Recommendations for Guidelines for Vision Therapy Program to the State Board of Optometry in Arkansas

As defined by the American Optometric Association and by the College of Vision Development.

Vision therapy and Neuro-rehabilitation (also called vision training, eye training, and eye exercises) is a clinical approach for correcting and ameliorating the effects of eye movements disorders, nonstrabismic binocular dysfunctions, focusing disorders, strabismus, amblyopia, nystagmus, and certain visual perceptual (information processing) disorders. The practice of vision therapy entails a variety of non-surgical therapeutic procedures designed to modify different aspects of visual function. Its purpose is to cure or ameliorate a diagnosis neuromuscular, neurophysiological, or neurosensory visual dysfunction.

Vision therapy typically involves a series of treatments during which carefully planned activities are carried out by the patient under professional supervision in order to relieve the visual problem. The specific procedures and instrumentation utilized are determined by the nature and severity of the diagnosed condition. Vision therapy is not instituted to simply strengthen eye muscles, but rather is generally done to treat functional deficiencies in order for the patient to achieve optimal efficiency and comfort.

The treatment may appear to be relatively uncomplicated, such as patching an eye as part of amblyopia therapy. Or, it may require complex infrared sensing devices and computers, which monitor eye position and provide feedback to the patient to reduce the uncontrolled jumping of an eye with nystagmus. Treatment of strabismus, or turned eye, can involve complex optical and electronic instruments or such simple devices as a penlight or a mirror. The particular procedures and instrument are dependent on the nature of the visual dysfunction and the doctors’ clinical judgment. (American Optometric Association)

As specialists in visual function and development, a developmental optometrist will evaluate, diagnose, and treat (but not limited to) the following areas:

1) **Binocularity**, or how the eyes interact with each other and how they transmit information to the brain. The doctor measure the eyes’ ability to aim together accurately in order to maintain single vision, and they check
to make certain the eyes don’t slide out of alignment, such as with crossed or wandering eyes.

2) **Oculomotility or tracking.** Developmental optometrists will evaluate the patients’ ability to team both eyes together and control where they aim their eyes, such as the skill required for reading so we don’t lose our place. They also assess that patients can pursue or follow a moving target smoothly and are able to make accurate eye jumps or saccades from one point to another.

3) **Accommodation, or focusing.** Developmental optometrists evaluate their patients’ ability to change their focus rapidly and smoothly when looking from distance to near and back again, such as from board to desk. In addition, developmental optometrists check to see if patients can maintain clear focus at near ranges for extended periods of time without blur or fatigue, such as required for reading small print.

4) **Visual Perceptual.** Developmental optometrist’s tests to determine if patients have developed the perceptual skills they need to understand and analyze what they see and how they visually process, evaluating skills such as visual memory, visual discrimination, visual closure, and visual figure-ground.

5) **Visual Motor Integration, or eye-hand-body coordination.** Developmental optometrists tests to see if patients’ visual systems are efficiently transmitting information to the body’s motor centers for good balance and coordination.

Optometrists can use any test that is a normative test looking at visual, sensory, sensory motor, visual pathways, visual motor, or visual processing which includes, but is not limited to, tests such as the following listed. While this list is comprehensive it may not include all normative tests available.

**Jordan Reversals Test** - This norm-referenced test assesses visual reversals of letters, numbers, and words in students 5 through 18 years of age. It is an excellent screening instrument for the early detection of learning disabilities.

**Test of Auditory Analysis Skills (TAAS)** - This assessment will tell you if the child has sufficiently developed skills in processing sequences of syllables and sounds within common words. This test is useful for quickly identifying children who do not possess the necessary auditory skills for efficient learning.
**Birch-Belmont Test of Auditory Visual Integration (AVIT)**- This test involves an auditory-visual pattern matching task where the examiner taps out an auditory pattern and the patient matches that with a visual spatial pattern (printed dot patterns). Motor-free

**Visual Perception Test (TVPS)**- The TVPS-3 is an easy-to-use assessment to determine a child’s visual perceptual strengths and weaknesses. Visual perception is an important ability that enables one to make sense out of what is seen (in contrast to visual acuity tests that determine just that something was seen by the individual). The TVPS-3 includes the following subtests:

- Visual Discrimination
- Visual Memory
- Visual-Spatial Relationships
- Form Constancy
- Visual Sequential Memory
- Visual Figure-Ground
- Visual Closure
- The TVPS-3 also provides new, nationally stratified norms based on data from over 2,000 children.

**The Dyslexia Screener (TDS)**- The Dyslexia Screener (TDS) is an instrument which has been developed to determine, whether or not a patient shows evidence of having one of the three basic types of dyslexia (a coding problem in reading and spelling).

**Wold Sentence Copying Test**. - Used to determine if a child has the ability to rapidly and accurately copy a sentence from top to bottom of page. by W.C. Maples

**Beery-Buktenika Developmental Test of Visual Motor Integration, Fifth Edition (VMI)**- The Beery VMI helps assess the extent to which individuals can integrate their visual and motor abilities. The Short Format and Full Format tests present drawings of geometric forms arranged in order of increasing difficulty that the individual is asked to copy

**The Motor Free Visual Perceptual Testing – (The MVPT-3)**- assesses an individual's visual perceptual ability without any motor involvement needed to make a response.
**Test of Visual Motor Skills -3** – The TVMS-3 is used to determine whether there are any systematic distortions or gross inaccuracies in copied designs that could be the result of deficits in visual perceptual, motor planning, and/or execution.

**Bender Visual-Motor Gestalt Test, Second Edition** - Provides a recall procedure to assess visual-motor memory that provides a more comprehensive assessment of visual-motor skills.

**TONI-3** - The TONI-3, a major revision of the popular and well-built *Test of Nonverbal Intelligence*, is a norm-referenced measure of intelligence, aptitude, abstract reasoning, and problem solving that is completely free of the use of language. The test requires no reading, writing, speaking, or listening on the part of the test subject. It is completely nonverbal and largely motor-free, requiring only a point, nod, or symbolic gesture to indicate response choices.

**Wach’s Analysis of Cognitive Structures** - Used to evaluate cognitive development. This test consists of fifteen clusters of tasks grouped into four sub-tests: Identification of Objects, Object Design, Graphic Design, and General Movement.

The tasks presented in this test are designed using a Piagetian approach and follow the normal hierarchy of cognitive development. Using blocks, pegs, puzzles, pencil and paper, and body movements, the patient’s intelligent use of body, visual, and tactile input is developmentally assessed.

The acquisition of schemes in these areas is a prerequisite for successful academic and sports performance, and efficient daily living skills. The development of these schemes provides the foundation for a person to truly understand, use, and apply information rather than achieving through the use of rote memory, or not achieving at all.
Guidelines in the state of Arkansas are developed to establish quality of treatment for patients and are in the best interest of patient care.

These guidelines are not limited to but should include:

1) Optometric vision therapy should be monitored by an optometric physician who has been trained in the areas of strabismus and amblyopia, binocular dysfunctions, eye movement disorders, accommodative dysfunctions, and visual perceptual.

2) A doctor that can diagnosis and treat with visual therapy include any Optometrist licensed in the state of Arkansas and in good standing in the state of Arkansas.

3) All optometry colleges currently include initial fundamental courses in their curriculum to establish a doctor to be able to provide visual therapy once graduated. Like any area of optometry, it is recommended that an optometrist continue to pursue staying updated with current technology, techniques, studies, and updated guidelines in the field of developmental optometry to provide the best visual treatment for patients. Post-graduate studies or continuing education to master the complex visual programs prescribed to prevent or eliminate visual dysfunctions and enhance visual performance are recommended for Optometrist to stay with current visual developmental care. Not all optometrists practice behavioral optometry, which includes developmental and functional optometry.

4) An optometric vision therapy program should be conducted in the optometric physician’s office that diagnosed the visual disorder and recommended the therapy program. This can include a primary or branch office. The Arkansas State Board of Optometry has established the definition of what is considered a branch office and should be referenced here.

5) The in-office vision therapy sessions can be conducted by the optometric physician or an employee of the OD who has been trained in optometric vision therapy. The visual therapy program is established by the OD with diagnosis, treatment and plan which includes scheduled progress evaluations.