# Payment Policy | Dynamic Posturography



**EFFECTIVE DATE:**10 | 01 | 2015

**POLICY LAST UPDATED:** 12 | 06 | 2016

#### **OVERVIEW**

Dynamic posturography tests a patient's balance control in situations intended to isolate factors that affect balance in everyday experiences. It provides quantitative information on the degree of imbalance present in an individual but is not intended to diagnosis specific types of balance disorders.

## **MEDICAL CRITERIA**

Not applicable

#### **PRIOR AUTHORIZATION**

Not applicable

### **POLICY STATEMENT**

### BlueCHiP for Medicare and Commercial Products

Dynamic posturography is considered not medically necessary. There are no studies that demonstrate the clinical utility of the test by leading to changes in management that improves health outcomes. As a result of these deficiencies in the evidence base, dynamic posturography is considered not medically necessary for all indications.

#### **COVERAGE**

Benefits may vary between groups and contracts. Please refer to the appropriate Evidence of Coverage or Subscriber Agreement for applicable not medically necessary benefits/coverage.

### **BACKGROUND**

Dynamic posturography aims to provide quantitative information regarding a patient's functional ability to maintain balance. The patient, wearing a harness to prevent falls, stands on an enclosed platform surrounded by a visual field. By altering the angle of the platform or shifting the visual field, the test assesses movement coordination and the sensory organization of visual, somatosensory, and vestibular information relevant to postural control. The patient undergoes 6 different testing situations designed to evaluate the vestibular, visual, and proprioceptive/somatosensory components of balance. In general terms, the test measures an individual's balance (as measured by a force platform to calculate the movement of the patient's center of mass) while visual and somatosensory cues are altered.

These tests vary by whether the eyes are open or closed, the platform is fixed or sway-referenced, and whether the visual surround is fixed or sway-referenced. Sway-referencing involves making instantaneous computer-aided alterations in the platform or visual surround to coincide with changes in body position produced by sway. The purpose of sway-referencing is to cancel out accurate feedback from somatosensory or visual systems that are normally involved in maintaining balance. In the first 3 components of the test, the support surface is stable, and visual cues are either present, absent, or sway-referenced. In tests 4 to 6, the support surface is sway-referenced to the individual, and visual cues are either present, absent, or sway-referenced. In tests 5 and 6, the only accurate sensory cues that are available for balance are vestibular cues. Results of computerized dynamic posturography have been used to determine what type of information (i.e., visual, vestibular, proprioceptive) can and cannot be used to maintain balance. Dynamic posturography cannot be used to localize the site of a lesion.

Complaints of imbalance are common in older individuals and contribute to the risk of falling in the elderly population. Falls are the most common cause of death and disability in this population in the United States. Maintenance of balance is a complex physiologic process, requiring interaction of the vestibular, visual, proprioceptive/somatosensory system, and central reflex mechanisms and is influenced by the general health of the patient (i.e., muscle tone, strength, range of motion). Therefore, identifying and treating the underlying balance disorder may be difficult. Commonly used balance function tests such as electronystagmography and rotational chair tests attempt to measure the extent and site of a vestibular lesion but do not attempt to assess the functional ability of the patient to maintain balance.

Posturography tests a patient's balance control in situations intended to isolate factors that affect balance in everyday experiences. Balance can be rapidly assessed qualitatively by asking the patient to maintain a steady stance on a flat or compressible surface (i.e., foam pads) with the eyes open or closed. By closing the eyes, the visual input into balance is eliminated. The use of foam pads eliminates the sensory and proprioceptive cues. Therefore, only vestibular input is available when standing on a foam pad with eyes closed. The evidence on dynamic posturography consists of studies on technical performance, comparisons of results in patients with balance disorders and healthy controls, and retrospective case series reporting outcomes of patients assessed with dynamic posturography as part of clinical care.

There are no generally accepted reference standards for dynamic posturography, which makes it difficult to determine how the results can be applied in clinical care. There is a lack of evidence on the performance characteristics of this test for clinically important conditions, such as identifying patients who are at risk of falls. There are no studies that demonstrate the clinical utility of the test, by leading to changes in management that improves health outcomes. As a result of these deficiencies in the evidence base, dynamic posturography is considered not medically necessary for all indications.

#### **CODING**

The following code is not medically necessary: **92548** Computerized dynamic posturography

#### **RELATED POLICIES**

None

### **PUBLISHED**

Provider Update, January 2017 Provider Update, August 2015

### **REFERENCES**

- 1. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Dynamic posturography in the assessment of vestibular dysfunction. TEC Assessments 1996; Volume 11, Tab 11.
- 2. Honaker J, Converse C, Shepard N. Modified head shake computerized dynamic posturography. Am J Audiol Dec 2009;18(2):108-113. PMID 19949235.
- 3. Pang MY, Lam FM, Wong GH, et al. Balance performance in head-shake computerized dynamic posturography: aging effects and test-retest reliability. Phys Ther. Feb 2011;91(2):246-253. PMID 21148260
- 4. Visser JE, Oude Nijhuis LB, Janssen L, et al. Dynamic posturography in Parkinson's disease: diagnostic utility of the "first trial effect". Neuroscience. 2010;168(2):387-394.
- 5. Whitney SL, Roche JL, Marchetti GF, et al. A comparison of accelerometry and center of pressure measures during computerized dynamic posturography: a measure of balance. Gait Posture. Apr 2011;33(4):594-599. PMID 21333541
- 6. Fritz NE, Newsome SD, Eloyan A, et al. Longitudinal relationships among posturography and gait measures in multiple sclerosis. Neurology. May 19 2015;84(20):2048-2056. PMID 25878185
- 7. Ferrazzoli D, Fasano A, Maestri R, et al. Balance dysfunction in Parkinson's disease: the role of posturography in developing a rehabilitation program. Parkinsons Dis. 2015;2015:520128. PMID 26504611

- 8. Buatois S, Gueguen R, Gauchard GC, et al. Posturography and risk of recurrent falls in healthy noninstitutionalized
- persons aged over 65. Gerontology. 2006;52(6):345-352. PMID 16905886
- 9. Girardi M, Konrad HR, Amin M, et al. Predicting fall risks in an elderly population: computer dynamic posturography versus electronystagmography test results. Laryngoscope. 2001;111(9):1528-1532. PMID 11568601
- 10. Sinaki M, Lynn SG. Reducing the risk of falls through proprioceptive dynamic posture training in osteoporotic women with kyphotic posturing: a randomized pilot study. Am J Phys Med Rehabil. 2002;81(4):241-246.
- 11. Whitney SL, Marchetti GF, Schade AI. The relationship between falls history and computerized dynamic posturography in persons with balance and vestibular disorders. Arch Phys Med Rehabil. 2006;87(3):402-407.
- 12. Ganesan M, Pasha SA, Pal PK, et al. Direction specific preserved limits of stability in early progressive supranuclear palsy: a dynamic posturographic study. Gait Posture. Apr 2012;35(4):625-629. PMID 22225854 13. Lee JM, Koh SB, Chae SW, et al. Postural instability and cognitive dysfunction in early Parkinson's disease. Can J Neurol Sci. Jul 2012;39(4):473-482. PMID 22728854
- 14. Pierchala K, Lachowska M, Morawski K, et al. Sensory Organization Test outcomes in young, older and elderly healthy individuals preliminary results. Otolaryngol Pol. Jul 2012;66(4):274-279. PMID 22890532 15. Biggan JR, Melton F, Horvat MA, et al. Increased load computerized dynamic posturography in prefrail and nonfrail community-dwelling older adults. J Aging Phys Act. Jan 2014;22(1):96-102. PMID 23416307 16. Lim KB, Lee HJ. Computerized posturographic measurement in elderly women with unilateral knee osteoarthritis.
- Ann Rehabil Med. Oct 2012;36(5):618-626. PMID 23185725
- 17. Alahmari KA, Marchetti GF, Sparto PJ, et al. Estimating postural control with the balance rehabilitation unit:measurement consistency, accuracy, validity, and comparison with dynamic posturography. Arch Phys Med Rehabil. Jan 2014;95(1):65-73. PMID 24076084
- 18. Teggi R, Caldirola D, Fabiano B, et al. Rehabilitation after acute vestibular disorders. J Laryngol Otol. Apr 2009;123(4):397-402. PMID 18549515

### **CLICK THE ENVELOPE ICON BELOW TO SUBMIT COMMENTS**

This medical policy is made available to you for informational purposes only. It is not a guarantee of payment or a substitute for your medical judgment in the treatment of your patients. Benefits and eligibility are determined by the member's subscriber agreement or member certificate and/or the employer agreement, and those documents will supersede the provisions of this medical policy. For information on member-specific benefits, call the provider call center. If you provide services to a member which are determined to not be medically necessary (or in some cases medically necessary services which are non-covered benefits), you may not charge the member for the services unless you have informed the member and they have agreed in writing in advance to continue with the treatment at their own expense. Please refer to your participation agreement(s) for the applicable provisions. This policy is current at the time of publication; however, medical practices, technology, and knowledge are constantly changing. BCBSRI reserves the right to review and revise this policy for any reason and at any time, with or without notice. Blue Cross & Blue Shield of Rhode Island is an independent licensee of the Blue Cross and Blue Shield Association.

