Motion Informatics:

Motion Informatics is pioneering next-generation neuromuscular rehabilitation by integrating AI-driven neuroinformatics, augmented reality (AR), and digital health into a seamless, adaptive therapeutic platform. Our present product, the Stimel-03, delivers advanced neuromuscular stimulation and biofeedback solutions for rehabilitation. Moving forward, we are introducing the Spatial StimelMD (SSMD), leveraging personalized real-time electrophysiological data, biofeedback-driven neuromodulation, and AI-optimized intervention protocols to dynamically personalize therapy, enhancing neuroplasticity, motor re-education, and functional recovery in conditions such as stroke, spinal cord injuries, and neuromuscular disorders. By fusing biomechanical modeling, predictive analytics, and remote neurorehabilitation, we are redefining precision rehabilitation, creating a highly scalable, intelligent, and data-driven ecosystem that bridges clinical and home-based care. This paradigm shift will establish AI-powered, fully autonomous, and continuously adaptive neuromuscular therapy, fundamentally transforming the future of digital healthcare.

Why Choose Stimel-03 and SSMD?

- **FDA Cleared & Clinically Validated:** Backed by research demonstrating superior patient outcomes.
- **Accelerated Recovery Through Neuroplasticity:** Stimulates **neuroplasticity**, enhancing the brain's ability to form new neural connections.
- **Enhanced Patient Engagement: Biofeedback & AI-driven coaching** keep patients motivated, reinforcing adherence to rehabilitation programs.
- **Intelligent, Data-Driven Adjustments: Real-time monitoring** ensures each session delivers optimal therapeutic outcomes.
- **Compact and User-Friendly:** Designed for seamless integration into clinical workflows and home environments.
- **Cost-Effective and Accessible: Consolidates multiple therapy modalities** into a single, powerful solution.
- **Multifunctional Therapy Solutions:** Effective for **upper and lower limb rehabilitation** across various conditions and severity levels.

What Makes Stimel-03 Essential for Your Practice?

Personalized Therapy & Rehabilitation
- **BioRhythmIQ™ Technology:** Adapts therapy in real-time to match patient needs.
- **Personalized Therapy Solutions**: This cutting-edge system uses real-time patient data to customize stimulation, ensuring every session precisely matches the patient's current clinical status for optimal outcomes.

Comprehensive Rehabilitation: Combining 3 Powerful Modalities in One Device
- **Functional Electrical Stimulation (FES):** Activates targeted muscle groups to improve movement patterns.
- **Neuromuscular Electrical Stimulation (NMES):** Strengthens muscles and restores function.
- **Biofeedback:** Provides immediate feedback, empowering patients to engage in their recovery.

Proven Clinical Benefits

- **Hand Range of Motion:** Stimel-03 trials showed statistically significant improvements in hand angle compared to traditional methods ($p < 0.001$).
- **Daily Functionality:** Functional Independence Measure (FIM) scores in daily activities were significantly higher for Stimel-03 patients ($p < 0.05$).
- **Stroke Recovery:** Patients experienced a marked reduction in stroke symptom severity ($p < 0.001$) and enhanced motor recovery as measured by Fugl-Meyer Assessment scores.

A Solution for Diverse Conditions
Stimel-03 addresses a wide range of rehabilitation needs, including:
- Post-stroke recovery
- Neurological impairments
- Post-surgical rehabilitation
- Chronic mobility challenges

Seamless Integration into Clinical Practice
- Lightweight, portable, and intuitive, the Stimel-03 is easy to implement in any therapy setting.
- Designed for both in-clinic use and home-based rehabilitation, offering unmatched flexibility.

How Stimel-03 Stands Out from the Competition
Stimel-03 differentiates itself from other electrical stimulation devices through **advanced personalization and real-time adaptability**. Unlike standard FES devices, which use fixed parameters, or FES + Biofeedback systems lacking patient-specific signal integration, Stimel-03 dynamically adjusts stimulation parameters during therapy based on patient-derived EMG characteristics. These features enhance treatment precision and increase rehabilitation efficacy, as supported by clinical research.

Spatial StimelMD (SSMD): AI-Powered, AR-Enhanced, and Biofeedback-Driven Therapy

Spatial StimelMD is the next evolution in **neuromuscular rehabilitation**, integrating **AI-driven neuroinformatics, augmented reality (AR), and real-time biofeedback** to provide **highly personalized therapy** for **clinical and home-based rehabilitation**.

Core Features of SSMD:

- **AI-Optimized Therapy** – Uses predictive analytics and machine learning to **dynamically adjust treatment based on patient progress**.
- **3D Motion Tracking & AR Integration** – Provides **real-time movement analysis, immersive therapy environments, and virtual limb projection**.
- **Advanced Biofeedback & Electrophysiology Monitoring** – Captures **detailed EMG signals**, enabling precision stimulation.
- **Wearable & Biometric Integration** – Tracks **patient vitals, movement, muscle activation, and progress with high accuracy**.
- **Multi-Mode Therapy** – Offers **adaptive rehabilitation for stroke recovery, neuromuscular disorders, and post-surgical rehabilitation**.
- **Remote & In-Clinic Usability** – Enables **seamless transition between professional and home-based therapy**.
- **Gamification & Virtual Coaching** – Engages patients with **interactive AI-driven therapy protocols** to increase motivation and adherence.
- **Telehealth-Enabled Rehabilitation** – Supports **remote therapy sessions with real-time therapist monitoring and intervention**.

Scalability and Real-World Impact

- **For Clinics & Healthcare Providers** – Enhances **therapist efficiency**, reduces workload, and provides actionable insights through **real-time monitoring and AI-driven automation**.
- **For Telemedicine & Home Use** – Expands access to rehabilitation, enabling **clinical-grade therapy from anywhere**.
- **For Patients** – Provides a **seamless, interactive, and results-driven rehabilitation experience**, ensuring long-term adherence and functional recovery.

By combining **clinical precision, AI-driven analytics, and real-time patient engagement**, **Spatial StimelMD sets a new benchmark in neuromuscular rehabilitation**.

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Join the Future of Rehabilitation
Empower your patients and enhance your practice with the Stimel-03. Contact us today to schedule a demo or learn more.