

Drug-Free Haptic Patches Improved Sleep, Pain, Balance and Strength in Trials Presented at World Congress of Psychiatry

Four randomized, placebo-controlled trials (N=289) of SuperPatch haptic patches showed significant gains in sleep, pain, balance, and athletic performance.

NARRAGANSETT, RI, UNITED STATES, October 9, 2026 /EINPresswire.com/ -- Research presented at the 26th WPA World Congress of Psychiatry (WCP 2026) in Stockholm, Sweden, finds that wearable, drug-free haptic patches were associated with significant improvements in sleep, pain, balance, and athletic performance across four randomized, placebo-controlled trials, pointing to a non-medication approach to managing multiple symptoms.

The presentation, "Influencing and Enhancing Piezoelectric Channels via Haptic Technology: A Nonmedication Approach for Symptom Management", is being given by Peter Hurwitz, President of Clarity Science, LLC.

How the Technology Works

Haptic [Vibrotactile Transduction](#)/Trigger Technology (VTT) uses an embedded pattern in a thin topical patch to deliver a precise, low-level stimulus to mechanoreceptors in the skin. The resulting signal is thought to engage PIEZO1 and PIEZO2 mechanosensitive ion channels, the touch-sensing receptors recognized by the 2021 Nobel Prize in Physiology or Medicine, sending signals through the peripheral nerves to the spinal cord and brain. Investigators propose that this pathway can influence pain signaling, autonomic tone, and neuromuscular and balance control without drugs or systemic absorption.

Four Randomized, Placebo-Controlled Trials

The presentation summarizes four minimal-risk, double-blind, randomized, placebo-controlled trials (total N=289) conducted by Clarity Science, LLC under independent Institutional Review Board oversight (Advarra). Participants wore an active VTT patch made by The Super Patch Company or a visually identical placebo patch for 7 to 14 days:

- Sleep (RESTORE trial, REM Patch, n=33): Sleep quality (PSQI), insomnia severity (ISI), and time to fall asleep all improved significantly by Day 14 ($p<0.001$). More than 83% of active-patch participants were "very" or "extremely" satisfied, versus 40% with placebo.
- Pain (Pain Study, FREEDOM Patch, n=118): Significant reductions in pain severity and interference, improved range of motion, and improvement in every measured quality-of-life domain by Day 14 ($p<0.05$).

- Balance (PROTECT trial, LIBERTY Patch, n=68 adults aged 55–85): A 4% reduction in “high-risk” fall classification and significant improvements in reaction time and time to stand and sit ($p<0.05$); changes in the placebo group were not significant.
- Athletic performance (POWER-UP trial, VICTORY Patch, n=70 NCAA Division I athletes): Knee flexion strength gains in both legs ($p<0.001$) that were significantly greater than with placebo and increased with patch-wear time.

“These findings suggest that targeted vibrotactile stimulation can work through the body’s own sensory pathways to relieve symptoms, without the systemic side effects that often come with medication,” said Peter Hurwitz, President of Clarity Science, LLC. “For psychiatry, that opens the possibility of a non-drug complement to existing treatments for sleep disturbance, anxiety, and stress-related symptoms.”

Disclosure

The trials were funded by SRYSTY Holding Co. / The Super Patch Company, the patch manufacturer, and conducted by Clarity Science, LLC and collaborating sites under independent IRB oversight (Advarra).

About Clarity Science, LLC

Clarity Science, LLC, headquartered in Narragansett, Rhode Island, is a contract research organization (CRO) that designs and conducts randomized, placebo-controlled clinical studies of non-pharmacological and pharmacological health technologies. Its studies are conducted with academic and clinical collaborators under independent Institutional Review Board oversight, and its findings have been published in peer-reviewed scientific journals.

About The Super Patch Company

The Super Patch Company (www.superpatch.com), based in Toronto, Canada, is a privately held wellness technology company that develops drug-free, non-invasive wearable patches incorporating Haptic Vibrotactile Transduction/Trigger Technology (VTT). Each patch carries an embedded pattern designed to stimulate mechanoreceptors in the skin.

Study Source

Mechanism review: Gudin J, Sakr M, Fason J, Hurwitz P. Piezo Ion Channels and Their Association With Haptic Technology Use: A Narrative Review. *Cureus*. 2025;17(1):e77433.

<https://doi.org/10.7759/cureus.77433>

POWER-UP trial: Improvement of Athletic Performance with Haptics: Results of the POWER-UP Trial. <https://pubmed.ncbi.nlm.nih.gov/41757622/>

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