

# 10 MinuteMoment

## PHYSICAL EXAM FOR DIZZINESS



### Faculty development

A key goal in the initial assessment of dizziness is to differentiate between cardiovascular and neurologic etiologies. If a neurologic source is found, the next step is to differentiate central and peripheral vestibular etiologies.

- \* CARDIOVASCULAR: hypovolemia, aortic stenosis, arrhythmia
- \* CENTRAL NEUROLOGIC: cerebrovascular disease, demyelinating disease
- \* PERIPHERAL NEUROLOGIC: BPPV, vestibular neuritis, acoustic neuroma, Meniere's disease

A thorough neurologic exam for central causes of dizziness is essential. In one study of more than 1600 patients who presented to the ED with dizziness, only 0.7% had a stroke as the cause **if** the dizziness was **not** accompanied by other neurologic signs.

**HINTS Exam** (Head Impulse test, Nystagmus, Test of Skew): used in for acute vertigo.

(In the first 24 hours, HINTS is more sensitive for a posterior circulation stroke than an MRI).

**Head Impulse Test** — tests the vestibulo-ocular reflex; any head movement is matched by opposing conjugate movement of the eyes (click [here](#) to see a video)

- NORMAL : with an intact vestibular-ocular reflex, the eyes move opposite, fixing on the examiner
- IMPAIRED REFLEX : the eyes move off target, then quickly reset with a corrective saccade
- **NOTE:** the absence of a corrective saccade suggests a central cause of the dizziness so that in a patient with vertigo, a normal test is concerning

**Directional Nystagmus** —

- \* Peripheral lesions suggested when looking in the opposite direction if the quick component of the nystagmus diminishes the nystagmus
- \* Central lesions suggested with vertical nystagmus or with horizontal nystagmus that changes direction with lateral gaze (“bidirectional nystagmus”)

**Test of Skew** — cover the eye for several seconds then quickly uncover it. If they eyes realign vertically that is concerning for a central lesion

**Dix-Hallpike Maneuver** : for patient with intermittent symptoms and asymptomatic at the time of presentation and testing (click [here](#) to watch video demonstration)

**Findings suggestive of a central cause**

- Immediate onset of nystagmus and vertigo
- Failure of the nystagmus and vertigo to resolve within 30 seconds
- Failure of the patient to adapt (no fatiguing) on repeated testing

**Findings suggestive of a peripheral vestibular cause**

- Latency period of 3-40 seconds before onset of symptoms and nystagmus
- Resolution of symptoms and nystagmus within 30 seconds
- Fatiguing of symptoms and nystagmus on repeated testing

*This patient presents with severe **DIZZINESS** for the last 3 days. Please examine them to check for the most common etiologies.*

	PHYSICAL EXAM TECHNIQUE	Y / N	AREAS FOR FEEDBACK	
INSPECTION & GENERAL EXAM	<b>Observe and assess the patient</b>			
	* Did the learner observe the patient's general appearance? * Did the learner comment on the patient's mental status (speech, fluency, train of thought, memory, reasoning, and alertness)? * Did the learner check vitals and orthostatics? * Did the learner evaluate the patient's hearing and check in the ears? * Did the learner do a cardio-pulmonary exam?			
	NEUROLOGIC EXAM	<b>Perform a focused neurologic exam</b>		- Learner does not assess the patient's gait safely. - Learner does not have a systematic way to assess the cranial nerves. - Learner does not consider ataxia, strength or sensation?
		* Did the learner safely assess the patient's gait (usual gait as well as tandem gait)? * Did the learner evaluate the cranial nerves? * Did the learner assess for ataxia with finger-to-nose and rapid alternating hand movements? * Did the learner test for strength and sensation?		
HINTS EXAM	<b>Perform the HINTS exam</b>		- Learner performs the HINTS maneuvers in a patient who does not qualify for it. - Learner does not know the different components of the HINTS exam.	
	* Did the learner correctly identify a patient who needed a HINTS exam? * Did the learner perform the components of the HINTS exam correctly? * Did the learner correctly interpret the components of the HINTS exam?			
DIX HALLPIKE	<b>Perform a neurological examination</b>		- Learner did not select the right test given the patient's presentation. - Learner did not perform the test correctly. - Learner did not interpret the test correctly.	
	* Did the learner correctly identify a patient who needed a Dix Hallpike test? * Did the learner correctly perform a Dix Hallpike test?			
	Did the learner have an organized and structured approach to the exam?			
	Did the learner maintain the patient's comfort and well being?			