



Neuro-Ophthalmic CAP Assessment Form II – January 2024

SECTION 1: REFERENCE-BASED QUESTIONS (questions 1-13)

These questions are based on the references listed below, which emphasize new information relevant to optometry within the area of neuro-ophthalmology disorders.

See page 2 for learning objectives for each topic area.

Topic: Optic Neuritis (questions 1-5)

Reference: Bennett JL. Optic Neuritis. Continuum. 2019 Oct;25(5):1236-1264.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7395663/pdf/nihms-1612928.pdf>

Topic: OCT for Disc Edema (questions 6-9)

Sibony PA, Kupersmith MJ, Kardon RH. Optical Coherence Tomography Neuro-Toolbox for the Diagnosis and Management of Papilledema, Optic Disc Edema, and Pseudopapilledema. J Neuroophthalmol. 2021 Mar 1;41(1):77-92. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7882012/pdf/jno-41-77.pdf>

Topic: Post-concussion Oculomotor Disorders (question 10-13)

Scheiman M, Grady MF, Jenewein E, Shoge R, Podolak OE, Howell DH, Master CL. Frequency of oculomotor disorders in adolescents 11 to 17 years of age with concussion, 4 to 12 weeks post injury. Vision Res. 2021 Jun;183:73-80. doi: 10.1016/j.visres.2020.09.011. Epub 2021 Mar 15.

<https://www.sciencedirect.com/science/article/pii/S0042698921000468?via%3Dihub>

SECTION 2: FUNDAMENTAL KNOWLEDGE QUESTIONS (questions 14-25)

These questions are considered “fundamental knowledge” within the areas of neuro-ophthalmic disorders listed below. This is information that has not changed substantially in the past 5-10 years, and with which all optometrists should be familiar or be able to access quickly.

The following outline is provided as a general guide for this section.

- A. Assessment, differential diagnosis, and management of visual pathway disorders
- B. Assessment, differential diagnosis, and management of pupillary disorders
- C. Assessment, differential diagnosis, and management of cranial nerve disorders
- D. Assessment, differential diagnosis, and management of optic nerve disorders (excluding glaucoma)
- E. Assessment, differential diagnosis, and management of headaches (including migraines)

The following references are recommended as a review of general concepts, but not required.

- The Wills Eye Manual, 7th ed. (2017)
- Kaiser and Friedman, Mass Eye and Ear Illustrated Manual of Ophthalmology, 4th ed. (2014)



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Learning objectives

The following learning objectives are provided as a guide to aid in navigating through the references and preparing for the reference-based section of the assessment.

Reference 1: Bennett JL. Optic Neuritis. *Continuum*. 2019 Oct;25(5):1236-1264.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7395663/pdf/nihms-1612928.pdf>

The learner will be able to:

- Describe the usual clinical presentation and the common causes of optic neuritis.
- List the clinical tests used to evaluate optic neuritis and how test results vary depending on the etiology.
- Compare and contrast optic neuritis associated with MS, NMOSD, MOG-IgG, paraneoplastic ON, and infectious ON, including the clinical presentation, test results, natural course and treatment/management.

Reference 2: Sibony PA, Kupersmith MJ, Kardon RH. Optical Coherence Tomography Neuro-Toolbox for the Diagnosis and Management of Papilledema, Optic Disc Edema, and Pseudopapilledema. *J Neuroophthalmol*. 2021 Mar 1;41(1):77-92. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7882012/pdf/jno-41-77.pdf>

The learner will be able to:

- List the quantitative tools that are available for OCT analysis of the optic nerve (RNFL thickness, GP-IPL thickness) and explain how they are used to evaluate optic disc edema.
- Explain how the transverse axial scan and the en face SD-OCT can be used to qualitatively assess the ONH and peripapillary area.
- Discuss the expected findings on the transverse axial scan for a healthy ONH, optic nerve edema, and pseudopapilledema with and without optic disc drusen.
- Describe what causes wrinkles, folds and creases and their role in distinguishing between optic disc edema and pseudopapilledema.
- Describe how to conduct stress testing and when it is helpful.

Reference 3: Scheiman M, Grady MF, Jenewein E, Shoge R, Podolak OE, Howell DH, Master CL. Frequency of oculomotor disorders in adolescents 11 to 17 years of age with concussion, 4 to 12 weeks post injury. *Vision Res*. 2021 Jun;183:73-80.
<https://www.sciencedirect.com/science/article/pii/S0042698921000468?via%3Dihub>

The learner will be able to:

- List the most common causes of concussions in children and describe the normal course of recovery.
- Describe the results of study including the percentage of children with oculomotor diagnoses and the most frequent problems.
- Discuss the results of physician screenings compared to the comprehensive visual examination and the implication of these findings in the management of post-concussion patients.
- Discuss which screening tests used in this study were most useful in detecting patients with visual problems.