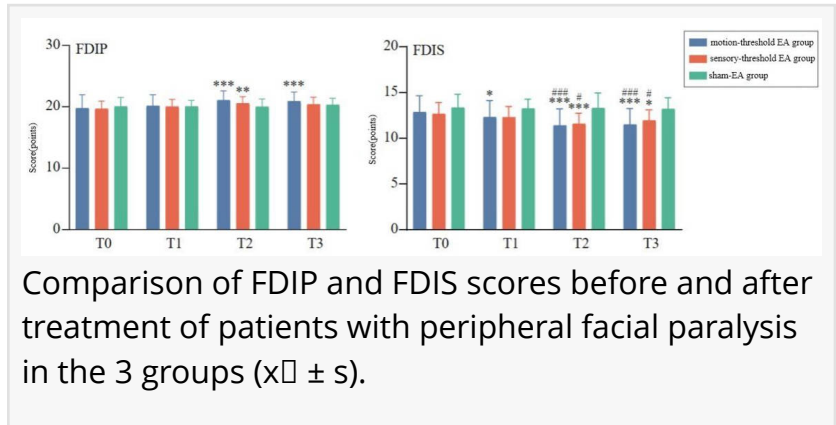


No more twitching needed: How gentle electroacupuncture can help rewire the brainstem in long-term facial paralysis

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/EINPresswire.com/ -- A new clinical study shows that [electroacupuncture](#) (EA) can significantly improve long-term facial paralysis symptoms and help regulate brainstem excitability, even when using minimal stimulation that patients can barely feel. The research compared two intensity levels—muscle-twitching motion threshold versus barely perceptible sensory threshold—against sham treatment. Both active approaches effectively reduced facial nerve damage rates and improved social functioning months after treatment ended, with no serious side effects reported.



Peripheral facial paralysis (PFP) affects around 38 out of every 100,000 people in China, leaving 2% to 29% of patients with lasting issues such as facial twisting, eye dryness, and muscle synkinesis. These residual symptoms often cause serious psychological distress, yet treatment options for patients who have been ill for more than three months remain limited. Electroacupuncture is known to promote nerve repair, but clinicians have long relied on vague guidance—“to the patient's tolerance”—without knowing whether stronger stimulation works better than gentler currents. These gaps motivated the research team to investigate that how different electroacupuncture intensities affect both clinical recovery and underlying brainstem function is urgently needed.

Researchers from the Second Affiliated Hospital of Guangzhou University of Chinese Medicine and the Clinical Medical College of Acupuncture-Moxibustion and Rehabilitation published (DOI: [10.13702/j.1000-0607.20240877](#)) their findings in *Acupuncture Research*, posted on December 25, 2025. In the randomized, patient-, assessor-, and data analyst-blinded trial, 66 participants with unilateral facial paralysis lasting at least three months were assigned to motion-threshold EA, sensory-threshold EA, or a sham-EA group, receiving 20 treatments once every three days.

The team used the House-Brackmann (H-B) grading scale and the Facial Disability Index (FDI) to

track recovery. After 20 sessions, both active EA groups showed significant significant reductions in H-B grades compared to sham, with benefits lasting through the one-month follow-up. Notably, motion-threshold EA improved social functioning as early as the tenth visit, while sensory-threshold EA showed similar improvements by the twentieth session—neither group showed a clear advantage in restoring physical motor function. Electrophysiological measurements revealed that motion-threshold EA shortened the R2 latency of the blink reflex, a brainstem-mediated response, indicating enhanced excitability of the trigeminal-facial nerve circuit. Facial nerve injury rates in the temporal and buccal branches also dropped sharply in both treatment groups, from median rates of approximately 40%~50% to 20%~30%, confirming that even minimal electrical currents can promote peripheral nerve regeneration.

“We were surprised to find that barely perceptible stimulation worked almost as well as visible muscle twitching,” the authors said. “For patients living with facial paralysis for months, being able to feel a tiny current may be enough to kickstart brainstem reflex pathways. This means clinicians don't always have to crank up the intensity to get good results. Comfort matters, and our data show that less can indeed be equally effective when it comes to electroacupuncture for long-term facial palsy.”

The findings offer practical guidance for acupuncturists and neurologists treating chronic facial paralysis. Because sensory-threshold EA avoids painful or uncomfortable muscle contractions, patients may be more willing to complete the full treatment course. The study also highlights the blink reflex as a measurable marker of brainstem recovery, potentially guiding future rehabilitation protocols. For up to nearly 30% of patients who experience lasting residual symptoms—and the psychological distress that often accompanies them, this gentler yet effective approach could improve both nerve function and quality of life without added discomfort.

References

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