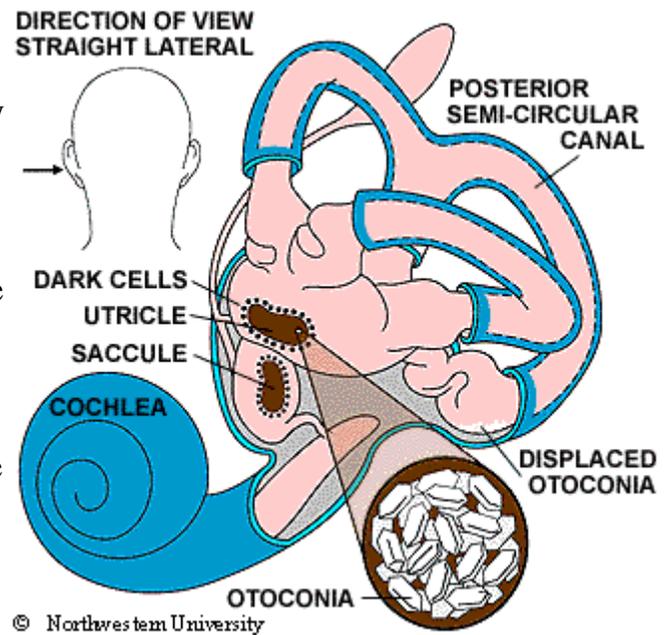


BENIGN PAROXYSMAL POSITIONAL VERTIGO

In Benign Paroxysmal Positional Vertigo (BPPV) dizziness is generally thought to be due to debris which has collected within a part of the inner ear. This debris can be thought of as "ear rocks", although the formal name is "otoconia". Ear rocks are small crystals of calcium carbonate derived from a structure in the ear called the "utricle" (figure 1 on right). While the saccule also contains otoconia, they are not able to migrate into the canal system. The utricle may have been damaged by head injury, infection, or other disorder of the inner ear, or may have degenerated because of advanced age.



BPPV is a common cause of dizziness. On average, about 1.6% of the population has BPPV each year. About 20% of all dizziness seen in medical offices is due to BPPV. BPPV can occur in children but it is rare. BPPV is much more common in older persons, and the number of people (i.e. prevalence) in the population increases linearly with age. About 50% of all dizziness in older people is due to BPPV. In one study, 9% of a group of urban dwelling elders were found to have undiagnosed BPPV.

The symptoms of BPPV include dizziness or vertigo, lightheadedness, imbalance, and nausea. Activities which bring on symptoms will vary among persons, but symptoms are almost always precipitated by a change of position of the head with respect to gravity. Getting out of bed or rolling over in bed are common "problem" motions. Because people with BPPV often feel dizzy and unsteady when they tip their heads back to look up, sometimes BPPV is called "[top shelf vertigo](#)." Women with BPPV may find that the use of shampoo bowls in beauty parlors brings on symptoms. Some Yoga postures or Pilates positions are sometimes the trigger. An intermittent pattern is common. BPPV may be present for a few weeks, then stop, then come back again.

WHAT CAUSES BPPV?

BPPV is mainly encountered in persons with advancing age and in older people, the most common cause is degeneration of the vestibular system of the inner ear -- "wear and tear" involving the [otoliths](#). In these cases, BPPV is called "idiopathic", but nevertheless the general opinion is that it is usually due to degeneration.

The most common cause of BPPV in people under age 50 is [head injury](#). The head injury need not be that direct - even whiplash injuries have a substantial incidence of BPPV. Between 8% and 20% of BPPV is attributed to trauma. While one does not usually think of surgery as trauma, nevertheless BPPV can follow surgery, including [dental work](#), where the cause is felt to be a combination of a prolonged period of supine positioning with vibration from drilling, or after surgery to the inner ear.

There is also a strong association of BPPV with migraine. Viruses affecting the ear such as those causing [vestibular neuritis](#) and [Meniere's disease](#) are significant causes.

INSTRUCTIONS FOR PATIENTS AFTER OFFICE TREATMENTS (Epley or Semont maneuvers)

1. *Wait for 10 minutes after the maneuver is performed before going home.* This is to avoid "quick spins," or brief bursts of vertigo as debris repositions itself immediately after the maneuver. Don't drive yourself home.

2. *Sleep semi-recumbent for the next night.*

This means sleep with your head halfway between being flat and upright (a 45 degree angle). This is most easily done by using a recliner chair or by using pillows arranged on a couch (see figure 3). During the day, try to keep your head vertical.

You must not go to the hairdresser or dentist. No exercise which requires head movement. When men shave under their chins, they should bend their bodies forward in order to keep their head vertical. If eye drops are required, try to put them in without tilting the head back. Shampoo only under the shower. Some authors suggest that no special sleeping positions are necessary.

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3. For at least one week, *avoid provoking head positions* that might bring BPPV on again.

- Use two pillows when you sleep.
- Avoid sleeping on the "bad" side.
- Don't turn your head far up or far down.

Be careful to avoid head-extended position, in which you are lying on your back, especially with your head turned towards the affected side. This means be cautious at the beauty parlor, dentist's office, and while undergoing minor surgery. Try to stay as upright as possible. Exercises for low-back pain should be stopped for a week. No "sit-ups" should be done for at least one week and no "crawl" swimming. (Breast stroke is OK.) Also avoid far head-forward positions such as might occur in certain exercises (i.e. touching the toes). Do not start doing the Brandt-Daroff exercises immediately or 2 days after the Epley or Semont maneuver, unless specifically instructed otherwise by your health care provider.

4. *At one week after treatment, put yourself in the position that usually makes you dizzy.* Position yourself cautiously and under conditions in which you can't fall or hurt yourself. Let your doctor know how you did.