

Cigna Medical Coverage Policy



Subject Computerized Dynamic Posturography (CDP)

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Coverage Policy

Cigna does not cover the use of computerized dynamic posturography (CDP) for any indication because it is considered experimental, investigational or unproven.

General Background

Computerized dynamic posturography (CDP) testing is a technique used to assess underlying sensory and motor control impairments associated with balance disorders. It does not identify the site of pathology, but rather documents the impairments that are functional manifestations of the pathology. Neurotological evaluation, electronystagmography (ENG) and rotary chair testing are typically used to diagnose and plan treatment for balance disorders. CDP testing has been proposed as a complement to clinical tests that localize and categorize the pathology of balance disorders. During CDP testing, the patient stands on a movable, enclosed platform. A computer controls the platform's orientation and can move it in a horizontal plane or rotate it out of a horizontal plane. The computer also assesses and records the patient's postural stability and motor reactions during platform tilting.

The protocol for CDP testing includes sensory organization, motor control and adaptation testing. During sensory organization testing (SOT), visual, vestibular and proprioceptive information is manipulated to evaluate the effect on standing balance. This protocol creates conditions of conflicting sensory impressions to isolate vestibular balance control and stress the adaptive responses of the central nervous system (CNS). The motor control test (MCT) evaluates the patient's recovery from unexpected platform movements. Adaptation testing (ADT) assesses the patient's ability to modify motor reactions when the platform moves unexpectedly in a "toes up" or "toes down" direction. This adaptive test simulates daily life conditions, such as irregular support surfaces.

The role of CDP testing in the evaluation of and treatment planning for balance disorders is controversial. It has been proposed that patients in the following categories may be candidates for testing with CDP (Monsell, et al., 1997):

- Patients who are undergoing balance rehabilitation
- Patients who have symptoms of disequilibrium for whom conventional tests of vestibular function have not detected an abnormality
- Patients who are being evaluated for balance impairment after trauma
- Disability and return-to-work assessment for patients with vestibular and neurological disorders
- Patients who are receiving potentially vestibulotoxic medications or are in environments that alter inner ear function or where the vestibular structures of the inner ear may be damaged
- Patients with a history of falls and aging patients with disequilibrium
- Patients who may have a nonorganic sensation of imbalance (e.g., malingers)

Varying sensitivity and specificity rates have been reported in the literature for CDP used to evaluate a variety of balance disorders. A sensitivity range of 57–89% and specificity range of 88–100% has been reported for differentiating malingers from both patients with a genuine balance disorder and healthy controls. Sensitivity and specificity rates of 77% and 71% respectively have been reported for differentiating between simulated vertigo and acute vertigo due to vestibular neuritis. The clinical utility of CDP has not been established. CDP reportedly provides additional information to conventional testing for balance disorders. However, the impact of this information on diagnosing, treatment planning, and monitoring has not been clearly defined. CDP does not localize the site of a lesion. Currently, vestibular disorders are typically diagnosed using established testing methods such as electronystagmography and rotational chair testing combined with imaging studies.

U.S. Food and Drug Administration (FDA)

The EquiTest™ system, introduced by NeuroCom® International (Clackamas, OR) in 1985, is approved by the FDA for computerized posturography testing.

Literature Review

The evidence in the published peer-reviewed medical literature examining the safety and effectiveness of CDP includes older studies, some poorly designed, with varying results (Morgan, et al., 2002; El Kashian, et al., 1998; Di Fabio, 1996; Di Fabio, 1995). A systematic review by Piirtola and Era (2006) evaluated prospective studies (n=9 studies) and reported that measures related to dynamic posturography (i.e., moving platforms) were not found to be predictive of falls among elderly populations. It was found that while certain aspects of force platform data may have predictive value for subsequent falls, the small number of available studies made it difficult to draw conclusions.

Additional evidence evaluating the use of CDP is primarily in the form of prospective and retrospective case series and validation studies with patient populations ranging from 26–216 (Ebersbach, et al., 2011; Mockford, et al., 2010; Gouveris, et al., 2007; Mbongo, et al., 2005; Sataloff, et al., 2005; Soto, et al., 2004; Artuso, et al., 2004; Amin, et al., 2002). . Studies have included patients with a various disorders including vertigo, vestibular schwannoma, and Ménière's disease. Overall, small sample sizes and poor study design have limited the generalizability of these study results. The data have not reliably demonstrated any beneficial effects of CDP evaluation on patient outcomes.

Professional Societies/Organizations

The American Academy of Otolaryngology—Head and Neck Surgery (AAO-HNS) recognizes dynamic platform posturography as a testing method that is medically indicated and appropriate in the evaluation of individuals with suspected balance or dizziness disorders (AAO-HNS, 2007).

Use Outside of the US

No relevant information found.

Summary

Insufficient evidence exists in the form of well-designed, large-population, prospective, randomized, controlled trials to draw definitive conclusions regarding the accuracy of computerized dynamic posturography (CDP) and the impact of CDP testing results on health outcomes. The diagnostic utility of CDP has not been demonstrated,

as any qualitative data provided by CDP testing serves only as a supplement to established diagnostic alternatives. Studies conducted thus far have not evaluated the effectiveness of CDP testing against that of standard testing methods, nor have these studies shown that the use of this technique would enhance treatment decision-making. Further studies are needed to determine the ultimate role of CDP testing in the management of individuals with balance disorders.

Coding/Billing Information

Note: 1) This list of codes may not be all-inclusive.

2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement

Experimental/Investigational/Unproven/Not Covered for any indication:

CPT* Codes	Description
92548	Computerized dynamic posturography

*Current Procedural Terminology (CPT®) ©2013 American Medical Association: Chicago, IL.

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