

## Combat Brain Injury Symptoms Could Be Post Traumatic Stress, Study

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A new study by US army medical researchers has revealed that combat troops who served in Iraq who still have health problems months after a mild traumatic brain injury or concussion, could actually be suffering from post traumatic stress, raising the possibility that some of them could be misdiagnosed and incorrectly treated.

The study is published early online in the 30th January issue of the *New England Journal of Medicine* and is the work of Dr. Charles W Hoge, director of the division of psychiatry and neuroscience at the Walter Reed Army Institute of Research, Silver Spring, Maryland, and colleagues.

Hoge and colleagues explained that the medical profession is becoming more and more concerned about the long term effect of mild traumatic brain injury (TBI), or concussion, particularly from roadside blasts and explosions, and that there is not enough good scientific information that relates specifically to this type of injury in combat troops.

So they examined 2,525 US army infantry troops 3 or 4 months after returning from a 1 year tour of duty in Iraq and using validated screening questionnaires, distinguished soldiers who reported mild TBI from soldiers who reported other types of injury.

TBI was defined as "injury with loss of consciousness or altered mental status" (for instance dazed or confused).

The researchers found that:

- 124 (4.9 per cent of the 2,525) soldiers reported injuries with loss of consciousness.
- 260 (10.3 per cent) reported injuries with altered mental status.
- 435 (17.2 per cent) reported receiving other injuries while serving in Iraq.
- Of those who reported loss of consciousness, 43.9 per cent met criteria for post traumatic stress disorder (PTSD).
- This compared to only 27.3 of those who reported altered mental status, 16.2 per cent with other injuries, and 9.1 per cent with no injuries.
- Soldiers with mild TBI, in the main those who had loss of consciousness, were significantly more likely to report missed work days, poor general health, medical visits, and a high number of somatic and postconcussive symptoms than were those who reported other injuries.
- However, after adjusting for PTSD and depression, mild TBI was "no longer significantly associated with these physical health outcomes or symptoms, except for headache".

Hoge and colleagues concluded that:

"Mild traumatic brain injury (i.e. concussion) occurring among soldiers deployed in Iraq is strongly associated with PTSD and physical health problems 3 to 4 months after the soldiers return home."

They added:

"PTSD and depression are important mediators of the relationship between mild traumatic brain injury and physical health problems."

In an accompanying editorial, Professor Richard A. Bryant, specialist in PTSD based at the School of Psychology, University of New South Wales, Sydney, Australia, wrote that misattributing symptoms following concussion could have negative consequences because it might be assumed that the recovery will follow a path that depends on neurological factors rather than say psychological factors.

He mentions that mild TBI can temporarily damage cognitive function and distort a person's ability to manage the consequences of their psychological trauma, thus compounding the effect, and leading to a greater incidence of PTSD.

Bryant suggests that this research by Hoge and colleagues had led to two very important points. One

is that soldiers with mild TBI are at greater risk for health related problems, and the other is that "soldiers should not be led to believe that they have a brain injury that will result in permanent change".

Bryant appears to be suggesting that managing the expectations of injured soldiers returning with mild TBI and PTSD appears to be as important as getting the diagnosis right, for:

"If troops currently serving in Iraq or Afghanistan are informed about a postconcussive syndrome and persistent problems emerging from mild traumatic brain injury, a new syndrome could arise from the current conflict in which soldiers attribute a range of common stress reactions to the effects of brain injury."

If this happens, it could damage morale, wrote Bryant, as well as soldiers' mental health, because:

"It could lead to the expectation of poor recovery."

But, in contrast, he wrote:

"The normalization of many of these reactions and the recognition that stress-related conditions can be managed with evidence-based strategies may minimize the unnecessary attribution of common stress reactions to pathology and facilitate resilience after mild traumatic brain injury."

Let us hope the experience of dealing with Gulf War Syndrome has something to offer here.

***"Mild Traumatic Brain Injury in U.S. Soldiers Returning from Iraq."***

Hoge, Charles W., McGurk, Dennis, Thomas, Jeffrey L., Cox, Anthony L., Engel, Charles C., Castro, Carl A.

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