

Posterior Canal Benign Paroxysmal Positional Vertigo (BPPV)

Author: Britta Smith, PT, MMSc

Fact Sheet

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Contact us:

ANPT

5841 Cedar Lake Rd S.

Ste 204

Minneapolis, MN 55416

Phone: 952.646.2038

Fax: 952.545.6073

info@neuropt.org

www.neuropt.org

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What is BPPV?

Benign Paroxysmal Positional Vertigo (BPPV) is characterized by episodic vertigo provoked by changes in head position in relationship to gravity. It is the most common vestibular disorder, accounting for one-third of vestibular diagnoses.¹ BPPV is caused by otoconia dislodged from the utricle and entering one or more of the semicircular canals. The particles change the fluid dynamics of the canals, making them sensitive to gravity. While otoconia can enter any canal, the posterior canal is most frequently affected due to its anatomical alignment.² BPPV may occur following head trauma, labyrinthitis, or ischemia in the anterior vestibular artery distribution, but almost half of cases are idiopathic.³

How is BPPV Diagnosed?

Patients commonly report symptoms of vertigo, dizziness, nausea or imbalance with changes in head position with respect to gravity. Symptoms are often provoked by rolling over in bed, looking up, bending over, or having the head hanging, such as during a dental or beauty parlor visit. The diagnosis of posterior canal BPPV is made by performing the Dix-Hallpike maneuver.⁴ Diagnostic findings for BPPV of the posterior canal are:

- Torsional ocular nystagmus toward the downward ear tested with an upward motion lasting less than 60 seconds,
- Latency between 1 and 40 seconds, and
- Symptoms of vertigo reported by the patient during the Dix-Hallpike maneuver.

How Is BPPV Treated?

Once the diagnosis of posterior canal BPPV is made, treatment is directed at moving the otoconia out of the canal and back to the utricle where it is thought the particles are reabsorbed.⁵ The canalith repositioning procedure (CRP) developed by Epley is an appropriate intervention for BPPV with particles in the posterior canal.⁶ The correct technique for this maneuver is described and shown on multiple websites.^{7,8} An alternative treatment is the liberatory maneuver.⁹ Although developed for another variant of BPPV, the liberatory maneuver can also be used for posterior canal treatment. A recent systematic review of the effectiveness of posterior canal BPPV treatment reported success rates for CRP between 67% and 95% and for the liberatory maneuver between 80% and 85%.¹⁰

Physical Therapy for Patients with BPPV

Physical therapists with training in vestibular rehabilitation are competent in diagnosing BPPV, selecting the appropriate maneuver for each patient, and

performing the intervention. Vestibular physical therapists educate patients about their diagnosis, intervention provided, and how to perform additional self-treatment if appropriate. Secondary problems related to BPPV, such as persistent dizziness or postural instability, can be treated by vestibular physical therapists as part of a comprehensive care plan.

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