Dizzy?
Is it caused by BPPV?
Patient Information Pack

What is Causes Dizziness?

Vertigo, or dizziness, is a symptom, not a disease. The term vertigo refers to the sensation of spinning or whirling that occurs as a result of a disturbance in the balance mechanisms of the inner ear. It also may be used to describe feelings of dizziness, light-headedness, faintness, and unsteadiness. The sensation of movement is called subjective vertigo and the perception of movement in surrounding objects is called objective vertigo.

Vertigo usually occurs as a result of a disorder in the vestibular system *(i.e., structures of the inner ear, the vestibular nerve, brainstem, and cerebellum)*. The vestibular system is responsible for integrating sensory stimulus and movement and for keeping objects in visual focus as the body moves.

When the head moves, signals are transmitted to the labyrinth, which is an mechanism in the inner ear that is made up of three semicircular canals surrounded by fluid. The labyrinth then transmits movement information to the vestibular nerve and the vestibular nerve carries the information to the brainstem and cerebellum (areas of the brain that control balance, posture, and motor coordination).

What is BPPV?

Benign paroxysmal positional vertigo (BPPV) is a condition characterised by episodes of sudden and severe vertigo when the head is moved around. Common triggers include rolling over in bed, getting out of bed, and lifting the head to look up. BPPV tends to come and go for no apparent reason. An affected person may have attacks of vertigo for a few weeks, then a period of time with no symptoms at all. It is thought that BPPV is caused by particles within the balance organ of the inner ear. Usually, BPPV affects only one ear. Other names for BPPV include benign postural vertigo, positional vertigo and top shelf vertigo (because you get dizzy looking up).

What are the Symptoms of BPPV?

The symptoms of BPPV can include:

- Sudden episodes of violent vertigo
- Nausea
- The vertigo may last half a minute or so
- The eyes may drift and flick uncontrollably (nystagmus)
- Movements of the head trigger the attacks.

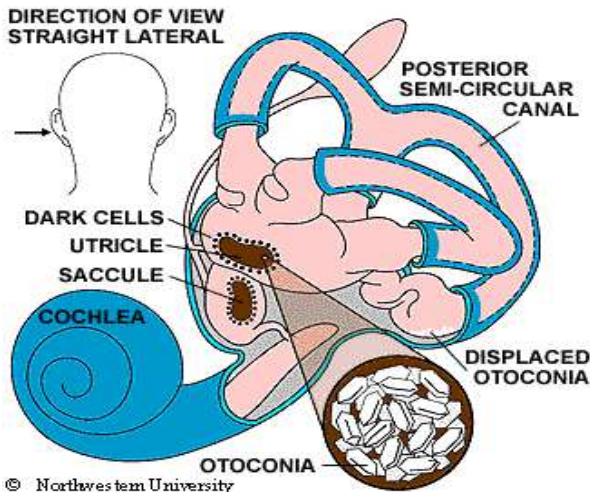
What are 'Ear Rocks'?

Inside the inner ear is a series of canals filled with fluid. These canals are at different angles. When the head is moved, the rolling of the fluid inside these canals tells the brain exactly how far, how fast and in what direction the head is moving. BPPV is caused by little 'ear rocks' (calcium carbonate crystals known as otoconia) within the canals. Usually, these crystals are held in special reservoirs within other structures of the inner ear (saccule and utricle). It is thought that injury or degeneration of the utricle may allow the 'ear rocks' to escape into the balance organ and interfere with the fluid flow. What are the Causes of BPPV?

Factors that may allow 'ear rocks' to migrate into the balance organ include:

- Head or ear injury
- Ear surgery or ear infection, such as otitis media
- Degeneration of the inner ear structures
- Vestibular neuritis (viral infection of the inner ear)
- Meniere's disease (disorder of the inner ear)
- Some types of minor strokes

In around half of BPPV cases, the cause can't be found (idiopathic BPPV).



How do we Diagnose BPPV?

Dizziness and vertigo are common to a wide range of medical conditions, so careful differential diagnosis is important.

Your physiotherapist or doctor may use several tests to diagnose BPPV:

Medical history - illnesses such as cardiac arrhythmia, low blood pressure and multiple sclerosis can include symptoms of vertigo.

Physical examination - this could include a range of tests. For example, you lie on the examination bed while your therapist or doctor deliberately moves their head into positions that are known to trigger BPPV within a few seconds.

Electronystamography (ENG) - a special eye test that checks for the presence of nystagmus (abnormal eye flicking).

Ear tests - such as hearing tests.

Scans – eg MRI, to check for the presence of otochonia in the balance organ.

How do we treat BPPV?
'Ear Rock' Relocation Techniques
Your skilled therapist will apply specific techniques to relocate the "ear rocks" to an area in the inner ear that doesn't stimulate feelings of dizziness or vertigo. These techniques include Epley's or Semont (Liberatory) Manoeuvres.

What's the Success Rate?
When BPPV techniques are performed correctly, reduction of the vertigo and other symptoms of BPPV is immediate in 80% or more of cases. We have a 90% success rate within 6 weeks.

Medication Options
Treatment options for BPPV could include symptom reduction medications to help control nausea. Your doctor may prescribe the best medication for you. These medications do not relocate or dissolve the 'ear rocks'. Their role is to reduce your symptoms.

Surgery
If non-surgical treatments fail, and the symptoms continue for more than 12 months, an operation may be needed. Generally, the nerve that services part of the balance organ (posterior semicircular canal) is cut. The risks of this type of operation include hearing loss.

What else can you do to help yourself manage BPPV?
Certain lifestyle changes could help to manage BPPV and reduce the frequency of attacks. Suggestions include:
- Sleep with your head raised higher than usual - for example, use two pillows instead of one.
- In bed, try to avoid lying on the affected side.
- Lying on your back may also reproduce symptoms.
- When rising in the morning, move slowly. Rest for a few minutes after each posture change.
- Whenever possible, avoid moving your head quickly.
- You may have to avoid sporting activities that involve quick changes of movement and posture (such as football or tennis).
- Remember that any activity that requires you to tip your head back could bring on vertigo. This could include activities such as working overhead, getting your hair washed at the hairdressers, or having a dental check-up.

Who Performs BPPV Treatment?
Not all physiotherapists and doctors are trained in the assessment and treatment of BPPV. In fact, BPPV-trained physiotherapists undertake specific training to diagnose and successfully treat BPPV.

