THE FACT OF THE MATTER
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TBI and Post-Traumatic Stress Disorder: Overview and Resources

Traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD) are hallmarks of the wars in Iraq and Afghanistan. These conditions pose significant challenges to reintegration into family, community, and vocational life post-deployment. This brief provides a basic overview of this topic and resources for more information.

What are TBI and PTSD?

TBI is an injury to the brain and can be classified as either penetrating (gunshot, shrapnel) or non-penetrating (blast exposure, fall). Common causes of TBI include exposure to improvised explosive devices (IEDs), falls, and motor vehicle crashes. Most TBIs are mild in severity. Changes in physical, cognitive, and psychological functioning are common. Although most individuals recover fully from mild TBI, some experience symptoms lasting 3 months or more. An estimated 15–22% of military personnel from the current conflicts have experienced a mild TBI (Helmick et al., 2010).

PTSD is an anxiety disorder that can develop when an individual has experienced, either directly or indirectly, a traumatic event involving actual or threatened death or serious injury that results in intense fear and helplessness. Symptoms include re-experiencing the event through flashbacks, avoidance of stimuli that remind the individual of the event, emotional and physiological hyper-arousal, and distress. Post-traumatic stress symptoms also can lead to other debilitating conditions such as depression and insomnia. Rates of PTSD among military personnel range from 1.4% to 31% (Sudin et al., 2010). High-risk behaviors associated with PTSD can include excessive drinking, drug dependency, and thoughts of suicide.

What are the symptoms common to both conditions?

Many of the physical, cognitive, and psychological symptoms associated with mild TBI can also occur with post-traumatic stress symptoms. Current research suggests that both conditions can contribute to the same symptoms in a single individual. (See table on the next page.)

References

Helmick K. et al. (2010). Cognitive rehabilitation for military personnel with mild traumatic brain injury and chronic post-concussional disorder: Results of April 2009 consensus conference. *NeuroRehabilitation, 26*, 239-255.

Sundin, J., Fear, N.T., Iversen, A., Rona, R.J., & Wessely, S. (2010). PTSD after deployment to Iraq: Conflicting rates, conflicting claims. *Psychological Medicine, 40*(3), 367-382.

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Symptoms **common to both conditions** include, but are not limited to:

Physical Symptoms	Cognitive Symptoms	Psychological Symptoms
Fatigue Sleep disturbance (insomnia) Hyper-arousal	Difficulty with concentration Difficulty focusing in the midst of distractions Difficulty learning new information Difficulty with working memory* Difficulty with initiation, organization, planning, self-monitoring	Anxiety Irritability Anger/aggression Withdrawal Decreased motivation Depression

*Working memory includes short-term memory as well as the active process of manipulating information for complex tasks (e.g., verbal reasoning, math problems).

What are current assessment options?

Evaluation for mild TBI and PTSD is based on medical history, interview, and a variety of cognitive and psychological assessment instruments. Reluctance to report symptoms is not uncommon out of concern of not being able to return to combat or a possible change in assignment. The military and Veterans Administration have specific procedures for screening military personnel for these conditions. In the first days to weeks after a mild TBI, the brain is very sensitive. During this time, there is a greater chance of having a second mild TBI; this underscores the importance of early screening.

What are current treatment options?

Well-researched treatment options for each of these conditions in isolation are available from the civilian population (e.g., cognitive rehabilitation for TBI; cognitive-behavioral and prolonged exposure therapy for PTSD). Research-based treatment options for these disorders specific to military personnel and veterans are just beginning to emerge.

In general, treatment should be under the direction of trained health care professionals and compassionately address the physical, cognitive, and psychological symptoms in an integrated fashion. Family members and peers should be included in the treatment process and receive education and support, as needed.

Where can I find more information?

* 24-hour suicide prevention hot line—1-800-273-8255; press 1 for veterans.
* America's Heroes at Work—Supporting the Employment Success of Returning Service Members with TBI & PTSD—www.americasheroesatwork.gov/
* Brain Injury Association of Oregon—www.biaoregon.org/vet.htm
* Defense Center of Excellence Consensus Report on Cognitive Rehabilitation—www.dcoe.health.mil/Content/navigation/documents/DCoE%20DVBIC%20Cognitive%20Rehabilitation%20Report.pdf
* National Center for PTSD—www.ptsd.va.gov
* Traumatic Brain Injury and PTSD—www.ptsd.va.gov/public/pages/traumatic_brain_injury_and_ptsd.asp
* The Fact of the Matter Research Briefs—www.cbirt.org/publications-products/