



# Q / What is the best approach to benign paroxysmal positional vertigo in the elderly?

## EVIDENCE-BASED ANSWER

**A** | A CANALITH REPOSITIONING MANEUVER (CRM), such as the Epley or Semont maneuver, should be the first-line treatment for benign paroxysmal positional vertigo (BPPV) in the elderly (strength of recommendation [SOR]: A, several good-quality randomized controlled trials [RCTs]).

Following the Epley maneuver with

self-treatment at home using a modified Epley procedure improves outcomes (SOR: B, a single good-quality RCT). Postural restrictions aren't necessary after CRM treatment (SOR: A, several good-quality RCTs).

Medications don't work as well as a CRM, but studies comparing treatments are limited (SOR: B, a single good-quality RCT).

## Evidence summary

No epidemiologic data on BPPV in the United States are available, but experts describe increasing incidence with advancing age. A recent German study found a lifetime prevalence of 2.4%, with a cumulative incidence approaching 10% by age 80.<sup>1</sup> Treatments include repositioning maneuvers (regimens of positioning the patient's head and body) and medication. Evidence about treating BPPV in elderly patients specifically is limited.<sup>2-4</sup>

### These 2 maneuvers work best

Both Epley's CRM and Semont's liberatory maneuver have been shown to treat BPPV effectively. (For descriptions of the maneuvers and video links, see "How the Epley and Semont maneuvers work" on page 296.)

An RCT with 124 participants (mean age 58.3 years) demonstrated that either Epley's or Semont's maneuver decreased the frequency of vertigo more than a sham maneuver ( $P=.021$  and  $P=.010$ , respectively).<sup>5</sup> Both maneuvers were more effective than the Brandt-Daroff home exercises ( $P=.033$ ).<sup>5</sup>

Another high-quality, double-blind RCT with 67 participants (median age 59 years) reported an improvement in vertigo and nystagmus at 24 hours among 80% of patients treated with Epley's CRM, compared with 10% of those who received a sham maneuver ( $P<.001$ ; number needed to treat [NNT]=1; 95% confidence interval [CI], 1-2).<sup>6</sup>

An RCT that enrolled 80 participants (median age 64 years) found complete resolution of BPPV symptoms and a negative Dix-Hallpike test 1 week after treatment in 88% of patients who received Epley's CRM plus self-treatment (a modified Epley's maneuver) compared with 69% who received Epley's CRM alone ( $P=.048$ ; NNT=5; 95% CI, 3-124).<sup>7</sup>

### Posture restrictions are unnecessary

An RCT involving 50 participants (mean age 60.9 years) demonstrated that postprocedure postural restrictions were unnecessary and didn't improve BPPV remission rates among patients receiving CRM ( $P=.97$ ). No differences were noted by age or sex.<sup>8</sup> Two prospective nonrandomized studies found that the recurrence rate of BPPV symptoms was 15% to

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**A canalith repositioning maneuver (Epley or Semont maneuver) is the first-line treatment for benign paroxysmal positional vertigo in the elderly.**

➤  
**Postural restrictions aren't necessary after a canalith repositioning maneuver.**

## How the Epley and Semont maneuvers work

### THE EPLEY MANEUVER

A patient with right-ear BPPV sits on the exam table with her head turned 45° to the right, then lies down quickly on the table on a pillow positioned under her shoulders. After maintaining this position for 30 seconds, the patient turns her head 90° to the left without raising it from the table and waits 30 more seconds. The patient then turns her head and body as a unit 90° to the left and waits another 30 seconds before sitting up on the left side of the table.

A patient with left-ear BPPV would perform the maneuver in a similar fashion, but would begin with her head positioned to the left side, eventually rotating her body to the right side, and end by sitting up on the right side of the exam table.

The following link leads to a video showing the modified Epley's CRM for treating right-ear, posterior canal BPPV: <http://www.neurology.org/content/vol63/issue1/images/data/150/DC1/video2.mpg>

### THE SEMONT MANEUVER

A patient with right-ear BPPV sits on the exam table with her head turned 45° to the left, then drops rapidly to the right side so that her head contacts the table just behind the right ear. After waiting in this position for 30 seconds, the patient moves quickly and smoothly toward the left side (without stopping in the upright position) so that the left side of her forehead rests on the exam table. She holds this position for 30 seconds, then sits upright again.

A patient with left-ear BPPV would perform the maneuver in a similar fashion, but begin with her head positioned to the right side.

The following link leads to a video demonstrating Semont's liberatory maneuver for treating right-ear BPPV: <http://www.neurology.org/content/vol63/issue1/images/data/150/DC1/video1.mpg>

18% at 12 months and 37% to 50% at 40 to 60 months.<sup>9,10</sup>

### Drug studies are scarce, but CRM appears to work better

Studies of drug treatment among patients with BPPV are extremely limited because BPPV as a cause of vertigo is often an exclusion criterion among medication trials. A small (N=20; age range 32-67 years) double-blinded RCT found no difference in dizziness symptom scores for participants with BPPV who took diazepam (5 mg, 3 times daily), lorazepam (1 mg, 3 times daily), or placebo (1 capsule, 3 times daily) over a period of 4 weeks.<sup>11</sup>

An RCT of 156 patients (mean age 74 years) with BPPV compared a calcium channel blocker (flunarizine, which isn't available in the United

States) with Semont's liberatory maneuver or no therapy (observation only). Semont's maneuver was more effective at the 6-month follow-up than either the calcium channel blocker or no therapy; the rates of asymptomatic patients with a negative Dix-Hallpike test at follow-up were 94%, 58%, and 34%, respectively ( $P<.001$ ).<sup>3</sup>

Although meclizine is often used in clinical practice, only 1 double-blind RCT from 1972 (N=31, age range 21-77 years) reported improvement in symptoms and physical findings for meclizine compared with placebo in patients with BPPV.<sup>12</sup>

### Recommendations

In a review article, Furman and Cass describe the diagnostic maneuver (Dix-Hallpike) and

treatment maneuver (Epley) for BPPV.<sup>13</sup> They recommend using either Epley's or Semont's maneuver for initial treatment.

The authors noted that vestibular suppressant medications may decrease the intensity of symptoms but don't reduce the frequency of

recurrent vertigo attacks. Moreover, medications produce unwanted side effects (somnolence, lethargy, worsened balance) and may prove counterproductive by delaying the central nervous system's adaptation to a peripheral vestibular abnormality. **JFP**

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## Issues in postmenopausal hormone therapy

### DEPRESSION, ENDOMETRIAL HEALTH, AND DISCONTINUATION

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**CASE 1** HT and new-onset depression Nanette F. Santoro, MD

**CASE 2** Estrogen and endometrial health Veronica A. Ravnikar, MD, FACOG

**CASE 3** Discontinuing HT James H. Liu, MD

Both physicians and patients report being confused by conflicting reports of the safety and efficacy of hormone therapy (HT). In this supplement to *Sexuality, Reproduction and Menopause*, 3 experts use case-based evidence to offer suggestions for prescribing HT to postmenopausal women who experience depression or vasomotor symptoms, or who want to discontinue HT.

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