

New recommendations for return to activity after concussion in military personnel

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Military service members with mild traumatic brain injury (mTBI), or concussion, should follow a six-step process of progressive activity, leading to return to active duty, according to new clinical recommendations by an expert panel. The guidance appears in the January-February issue of *The Journal of Head Trauma Rehabilitation*, official journal of the Brain Injury Association of America, an annual special issue devoted to new research on TBI in the military.

The new guidance includes specific recommendations for rest and <u>activity</u>, based on minimal or absent symptoms at each stage of the progression. The clinical recommendations were developed by a Progressive Activity Working Group established by the <u>Defense and Veterans Brain Injury Center</u> (DVBIC).

Specific Guidance for Return to Activity after Military mTBI

The Working Group consisted of Department of Defense representatives across all service branches and from the <u>Defense Centers of Excellence</u> for Psychological Health and Traumatic Brain Injury, as well as other experts with experience assessing military patients with mTBI. The lead author was Karen L. McCulloch, PT, PhD, NCS, of University of North Carolina-Chapel Hill.

Based on current evidence and expert opinion, the recommendations



seek to update previous guidelines, which were based largely on studies of sports-related concussions. "Although service members share similarities with athletes," Dr McCulloch and the Working Group write, "guidance for sports-related <u>concussion</u> is not always relevant to military contexts and does not incorporate the complexities of military demands, decision making under stressful conditions, and multitasking in extreme environments."

A 24-hour recovery period is mandated for all service members with mTBI following a first concussion, and longer recovery periods for second or third injuries. If a service member is free from symptoms at rest but develops symptoms after initial activity testing, the progressive return to activity guidance should be followed.

The recommendations describe a six-step process, progressing from rest, to light routine activity, to light occupation-oriented activity, to moderate, intensive, and unrestricted activity. Each stage lasts at least 24 hours, with specific types of activities prescribed.

Activity Increased Progressively—Depending on Symptoms

Patients cannot proceed to the next step in the progression if they develop symptoms: pain or other physical symptoms, affective (mood) symptoms, cognitive (thinking) symptoms, or balance/vestibular symptoms. If any of these occur, patients return to the previous stage of activity that they were able to tolerate without symptoms.

"Individuals whose symptoms are worsening, are not progressing as anticipated, or do not progress in seven days are referred to a higher level of care," the Working Group writes. They also identify "red flags" that may indicate an acute neurological condition requiring immediate



specialty consultation.

The new guidance includes a summary of each stage of activity progression, with the goal of optimizing successful return to full activity. Complete descriptions, including clinical tools for health care professionals and patient education and instructional materials, are available at the DVBIC website: <u>http://dvbic.dcoe.mil/</u>.

Traumatic <u>brain injury</u> is a major concern in military personnel, both deployed and nondeployed. Estimates suggest that more than 294,000 service members sustained TBI between 2000 and 2013. More than 80 percent of these injuries were mTBI, also known as concussion.

Dr McCulloch and the Working Group hope the rehabilitation recommendations will help to maximize recovery and return to active duty, taking into account the unique needs and characteristics of service members with mTBI. They emphasize the need for further research to test and refine the proposed recommendations, and for clinical judgment in managing individual patients.

The special issue of JHTR includes 14 new studies related to unique aspects of military TBI. Topics include new assessment tools, estimates of the rates of TBI in <u>military</u> populations, and short- and long-term effects of TBI, including injuries caused by blast exposure.

More information: "Development of Clinical Recommendations for Progressive Return to Activity After Military Mild Traumatic Brain Injury: Guidance for Rehabilitation Providers" journals.lww.com/headtraumareh ... =00007&type=Fulltext

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