PEDIATRIC OPTOMETRY
REFERRAL GUIDELINES
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
2. Guidelines for pediatrician referrals to the ophthalmologist
3. Ten critical diagnoses not to miss on a pediatric eye screening
   Bothun ED. Minn Med. 2009 Jun; 92(6):34-7

For appointments, please call 1-888-770-2462
Submit all pertinent medical records to: choc.org/referrals, or by fax 1-855-246-2329
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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 ≤ 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**

**Dacryocele/Mucocele**
- Often heralded by clinically apparent enlargement of the lacrimal sac and bluish discoloration of the overlying skin in the first weeks of life.
- Immediate referral – as there is risk for secondary infection and neonatal sepsis

**Dacryostenosis (Blocked tear duct)**
- Excessive tearing is usually related to nasolacrimal duct obstruction, and often resolves in the first year of life.
- Tearing past 11-12 months requires a referral. If there is recurrent nasolacrimal sac infection (dacryocystitis), earlier referral and treatment is appropriate.
**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.

**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.

**GENERAL GUIDELINES REFER WHEN:**

- 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.

- 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.
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.
- 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.

Esotropia (eyes turning in/toward 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.

Exotropia (eyes turning out/away from nose)
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### GENERAL GUIDELINES

**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).

### REFER WHEN:
- 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.

### REFER WHEN:
- 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.

### REFER WHEN:
- 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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**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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