

**LIMBIC-CENC Clinical Care Monographs:**  
**Persistent Symptoms after mild TBI: Balance and Pain**

**Key Finding:** LIMBIC-CENC researchers found that several other factors, in addition to prior mild TBI, were associated with poorer balance performance, with pain showing an especially strong relationship.<sup>1</sup>

**Perspective:** Balance performance is a delicate and complex process controlled by brain networks that integrate and process multiple afferent and efferent pathways. Pain can disturb this process by a number of potential central or peripheral mechanisms.

**Clinical Pearl:** The treatment of balance problems in Servicemembers and Veterans with prior TBI should address pain before and during vestibular rehabilitation or other interventions.

**References:**

1. Walker WC, Nowak KJ, Kenney K, Franke LM, Eapen BC, Skop K, Levin H, Agyemang AA, Tate DF, Wilde EA, Hinds S, Nolen TL. Is balance performance reduced after Mild Traumatic Brain Injury?: Interim analysis from Chronic Effects of Neurotrauma Consortium (CENC) multi-centre study. *Brain Inj.* 2018;32(10):1156-1168. doi: 10.1080/02699052.2018.1483529. Epub 2018 Jun 12. PMID: 29894203.

*n.b.: The 'Perspectives' and 'Clinical Pearls' expressed are based on interpretation of findings from the described Long-term Impact of Military-related Brain Injury Consortium/Chronic Effects of Neurotrauma Consortium (LIMBIC-CENC) research studies and their assimilation with the extant literature. These views are endorsed by LIMBIC-CENC leadership but may vary across individual researchers. All findings involve Service Members (SMs), Veterans (Vs) or both.*

*LIMBIC-CENC research and its KT products were supported financially and is based upon work supported by the U.S. Army Medical Research and Materiel Command and from the U.S. Department of Veterans Affairs Chronic Effects of Neurotrauma Consortium under Award No. W81XWH-13-2-0095, the U.S. Department of Veterans Affairs Long-term Impact of Military-related Brain Injury Consortium/Chronic Effects of Neurotrauma Consortium under Award No. 1I01CX002097-01, the U.S. Department of Defense Chronic Effects of Neurotrauma Consortium (CENC) Award W81XWH-13-2-0095 and the U.S. Department of Defense Long-term Impact of Military-relevant Brain injury Consortium Award No. W81XWH-18-PH/TBIRP-LIMBIC. The U.S. Army Medical Research Acquisition Activity, 820 Chandler Street, Fort Detrick MD 21702-5014 is the awarding and administering acquisition office. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Government, or the U.S. Department of Veterans Affairs, and no official endorsement should be inferred.*