

STANDARDS OF PRACTICE

BINOCULAR & DEVELOPMENTAL VISION ASSESSMENT

Name:	Binocular & Developmental Vision Assessment
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This guideline covers a diverse group of disorders, anomalies, and conditions that may occur at any time in a person's life. These disorders and anomalies may interfere with school, work performance, or negatively affect a person's quality of life. They may cause a wide range of symptoms; including, but not limited to: blurred vision, headaches, asthenopia, double vision, inability to read or spell at an age appropriate level, losing one's place when reading, skipping words, loss of concentration, motion sickness, and fatigue.

Depending on the severity and type of condition, proper treatment may include one or more of the following:

- Optical correction (lenses and/or prisms)
- Vision therapy and/or occlusion
- Pharmaceutical therapy and/or chemodenervation
- Surgical management

Proper diagnosis and treatment usually results in cost-effective and permanent improvement in visual skills.

Goals

The goal of this guideline is for every optometrist to:

- Identify patients who may benefit from additional binocular, oculomotor, accommodative, fusional, perceptual and /or sensory diagnostic and treatment programs
- Accurately diagnose binocular, oculomotor, accommodative, fusional, perceptual and/or sensory programs
- Improve the quality of care rendered to patients with the above disorders
- Maximize the visual status and quality of life of patients having these disorders
- Inform and educate the patient, their guardian (if applicable) and other members of the patient's health care and educational team about the functional and visual manifestations of these disorders and availability of treatment and management

Guidelines

1. When performing a binocular vision assessment (BVA), all procedures required in the provision of a routine examination shall be provided by the optometrist. In the case of a referral by another optometrist, the procedure performed by the referring optometrist within a reasonable time frame preceding the binocular or developmental vision assessment need not be duplicated by the optometrists performing the BVA.
2. The BVA may include but is not limited to the following procedures (except when the patients mental and/or physical conditions preclude such procedures):
 - a) Record of the previous case history and vision care, a history of neurological, systemic, or developmental disorders or abnormalities, academic and/ or psycho educational evaluations when available, patient's visual concerns, patient symptoms and change of symptoms. A record of previous diagnoses, treatment and results should also be made when available
 - b) Visual Acuity – the best corrected or habitual visual acuity should be measured for each eye and for both eyes together, at distance and near
 - c) Refraction - The patient's refractive status should be evaluated unless performed at a recent routine examination or provided by a referring optometrist. Cycloplegic refraction is advised for the patient whose excessive accommodative response could affect the measurement of refractive error of binocular coordination or when deemed clinically necessary
 - d) Ocular Motility - The patient's fixation, pursuits and saccadic ability should be evaluated.
 - e) Alignment - Cover testing should be performed with a small target to control accommodation. When indicated cover test should be assessed in all fields of gaze. Risley prisms, maddox rod and stereoscopic devices or computerized systems may also be used to measure the heterophoria or strabismus.
 - f) Stereopsis
 - g) In the presence of strabismus, sensorimotor fusion testing must be performed. Tests such as the Worth 4-dot test at distance and near and tests for stereopsis may be used
 - h) When strabismus is manifest, the following variables may be tested and recorded when appropriate: direction of strabismus, concomitancy, frequency, magnitude, retinal correspondence, variability, eye laterality and eye dominance / fixation preference
 - i) Near Point of Convergence – this should include a record of both break and recovery
 - j) Near and distance Fusional Amplitudes- this should include a record of blur, break and recovery using horizontal and vertical prisms
 - k) Accommodation – This should include relative accommodative measurements, and accommodative amplitude and facility measurements
 - l) Accommodative Convergence / Accommodation Ratio
 - m) Fixation Disparity / Associated Phoria
 - n) Vergence Facility

o) Accommodative Lag

Note: In the presence of strabismus, more detailed sensory testing (e.g., the Bagolini striated lenses, Hering – Bielchowsky after-image and synoptophore or computerized equivalent) can be used to evaluate retinal correspondence in older children and adults.

3. In addition to the Binocular Vision Minimum Equipment Standards, optometrists who provide additional diagnostic, treatment and management services for binocular, oculomotor, accommodative, fusional, perceptual and /or sensory disorders or anomalies must have additional specialized equipment appropriate for effective diagnosis and treatment of the disorder or anomaly.

Binocular Vision: Minimum Equipment Standards

- a) Loose prisms and/or prism bars
 - b) Accommodative Flippers
 - c) Tranaglyphs, Vectograms or computer display equivalent
 - d) Free Fusion Cards, barrel convergence cards or computer display equivalent
 - e) Brewster or Wheatstone Stereoscope or computer display equivalent
 - f) Aperture rule trainer or computer display equivalent
 - g) Distance and Near fixation charts
 - h) Developmental Eye Movement (DEM) or equivalent for measuring tracking
 - i) Optometrists who choose to provide perceptual or developmental assessments and vision therapy shall maintain appropriate and current testing and training materials.
1. Before any additional testing, management or treatment services are provided to a patient, optometrists must explain the type of services that are recommended, the expected timeline of treatment and the expected costs for all recommended diagnosis, management and treatment services.
 2. After the assessment has been completed, a consultation with treatment recommendations and prognosis for remediation should be performed and recorded. The treatment plan should outline the goals of the therapy and provide for periodic review throughout therapy to allow for adjustment of the therapy program.
 3. When performing a Developmental / Visual Perceptual Assessment, the skill sets evaluated may include, but are not limited to:
 - a) Visual Spatial Orientation
 - b) Bilateral Integration
 - c) Laterality / Directionality
 - d) Visual Analysis
 - e) Non-Motor
 - f) Visual-Motor Integration
 - g) Fine-Motor Coordination
 - h) Auditory-Visual Integration
 - i) Rapid Naming / Automaticity

Supplemental Testing

1. Reading Disability Subtype tests
2. Optometrists who provide testing, management and treatment services for learning related problems as part of a multi-disciplinary team shall communicate and coordinate care with patients, parents and/or legal guardians, classroom teachers, special education teachers and other health care practitioners to ensure maximum opportunity for proper correction and improvement.
3. If the optometrist does not provide BVAs or therapy or if the assessment or therapy required is outside the optometrists' level of competence, then it is his/her professional responsibility to refer the patient to a practitioner who provides these services.
4. An optometrist may delegate duties and tasks to support personnel where appropriate. Any act that is delegated by the optometrist must be ordered by the optometrist and the optometrist assumes full responsibility for such acts. Patient care must not be compromised in any decision to delegate. It is the responsibility of the optometrist to ensure that optometric assistants are competently trained to perform their duties.