

# Vertigo Assessment Guide for Medical Practitioners

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## Introduction

Differentiating vertigo syndromes is essential for accurate diagnosis and management. This guide is designed to assist practitioners in assessing vertigo by distinguishing between central and peripheral causes and outlining critical management steps.

## Vertigo Syndromes

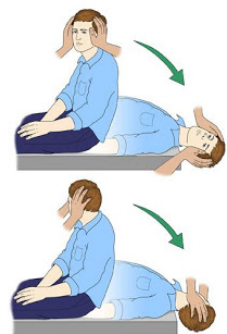
### 1. Triggered – Episodic Vestibular Syndrome (T-EVS)

- **Description:** Attacks last seconds to minutes. Between attacks, patients will have no vertigo but may report nausea/disequilibrium.
- **Common Causes:**
  - Benign Paroxysmal Positional Vertigo (BPPV)
  - Postural hypotension (evaluate with blood pressure testing)
- **Rare Serious Causes:** Vertebrobasilar insufficiency and central paroxysmal positional vertigo (CPPV).
- **Evaluation:** Use Dix-Hallpike and postural blood pressure measurements – see below

### Diagnostic Techniques

#### A) Dix-Hallpike for BPPV

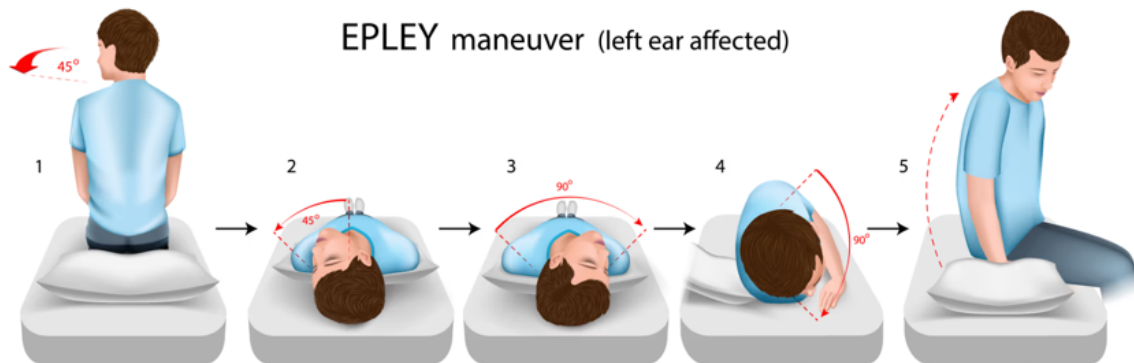
1. Sit patient upright, turn head 45° toward the test ear.
2. Quickly lay patient flat with head down 30° off the end of the bed.
3. Observe for torsional/up-beating nystagmus
  - **Typical BPPV (Posterior Semicircular Canal):**
    1. Up-beating torsional nystagmus towards affected ear.
    2. Latency period
    3. Fatiguability/habituation on subsequent manoeuvres
    4. Crescendo-Decrescendo nature of nystagmus (usually onset <15sec and offset <60sec)
  - **Atypical Nystagmus:** Down-beating or horizontal nystagmus, nil latency, no fatiguability.



#### B) Criteria for Orthostatic Hypotension

- Diagnose when there's a **≥20 mmHg fall in systolic** or **≥10 mmHg fall in diastolic** blood pressure within 2-5 minutes of standing. This must be accompanied by **symptom reproduction**.

## Treatment of BPPV (Posterior SCC) with Modified Epley Manoeuvre



1. **Start:** Sitting with head 45° toward the affected ear.
2. **Lay down:** Head remains 45° toward the affected ear, wait 30 seconds.
3. **Rotate:** Turn the head 90° to the opposite side and wait 30 seconds.
4. **Turn further:** Head facing diagonally toward the floor and wait 30 seconds.
5. **Sit up** on that side.

## 2. Spontaneous – Acute Vestibular Syndrome (S-AVS)

- **Description:** Episodes that are abrupt in onset, last days to weeks and are often monophasic.
- **Symptoms:** Severe nausea, vomiting, gait impairment, and vertigo/oscillopsia with head still.
- **Common causes:**
  - Peripheral: Vestibular neuritis, Meniere's, peri-lymphatic fistula
  - Central: CVA, migraine, space-occupying lesion

### HINTS 'Plus' Exam

*Distinguish between Peripheral and Central AVS using: **Head Impulse**, **Nystagmus**, **Test of Skew**, and hearing assessment.*

Feature	Peripheral AVS	Central AVS
<b>Head Impulse</b>	Positive (corrective saccade present)	Negative (nil corrective saccade)
<b>Nystagmus</b>	Unidirectional and horizontal	Vertical or horizontal direction-changing; not suppressed by fixation
<b>Test of Skew</b>	Nil vertical deviation	Skew deviation with vertical diplopia
<b>Hearing Loss</b>	None (may have tinnitus in vestibular labyrinthitis)	New sudden hearing loss possible

**Peripheral HINTS Plus Exam:** Must satisfy **ALL** criteria

Saccade with **Head Impulse**, horizontal unidirectional **Nystagmus**, no **Skew**, no new hearing loss.

**Central HINTS Plus Exam:** **Any** of the below

Nil saccade with **Head Impulse**, bi-directional or vertical **Nystagmus**, vertical **Skew**, new hearing loss

**Management:**

- **Central AVS:** Refer to Neurology and arrange cranial imaging
  - **Peripheral AVS:** Provide anti-emetics, recommend bed rest, and refer to vestibular physiotherapy for habituation exercises.
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### 3. Toxic/Traumatic – Acute Vestibular Syndrome

- **Description:** Rare, episodes last days to weeks, often related to a clear history of trauma or toxin exposure.
  - **Symptoms:** Disequilibrium, ataxia, oscillopsia, and possible hearing impairment.
  - **Differentials:**
    - **Traumatic:** Vertebral artery dissection, head injury, barotrauma
    - **Toxins:** Anticonvulsants, aminoglycosides, carbon monoxide, alcohol
  - **Management:** Tailor to specific suspected pathology.
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#### Management and Referral

##### CCT Physiotherapy

- **Hours:** 8 AM - 8 PM, 7 days/week.
- **Referral Criteria:** Peripheral vertigo management or differentiation of atypical vertigo.
- **Physio Assessment:**
  - Subjective Assessment: detailed history of symptoms
  - Objective Assessment: Cerebellar/oculomotor tests, gait assessment, Dix-Hallpike/horizontal canal provocation, and balance evaluation.
- **Management by Physio:**
  - Repositioning manoeuvres (e.g. Epley, BBQ roll)
  - Vestibular exercises
  - Education
  - Referrals to outpatient vestibular clinic if safe for discharge but not fully resolved