

# Benign Paroxysmal Positional Vertigo

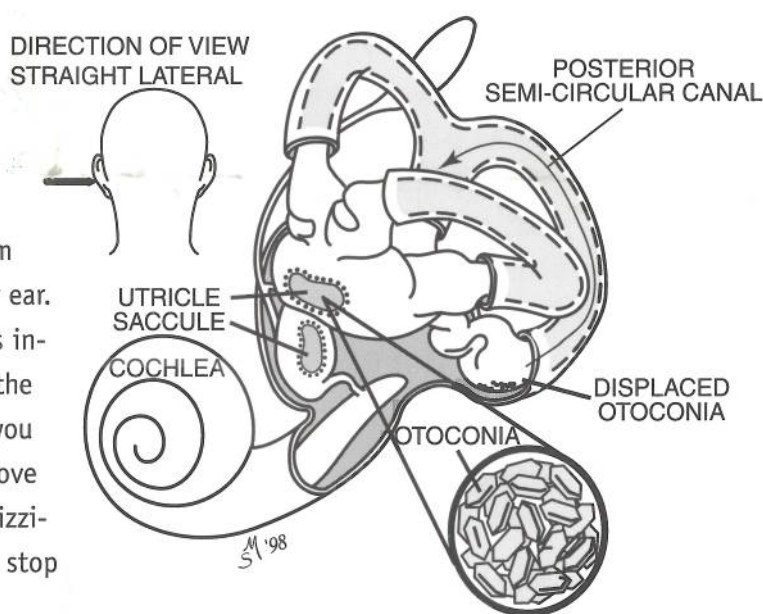
You have been diagnosed with **Benign Paroxysmal Positional Vertigo**. This brochure is designed to help increase your understanding of this disorder and its potential treatments.

## WHAT IS BPPV?

**B**enign paroxysmal positional vertigo (BPPV) is a disorder of the inner ear. People with BPPV typically experience brief episodes of vertigo (dizziness) when they change the position of their head with respect to gravity. Approximately 20 percent of all vertigo is due to BPPV.

## WHAT CAUSES BPPV?

**B**PPV is thought to be due to tiny crystals, called otoconia, that have collected within a sensitive part of the inner ear. Otoconia are crystals of calcium carbonate that are normally located in a structure of the ear called the utricle. Dizziness occurs when the crystals are displaced from the utricle into the semicircular canals of the inner ear. Otoconia may become displaced when the utricle is injured, if there is an infection or other disorder of the inner ear, or simply due to advanced age. When you change the position of your head, the otoconia move within the semicircular canals and this causes the dizziness. The dizziness subsides when the otoconia stop moving.



**Mechanism of BPPV**

The most common cause of BPPV in people under age 50 is head injury. In older people, the most common cause is degeneration of the vestibular system of the inner ear. BPPV becomes much more common with advancing age. Other causes include minor strokes, Meniere's disease, and viruses such as those causing vestibular neuritis. In approximately half of all BPPV cases, no cause can be determined.

## WHAT ARE THE SYMPTOMS?

**T**he symptoms of BPPV include dizziness or vertigo, lightheadedness, imbalance, and nausea. Activities that bring on symptoms vary among individuals, but symptoms are usually associated with a change in the position of the head with respect to gravity. Getting out of bed, rolling over in bed, and tipping the head back to look up are common "problem" motions. The use of shampoo bowls in hair salons may bring on symptoms. An intermittent pattern is common. BPPV may be present for a few weeks, then stop, and then come back again.

## HOW IS BPPV DIAGNOSED?

**B**PPV is diagnosed with the Dix-Hallpike test. This test involves observing the eyes with the head and body positioned in specific ways. It can be performed either by the clinician, or as part of a laboratory test called an electronystagmography, or ENG. If the Dix-Hallpike test is abnormal and the findings are “classic” for BPPV, then additional testing is not necessary. If the results are normal or not “classic” then the diagnosis of BPPV is less certain and other tests may be suggested.

## WHAT ARE THE TREATMENTS FOR BPPV?

*There are four approaches to treating BPPV.*

### 1. DO NOTHING AND WAIT FOR IT TO GO AWAY BY ITSELF

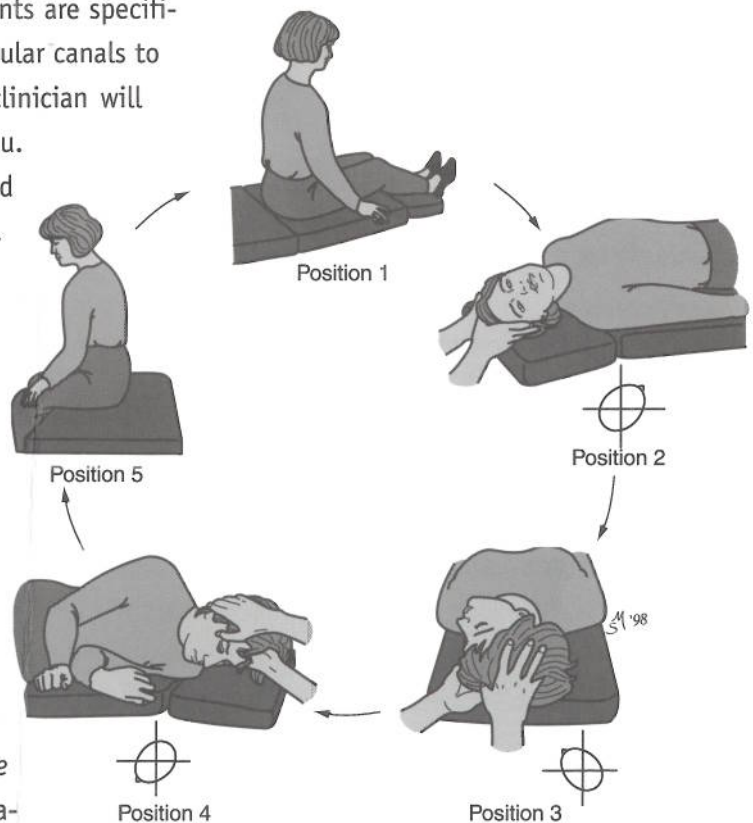
BPPV symptoms sometimes go away within six months of onset, therefore you might want to wait and see if your symptoms subside on their own. During this waiting period, medications to prevent motion sickness or nausea are sometimes helpful in controlling the nausea associated with BPPV.

### 2. PHYSICAL MANEUVERS PERFORMED IN THE CLINIC

(The Epley and Semont Maneuvers)

The Epley and Semont maneuvers, named for their inventors, are treatments that are performed in the clinic. These treatments are specifically intended to move the otoconia from the semicircular canals to a less sensitive location within the inner ear. Your clinician will select the treatment that is most appropriate for you. Each of these treatments takes about 15 minutes and alleviates symptoms in about 80 percent of patients. In the remaining 20 percent, a second treatment may be necessary, or you may be instructed to perform the Brandt-Daroff exercises (see “Home Treatment”).

The Epley maneuver, also called the canalith repositioning procedure (CRP) and particle repositioning, is a procedure in which the clinician moves your head into five positions, maintaining each position for approximately 30 seconds. The Semont maneuver (also called the liberatory maneuver) is a procedure in which the clinician rapidly moves you from lying on one side to lying on the other side. *These maneuvers may not be appropriate for patients with neck or back problems.* Patients who experience nausea or anxiety may wish to take medication prior to the treatment.



***The Epley Maneuver***

## INSTRUCTIONS FOR PATIENTS AFTER CLINIC TREATMENTS

Follow these instructions after the Epley or Semont maneuver. By doing so you will minimize the opportunity for otoconia to return to the semicircular canals of the inner ear and reduce the potential that your dizziness will recur.

### **Wait at least 10 minutes after the maneuver before going home.**

This is to avoid "quick spins" or brief bursts of vertigo as the otoconia reposition themselves immediately after the maneuver. If possible, arrange to have someone drive you home.

### **The following two days:**

- Sleep semi-recumbent for the next two nights. This means sleeping with your head halfway between flat and upright, at a 45-degree angle. This is most easily done by sleeping in a recliner chair or by sleeping with pillows appropriately arranged on a couch.
- During the day, try to keep your head vertical. A soft neck brace may be helpful. Do not go to the barber, hairdresser or dentist. When shaving, keep your head vertical by bending forward at your hips with your neck extended. If you need to administer eye drops, try to keep your head as vertical as possible. Shampoo only under the shower.



***Suggested sleeping position***

### **During the following week, avoid provoking head positions that might bring on BPPV.**

- Use two pillows when you sleep.
- Avoid sleeping on the affected side.
- Don't turn your head far up or far down.
- Avoid tilting your head back especially when lying on your back with your head turned toward the affected side. If possible, postpone elective surgery and going to the beauty parlor or the dentist's office.
- Avoid far head-forward positions and exercises where the head is not kept upright, for example toe touches.

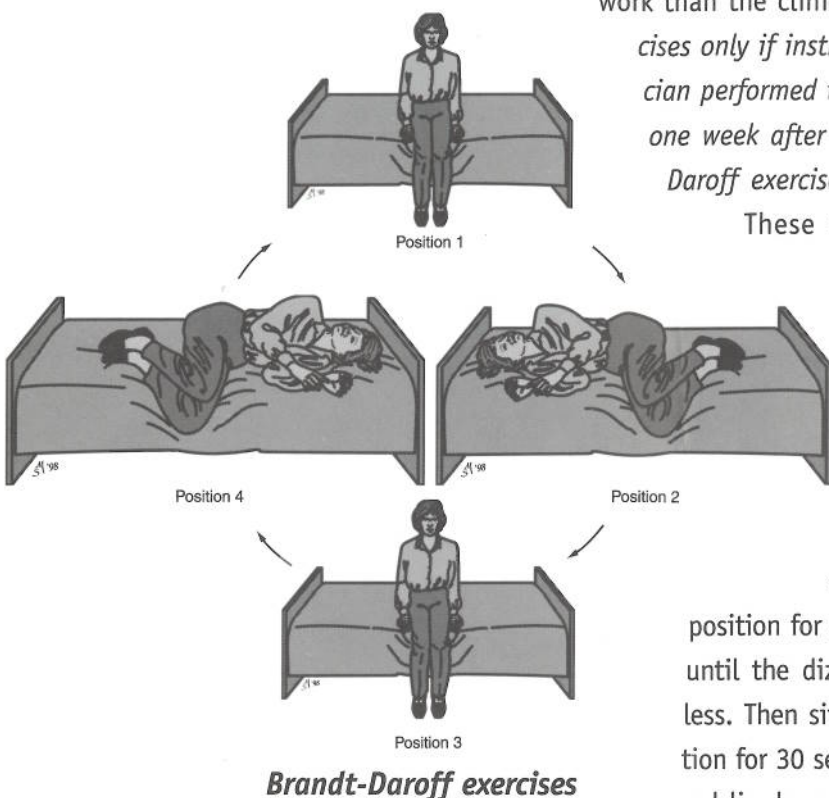
### **The effectiveness of the clinic treatment cannot be determined for one week.**

Wait one week after treatment to test the effectiveness of treatment. Place yourself in the position that usually makes you dizzy. Be sure to position yourself cautiously and under conditions in which you can't fall or hurt yourself.

### 3. HOME TREATMENT OF BPPV (Brandt-Daroff Exercises)

When the clinic treatment (Epley or Semont) fails, when the involved side is not determined, or when a case is mild, the Brandt-Daroff exercises may be recommended. These exercises succeed in 95 percent of cases but take longer to

work than the clinic treatments. *You should perform these exercises only if instructed to do so by your clinician. If your clinician performed the Epley or Semont maneuver, you must wait one week after that treatment before you begin the Brandt-Daroff exercises.*



These exercises should be performed on a flat surface, without a pillow. Start sitting upright on the edge of the bed or on the floor (Position 1). Turn your head 45 degrees to the left and lie down on your right side (Position 2). When in the right side-lying position, your head should be at a 45-degree angle turned halfway between the flat surface and the ceiling. Stay in the side-lying position for at least 30 seconds. If you are still dizzy, stay until the dizziness subsides or one minute, whichever is less. Then sit up (Position 3) and stay in the sitting position for 30 seconds. Turn your head 45 degrees to the right and lie down on your left side (Position 4), again keeping your head turned halfway toward the ceiling for 30 seconds

or until the dizziness subsides. Return to Position 1 (sit upright) for 30 seconds. This is one repetition. One set (five repetitions) takes about 10 minutes to complete and should be performed each morning, mid-day and evening.

The Brandt-Daroff exercises should be performed for two weeks, three sets each day, or for three weeks, two sets each day (52 sets total). In most individuals, complete relief from symptoms is obtained after 30 sets, or about 10 days. In approximately 30 percent of patients, BPPV will recur within one year. If BPPV recurs you may wish to add one 10-minute exercise (one set) to your daily routine.

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### 4. SURGICAL TREATMENT OF BPPV

If the maneuvers or exercises do not control symptoms that have persisted for a year or longer and the diagnosis is very clear, surgery may be recommended. The most common surgical procedure, called posterior canal plugging, blocks most of the posterior canal's function without affecting the functions of the other canals or parts of the ear. There is, however, a small risk of hearing loss. This surgery is effective in about 90 percent of individuals who have not responded to other treatments and when symptoms are severe and long-standing.

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Authors: Timothy C. Hain, MD, Janet Odry Helminski, PhD, PT.

*This information is for educational purposes and is not intended as a substitute for examination, diagnosis, or medical care provided by a licensed and qualified health professional.*

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