



US DEPARTMENT OF DEFENSE
BLAST INJURY RESEARCH PROGRAM
COORDINATING OFFICE

Neurocognitive Function and Psychological Health No Significant Acute and Subacute Differences Between Blast and Blunt Concussions Across Multiple Neurocognitive Measures and Symptoms in Deployed Service Members

Researchers at the NICoE examined the effect of blast or blunt trauma on neurocognitive function. Assessments were conducted within 72 hours of injury using the Military Acute Concussion Evaluation, the Automated Neuropsychological Assessment Metrics, traditional neuropsychological tests and health status questionnaires. Participants included 50 military Service Members who experienced a TBI. Of the 50 participants, 34 had blast-related injuries and 16 had blunt-trauma injuries. These results demonstrate no differences between blast injury and blunt injury participants on any of the psychological assessments, or in any demographic parameters. Multiple neurocognitive assessments administered to personnel who have suffered either blast or blunt trauma did not detect any differences between the two injury types. This suggests that models derived from sports or mechanical events may be equally effective in developing sensors, protective gear, and treatments, as using blast injury models.