CHOC Specialists

PEDIATRIC OPTHALMOLOGY 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. Peditr 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 ≤ 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.

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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.	• Immediate referral – Delays can cause irreversible optic nerve damage, permanent corneal enlargement, irregular astigmatism and amblyopia.
Chronic Conjunctivitis	
• The most common cause is allergic conjunctivitis. However, other (more serious) etiologies should always be considered.	• 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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1120 W. La Veta Ave., Suite 100
Orange, CA 92868

CHOC HEALTH CENTER, MISSION MEDICAL TOWER

26732 Crown Valley Parkway, Suite 501
Mission Viejo, CA 92691

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