

# SUMMARY OF CURRENT BEST PRACTICES FOR COMMON DIZZINESS AND BALANCE DISORDERS IN MILITARY POPULATIONS

## Introduction

This summary document highlights the current state of the literature for common causes of dizziness seen in the Military Health System (MHS). This document was developed by the Department of Defense Hearing Center of Excellence with the concurrence of the Defense and Veterans Brain Injury Center. Information is intended to serve as a reference and not a substitute for clinical decision making. This document will be updated yearly by the DoD HCE.

Comments or questions regarding this document may be sent to the DoD Hearing Center of Excellence Clinical Care Branch: [dha.ncr.j-9.list.hce-clinical-care@mail.mil](mailto:dha.ncr.j-9.list.hce-clinical-care@mail.mil).

DISORDER	REFERENCES	KEY TAKEAWAYS	GAPS
<b>Benign Paroxysmal Positional Vertigo (BPPV)</b>	Bhattacharyya, N. et al. (2017). Clinical Practice Guideline: Benign Paroxysmal Positional Vertigo (Update). Otolaryngology Head Neck Surgery. 156 (3_suppl): S1-S47.	<p>Clinical Practice Guideline (CPG) updated previous guidelines from the American Academy of Otolaryngology</p> <ul style="list-style-type: none"> <li>■ Emphasis on patient education</li> <li>■ <b>Strong recommendation</b> for providers to diagnose and treat posterior canal BPPV</li> <li>■ <b>Recommend against</b> radiographic imaging for patients meeting diagnostic criteria for BPPV</li> <li>■ <b>Recommend against</b> routine use of vestibular suppressant medications to treat BPPV</li> </ul> <p>Between 17-42% of the 5.6 million clinic visits related to dizziness will receive a diagnosis of BPPV.</p> <p>Preliminary data shows that only 10% of those with this diagnosis in the Military Health System (MHS) receive treatment (ICD-10 and CPT coding data).</p>	<p>CPG identifies 18 current gaps including:</p> <ul style="list-style-type: none"> <li>■ Lack of guidance for additional testing in the presence of BPPV</li> <li>■ Unsure of optimal number of canalith repositioning maneuvers (CRMs)</li> <li>■ Unclear optimal time interval between CRMs</li> <li>■ Unclear of the benefits of vestibular rehabilitation</li> </ul>
<b>Cervicogenic Dizziness</b>	Devaraja, K. (2018). Approach to cervicogenic dizziness: a comprehensive review of its aetiopathology and management. European archives of Oto-Rhino-Laryngology 275:2421-2433	<p>Cervicogenic dizziness is a diagnosis of exclusion. Other causes of dizziness must sufficiently be ruled out before assigning this diagnosis.</p> <p>This narrative review of the literature by Devaraja describes neural and vascular causes of cervicogenic dizziness. Clinical subtypes may guide specific treatment paradigms. Features of each subtype are defined:</p> <ul style="list-style-type: none"> <li>■ Bow hunter’s syndrome</li> <li>■ Barre-Lieou syndrome</li> <li>■ Whiplash-associated disorders</li> <li>■ Degenerative spine disorders</li> </ul>	<p>There is not an accepted diagnostic tool/criteria for cervicogenic dizziness</p> <p>“No single clinical study has incorporated and isolated all the conditions of cervicogenic dizziness. There is a need for such studies in the future to validate either the reliability of a clinical test or the efficacy of an intervention in cervicogenic dizziness.” (Devaraja 2018)</p>

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DISORDER	REFERENCES	KEY TAKEAWAYS	GAPS
<b>Mild Traumatic Brain Injury (mTBI)</b>	Free download available: <a href="https://dvbic.dcoe.mil/material/assessment-andmanagement-dizzinessassociated-mild-tbini-recommendation-0">https://dvbic.dcoe.mil/material/assessment-andmanagement-dizzinessassociated-mild-tbini-recommendation-0</a>	<p>Dizziness is common following TBI.</p> <p>Defense and Veterans Brain Injury Center (DVBIC) provides clinical recommendation for assessment of dizziness post mTBI. Consensus panel included members from Veterans Affairs (VA), Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE), and civilian sector.</p> <ul style="list-style-type: none"> <li>■ Primary care physical examination for complaints of dizziness should include vital signs, otoscopic, cardiovascular, neurologic and musculoskeletal examinations</li> <li>■ Diagnostic exams include primary position and gaze-evoked nystagmus, assessment of gait, Dix-Hallpike test, otologic and oculomotor exam, and Romberg test</li> <li>■ Routine blood tests are not typically beneficial for patients with dizziness symptoms</li> </ul>	<p>There is not an accepted gold standard for diagnosing mTBI. The DoD Definition and Military Acute Concussion and Evaluation (MACE2) are the current standards</p> <p>Research continues to seek a more objective test for mTBI</p> <p>Many subtypes of mTBI have been defined in the literature</p> <p>Individualized treatment planning is essential</p>
<b>Peripheral Vestibular Hypofunction</b>	Hall, C.D. et al. (2016). Vestibular Rehabilitation for Peripheral Vestibular Hypofunction: An Evidence-Based Clinical Practice Guideline. <i>Journal of Neurologic Physical Therapy</i> . 40:124-154.	<p>CPG developed by The Academy of Neurology of the American Physical Therapy Association to assist providers in selecting appropriate candidates for rehab and decrease variation in care</p> <ul style="list-style-type: none"> <li>■ <b>Strong evidence</b> to support vestibular rehabilitation for persons with impairments and functional limitations related to unilateral and bilateral vestibular hypofunction</li> <li>■ <b>Moderate evidence</b> that clinicians should offer specific exercise techniques to target identified impairments or functional limitations</li> <li>■ <b>Moderate evidence</b> and in consideration of patient preference that clinicians may provide supervised vestibular rehabilitation</li> <li>■ <b>Expert opinion</b> supports prescribing gaze stability exercises a minimum of 3 times per day as home exercise program</li> </ul>	<p>CPG identifies 9 research recommendations including:</p> <ul style="list-style-type: none"> <li>■ Uncertain if there is a critical period for intervention</li> <li>■ Unclear of appropriate dosing and type of vestibular exercises</li> <li>■ Lack information on effectiveness of rehab in children</li> </ul>
<b>Persistent Postural-Perceptual Dizziness (PPPD)</b>	Popkirov, S., Staab, J.P., Stone, J. (2018). Persistent postural-perceptual dizziness (PPPD): a common characteristic and treatable cause of chronic dizziness. <i>Practical Neurology</i> ; 18:5-13.	<p>Persistent postural-perceptual dizziness combines features of chronic subjective dizziness and related disorders</p> <p>This diagnosis has recently been accepted by the Barany Society</p> <p>Barany Society diagnostic criteria are presented in this review of current diagnosis and treatment recommendations</p>	<p>CPG lacks a systematic review of the literature with accepted guidelines and recommendations</p> <p>Pathophysiology of PPPD is not currently understood</p> <p>Dosage and pacing of treatment are not fully understood</p>