



AREA	TOOLS	BASIC METHODS	ADDITIONAL ISSUES AND METHODS FOR 13-18 YEARS	ADDITIONAL ISSUES AND METHODS FOR 13-18 YEARS
<b>History and General Development</b>	<ul style="list-style-type: none"> <li>• Questionnaire</li> <li>• Interview</li> <li>• Behavioral observations</li> <li>• Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Reason for visit</li> <li>• History of present illness</li> <li>• Past</li> <li>• Family</li> <li>• Social</li> <li>• Review of systems</li> <li>• Motor/sensory</li> <li>• Language</li> <li>• Academic history/issues</li> </ul>	<ul style="list-style-type: none"> <li>• Academic milestones – See Signs and Symptoms of Learning-Related Vision Problems</li> <li>• Sports performance</li> <li>• CL interest</li> <li>• Reading or distance tasks</li> <li>• Head posture when reading</li> </ul>	
<b>Motility, Accommodation and Binocularity</b>	<ul style="list-style-type: none"> <li>• Light source</li> <li>• Penlight or other appropriate target</li> <li>• Direct ophthalmoscope, occluder, phoropter</li> </ul>	<ul style="list-style-type: none"> <li>• Brückner</li> <li>• Hirschberg</li> <li>• Cover Test-distance and near</li> <li>• Versions</li> <li>• NPC</li> <li>• Phoria testing</li> <li>• Vergence ranges</li> <li>• NRA, PRA, FCC, NPA</li> </ul>	<ul style="list-style-type: none"> <li>• Pursuits and saccades</li> <li>• Aware of diplopia</li> <li>• Stereopsis</li> <li>• Accommodation</li> </ul>	<ul style="list-style-type: none"> <li>• Watch for convergence excess, convergence insufficiency, basic exophoria, basic esophoria</li> <li>• NRA +2.25 to +2.75 normal expected +2.00</li> <li>• PRA at least -expected -2.25</li> <li>• FCC +0.75</li> </ul>
<b>Refractive Status</b>	<ul style="list-style-type: none"> <li>• Retinoscope</li> <li>• Automated refractor</li> <li>• Phoropter</li> <li>• Near point card</li> </ul>	<ul style="list-style-type: none"> <li>• Retinoscopy</li> <li>• Subjective refraction</li> </ul>	<ul style="list-style-type: none"> <li>• See AOA pediatric clinical practice guideline</li> </ul>	
<b>Visual Acuity</b>	<ul style="list-style-type: none"> <li>• Snellen chart</li> <li>• ETDRS</li> </ul>	<ul style="list-style-type: none"> <li>• Distance and near</li> </ul>		
<b>Ocular Health and Systemic Health</b>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Automated VF</li> <li>• Direct, monocular, or binocular indirect ophthalmoscope</li> <li>• Dilation</li> <li>• Color vision</li> <li>• Tonometer</li> <li>• Biomicroscope</li> </ul>	<ul style="list-style-type: none"> <li>• Anterior segment</li> <li>• Posterior segment</li> <li>• Pupillary responses</li> <li>• Confrontation fields</li> <li>• Automated VF</li> <li>• Tonometry – Goldmann, non-contact, iCare, Tonopen, Pulsair, Pascal, Ishihara or HRR color plates</li> </ul>	<ul style="list-style-type: none"> <li>• Same medications as adults (adjust dosage based on weight for orals)</li> </ul>	

This quick reference guide should be used in conjunction with AOA's *Evidence-Based Clinical Practice Guideline: Comprehensive Pediatric Eye and Vision Examination*, (February 2017). It provides a summary and is not intended to stand alone in assisting the clinician in making patient care decisions. These recommendations include but are not limited to the areas, procedures and recommendations listed. Professional judgment and individual symptoms, findings and developmental level may significantly influence the nature and course of the examination.

## SIGNS AND SYMPTOMS OF LEARNING-RELATED VISION PROBLEMS\*

Symptoms	Possible Vision Problems
<ul style="list-style-type: none"> <li>Complains of blurred vision</li> <li>Rubs eyes frequently</li> <li>Squints</li> </ul>	<ul style="list-style-type: none"> <li>Nearsightedness</li> <li>Farsightedness</li> <li>Astigmatism (inability to see clearly in the distance or up close)</li> </ul>
<ul style="list-style-type: none"> <li>Closes or covers one eye</li> <li>Occasionally sees double</li> <li>Rubs eyes frequently</li> <li>Able to read for only a short time</li> <li>Poor reading comprehension</li> </ul>	<ul style="list-style-type: none"> <li>Eye coordination problems (inability to coordinate the eyes together effectively)</li> </ul>
<ul style="list-style-type: none"> <li>Holds things very close</li> <li>Complains of blurred vision</li> <li>Poor reading comprehension</li> <li>Says eyes are tired</li> <li>Able to read for only a short time</li> <li>Has headaches when reading</li> </ul>	<ul style="list-style-type: none"> <li>Eye focusing problems (inability to easily refocus eyes or maintain clear focus)</li> </ul>
<ul style="list-style-type: none"> <li>Moves head excessively when reading</li> <li>Frequently loses place, skips lines when reading</li> <li>Uses finger to keep place</li> <li>Poor reading comprehension</li> <li>Short attention span</li> </ul>	<ul style="list-style-type: none"> <li>Eye tracking problems (inadequate ability to smoothly and accurately move the eyes from one point to another)</li> </ul>
<ul style="list-style-type: none"> <li>Mistakes words with similar beginnings</li> <li>Difficulty recognizing letters, words, or simple shapes and forms</li> <li>Can't distinguish the main idea from insignificant details</li> <li>Trouble learning basic math concepts of size, magnitude, and position</li> </ul>	<ul style="list-style-type: none"> <li>Faulty visual form perception (inability to discriminate differences in size, shape or form)</li> </ul>
<ul style="list-style-type: none"> <li>Trouble visualizing what is read-poor reading comprehension</li> <li>Poor speller</li> <li>Trouble with mathematical concepts</li> <li>Poor recall of visually presented material</li> </ul>	<ul style="list-style-type: none"> <li>Faulty visual memory (inability to remember and understand what is seen)</li> </ul>
<ul style="list-style-type: none"> <li>Sloppy handwriting and drawing</li> <li>Can't stay in lines</li> <li>Poor copying skills</li> <li>Can respond orally but not in writing</li> </ul>	<ul style="list-style-type: none"> <li>Faulty visual motor integration (inability to process and reproduce visual images by writing or drawing)</li> </ul>
<ul style="list-style-type: none"> <li>Trouble learning right and left</li> <li>Reverses letters and words</li> <li>Trouble writing and remembering letters and numbers</li> </ul>	<ul style="list-style-type: none"> <li>Difficulty with laterality and directionality (poor development of left/right awareness)</li> </ul>

\*Checklist courtesy of the College of Optometrist in Vision Development

## PHYSICAL SIGNS OR SYMPTOMS OF A VISION PROBLEM

- Frequent headaches or eye strain
- Blurring of distance or near vision, particularly after reading or other close work
- Avoidance of close work or other visually demanding tasks
- Poor judgment of depth
- Turning of an eye in or out, up or down
- Tendency to cover or close one eye, or favor the vision in one eye
- Double vision
- Poor hand-eye coordination
- Difficulty following a moving target
- Dizziness or motion sickness

## PERFORMANCE PROBLEMS

- Poor reading comprehension
- Difficulty copying from one place to another
- Loss of place, repetition, and/or omission of words while reading
- Difficulty changing focus from distance to near and back
- Poor posture when reading or writing
- Poor handwriting
- Can respond orally but can't get the same information down on paper
- Letter and word reversals
- Difficulty judging sizes and shapes

Infant & Children's Vision supported by The American Optometric Association and Optometry Cares – The AOA Foundation.