

Orthostatic Hypotension Parameters:

After two to five minutes of quiet standing, one or more of the following present:

- 1) At least a 20 point drop in systolic pressure.
- 2) At least a 10 point drop in diastolic pressure.
- 3) Patient reports symptoms of dizziness, lightheadedness, visual blurring or darkening of the visual fields.

Peripheral Objective Tests

1. Hallpike – Dix Maneuver



Tests for BPPV. The head is turned 45 degrees toward the suspected side. The patient is brought into a supine position with the neck extended 30 degrees off the table end. Observe for nystagmus. Complaints of vertigo are noted.

2. Head Impulse (Head Thrust)



Tests for vestibular hypofunction. The patient visually fixates on a stationary object while the head is held by the examiner's hands. The head is rapidly rotated 10 – 30 degrees. Normal patients will maintain visual fixation. Patients with vestibular hypofunction make a corrective saccade to maintain fixation. The direction of the error is towards the side of the hypofunction.

Central Objective Tests

1. Smooth Pursuit



Provide a moving object for the patient to track 18 inches in front of the eyes. Move in an “H” like pattern up to 80 degrees per second, 40 degrees from center. “Follow this slow moving object with your eyes while you keep your head still.” Positive finding = nystagmus or saccadic eye movements. It is normal to see up to 3 saccadic catches in patients 75 years or older.

2. Saccades



Patient quickly looks back and forth between two objects about 15 degrees from the center. Vary the timing when commanding to look “left” and “right.” Directions: “Shift your eyes between my nose and the pen when I tell you to. Now let’s repeat that on the other side.” Abnormalities include overshooting, undershooting, requiring more than one corrective saccade. Normal is the ability to shift gaze accurately and timely.

3. Gaze Fixation

Evaluates patient’s ability to hold eyes in a fixed direction of gaze without drifting or nystagmus: test 30 degrees, left/right/up/down. Hold x 5 seconds. Abnormal findings may suggest brainstem/cerebellar involvement.

Possible Protocol for Referrals

Physical Therapy:

Patient reports sudden onset of dizziness due to specific head positioning.

- Tests positive for BPPV or hypofunction.
- Reports symptoms that sound like BPPV or hypofunction even though examination did not reproduce obvious nystagmus or the patient’s symptoms.
- Central problems that appear stable and the appropriate testing has been done.

Audiology:

- Dizziness that does not increase or decrease with change in head position.
- Complaints of spinning/dizziness/vertigo that have not improved with Physical Therapy treatment.
- Reports of hearing loss.

***Audiologists perform testing. They do not diagnose. The patient must follow-up with primary care provider or ENT to discuss tests results.

ENT:

- Hearing loss
- Pain, pressure, and/or ringing in the ear.
- Loss of balance that correlates with the ear symptoms above.
- Tested in audiology and needs interpretation of results.

Neurology:

- Significant central findings including “Red Flags.”

The 5 Classic Vestibular Presentations

Patient reports sudden onset of dizziness with head positioning. Common head positions that precipitate attacks are neck extension and rotation, or rolling over in bed – usually to a specific side. Your examination usually reveals nystagmus which fatigues in a minute or two. *Possible Diagnosis: BPPV or Hypofunction. To Physical Therapy*

Patient reports an abrupt onset of severe vertigo lasting for several hours to 1 day. Attacks come without warning, are sudden and recurrent, and associated with a report of fullness in the ear, low tone tinnitus, and low tone hearing loss. The patient might have a history of diabetes or fluid retention. *Possible Diagnosis: Meniere’s Disease. Consult with ENT*

Patient reports sudden onset of intense, unremitting dizziness/spinning/vertigo. Symptoms last days to weeks. This is also often associated with a prior respiratory infection. Sudden head movements may provoke the vertigo for long periods of time. Symptoms gradually diminish over weeks. Hearing loss is evident, especially high tone. *Possible diagnosis: Labyrinthitis. To Audiology or ENT*

Same presentation as labyrinthitis but with no hearing loss. May originate from a viral infection. *Possible diagnosis: Vestibular Neuronitis: To Audiology. Maybe to Physical Therapy for proprioceptive or habituation exercises*

History of whiplash injury. No obvious examination findings except dizziness which is reproduced by body rotation with head held constant. *Possible diagnosis: Cervicogenic Vertigo. To Physical Therapy*