

Topic #8: Evaluate pediatric ophthalmic presentations

This post describes the ophthalmology learning objectives to evaluate a pediatric patient with ophthalmic problems that are covered on the Medical Council of Canada Qualifying Examination (MCCQE). The resources presented here should be sufficient to help you pass the MCCQE exam and have a basic understanding of pediatric ophthalmic presentations in a primary care or emergency setting.

Learning Objectives

8(a): Take a focused history with regards to timing and presenting symptoms

8(b): Identify the risk factors for the development of strabismus or amblyopia in a child (e.g., prematurity, family history)

8(c): Perform a focused ocular exam as outlined in [Topic #2](#), including visual acuity if appropriate

8(d): List and interpret key components of the history and physical exam including red reflex testing

8(e): Understand age-appropriate visual responses as per Rourke Baby Record

8(f): List and identify the most important ophthalmic problems in children including:

- Refractive error
- Amblyopia
 - Strabismic
 - Refractive
 - Deprivation
- Strabismus
 - Manifest or Intermittent Tropia
 - Phoria
- Pseudoesotropia
- Nasolacrimal duct obstruction
- Anisocoria
- Ptosis
- Congenital cataract or other causes of leukocoria*
- Congenital glaucoma*
- Retinoblastoma*
- Retinopathy of prematurity

8(g): Construct an effective initial management plan, including determining if the patient requires further investigation or a referral based on the risk factors or the clinical findings

8(h): Counsel parents about the need for timely referral to manage ocular issues

Note: *Urgent and red flag conditions have been denoted with a red Asterix. These warrant urgent referral to an ophthalmologist.

Primary resources

These resources cover learning objectives a-h, meeting all of the learning objectives.

- Pediatric eye exam (Tim Root): <https://youtu.be/oXE8TDVpD4>
 - Objective c
- Amblyopia (Tim Root): <https://timroot.com/amblyopia/>
 - Objective b
- Pediatric eye exam tips and tricks (AAO): <https://www.aao.org/young-ophthalmologists/yo-info/article/how-to-conquer-the-pediatric-eye-exam>
 - Objective a, c, d
- The following resources cover objective f:
 - Refractive errors in children (AAPOS): <https://aapos.org/glossary/refractive-errors-in-children>
 - Amblyopia (MEDSKL): <https://medskl.com/module/index/amblyopia>
 - Strabismus (MEDSKL): <https://medskl.com/module/index/strabismus>
 - Congenital cataract (Merck): <https://www.merckmanuals.com/en-ca/professional/pediatrics/eye-defects-and-conditions-in-children/congenital-cataract>
 - Childhood glaucoma (University of Alberta): <https://www.youtube.com/watch?v=Y8fHBNZtcD8>
 - Retinoblastoma (AAO): <https://www.youtube.com/watch?v=Eg7-KuQY53Y>
 - Retinopathy of prematurity (MCW Neonatology): <https://www.youtube.com/watch?v=1ibN602YAsE>
- Eye screening for children (AAO): <https://www.aao.org/eye-health/tips-prevention/children-eye-screening>
 - Objectives e, g, h

Additional resources

These resources provide more comprehensive information about the learning objectives and will allow you to expand on your understanding.

- Pediatric eye examination (AAO): https://youtu.be/IGW_D7YkRGs
 - Objective c
- Risk Factors and Genetics in Common Comitant Strabismus (JAMA Ophthalmol): <https://jamanetwork.com/journals/jamaophthalmology/fullarticle/1710519>
 - Objective b
- The 8-point eye exam (AAO): <https://www.aao.org/young-ophthalmologists/yo-info/article/how-to-conduct-eight-point-ophthalmology-exam>
 - Objectives a and d
- Amblyopia (AAO): <https://youtu.be/ix3MpxuSjso>
- Strabismus & Extra-ocular Movements (Queen's University): <https://ophthalmology.queensu.ca/academics/undergraduate/education/clinical-skills/2>

- Retinopathy of prematurity screening (CPS): <https://www.cps.ca/en/documents/position/retinopathy-of-prematurity-screening>
- Strabismus: importance of timely care (Mayo): <https://www.mayoclinic.org/medical-professionals/pediatrics/news/strabismus-the-importance-of-timely-specialized-care/mqc-20452790>
 - Objective f

Other Undergraduate Medicine Resource Pages

Topic #1: Describe the anatomy of the eye and the visual system

Topic #2: Perform a basic eye exam

Topic #3: Evaluate a patient with acute vision loss

Topic #4: Evaluate a patient with chronic vision loss

Topic #5: Evaluate a patient with a red or painful eye

Topic #6: Evaluate a patient with eye trauma

Topic #7: Evaluate a patient with an eye movement abnormality, diplopia, or pupillary disorders

Topic #9: Ocular Pharmacology

Topic #10: Evaluate a patient with ocular manifestations of systemic disease