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**Neurotherapy of traumatic brain injury/posttraumatic stress symptoms in OEF/OIF veterans.**

[Nelson DV](https://www.ncbi.nlm.nih.gov/pubmed/?term=Nelson%20DV%5BAuthor%5D&cauthor=true&cauthor_uid=22772672)1, [Esty ML](https://www.ncbi.nlm.nih.gov/pubmed/?term=Esty%20ML%5BAuthor%5D&cauthor=true&cauthor_uid=22772672).

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**Abstract**

The Flexyx Neurotherapy System (FNS), a novel variant of EEG biofeedback, was adapted for intervention with seven treatment-refractory Afghanistan/Iraq war veterans, and brought about significant decreases in bothersome neurobehavioral and posttraumatic stress symptoms. FNS may help ameliorate mixed trauma spectrum syndromes.

# Impact of qEEG-Guided Coherence Training for Patients with a Mild Closed Head Injury

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**ABSTRACT**

*Background*. Mild closed head injury (MHI) is a major problem in our society. Traditional methods of treatment such as cognitive rehabilitation or behavioral training are time consuming, expensive, and of questionable effectiveness. Anecdotal reports indicate that neuro-feedback can remediate the symptoms of MHI in a rapid and cost effective way. The purpose of this study is to evaluate whether quantitative electroencephalography (qEEG) guided coherence training is effective in remediating residual symptoms of MHI.

*Methods*. Twenty-six patients with persistent post-traumatic symptoms (PTS) were seen by the first author 3 to 70 months after a MHI and had a quantitative EEG (qEEG). Neurofeedback therapy designed to normalize abnormal qEEG coherence scores was provided to determine the effectiveness of this approach. Five training sessions addressed each qEEG abnormality. Training continued until the patient, by self-report, indicated that significant improvement had occurred or until a total of 40 sessions were given.

*Results*. Significant improvement (>50%) was noted in 88% of the patients (mean = 72.7%). All patients reported that they were able to return to work following the treatment, if they had been employed prior to the injury. On average, 19 sessions were required, less than the average of 38 sessions required using power training of Cz-Beta in our previous unpublished study.

*Conclusions*. In this uncontrolled open trial of qEEG guided coherence training, the majority of patients with MHI experienced substantial and rapid symptomatic improvement, including return to work. Further study with controls and additional outcome measures is warranted.