



Brain Health in Service Members with mTBI

Do Service Members with mTBI have more abnormal brain MRI findings?

Researchers compared service members who had one or more mild traumatic brain injuries (mTBI) to those who had body injuries or PTSD. The study looked at whether doing 'FLAIR' or 'SWI' MRI was better at finding mTBI-related damage to the brain. Here are the main findings:

- ★ FLAIR showed equal levels of abnormal brain images among those with mTBI, PTSD and body injuries.
- ★ SWI showed abnormal brain images in 22% of those with mTBI but <1% in those with PTSD or body injuries.
- ★ Having mTBI and abnormal SWI brain images did not lead to greater symptom reporting or worse cognitive test scores.
- ★ Having mTBI and abnormal FLAIR brain images was only related to worse working memory test scores.

Take Home: For service members with mTBI, the presence and severity of abnormal brain images differ based on the MRI approach used. Having abnormal MRI brain images is generally not related to worse symptoms or cognitive test scores in the short-term.



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<http://www.cencstudy.org>

Reference:

Tate, D.F., Gusman, M., Kini, J., Reid, M., Velez, C.S., Drennon, A.M., York, G.E. (2017). Susceptibility Weighted Imaging and White Matter Abnormality Findings in Service Members With Persistent Cognitive Symptoms Following Mild Traumatic Brain Injury. *Military Medicine*, 182(3). doi: 10.7205/milmed-d-16-00132