Title: Prescribing for Children
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AOA Guidelines for Pediatric Eye Examination Interval[1]:

Patient's Age	Asymptomatic/Low Risk	At-Risk
Birth to 2 years	At 6-12 months of age	At 6-12 months of age or as recommended
3-5 years	At least once between 3-5 years	At least once between 3-5 years or as recommended
6-18 years	Before first grade and annually thereafter	Before first grade and annually thereafter or as recommended

AAP Guidelines for Expected Visual Acuity by Age[2]:

Age	Expected Visual Acuity
3 years	20/50
4 years	20/40
5 years	20/32

Pediatric Exam Techniques:

Visual Acuities	• Fix and follow • Visual evoked potential • Forced choice preferential looking • Lea symbols • HOTV • Snellen
Confrontations	• Non-seeing to seeing • Confrontations
Ocular Deviation	• Gross observation • Bruckner

	● Hirschberg/kappa/krimsky ● Cover test
Extraocular Movements	● Doll's head ● Fix and follow
Refraction	● Mohindra retinoscopy ● Retinoscopy with lens bars ● Retinoscopy in phoropter ● Manifest refraction
Anterior Segment	● Gross observation ● 20D transilluminator/BIO ● Hand-held slit lamp ● Slit lamp
Dilation	AOA recommendations: ● 0.5% cyclopentolate but can also use cyclomydril combination drops (0.2% cyclopentolate hydrochloride + 1% phenylephrine) for those <1 y/o[1] ● 1% cyclopentolate for those >1 y/o[1] --- ● If cyclopentolate is not be available or contraindicated, can use 1% tropicamide for non-strabismic infants[1,3] ● Use of spray administration of cyclopentolate to the open or closed eye of young children an acceptable however may not be adequate in children with dark irides[1,3] ● Darkly pigmented irides: 1% tropicamide, 2.5% phenylephrine + 2% cyclopentolate[4] ● Latent hyperopes, new onset esotropia, residual strabismus in previously well-controlled accommodative esotropes: 2 drops of cyclopentolate 5 minutes apart[4]
Posterior Segment	● BIO ● 90D/78D

AOA Guideline for Amblyogenic Factors (Refractive)[5,6]:

Isoametropia	
Hyperopia	>5D
Myopia	>8D
Astigmatism	>2.50D
Anisometropia	
Hyperopia	≥1D
Myopia	≥3D
Astigmatism	≥1.50D

Amblyogenic Factors (Strabismic): constant and unilateral strabismus.[6,7]

Amblyogenic Factors (Deprivational)[6]:

- Complete/partial obstruction of visual axis resulting in a degraded retinal image
- Cataracts
- Corneal opacities
- Ptosis covering visual axis

Classification of Amblyopia Based on BCVA[6]:

Classification	BCVA
Mild	20/25 to 20/50
Moderate	20/60 to 20/100
Severe	<20/100

<u>Prescribing</u>

*Important to consider that prescribing for young children is based more on experience rather than evidence[4]

Myopic Guidelines:

- Low myopia (<1.50D) in infants can emmetropize, a process in which there is a decrease in refractive error/variability of refractive error and occurs most rapidly during the first year of life[8]
    - Infants typically only need to see their mother's face which is often approximately 25cm away[4]
    - Should treat infant with extreme myopia (≥4D) and consider treatment in a very young child who has ≥3D of myopia[4]
- By 5 years of age and older, -0.50D is considered abnormal and should be prescribed[8]
- Children without spectacles and low myopia: monitor in 3-6 month intervals[5]
- Children w/ spectacles: monitor for adaptation 3 months after prescription is filled[8]
- For children who appear to progress quickly, consider myopia control with atropine eye drops, orthokeratology contact lenses, and/or multifocal soft contact lenses[8]

Hyperopic Guidelines:

- Staging of hypermetropia[9]:
    - Low hyperopia: ≤+2.00D
    - Moderate hyperopia: +2.25D to +5.00D
    - High hyperopia: >+5.00D
- Bring them to normal range (consider emmetropization):
    - At birth, most infants are hyperopic (average +2.00D)[8]
    - As mentioned previously, emmetropization occurs most rapidly during the first year of life, continuing after 12-18 months and slowing down from 3 to 6 years of age[8,10]

Prescribing by Amount of Hyperopia and Age[8,11]		
	0-2 year olds	3-4 year olds
High hyperopia (without esotropia)	Monitor every 2-3 months for refractive stability	Recommend partial correction (cutting back by 1-2D)
Moderate hyperopia (without esotropia)	Monitor every 3-6 months for refractive stability	Recommend partial correction depending on symptoms
*5+ year olds: consider prescribing if ≥1.50D present		

Astigmatism Guidelines:

Expected Astigmatism by Age	
Age	Abnormal amount of astigmatism
5 months to 3 years	>1.75DC
3-5 years	>1.25DC

- Prescribing[8]:
    - 0-2 years of age: prescribe if astigmatism >3.25DC
    - 2-4 years of age: prescribe if astigmatism >2D
    - >5 years of age: prescribe if astigmatism >0.75DC
- Generally, the full astigmatism correction is prescribed unless there is concern for adaptation[8]

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