

## **Benign Paroxysmal Positional Vertigo (BPPV)**

Benign paroxysmal positional vertigo (BPPV) is the most common inner ear balance problem in patients and has a lifetime prevalence of 2.4%. It has a peak onset between the ages of 50-60 and has a female-to-male ratio of 3:1. The condition is characterized by a brief spinning sensation typically lasting less than 1 minute (although first time episodes can have longer duration), and usually triggered by a change in head position with respect to gravity. Patients can have BPPV symptoms when getting in and out of bed, rolling over in bed, or tilting/bending the head. Some BPPV attacks can be associated with nausea and vomiting.

The condition occurs when crystals that normally reside in one part of the inner ear dislodge and stimulate the balance canals thereby leading to a false sense of rotation. BPPV usually arises from stimulation of the posterior semicircular canal which is the most gravity-dependent canal. 90% of BPPV cases involve the posterior semi-circular canal. BPPV has also been associated with osteopenia/osteoporosis and decreased levels of vitamin D and calcium.

BPPV is diagnosed through certain maneuvers that can be done in the clinic by your doctor. The test usually makes patients dizzy for a brief moment.

BPPV typically resolves without treatment. The median time of spontaneous resolution is reported to be about 17 days for posterior canal BPPV. It is thought that symptoms resolve as the loose crystals dissolve in the inner ear fluid. Canal repositioning maneuvers are a way to treat BPPV promptly and effectively.

The Epley maneuver is a well-known canalith repositioning maneuver for posterior canal BPPV. The Epley maneuver can be performed by your doctor or trained vestibular physical therapist. Some patients may need repeated Epley maneuvers performed. Other canalith repositioning maneuvers can be safely performed at home by the patient (see below).

### **Semont Maneuver (BPPV treatment)**

The Semont maneuver can be used to treat BPPV involving the posterior semicircular canal. The maneuver is particularly helpful in patients who have difficulty extending the neck,

which is needed in an Epley maneuver. The Semont maneuver is useful for BPPV **treatment**, as opposed to BPPV management/prevention. The semont maneuver may be repeated several times until no further nystagmus is elicited.

To perform a Semont maneuver, sit upright at the edge of the bed, and turn your head 45 degrees to the unaffected side. Next, quickly lay down on the affected side and remain in place for 1 minute. Next, quickly go from lying down on the affected side and move your head to the unaffected side with the head down. You should be looking diagonally downward when lying on the unaffected side. Maintain your position for 1 minute. Slowly return to sitting at the edge of your bed, and keep your head level for 10 minutes. You may experience dizziness during this maneuver. You may repeat daily as needed.

Semont maneuver for the left ear:

<https://www.youtube.com/watch?v=ZKq8RL0mNUA>

Semont maneuver for the right ear:

<https://www.youtube.com/watch?v=QNorLXIBRUw>

### **Brandt-Daroff (BPPV prevention)**

The Brandt-Daroff exercise can be done twice a day for BPPV prevention (can also be useful for treatment). This maneuver is thought to flush out debris in your balance canals. To perform this maneuver, sit at the edge of your bed. Turn your head 45 degrees to the right. Maintain your head position while lying down to your left side. Hold this position for 30 seconds. Sit back up on the bed and look straight ahead. Hold this position for 30 seconds. Lastly, turn your head 45 degrees to the left, and maintain your head position while lying down on the right side. Hold this position for 30 seconds. Sit back up on the bed and look straight ahead. Maintain this position for 30 seconds.

Brandt-Daroff exercise video:

<https://www.youtube.com/watch?v=laRHBIN-tgY&t=64s>