

# Ocular Motor Examination and Interpretation of Nystagmus

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# Disclosures

- No financial or other conflicts of interest
- No off-label use of medications

# Learning Objectives

Upon completion of attending this lecture, participants should be able to:

- Perform a systematic examination of eye movements
- Recognize eye movement abnormalities of particular importance in dizzy patients, such as skew deviation
- Identify typical nystagmus patterns, with particular attention to those suggestive of central nervous system pathology

# Key Messages

- **Ocular motor examination** in the dizzy patient includes observation of the eyes with and without fixation in all gaze positions and supine, as well as assessment of ocular alignment, saccades, pursuit, and vestibular ocular reflexes.
- **Skew deviation** is a vertical ocular misalignment, reflecting asymmetry of ascending otolithic pathways in the brainstem. It is a component of the ocular tilt reaction. The other components include a head tilt and abnormal ocular torsion.
- **Common peripheral patterns of vestibular nystagmus** include horizontal-torsional nystagmus suppressed by fixation with vestibular nerve lesions and positional vertical-torsional or pure horizontal nystagmus induced by positioning with BPPV.
- **Central patterns of jerk nystagmus** include pure horizontal, pure upbeat, pure downbeat, pure torsional, and several forms of 'direction changing' nystagmus. The latter include gaze-evoked, periodic alternating, Brun's, and rebound nystagmus.

# References

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- For nystagmus cases and examples: <https://novel.utah.edu>