

IpsiHand's BCI Therapy Produced Motor Improvement in 100% of Chronic Stroke Study Participants

IpsiHand Brain-Computer Interface Therapy Induces Broad Upper Extremity Motor Rehabilitation in Chronic Stroke (N=26), **Neurorehabilitation and Neural Repair, 2025**

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Introduction

Chronic stroke rehabilitation has historically yielded limited motor recovery, with improvements thought to plateau after three months. Brain-computer interface (BCI) therapy engaging the unaffected hemisphere offers a novel strategy to drive neuroplasticity and restore upper extremity motor function.

Methods

Study Population: 26 chronic hemiparetic stroke patients (>6 months post-stroke)

Intervention: 12 weeks of contralesionally controlled BCI therapy using the IpsiHand System

Primary Outcome Measure: Upper Extremity Fugl-Meyer (UEFM)

Secondary Measures: ARAT, AMAT, Motricity Index, Gross Grasp

Neurophysiology: Resting-state EEG analysis focused on theta-gamma cross-frequency coupling (CFC)

Key Results

100%

of participants had a measured improvement in motor function

8.1 points

mean increase in UEFM score*

69%

of patient reached the MCID threshold within 12 weeks

Conclusion

BCI therapy with the IpsiHand System produced clinically meaningful improvements in both proximal and distal upper extremity motor functions in patients with chronic stroke, despite being beyond six months post-event. These findings support BCI therapy as an effective rehabilitation strategy, even for those well beyond the traditional post-stroke recovery window.

To learn more about prescribing IpsiHand contact us at:
providerinfo@kandu.com

Read the findings:



*Exceeded the minimal clinically significant difference (MCID) threshold of 5.25 points increase.¹

1. Page SJ, Fulk GD, Boyne P. Clinically important differences for the upper-extremity Fugl-Meyer Scale in people with minimal to moderate impairment due to chronic stroke. *Phys. Ther.* 2012;92:791-798. doi:10.2522/ptj.20110009

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