

Benign paroxysmal positional vertigo (BPPV)

Vertigo is described as feeling like you are turning around when you are standing still - the experience is similar to how you feel when spinning on a playground roundabout. Vertigo has also been described as the sensation of standing still within a spinning room.

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. Usually, BPPV affects only one ear. It is thought that BPPV is caused by particles within the balance organ of the inner ear. Other names for BPPV include benign postural vertigo, positional vertigo and top shelf vertigo (because you get dizzy looking up).

Symptoms

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.

'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 thought to be caused by little calcium carbonate crystals (otoconia) within the canals. Usually, these crystals are held in special reservoirs within other structures of the inner ear (sacculle 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.

A range of possible causes

Factors that may allow calcium carbonate crystals to migrate into the balance organ include:

- Head injury
- Ear injury
- Ear infection, such as otitis media
- Ear surgery
- 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).

Diagnosis methods

Dizziness and vertigo are common to a wide range of medical conditions, so careful diagnosis is important. Diagnosis methods may include:

- **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, the patient lies on the examination bed while the doctor deliberately moves their head into positions that are known to trigger BPPV within a few seconds. The doctor will also check for nystagmus.
- **Electronystamography (ENG)** - a special eye test that checks for the presence of nystagmus.
- **Ear tests** - such as hearing tests.
- **Scans** - such as magnetic resonance imaging, to check for the presence of otoconia in the balance organ.

Treatment options

Generally, BPPV resolves by itself within six months or so. Treatment options in the meantime could include medications to help control nausea and special manoeuvres designed to dislodge otoconia. These manoeuvres boast an 80 per cent success rate and include:

- **The Semont manoeuvre** - the patient lies down, then is quickly rolled from one side to the other.
- **The Epley manoeuvre** - also known as canalith repositioning procedure. The patient's head is moved into four different postures. The head is held in each postural position for about half a minute.
- **After-treatment care** - it is important to sit still for at least 10 minutes after the Semont or Epley manoeuvre to allow the otoconia to settle. For the next 48 hours, keep the head still and upright and sleep in a semi-sitting position. For the next five days, strictly avoid any postures that have triggered BPPV in the past. After one week, deliberately try to induce BPPV to see if your symptoms have improved. Report to your doctor.
- **Brandt-Darroff exercises** - if the above manoeuvres don't work, the next stage of treatment is Brandt-Darroff exercises. This is a more complex series of postures that have to be performed three times every day for two weeks.

Self-help suggestions

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.
- Remember that lying on your back may bring on symptoms too.
- When rising in the morning, move slowly. Rest for a few minutes at each posture.
- Whenever possible, avoid moving your head quickly.
- You may have to avoid sporting activities that rely on 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 getting your hair washed at the hairdressers or having a dental check-up.

Surgery may be needed in severe cases

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.

Where to get help

- Your doctor
- Hearing and Balance Centre, St Vincent's Hospital Sydney Tel. 1300 134 327

Things to remember

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- It is thought that BPPV is caused by particles within the balance organ of the inner ear.

This page has been produced in consultation with, and approved by:

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