Benign Paroxysmal Positional Vertigo (BPPV)

BPPV causes spinning dizziness (‘vertigo’) due to crystals in the inner ear breaking loose. The crystals are normally embedded in a jelly and when we move forwards and backwards, or up and down, in space they send our brain messages about where we are. If they become loose they can find their way into the wrong area and cause the sensation that we are moving when we are actually not – the result is a sudden feeling of spinning, usually set off by turning your head.

What causes BPPV?
Perhaps half of all cases of BPPV are “idiopathic” – they occur for no known reason. The most common identified cause of BPPV in people under fifty is a previous head injury. In older people the most common cause is ‘wear and tear’ of the vestibular (balance) system of the inner ear. Some people have a history of previous inner ear inflammation with a period of severe, prolonged dizziness.

Diagnosing BPPV
The diagnosis is made based on history, physical examination and sometimes with hearing or balance testing. Other diagnostic tests may be required: for example, 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 without any medical treatment. Symptoms tend to wax and wane. Physical manoeuvres and exercises are very effective in stopping your symptoms, and are the main basis of treatment. Motion sickness medications are sometimes helpful in controlling the nausea associated with BPPV. As an absolute last resort, surgery can be needed.

Office treatment
There are two treatments (or ‘manoeuvres’) for BPPV that are usually performed in your doctor’s office. These are called the Epley and Semont Manoeuvres. Both are very effective, with an 80-90% cure rate. They are designed to move the ‘crystals’ out of the sensitive area of the ear to a less sensitive location. After office treatment you must follow some simple instructions, to avoid the ‘crystals’ moving back into the areas that will give your symptoms. BPPV can recur, early or after a prolonged period of time, after these manoeuvres and in some instances a repeat manoeuvre may be necessary.

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. It is best to have someone drive you, if possible.
• Sleep semi-upright for the next 2 days. This is most easily done using a recliner chair or by using a few pillows.
• Keep your head in a neutral position. Avoid looking up (e.g. reaching up to high cupboards, tilting back to wash your hair in the shower), and looking down (touching the toes, leaning down to put on your shoes, reaching down to low drawers/cupboards etc.). Avoid positions that tilt your head a long way back (e.g. at the hairdresser or dentist). When shaving keep your head in a neutral position. Avoid head positions that have previously provoked your symptoms for the next week.
• Exercise: only gentle walking, no gym sessions - in particular no sit-ups for a week. Use two pillows when you sleep. Don’t sleep with the bad side down.
• 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 have resolved. If not completely gone you can self-treat yourself with home exercises as outlined below.

What if the manoeuvres don't work or the dizziness returns?
These manoeuvres don't always work. If they don't, and you known which side your problem is on, you can very safely repeat the Epley or Semont Manoeuvre at home. If you are unsure of the side, or find these manoeuvres too difficult, you can proceed to Brandt Daroff exercises.

BPPV often recurs. About one third of patients have a recurrence in the first year after treatment, and by five years, about half of all patients have a recurrence. If BPPV recurs, the manoeuvres can be repeated with the same benefit as the first time they were used.
Brandt-Daroff Exercises

Brandt-Daroff exercises are another method of treating BPPV, typically used when the office treatment fails. They succeed in 95% of cases but are more arduous than the office treatments. 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 for any benefit to occur. If the exercises are done regularly, the symptoms should resolve over a period of several days in most cases.

1. Sit on the edge of bed; turn head slightly to left side (approximately 45% degrees).
2. 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 any dizziness to stop, and then wait another 30 seconds. If there is no dizziness, wait 30 seconds.
3. Sit up straight, again waiting as above.
4. Turn head slightly to right side and repeat sequence in the opposite direction. Continue as above for 10 minutes (five or more repetitions to each side).

Suggested Schedule for Brandt-Daroff exercises

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<tr>
<th>Time</th>
<th>Repetitions</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Morning</td>
<td>5</td>
<td>10 minutes</td>
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<tr>
<td>Noon</td>
<td>5</td>
<td>10 minutes</td>
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<tr>
<td>Evening</td>
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These exercises should be performed for two weeks, three times per day, or twice per day for three weeks. 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 ten-minute exercise to your daily routine.