allergies, immune system support

3. Digestive Regulation

• Frequency: 7.83Hz

• **Application:** Over the mid-thoracic spine (T5–T10) and vagus nerve (behind ear,

mastoid)

• **Duration:** 2–3 minutes total

• Goal: Enhances vagal tone, calms gut-brain axis

• Use For: Constipation, reflux, nervous stomach, food sensitivity

4. Anxiety, Sleep, & Sensory Processing

• Frequency: 7.83Hz

• Application: Behind ears, upper cervical spine, occiput

• **Duration:** 2 minutes

• Goal: Activates parasympathetic (rest and digest) state

• Use For: Bedtime routine, sensory overload, emotional meltdowns

5. Pain or Injury (Minor Falls, Sports, Growing Pains)

• Frequency: 0.3Hz

• Application: Localized area of pain (e.g., knees, ankles, shoulders)

• **Duration:** 2–3 minutes

• Goal: Reduces inflammation and discomfort

• Use For: Growing pains, sprains, bruises, post-sports recovery

6. Postural or Developmental Support

• **Frequency:** 0.3Hz and 7.83Hz alternating

• **Application:** Full spine sweep with light gliding motion

• **Duration:** 4–5 minutes

• Goal: Improves proprioception and postural alignment

• Use For: Scoliosis, toe-walking, low tone or delayed milestones

☐ Suggested Session Frequency:

• **Initial Phase:** 1–2x per week for 3–4 weeks

Maintenance: Every 2–4 weeks or as needed



About Dr. Edward Kondrot and Microcurrent Therapy:

- **Background:** Dr. Kondrot is recognized for integrating **holistic medicine** with **conventional ophthalmology**, focusing on **non-invasive treatments** for **eye diseases**.
- Vision Therapy Approach: He uses microcurrent therapy as part of his "10 Essentials to Save Your Sight" program, which also includes nutrition, hydration, detoxification, and light therapy.
- Conditions Treated: His protocols are often used for macular degeneration, glaucoma, retinitis pigmentosa, and diabetic retinopathy.

How Microcurrent Therapy Works for Vision:

- Cellular Stimulation: Microcurrent helps boost ATP production, which is critical for cellular repair in the retina and optic nerve.
- Improved Circulation: The gentle electrical currents enhance blood flow to the ocular tissues, promoting nutrient delivery and waste removal.
- Reduction of Inflammation: Supports detoxification and helps reduce inflammation, which can benefit eve health.

Dr. Kondrot's Microcurrent Therapy Protocols:

While Dr. Kondrot's exact **proprietary protocols** are not widely published, here are some general insights into how **microcurrent therapy** is applied in **eye care**:

1.□ Protocol for Macular Degeneration:

Objective: Improve retinal function and slow disease progression.

Frequency & Settings:

- Typically uses **0.3 Hz** to **7.83 Hz**, similar to settings available in the **SpineMaster® iPROBE**.
- Lower frequencies help **reduce inflammation**, while higher frequencies may **stimulate circulation**.

Application Method:

- Electrodes are placed around the orbital area (but not directly on the eyes).
- The microcurrent is applied in a **gentle**, **circular motion**, promoting **blood flow** to the **retina**.

Duration:

- 15-20 minutes per session.
- Recommended twice daily during intensive treatment phases, then weekly for maintenance.

2. Protocol for Glaucoma:

Objective: Reduce intraocular pressure and support the optic nerve.

Frequency:

• Lower frequencies (0.3 Hz) to help relax ocular muscles and improve fluid drainage.

Technique:

- Electrodes are positioned to stimulate the **periocular muscles**, helping to **relieve pressure** within the **eye**.
- Gentle stimulation around the **temples**, **forehead**, and **upper cheekbones**.

Treatment Plan:

• Daily sessions during the initial phase, then transition to maintenance therapy 2-3 times weekly.

3. Protocol for Retinitis Pigmentosa & Diabetic Retinopathy:

Objective: Enhance cellular energy and slow vision loss.

Microcurrent Settings:

• Uses a blend of **low and moderate frequencies**, generally **0.5 Hz to 8 Hz**, promoting **tissue regeneration**.

Application Method:

- Electrodes are placed around the eye socket, avoiding direct contact with the eyeball.
- Microcurrent is delivered in **pulsed patterns**, encouraging **retinal cell activity**.

Treatment Frequency:

• Intensive sessions for **4-6 weeks**, followed by a **maintenance schedule** based on **patient response**.

Enhancing Microcurrent Therapy with Conductive Media:

The use of SpineMaster Gel with essential oils such as Lavender, Turmeric, Clary Sage, and Peppermint may offer additional benefits:

- Anti-Inflammatory Effects: Reduces inflammation around the eyes.
- Calming Properties: The Lavender content may help with patient relaxation, which is particularly beneficial during eye treatments.

Important Considerations:

- Safety First: When using microcurrent therapy near the eyes, it is crucial to ensure the device settings are on low intensity and the electrodes do not make direct eye contact.
- Consultation: Patients should always consult with an ophthalmologist or trained practitioner before starting microcurrent therapy for eye conditions.



SpineMaster iPROBE – Equine Protocol Guide

Evidence-Based Microcurrent Therapy for Horse Wellness, Pain Relief & Performance Recovery

ed microcurrent device that delivers dual-
on, lymph flow relaxation, recovery
urmeric, Clary Sage, Peppermint) for
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s
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spine or treatment area
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echnique
on signs (licking, blinking, head drop)
ody Regulation)
xiety, prep for work or recovery
ead C1 through sacrum)
, or high-stress events

Purpose: Post-ride muscle recovery, circulation enhancement, soreness prevention

Protocol:

- Sweep from **poll to tailhead** along both sides of the spine
- Apply to major muscle groups: shoulders, glutes, hamstrings
- Use **light gliding motions**, pausing over tight or reactive areas

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☐ **Use After:** Training, competition, long rides, bodywork sessions

☐ 3. Musculoskeletal Pain Protocol

Purpose: Address local discomfort or stiffness from strain, injury, or chronic compensation patterns

Protocol:

- Identify sore or stiff areas with gentle palpation
- Apply the iPROBE directly over the affected muscle or joint
- Use hold-and-release technique (10–20 seconds per point)
- Follow up with sweeping glides along muscle fibers

Duration: 3–5 minutes per problem are

☐ Use For: Back pain, sacroiliac issues, poll tension, sore limbs

☐ 4. Lymphatic Drainage & Detox Support

Purpose: Aid immune system, reduce inflammation, support toxin clearance after vaccines or illness

Protocol:

- Glide iPROBE along the neck, down the chest and belly toward inguinal region
- Focus on lymphatic pathways: behind jaw, between front legs, under belly
- Always move in direction of drainage

□ **Duration:** 8–10 minutes total

☐ Use For: Post-illness, vaccine recovery, chronic swelling or inflammation

☐ 5. Pre-Sleep or Restful Recovery Protocol

Purpose: Encourage parasympathetic activity for healing and deep rest

Protocol:

• Perform **full spinal sweep** slowly from poll to sacrum

• Hold iPROBE at poll, withers, lumbar, and tailhead for 20 seconds each

□ **Duration:** 6–8 minutes

☐ **Use For:** Rehab horses, post-surgery, nervous system reset

☐ Treatment Frequency Recommendations

Goal Frequency

Acute Injury/Inflammation 1x daily for 3–5 days, then reassess

Performance Recovery After each intense session

General Maintenance 2–3x weekly

Anxiety/Nervous System Support As needed (pre-event or bedtime)

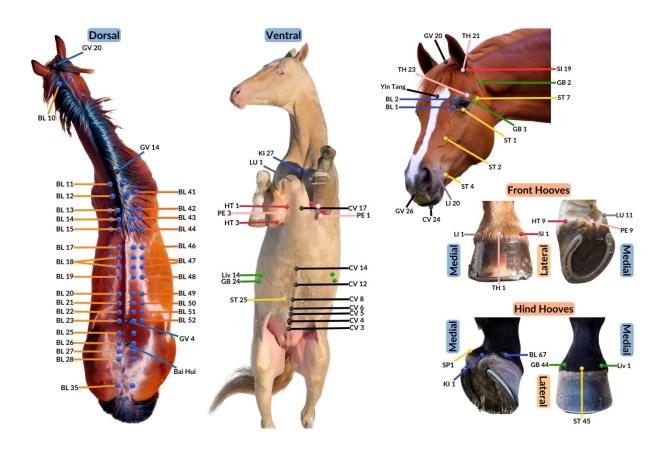
☐ Signs of Positive Response in Horses

- Lowered head
- Yawning or licking/chewing
- Soft blinking
- Shifting weight to relax
- Audible gut sounds
- Relaxed tail carriage

Key Acupoints and Their Uses:

- <u>Er-jian</u> (Tip of the Ear): Used for general pain relief and calming the spirit.
- Wei-jian (Tip of the Tail): Used for pain in the lower back and hindquarters.
- <u>GV-14</u> (In front of the Withers): Used for general strengthening and promoting energy flow.
- HT-7 (Near the Back of the Knee): Used for pain and stiffness in the legs.
- <u>Fei-shu</u> (Between the 9th and 10th Ribs): Used for lung and respiratory issues.
- <u>Small Intestine-1</u>: Used for pain relief and to improve circulation.

- <u>Triple Heater-1</u>: Used to regulate energy and promote healing.
- <u>Large Intestine-1</u>: Used for pain relief and to improve circulation.
- QIAN-TI-TOU: Used for pain relief and to improve circulation.
- **Heart-9**: Used for pain relief and to improve circulation.
- Pericardium-9: Used for pain relief and to improve circulation.
- <u>Lung-11</u>: Used for pain relief and to improve circulation.
- QIAN-TI-MEN: Used for pain relief and to improve circulation.



Top Acupoints for Equine Performance Tune-Ups

- ☐ Pre-Competition (Energize, Balance, Prevent Tightness)
 - 1. Bai Hui (GV20 "Hundred Meetings")
 - Location: Top of the sacrum (near lumbosacral junction)
 - Why: Balances the central nervous system, calms anxiety, supports hind-end power.
 - 2. GV14 (Da Zhui "Big Vertebra")
 - o **Location:** Below the last cervical vertebra (C7-T1 junction)

o Why: Stimulates Yang energy, boosts immune readiness, enhances stamina.

3. **LI4 (Hegu)**

- o Location: Between the second and third metacarpal bones (medial front leg)
- o **Why:** Circulatory boost and tension relief in forelimbs and neck.

4. ST36 (Zusanli)

- o **Location:** Just below the stifle, lateral to the tibial crest
- o Why: Increases energy, supports digestion, enhances muscle tone.

5. BL10 (Tianzhu)

- o **Location:** On either side of the cervical spine at C1-C2
- o **Why:** Relieves neck tension, balances neurovascular flow to the brain.

□ Post-Competition (Recover, Relax, Detoxify)

1. BL13, BL15, BL18, BL20, BL23 (Back Shu points)

- o Location: Along the Bladder meridian on either side of the spine
- Why: Each point supports key organs (lungs, heart, liver, spleen, kidneys) for detox, inflammation control, and internal balance.

2. GB34 (Yanglingquan)

- o Location: Near the lateral head of the fibula
- Why: A go-to for muscle and tendon recovery promotes flexibility and eases soreness.

3. SP6 (Sanyinjiao)

- o **Location:** Just above the hock on the medial aspect
- o **Why:** Regulates blood flow and reduces post-exertion fatigue, especially in mares.

4. HT7 (Shenmen)

- o Location: Above the medial sesamoid bone of the foreleg
- Why: Deep relaxation point to settle the nervous system and help the horse decompress.

☐ ☐ Why the iPROBE Works So Well on These Points

☐ Gentle, Precise Quad-Tip Design

• The iPROBE allows light contact and full control over point-specific stimulation — critical for animals that may be reactive to pressure or needles.

☐ Microcurrent = Bioidentical Energy

• The microcurrents mimic the body's natural bioelectric signals. This makes it ideal for **stimulating acupoints** in a way that's **safe**, **subtle**, **and deeply effective**, even on sensitive horses.

□ Dual Frequency Delivery (0.3Hz and 7.83Hz)

- Use 0.3Hz to support cell repair, blood flow, and tissue recovery
- Use **7.83Hz** to activate the **parasympathetic system** and settle the horse post-exercise.

☐ No Needles, No Stress

• Many equine clients (and owners!) prefer non-needle techniques. The iPROBE delivers therapeutic results without puncturing the skin.

☐ Mobile + Field-Ready

• The iPROBE's portable and rugged design makes it ideal for barns, trailers, and competitions.

Equine iPROBE™ Tune-Up Protocols

1. Acupoint Treatment Chart

Acupoint	Location	Purpose	iPROBE Frequency
Bai Hui (GV20)	Top of sacrum	Balances CNS, calms anxiety, hind-end power	7.83Hz
GV14	C7-T1 junction	Boosts immune system, stamina	7.83Hz
LI4	Between 2nd and 3rd metacarpals (front leg)	Forelimb tension, circulation	0.3Hz
ST36	Lateral to tibial	Energy, digestion,	0.3Hz

	crest below stifle	muscle tone	
BL10	Sides of C1-C2 vertebrae	Neck tension, blood flow to brain	7.83Hz
BL13-23	Along spine (T3-L2)	Organ detox, inflammation control	0.3Hz
GB34	Near fibula, hind limb	Muscle/tendon recovery	0.3Hz
SP6	Above hock, medial side	Blood flow, post- exertion fatigue	0.3Hz
HT7	Above medial sesamoid (foreleg)	Nervous system relaxation	7.83Hz

2. Pre-Ride and Post-Ride Protocol

Pre-Ride (Energize & Balance)

- Begin at Bai Hui (GV20), 7.83Hz, 30 seconds
- GV14, 7.83Hz, 30 seconds
- LI4 (each side), 0.3Hz, 30 seconds
- ST36 (each hind leg), 0.3Hz, 30 seconds
- BL10 (both sides), 7.83Hz, 30 seconds
- Total time: 5-6 minutes

Use light contact with iPROBE tips and avoid holding in one place too long. Goal is to stimulate circulation and neural readiness.

Post-Ride (Recovery & Relaxation)

- Begin at GB34 (each side), 0.3Hz, 45 seconds
- BL13 to BL23 sweep (both sides), 0.3Hz, 1-2 minutes per side
- SP6 (each hind leg), 0.3Hz, 30 seconds
- HT7 (each side), 7.83Hz, 30 seconds
- Bai Hui (GV20) finish, 7.83Hz, 45 seconds
- Total time: 7–9 minutes

Helps drain lactic acid, restore internal balance, and reduce recovery time.

"One of the key advantages of using the iPROBE to treat horse acupoints is the broad field of energy created by the intersecting microcurrents. Unlike pinpoint stimulation methods, the iPROBE delivers a larger therapeutic zone—making it much easier to effectively engage each acupoint. It's like using a precision-guided shotgun: wide enough to ensure the target is hit, but still focused enough to deliver the healing response exactly where it's needed." Dr. V

Microcurrent Stimulation and Healing: Evidence from Research

Wound Healing

• Gault WR & Gatens PF Jr (1976) – "Use of low intensity direct current in management of ischemic skin ulcers." Physical Therapy. Findings: Low-intensity direct current (~10–20 μA) roughly doubled the weekly healing rate of ischemic ulcers compared to controls

pubmed.ncbi.nlm.nih.gov

- . In 100 ulcer cases, treated wounds healed \sim 30% per week vs \sim 15% in untreated controls, demonstrating significantly accelerated closure
- Carley PJ & Wainapel SF (1985) "Electrotherapy for acceleration of wound healing: low intensity direct current." Arch. Phys. Med. Rehabil. Findings: First controlled trial of microcurrent for wounds. Over 5 weeks, ulcers treated with microampere DC current showed significantly greater size reduction than those with standard care

pmc.ncbi.nlm.nih.gov

- . Many microcurrent-treated ulcers achieved near-complete closure (~0.5 cm² residual), whereas control ulcers remained much larger (~2.2 cm²)
- . Treated wounds healed faster and more completely than controls

.

• Wood JM et al. (1993) – (Multi-center RCT on pressure ulcers, USA). Findings: In a double-blind trial on pressure ulcers, 58% of microcurrent-treated ulcers were fully healed after 8 weeks versus only 3% in the placebo group

pmc.ncbi.nlm.nih.gov

- . This dramatic difference, using low-frequency pulsed microcurrent (hundreds of μA), illustrates greatly improved wound closure rates with microcurrent therapy.
- **Avendaño-Coy J et al. (2022)** "Electrical microcurrent stimulation therapy for wound healing: A meta-analysis of randomized clinical trials." J. Tissue Viability. **Findings:** A meta-analysis of 8 RCTs (337 patients) found that microcurrent therapy + standard care significantly **reduced wound area** (by ~8.3 cm² more than standard care alone) and **shortened healing time** by ~7 days on average

pubmed.ncbi.nlm.nih.gov

. Patients receiving microcurrent also reported lower pain levels, with no increase in adverse events

pubmed.ncbi.nlm.nih.gov

- . This confirms that adjunct microcurrent is an effective and safe accelerant for both acute and chronic wound healing.
- Nair HKR (2018) "Microcurrent as an adjunct therapy to accelerate chronic wound healing and reduce patient pain." J. Wound Care. Findings: Case series of 100 patients with chronic wounds (diabetic ulcers, venous ulcers, etc.) treated with frequency-specific microcurrent. After 4 weeks, all patients showed wound size reduction (16 wounds achieved full closure), and 89% of those with wound-related pain had reduced pain (11 became completely pain-free)

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. Other clinical signs improved as well (e.g. reduced inflammation and swelling), suggesting microcurrent sped up healing and comfort in otherwise slow-healing wounds

pubmed.ncbi.nlm.nih.gov

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Nerve Regeneration

- Mendonça AC et al. (2003) "Directly applied low intensity direct electric current enhances peripheral nerve regeneration in rats." J. Neurosci. Methods. Findings: In a rat sciatic nerve crush model, continuous low-intensity DC stimulation (≈1 μA) significantly enhanced nerve regrowth. Microcurrent-treated nerves showed faster functional recovery (improved Sciatic Functional Index) and higher regenerating fiber density than controls
 - . Treated nerves also developed more new blood vessels (vasa nervorum), indicating better nourishing of the regenerating nerve
 - . The authors concluded that microcurrent "enhances nerve regeneration" after injury

.

- Kong J et al. (2024) "Enhancing regeneration and repair of long-distance peripheral nerve defect injuries with continuous microcurrent electrical nerve stimulation." Front. Neurosci. Findings: Using a severe sciatic nerve gap model in rats, continuous microcurrent nerve stimulation (100 μA for 10 days) markedly improved nerve repair outcomes. Treated animals had superior motor function recovery, faster nerve conduction, and greater reinnervation than controls
 - . Histologically, microcurrent led to thicker, more mature nerve fibers and reduced muscle atrophy in the denervated limb

frontiersin.org

- . This suggests microcurrent therapy can significantly promote peripheral nerve regeneration even across large injury gaps.
- Additional Evidence: Consistent with the above, numerous animal studies (e.g. Kerns 1991; Politis 1988; Shen 1995) have reported accelerated nerve healing with microcurrents. Researchers note that low-intensity currents are especially beneficial for nerve regrowth

icb.ufmg.br

. While human clinical studies are still limited, the animal data provide a strong rationale that microcurrent stimulation can aid injured nerves in regenerating more rapidly and completely.

Bone Repair

• **Brighton CT et al. (1977)** – "Treatment of nonunion with constant direct current." Clin. Orthop. Relat. Res. **Findings:** A pioneering clinical study treating 57 fracture nonunions with implanted cathode electrodes delivering 10–20 μA DC. When specific microcurrent parameters were met, a ~70% bone healing success rate was achieved in these otherwise recalcitrant nonunions

pubmed.ncbi.nlm.nih.gov

- . This demonstrated that tiny constant currents can induce osteogenesis at the fracture site, helping bone tissue to bridge and heal. Importantly, no significant complications were noted, establishing low-µA DC stimulation as a safe, effective bone-growth therapy.
- Ganne JM (1988) "Stimulation of bone healing with interferential therapy." Aust. J. Physiother. Findings: Reported on 38 cases of delayed or non-healing fractures treated with interferential current (a form of amplitude-modulated AC microcurrent). In a controlled comparison of acute tibial fractures, patients who received interferential microcurrent showed faster radiographic union and better early healing than matched controls not receiving it

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- . The non-invasive interferential therapy was highlighted as a useful adjunct to stimulate bone repair prophylactically in high-risk fractures
- Bayat A et al. (2011) "Electrical stimulation in bone healing: critical analysis by evaluating levels of evidence." (Systematic review). Findings: This comprehensive review of 105 clinical studies and 35 lab studies concluded that electrical stimulation, including direct microcurrent, generally promotes bone healing
 - . For example, there is high-level evidence that DC stimulation improves spinal fusion success and that capacitive/inductive coupling (related techniques) aid fracture healing
 - . Mechanistically, electrical microcurrents upregulate growth factors and cell signaling in bone tissue, enhancing osteogenesis

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. The authors note overall positive outcomes in both animal models and human trials of microcurrent bone stimulators, albeit with some variability in protocols.

Tissue Repair (Muscle, Tendon, etc.)

- Cheng N et al. (1982) "The effects of electric currents on ATP generation, protein synthesis, and membrane transport of rat skin." Clin. Orthop. Relat. Res. Findings: A foundational laboratory study showing that microcurrent at microampere intensities dramatically boosts cellular repair activity. In rat skin tissue, currents from 10 μA up to 1000 μA increased ATP production and amino acid transport, resulting in enhanced protein synthesis (≈30–40% higher)
 - . Notably, higher currents (>1000 $\mu A)$ had the opposite effect, inhibiting protein synthesis

pubmed.ncbi.nlm.nih.gov

- . This biphasic response suggests microcurrents mimic the body's natural healing signals by raising cellular energy (ATP) levels thereby accelerating tissue regeneration at the cellular level
- Ahmed AF et al. (2012) "Polarity effect of microcurrent electrical stimulation on tendon healing: biomechanical and histopathological studies." J. Adv. Res. Findings: In a controlled trial on 90 rabbits with Achilles tendon ruptures, daily microcurrent therapy significantly improved tendon healing strength and quality. By 3 weeks post-injury, tendons treated with a cathodal microcurrent showed greater tensile strength and superior collagen organization than untreated tendons
 - . At later healing stages (5–8 weeks), anodal microcurrent yielded the strongest tendons

doaj.org

- . Both microcurrent-treated groups far outperformed controls in all biomechanical measures at each time point
- . Histology confirmed more mature, well-aligned fibers in treated tendons, indicating that microcurrent (whether DC cathode or anode) accelerates and enhances tendon repair, with polarity affecting the optimal healing phase

doaj.org

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• Yi D et al. (2021) – "Effect of microcurrent stimulation on pain, shoulder function, and grip strength in early post-operative phase after rotator cuff repair." Medicina. Findings: A randomized trial of 28 patients recovering from rotator cuff surgery showed that adjunct microcurrent therapy led to significantly better functional recovery. Patients who received microcurrent stimulation (3 sessions per week for 4 weeks) had greater improvements in shoulder range of motion and Simple Shoulder Test scores, and reported less pain, compared to a sham-stimulation control group

. Grip strength also increased more in the microcurrent group

pubmed.ncbi.nlm.nih.gov

. These clinical results demonstrate that microcurrent can accelerate post-surgical muscle/tendon healing and improve patient outcomes in the early rehabilitation phase.

Inflammation Reduction

• Lee Y et al. (2022) – "Micro-current stimulation suppresses inflammatory responses in peptidoglycan-treated macrophages and Propionibacterium acnes-induced skin inflammation via TLR2/NF-κB signaling pathway." Int. J. Mol. Sci. Findings: This cell and animal study revealed microcurrent's direct anti-inflammatory effects. In vitro, a 50 μA microcurrent significantly reduced macrophage production of pro-inflammatory mediators by inhibiting the TLR2/NF-κB pathway (evidenced by lower nuclear NF-κB levels)

pmc.ncbi.nlm.nih.gov

- . In vivo, mice with induced inflammatory skin lesions (acne model) showed **marked improvement** with microcurrent treatment levels of key inflammatory cytokines (like IL-1 β) dropped, and the area of inflammation/lesions was significantly reduced compared to untreated mice
- . This suggests microcurrent therapy can blunt excessive inflammatory signaling, aiding the resolution of inflammation.
- **Prado Bravo M et al. (2021)** "Microcurrent stimulates cell proliferation and modulates cytokine release in fibroblast cells." J. Wound Care. **Findings:** An in vitro study on human fibroblasts showing that microcurrent not only boosts cell growth but also shifts cytokine profiles toward healing. After two daily microcurrent applications, fibroblast proliferation increased, while inflammatory cytokine release was modulated for example, **Interleukin-2 (IL-2)** levels decreased noticeably in microcurrent-treated cells

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- . The authors conclude that microcurrent can aid tissue regeneration in part by dampening excessive inflammation and creating a more favorable healing environment
- . Consistently, many clinical wound studies have observed reduced swelling, redness, and pain with microcurrent therapy
- , aligning with these laboratory findings that microcurrents actively suppress inflammatory responses.

General Recovery and Pain Relief

• Curtis D et al. (2010) – "The efficacy of frequency specific microcurrent therapy on delayed onset muscle soreness (DOMS)." J. Bodywork Mov. Ther. Findings: Frequency-specific microcurrent markedly sped up muscle recovery after intense exercise. In a randomized crossover trial, subjects performed heavy eccentric exercise on both legs; one leg then received 20 minutes of microcurrent treatment while the other served as control. The treated legs experienced far less soreness in the days after exercise – pain scores at 48 hours were only ~1.2 (on a 0–10 scale) with microcurrent vs ~7.0 in the control limbs

. By 72 hours post-exercise, microcurrent-treated muscles had almost no pain or stiffness, whereas untreated muscles were still notably sore

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. This significant protection from DOMS indicates microcurrent therapy accelerates recovery by reducing muscle tissue damage and inflammation. Athletes and clinicians have accordingly used microcurrents to facilitate healing of soft-tissue injuries and to alleviate pain. Notably, similar microcurrent devices have shown benefit in chronic pain conditions (like fibromyalgia) by lowering inflammatory cytokines and improving patients' pain scores

sciencedirect.com

, underscoring their broad utility in promoting recovery and healing across various contexts.

Sources: The above summaries are drawn from peer-reviewed studies and reviews in medical and scientific journals, as cited. Each provides evidence that microcurrent stimulation – whether delivered as low-frequency AC currents, direct currents (DC), interferential currents, or pulsed microcurrents – can positively influence biological healing processes. These range from accelerating wound closure and nerve regrowth to enhancing bone union, tendon repair, inflammation resolution, and overall recovery

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. The convergence of findings across animal experiments and human trials supports the clinical relevance of microcurrent therapy as a healing modality. Each study noted measurable improvements in healing outcomes (e.g. wound size, tensile strength, pain reduction, or time to recover), highlighting the potential of microcurrent stimulation to improve recovery in both acute injuries and chronic conditions.

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pubmed.ncbi.nlm.nih.gov

Wound Healing

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