



US DEPARTMENT OF DEFENSE
BLAST INJURY RESEARCH PROGRAM
COORDINATING OFFICE

Neurocognitive Function and Psychological Health

A Multi-Site Study of the Relationships between Blast Exposures and Symptom Reporting in a Post-Deployment Active Duty Military Population with mTBI

Cumulative blast exposures result in greater impairment, suggesting the need to develop more effective means of monitoring the exposure of military personnel to blasts. Additionally, studies investigating cumulative or repeated blasts should ensure that a sufficient number of blasts are applied under experimental conditions to appropriately mimic the neuropathological changes. Researchers at the NICoE examined the influence of previous cumulative blast exposures on symptom reporting after mTBI. Post-concussion symptom reporting was completed using NSI and the PTSD Checklist – Civilian version. Participants included 573 military Service Members with mTBI, who were divided into four groups based on the number of blast exposures (1, 2, 3 and 4-10 exposures), along with a non-blast control group. Results showed greater impairment in individuals with three to ten blast exposures. These results suggest the need for further investigation into relationships between cumulative blast exposures, symptom reporting, and neuropathological changes.