

Treating BPPV

In a patient with episodic dizziness triggered by movement like lying back, check **for posterior canal BPPV** with the **Dix-Hallpike test**.



Treat posterior canal BPPV with the **Epley maneuver**.



In a patient with posterior canal BPPV, the Dix-Hallpike test provokes dizziness and torsional upbeat nystagmus in a crescendo-decrescendo pattern, often with a few seconds of latency before the dizziness or nystagmus begin.

The third position of the Epley maneuver should also elicit dizziness and nystagmus in a patient with posterior canal BPPV.

If your patient can tolerate it, always repeat the Dix-Hallpike test after an Epley maneuver. In posterior canal BPPV, nystagmus and dizziness should improve with the Epley maneuver.

Dangerous problems can also produce nystagmus in the Dix-Hallpike position. Sometimes this is obvious, e.g., downbeating nystagmus in the setting of a cerebellar lesion, or nystagmus which persists as long as the position is maintained due to rotational vertebral artery occlusion. Sometimes it is not obvious, e.g., short-duration horizontal nystagmus in the Dix-Hallpike position caused by stroke adjacent to the fourth ventricle.

Instead of documenting simply Positive Dix-Hallpike or Supine Roll, always describe the nystagmus elicited – **torsional upbeat nystagmus toward the tested ear** is expected with posterior canal BPPV, and **horizontal** (geotropic or ageotropic) nystagmus is expected with horizontal canal BPPV. NOTE: change of direction

Note other parameters, like **latency** and **duration** of nystagmus, as well as subjective dizziness.

Always **repeat provocation testing** (Dix-Hallpike or Supine Roll) after performing a treatment maneuver if the patient can tolerate it. This tells you not only whether you've resolved the problem, but if dizziness and nystagmus are unchanged compared to the first test, raises the possibility of a **BPPV mimic**, which may require immediate attention.

Horizontal canal BPPV is nearly as common as Posterior canal BPPV – check for both in a patient with **triggered, episodic dizziness** with head movement.



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Check for horizontal canal BPPV with the Supine Roll test.

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At rest, direction-changing nystagmus is concerning for a central problem. During the Supine Roll test, direction-changing horizontal nystagmus is reassuring that you're looking at horizontal canal BPPV.

Treat with the **Gufoni maneuver** if nystagmus is **geotropic**, and the **modified Gufoni** if nystagmus is **ageotropic**. If present, both sides often elicit dizziness and nystagmus. This does not mean there is pathology on both sides. Treat the more symptomatic side, which usually also features nystagmus of greater velocity and duration.



If **Right** side is pathologic and nystagmus is **geotropic**:

1. Lie patient on Left side.

2. Turn patient's head toward the ground.

3. Help patient sit up while maintaining Leftward rotation of the head.



If **Right** side is pathologic and nystagmus is **ageotropic**:

1. Lie patient on Right side.

2. Turn patient's head toward the ceiling.

3. Help patient sit up while maintaining Leftward rotation of the head.

Elevate head of bed to approx. **30 degrees** to isolate the horizontal semicircular canal.

In practice, it is sometimes easier to have the patient start from one side, then roll 180 degrees to the other side (to test the rolled-to side).

There are many other maneuvers. A comparative analysis found that Gufoni, the simplest, was as effective as other maneuvers.

