

Explosive blast mild traumatic brain injury

Explosive blast mild traumatic brain injury (mTBI) is associated with a variety of [symptoms](#) including [memory impairment](#) and [posttraumatic stress disorder](#) (PTSD). Explosive shock waves can cause [hippocampal injury](#) in a large animal model. We recently reported a method for detecting brain injury in soldiers with explosive blast mTBI using magnetic resonance spectroscopic imaging (MRSI). This method is applied in the study of veterans exposed to blast.

The region of the hippocampus injured differentiates explosive blast mTBI from PTSD. MRSI is quite sensitive in detecting and localizing regions of neuronal injury from explosive blast associated with memory impairment ¹⁾

1)

de Lanerolle NC, Hamid H, Kulas J, Pan JW, Czlapinski R, Rinaldi A, Ling G, Bandak FA, Hetherington HP. Concussive brain injury from explosive blast. Ann Clin Transl Neurol. 2014 Sep;1(9):692-702. doi: 10.1002/acn3.98. Epub 2014 Sep 30. PubMed PMID: 25493283; PubMed Central PMCID: PMC4241796.

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