

PEDIATRIC OPHTHALMOLOGY REFERRAL GUIDELINES

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- A Pediatric Ophthalmologist is a Board Certified Ophthalmologist who has completed additional training in Pediatric Ophthalmology.
- The American Academy of Pediatrics (AAP), in response to a recommendation from the AAP Subspecialty Work Group, created referral guidelines to assist general pediatricians in determining when to refer their patients to pediatric surgical specialists.
- Many complex pediatric problems are optimally managed by a medical-surgical team rather than an individual surgical specialist.
- The recommendations of the AAP policy statement have been used in part to guide the referral recommendations below.

References of Interest:

1. AAP Surgical Advisory Panel: Guidelines for Referral to Pediatric Surgical Specialists
Pediatrics Vol. 110 No. 1 July 2002, pp. 187-191
2. Guidelines for pediatrician referrals to the ophthalmologist
Friedman LS, Kaufman LM. Pediatr Clin North Am. 2003 Feb; 50(1):41-53
3. Ten critical diagnoses not to miss on a pediatric eye screening
Bothun ED. Minn Med. 2009 Jun; 92(6):34-7

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GENERAL GUIDELINES

REFER WHEN:

VISUAL BEHAVIOR ACUITY

- By 3 months of age, babies should exhibit a social smile and make eye contact. (*In premature babies corrected age should be used*)
- By 4 months of age, babies' ocular alignment is stable and can look from near to far and back again.
- Vision testing with a pediatric eye chart is usually feasible beginning age 3-4 years.

- Absence of a social smile or eye contact by 3 months of age should prompt a referral.
- Any misalignment of eyes (intermittent or constant) in children after the age of 4 months or constant misalignment of eyes at any age even before 4 months should be evaluated.
- A difference of 2 lines or greater between eyes should prompt a referral. Any acuity \leq 20/50 should be evaluated.

EYELIDS

- Mechanical obstruction of vision can produce severe visual loss (deprivational amblyopia).
- Droopiness of Eyelid (ptosis) or Eyelid hemangioma can also cause visually significant Astigmatism that can result in Refractive amblyopia.

- Any child with ptosis or eyelid mass should be referred for evaluation.

NASOLACRIMAL SYSTEM

Dacryoceles/Mucocele

- Often heralded by clinically apparent enlargement of the lacrimal sac and bluish discoloration of the overlying skin in the first weeks of life.

Dacryostenosis (Blocked tear duct)

- Excessive tearing is usually related to nasolacrimal duct obstruction, and often resolves in the first year of life.

- Immediate referral – as there is risk for secondary infection and neonatal sepsis
- Tearing past 11-12 months requires a referral. If there is recurrent nasolacrimal sac infection (dacryocystitis), earlier referral and treatment is appropriate.

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GENERAL GUIDELINES

REFER WHEN:

ANTERIOR SEGMENT

Congenital Glaucoma

- When excess tearing is associated with photophobia (light aversion), corneal enlargement and clouding, an immediate referral should be made for possible congenital glaucoma.

Chronic Conjunctivitis

- The most common cause is allergic conjunctivitis. However, other (more serious) etiologies should always be considered.

- Immediate referral – Delays can cause irreversible optic nerve damage, permanent corneal enlargement, irregular astigmatism and amblyopia.
- Persistent conjunctivitis / red eye associated with photophobia and corneal scarring are potential signs of Herpetic (HSV) eye disease and require prompt evaluation.

OCULAR MEDIA OPACITIES

- Examination of the red reflex is an essential part of healthy baby/child visits in nonverbal children.
- Infantile cataracts that are not extracted in the first 6-8 weeks of life may be associated with irreversible visual loss and nystagmus.

- Anytime there is a dull or asymmetric reflex a referral should be made.
- If there is a white reflex (leukocoria) an urgent referral should be made to rule out possible retinoblastoma.

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GENERAL GUIDELINES

REFER WHEN:

SENSORIMOTOR SYSTEM (PUPILS AND EYE MOVEMENTS)

Difference in Pupil Size

- A difference in pupil size that is less than 1mm in both light and dark is usually benign.

- Any difference in pupil size more than 1mm should be evaluated.
- Association of mild ptosis (droopy eyelid), with a smaller pupil on the same side, more pronounced in the dark, requires evaluation for Horner's Syndrome and workup for rare cases of neuroblastoma.
- A dilated pupil with limitation of eye movement requires urgent referral for evaluation of a 3rd nerve palsy.

Nystagmus

- Any child with nystagmus (oscillating eye movements) should be evaluated.
- New/acute onset nystagmus requires urgent evaluation.

Esotropia (eyes turning in/toward nose)

Exotropia (eyes turning out/away from nose)

- Disruption of binocular vision development in the first 3-6 months of life may produce permanent loss of stereo-vision.
- Acute onset misalignment of eye (strabismus) or double vision (diplopia) can be a manifestation of more serious neurological issues like brain tumor.
- Strabismic amblyopia not treated before age 7-8 years is often irreversible.

- Any infant older than 4 months of age with constant/intermittent ocular deviation should be evaluated promptly. Any infant with constant ocular deviation should be evaluated even prior to 4 months of age.
- Any child with suspected ocular misalignment should be evaluated.

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GENERAL GUIDELINES

REFER WHEN:

PREMATURITY

- Very premature infants, <1500g or <32wks, are at risk for development of strabismus and refractive errors – even in the absence of retinopathy of prematurity (ROP).
- These infants should be examined at minimum 3 and 6 months post discharge from the NICU (or more frequently if there is a history of retinopathy of prematurity).

SYSTEMIC DISORDERS

- Children with autoimmune disorders are at risk for uveitis.
- Children with Type I or II Diabetes are at risk for development of retinopathy.
- Children with Sickle Cell disease, Albinism, Hypertension, thyroid malfunction, sturge-weber syndrome.
- Appropriate referral for screening should be made (e.g. JRA, Lupus).
- Baseline evaluation followed by appropriate examinations for children with diabetes is recommended.
- Baseline evaluation followed by appropriate eye examinations based on ocular findings.

CONGENITAL SYNDROMES

- Subtle abnormalities of the anterior segment may be associated with significant underlying ocular maldevelopment (e.g. small iris coloboma – “key hole pupil” – with possible associated chorioretinal and optic nerve coloboma)
- Many genetic syndromes have eye findings.
- Children with Craniosynostosis can have bony compression of the optic nerve and irreversible loss of vision from. Strabismus is also common in patients with bony abnormalities of the orbit.
- Any congenital deformity that involves the orbit or optic pathways should be evaluated.
- Children with Down syndrome are at higher risk for cataracts and high refractive errors.
- Ocular examination can aid in diagnosis of certain syndromes (e.g. Iris Lisch nodules is NF-1, lens subluxation in Marfan’s).
- Any child with a history of gestational drug exposure/alcohol should be evaluated for associated ocular abnormalities.
- Any child with craniosynostosis should be evaluation for optic neuropathy and strabismus.

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GENERAL GUIDELINES

REFER WHEN:

NON-ACCIDENTAL INJURY

- Retinal hemorrhages may be an important clue to possible “shaken baby syndrome” and are more common before age 3 months – due to poor neck control.
- Any child with suspected non-accidental injury should have a dilated fundus examination.

HEADACHES

- Headaches can be secondary to refractive errors (need for glasses) or ocular motility issues like convergence insufficiency.
- Any child with chronic headaches or complaining of headache after prolonged reading should have a comprehensive eye examination.

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