Improving the Balance of Concussion Patients: Study Results

BACKGROUND

The most common approach to treating balance issues in concussion and mild-to-moderate traumatic brain injury (mmTBI) patients is physical therapy, but its effect has limits. Improvements in function are often lost if therapy is not sustained.



People are living with TBI-related disabilities.



Of people with TBI report difficulty with their balance, known as balance deficit.



The PoNS™ or Portable Neuromodulation Stimulator, when used with physical therapy, is believed to enable the brain's ability to strengthen the neural connections associated with balance.

METHODS



43 participants who had an mmTBI occurring at least 1 year before enrollment and reached a functional plateau in their recovery.



26 weeks with 3 consecutive stages: in-clinic, at-home, and no treatment (washout).



Participants used the PoNS™ device with either a high frequency pulse or low frequency pulse, plus physical therapy for a total of 14 weeks, twice daily, followed by 12 weeks without treatment.

RESULTS





There was no significant difference in the primary endpoint between the high frequency and low frequency groups. Combining the results from both groups showed significantly improved balance scores overall.

At 12 weeks post-treatment, the improvement was maintained.

KEY TAKEAWAY

This study suggests that tongue-based neurostimulation delivered in conjunction with physical therapy may offer an innovative way to treat balance disorders after a mild-to-moderate TBI.



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