



Is balance performance reduced after mild traumatic brain injury?: Interim analysis from chronic effects of neurotrauma consortium (CENC) multi-centre study

Purpose

To find out whether mild traumatic brain injury (mTBI) is related to persistent balance difficulties.

Participants

Veterans and service members (N=322) who experienced post-911 combat and completed computerized balance testing. Most had sustained 1 or more mTBIs.

How was this study conducted?

Lifetime mTBI history was gathered through the in-depth CENC structured interviews I. Participants were grouped by several categories of mTBI history including number and type of mTBIs. Balance was measured by computerized posturography with the Sensory Organization Test. Complicating factors considered and adjusted for with a statistical method called structural equation modeling included: age, time of injury, alcohol use, learning disabilities, gender, intelligence, PTSD, depression, anxiety, pain and combat exposure.

Findings

Compared to Veterans and service members who sustained 1 or 2 mTBIs, those with three or more mTBIs had poorer balance, with pain acting as a catalyst. The authors found no difference in balance in participants with 1-2 mTBI when compared to those without any mTBIs.

Military Impact

Veterans and service members with post-911 combat history who sustained three or more mTBIs are at risk for balance problems. Treatment of TBI related balance disorders should include pain assessment and treatment

Walker, W., Nowak, K., Kenney, K., Franke, L., Eapen, B., Skop, K., Levin, H., ... & Nolen, T. (2018). Is balance performance reduced after mild traumatic brain injury?: Interim analysis from chronic effects of neurotrauma consortium (CENC) multi-centre study. Brain Injury, 1-13.