VESTIBULAR DYSFUNCTION

DIX-HALLPIKE TEST

**Client Position**
- Typically long sitting with legs extended on table (or sitting with legs off end of table if necessary)

**Clinician Position**
- Standing directly behind client

**Movement**
- The clinician rotates the client's head approximately 45° (a), and quickly passively lowers the client to supine with head in rotation and 20° extension (off end of table) position (b). The clinician observes the client's eyes for about 45 seconds for nystagmus.

**Assessment**
- If rotational nystagmus occurs, test is (+) for benign paroxysmal positional vertigo (BPPV). The fast phase of the nystagmus is toward the affected ear. The fast phase is defined by the rotation of the top eye, either clockwise or counterclockwise.

**Statistics**
- Published estimates of SN ranged from 48 to 88; estimates of SP were lacking.\(^{33}\)
- SN 79 (65-94), SP 75 (33-100), +LR 3.2, −LR 0.28, in a critical review of literature for diagnosis of BPPV.\(^{33}\)
- Side-lying performance of Dix-Hallpike: **SN 90 (79-100)**, SP 75 (33-100), +LR 3.6, −LR 0.14\(^{33}\)

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**Case Studies**
Go to www.HumanKinetics.com/OrthopedicClinicalExamination and complete these case studies for chapter 15:

- Case study 1 discusses a 26-year-old female with insidious onset of headaches.
- Case study 2 discusses a 19-year-old male with a facial injury from being hit with a baseball.

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**Abstract Links**
Go to www.HumanKinetics.com/OrthopedicClinicalExamination to access abstract links on these issues:

- Dix-Hallpike test
- Finger tap test
- Median nerve upper limb tension test
- Pronator drift test
- Rinne test
- Spurling's test
- Weber test

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**Figure 15.5**
- Published estimates of SN ranged from 48 to 88; estimates of SP were lacking.\(^{33}\)
- SN 79 (65-94), SP 75 (33-100), +LR 3.2, −LR 0.28, in a critical review of literature for diagnosis of BPPV.\(^{33}\)
- Side-lying performance of Dix-Hallpike: **SN 90 (79-100)**, SP 75 (33-100), +LR 3.6, −LR 0.14\(^{33}\)
MONOHEMISPHERIC DYSFUNCTION: TUMOR

FINGER TAP TEST

**Client Position** Sitting or standing

**Clinician Position** Standing, monitoring client

**Movement** The clinician asks the client to tap the index finger of one hand to the interphalangeal joint of the thumb on the other hand as many times as possible in 10 seconds. The clinician makes a side-to-side comparison in repetitions.

**Assessment** A (+) test is a difference of ≥5 repetitions between sides.

**Statistics** SN 73 (not reported, or NR), SP 88 (NR), +LR 5.9, –LR 0.31, QUADAS 9, in a study of 170 clients with a suspected abnormality in the nervous system (mean age 54.6 years, male–female ratio of 1.5:1, mean duration of symptoms NR) and computed tomography as a reference standard.34

[Video 15.7](#) in the web resource shows a demonstration of this test.

PRONATOR DRIFT TEST

**Client Position** Sitting or standing

**Clinician Position** Standing, monitoring client

**Movement** The client flexes bilateral shoulders to 90° with full elbow extension and supination (a). The clinician asks the client to close their eyes and maintain that position for up to 2 minutes.

**Assessment** A (+) test is a gradual drift of the involved-side forearm into pronation (b).

**Statistics**

- SN 92 (NR), SP 90 (NR), +LR 9.2, –LR 0.09, QUADAS 9, in a study of 170 clients with a suspected abnormality in the nervous system (mean age 54.6 years, male–female ratio of 1.5:1, mean duration of symptoms NR) and computed tomography as a reference standard.34
- SN 22 (12-36), SP 100 (83-100), +LR Inf, –LR 0.88, QUADAS 8, in a study of 46 clients with a single cerebral hemisphere lesion (age range 21-83 years, 18 women, mean duration of symptoms NR) and CT as a reference standard.35