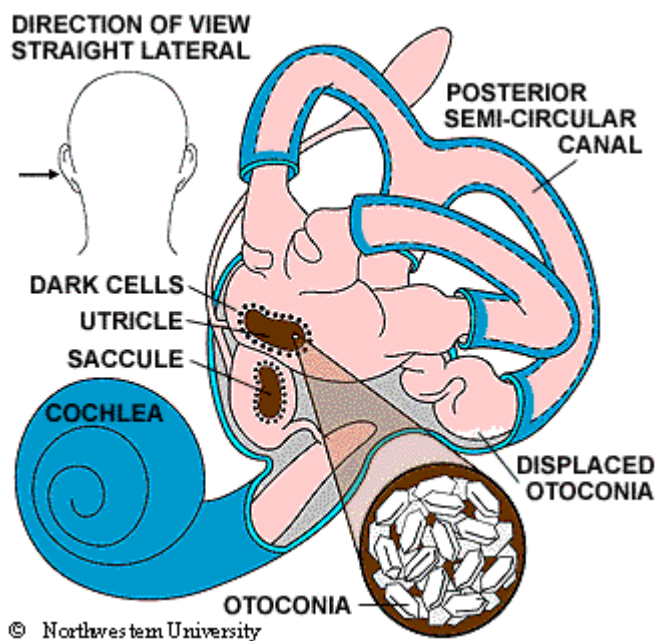


## Benign Paroxysmal Positional Vertigo: BPPV

**BPPV** causes dizziness due to debris that has become malpositioned in the balance apparatus of the ear. This debris is like small rocks. Chemically ear rocks are small crystals of calcium carbonate. They belong in the ear and are normally embedded in a jelly and when we move forwards and backwards and Up and Down in space they send our brain messages. If they become loose they can find their way into the wrong area and cause the sensation that we are spinning when we are actually not. They can become loose in a number of ways; increasing age, head injury, infection and some other disorders of the inner ear.



### What causes BPPV?

The most common cause of BPPV in people under 50yo is head injury. In older people the most common cause is degeneration of the vestibular system of the inner ear. However in perhaps half of all cases, BPPV is called “idiopathic” – it occurs for no known reason.

### Diagnosing BPPV:

The diagnosis is made based on history, physical examination and sometimes with audiology and vestibular testing. Other diagnostic tests may be required. AN ENG for assessment of jumping of the eyes ( nystagmus). A rotatory chair test may be used for difficult diagnostic problems. A CT or MRI may be required for cases that don't fit the usual pattern. It is possible to have BPPV in both ears, which may make the diagnosis and treatment more challenging.



## **How is BPPV treated?**

BPPV is often described as “ self Limiting” because symptoms often subside or disappear within 6 months of onset. Symptoms tend to wax and wane. Motion sickness medications are sometime helpful in controlling the nausea associated with BPPV. Physical manoeuvres and exercises are very effective. As an absolute last resort surgery can be needed.

## **Office treatment:**

There are two treatments for BPPV that are usually performed in the Doctors office. Both are very effective with 80-90% cure rate according to study by Herdman and others ( 1993)

The manoeuvres are named after their inventors. They were both invented to move the debris or “ear rocks” out of the sensitive area of the ear to a less sensitive location. Both manoeuvres take about 10-15 min to accomplish. The Semont manoeuvre involves a procedure where the patient is rapidly moved from lying on one side to the other. The Epley manoeuvre involves sequential movement of the head into four positions. The recurrence rate of BPPV after these manoeuvres is about 5%, in some instances a second treatment may be necessary. After office treatment you must follow some simple instructions. Office treatment won't be done if you are driving yourself home.

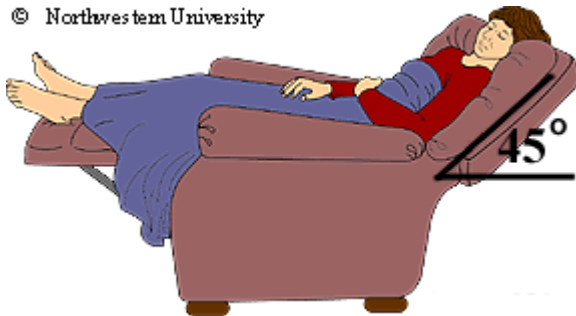
## **Instructions for patients after office treatments.** ( Epley or Semont)

**Wait for 10 minutes after procedure** before going home. This is to avoid quick spins or brief periods of vertigo as debris repositions itself.

**Don't drive yourself home.**

**Sleep semi upright for the next 2 days.** Sleep halfway between upright and lying on 45 degree angle. This is most easily done using a recliner chair or by using a few pillows.

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**Keep your head in a neutral position.** You must not go to the hairdresser or dentist. Only gentle walking, no gym sessions in particular no situps for a week, when shaving you must keep your head in a neutral position. Be careful washing hair and avoid head positions that provoke symptoms for a week.

**Use two pillows when you sleep.** Don't sleep with Left / Right side down (bad side)

**Don't lift your head up or down**

Be careful to avoid a head extension position

**Avoid far head forward positions** no touching the toes, tying shoelaces etc.

**At one week after treatment** put yourself in the position that would usually make you dizzy. You may still get some mild dizziness or it may be resolved. If not completely gone you can self treat yourself with the following instructions.



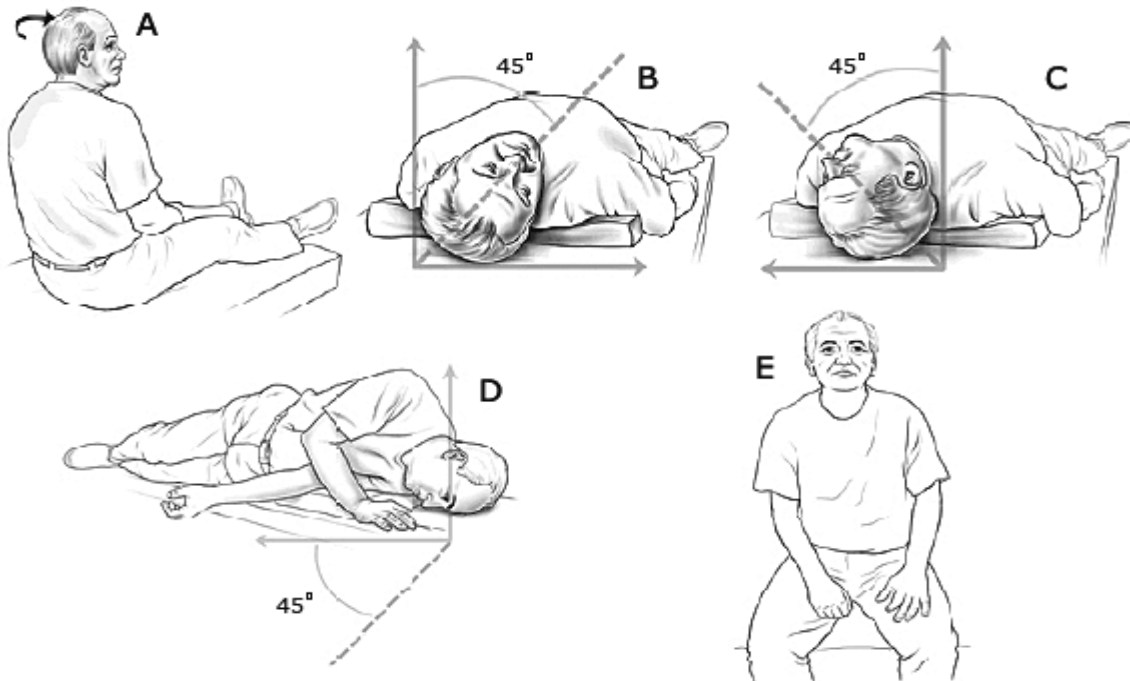
### What if the Manoeuvres don't work?

These manoeuvres don't always work ( only 80-90% of time) and if they don't you can repeat the Epley Manoeuvre or you can proceed to Brandt Daroff exercises. BPPV often recurs. About 1/3 of patients have a recurrence in the first year after treatment, and by five years, about half of all patients have a recurrence (Hain et al, 2000; Nunez et al; 2000; Sakaida et al, 2003). If BPPV recurs, in our practice we usually retreat with one of the maneuvers below.

### Repositioning Epley Procedure

Your ear that is affected is the **LEFT/RIGHT** ear

These are instructions diagram for the **RIGHT** ear, if your left ear is affected then you need to start on the opposite side.

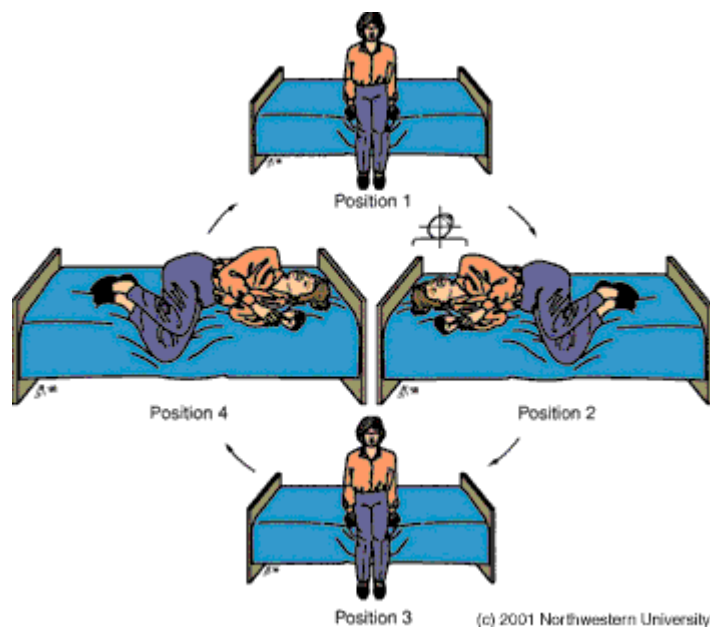


1. Start by sitting on the bed; for the right ear start sitting on left side of bed. For the left ear start sitting on right side of the bed. Turn your head 45 degrees to the left or right
2. Place a pillow behind you so that when you lie down it will be at the level of your shoulders (NOT UNDER YOUR HEAD)
3. Lie back quickly with shoulders on pillow, head hanging down looking to right and right ear pointing to the ground. **KEEP YOUR EYES OPEN.** You will often feel dizzy like this.
4. Wait for 30 seconds – 1 minute until dizziness settles.
5. Turn your head 90 degrees to left so now looking to left shoulder. Do not raise the head as you do this.
6. Wait again for 30 seconds – 1 minute
7. Turn your body and head to lie on your left shoulder and turn the head so again you are looking down at the ground. Left ear now down.
8. Wait 30 seconds – 1 minute
9. Slowly sit up on the left side of the bed.

This manoeuvre should be performed three times a day until you are free from BPPV for 24 hours.



## Brandt-Daroff Positional Exercises for Benign Positional Vertigo: START in 1 Weeks time



The Brandt-Daroff exercises are another method of treating BPPV, typically used when the office treatment fails. They succeed in 95 percent of cases but are more arduous than the office treatments. These exercises are performed in three sets per day for two weeks. In each set, one performs the manoeuvre below five times. In the initial stages it is permissible to take anti-sickness medication if nausea is a problem. The symptoms of giddiness need to be reproduced by the exercise if any benefit is to occur. If the exercises are done regularly, the symptoms should resolve over a period of several days in most cases.

- A. Sit on the edge of bed, turn head slightly to left side (approximately 45% degrees).
- B. While maintaining this head position, lie down quickly on the right side, so that the back of the head is resting on the bed. Wait for 20 to 30 seconds or for any giddiness to resolve.
- C. Sit up straight, again waiting for 20 to 30 seconds or for any giddiness to resolve.
- D. Turn head slightly to right side and repeat sequence in the opposite direction.
- E. Continue as above for 10 minutes (five or more repetitions to each side).

### **Suggested Schedule for Brandt-Daroff exercises**

<b>Time</b>	<b>Exercise</b>	<b>Duration</b>
Morning	5 repetitions	10 minutes
Noon	5 repetitions	10 minutes
Evening	5 repetitions	10 minutes

These exercises should be performed for two weeks, three times per day, or for three weeks, twice per day. This adds up to 52 sets in total. In most persons, 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 to your daily routine.

