



Medical Coverage Policy

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Vision Therapy/Orthoptics

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Related Coverage Resources

- [Attention-Deficit/Hyperactivity Disorder \(ADHD\): Assessment and Treatment](#)
- [Autism Spectrum Disorders/Pervasive Developmental Disorders: Assessment and Treatment](#)

INSTRUCTIONS FOR USE

The following Coverage Policy applies to health benefit plans administered by Cigna Companies. Certain Cigna Companies and/or lines of business only provide utilization review services to clients and do not make coverage determinations. References to standard benefit plan language and coverage determinations do not apply to those clients. Coverage Policies are intended to provide guidance in interpreting certain standard benefit plans administered by Cigna Companies. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement, Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document always supersedes the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses in-office vision therapy/orthoptic/pleoptic training and visual perceptual training.

Coverage Policy

Coverage for Vision Therapy/Orthoptics and Visual Perceptual training varies across plans. Refer to the customer's benefit plan document for coverage details.

Vision therapy/orthoptics for up to 12 visits is considered medically necessary in the treatment of convergence insufficiency.

The following treatments are considered experimental, investigational or unproven:

- vision therapy/orthoptics for all other indications
- visual perceptual training for any indication

General Background

Vision Therapy/Orthoptics

There is a lack of consensus on the definition of 'vision therapy'. Generally, optometric vision therapy or orthoptics is used to correct or improve specific dysfunctions of the vision system. The term vision therapy can refer to a comprehensive treatment program, which may include:

- passive vision therapy
 - observation
 - glasses
 - occlusion [patching]
 - pharmacologic agents
- active vision therapy
 - pencil push-ups done at home
 - home-based computer vergence/accommodative therapy with pencil push-ups
 - office-based vergence/accommodative therapy with home reinforcement
 - other orthoptic and binocular activities to stimulate fusion
 - surgery: rarely recommended in convergence insufficiency CI because of the high risk of double vision in the distance (American Optometric Association [AOA], 2004; McGregor, 2014; Rucker, et al., 2018).

The American Association for Pediatric Ophthalmology & Strabismus (AAPOS) defines vision therapy as a term used by optometrists. Optometrists define vision therapy as an attempt to develop or improve visual skills and abilities; improve visual comfort, ease, and efficiency; and change visual processing or interpretation of visual information. An optometric vision therapy program consists of supervised in-office and at home reinforcement exercises performed over weeks to months. In addition to exercises, lenses ("training glasses"), prisms, filters, patches, electronic targets, or balance boards may be used. There are three main categories of vision therapy:

- Orthoptic vision therapy: so called by optometrists are a series of exercises usually weekly over several months performed in the optometric office. Orthoptic eye exercises (orthoptics), as used by pediatric ophthalmologists and orthoptists, are eye exercises to improve binocular function and are taught in the office and carried out at home. 'Orthoptics' is a well-established profession performed by orthoptists who work within the sub-specialty of ophthalmology. Orthoptists evaluate and measure eye deviations, manage amblyopia treatment and treat small intermittent symptomatic eye deviations.
- Behavioral/Perceptual Vision therapy: eye exercises to improve visual processing and visual perception
- Vision therapy for prevention or correction of myopia (nearsightedness) (AAPOS, 2016).

Convergence insufficiency (CI) is a common binocular disorder in which the eyes do not work well at near fixation. The incidence of CI in the general population has been estimated to be 2.5% to 13%. The near point of convergence (NPC) is reduced, and the eyes drift out as a fixation target is moved closer. The NPC is the closest distance in which the eyes can maintain clear and equal focus on a near accommodative target. Symptoms that may occur in children with CI while performing near tasks (e.g., working on a computer, using a cell phone, and reading) include eyestrain, double vision, blurred vision, loss of place while reading, excessive tiredness when reading, covering one eye, etc. All of these symptoms can be caused by other ocular and nonocular problems (McGregor, 2014).

Visual Perceptual Training or Perceptual Vision Therapy

The American Association for Pediatric Ophthalmology & Strabismus (AAPOS) defines behavioral/perceptual vision therapy as eye exercises to improve visual processing and visual perception. Visual perceptual training is generally provided by psychologists, other behavioral health providers, or occupational therapists and is directed toward visual perceptual disorders that purportedly affect the learning ability. In particular, this training was developed to treat visual perceptual and/or visual motor disabilities associated with learning disabilities. In the Handbook of Visual Perceptual Training (the Handbook), visual perceptual disabilities are defined as the

“process by which impressions observed through the medium of the eye are transmitted to the brain where relationship to past experiences takes place” (Cunningham and Reagan, 1972). It is thought that there is a close relationship between visual perception and the learning process and that visual perception dysfunction has been classified as a learning disability or disorder (Cunningham and Reagan, 1972). The Handbook notes that concomitant factors of visual perceptual dysfunction may include, “short attention span, hyperactivity, distractibility, social adjustment difficulties, delayed motor perceptual ability, depressed academic achievement, inadequate body image and low frustration level.”

In the Handbook, it is noted that visual perceptual training may include “motor rhythm activities, body image training, spatial and directional relationships and should be built upon previous successes and move from concrete to abstract” (Cunningham and Reagan, 1972). The Handbook recommends that after detection of the visual perceptual deficit, an individualized program be developed to meet the needs of the child. The Handbook indicates that activities of the program are grouped into five main headings: “coordination of eye-motor movements, distinguishing foreground from background, visual memory, spatial position, and relationship to space.” The Handbook states that in the development of this program that “major emphasis was placed on relating all activities, whether motor, kinesthetic, visual or other, to reading, writing and arithmetic.” The Handbook recommends that a minimal length of time for this training be thirty hours per child over a six-week period, with the daily period ranging from 30 minutes to an hour, or longer, depending on the child’s attention span.

Vision Therapy/Orthoptics - Literature Review

Treatment with vision therapy has been applied to a broad spectrum of visual and nonvisual functions and disorders, such as convergence, reading difficulties, dyslexia, ADHD, and concussion; however, the majority of peer-reviewed studies address the diagnosis of convergence insufficiency (CI). Although the published peer-review scientific literature for convergence insufficiency is not robust, in-office vision (orthoptic) therapy has become an accepted standard of care in the treatment of convergence insufficiency (American Academy of Ophthalmology, 2017; Convergence Insufficiency Treatment Trial [CITT] Study Group [CITTSG], et al., 2009; CITTSG, et al., 2008; Scheiman, et al., 2005b; Scheiman, et al., 2005c).

There is insufficient evidence to support vision therapy for diagnoses other than convergence insufficiency including other nonstrabismic binocular anomalies and accommodative disorders, reading difficulties, learning disabilities, dyslexia, ADHD, concussion, stroke or traumatic brain injury (Pollock, et al., 2019; Berger, et al., 2016; Joyce, et al., 2015; Cacho Martínez, et al., 2009).

Rucker et al. (2018) conducted a systematic review of the literature, focusing primarily on published data regarding convergence, reading, dyslexia, and ADHD. Rucker et al. stated the CITT study group demonstrated that intensive office-based therapy is more efficacious than less intensive home-based therapies. Randomized, controlled, double-masked studies show that convergence exercises reduce symptoms and improve signs of CI in otherwise healthy patients. However, the most efficacious convergence tasks, and the optimal duration and frequency of these tasks, remain unknown. Rucker et al. noted that patients with learning disabilities, poor reading ability, dyslexia, or ADHD do not consistently have unique ocular motor deficits. There are no randomized, controlled studies that show treatment consisting of repetitive ocular motor tasks improves learning disabilities, reading, dyslexia, or ADHD. There is insufficient evidence to recommend “vision therapy” for the treatment of learning disabilities, impaired reading, dyslexia, or ADHD.

Trieu et al. (2018) stated that current literature shows that although the measurement is still not standardized, near point of convergence and patient symptomatology appear to be an appropriate screen for convergence insufficiency. Further study is needed to establish standardization of diagnostic criteria. Trieu et al. (2018) concluded it is now well recognized that orthoptic/vergence therapy provides excellent improvement in the clinical measurements and symptoms associated with convergence insufficiency.

Vision Therapy/Orthoptics - Professional Societies/Organizations

American Academy of Ophthalmology (AAO): The AAO Preferred Practice Pattern® for Esotropia and Exotropia (2017) addresses esotropia and exotropia. Esotropia: Treatment for esotropia includes convergence exercises for convergence insufficiency exotropia. The AAO states that orthoptic therapy may improve fusional control in children or adults with convergence insufficiency and with small- to moderate-angle exodeviation (i.e.,

20 prism diopters or less), with the goal of strengthening fusional convergence amplitudes. Children and adults with the convergence insufficiency type of exotropia (exotropia greater at near) and asthenopic symptoms with near viewing (typically reading) may be good candidates for orthoptic therapy. Near point of convergence exercises on an accommodative target are useful if the near point of convergence is distant. Convergence exercises with a base-out prism may be beneficial once the near point of convergence improves. Treatment is tapered as symptoms improve, and it may need to be resumed if symptoms recur. Other treatments include computer-based convergence exercises and in-office orthoptics.

The AAO Preferred Practice Pattern® for Amblyopia (2017) does not address vision therapy exercises. The AAO states treatment for amblyopia in children includes:

- optical correction of significant refractive errors
- patching
- pharmacological treatment
- optical treatment (e.g., overplus)
- bangerter (translucent) filters (Ryser Optik AG, St. Gallen, Switzerland)
- surgery

The AAO and American Association for Pediatric Ophthalmology and Strabismus (AAPOS) Joint Policy Statement 'Amblyopia is a Medical Condition' (updated 2017) does not address vision therapy exercises. The AAO states "Optical correction, such as eyeglasses or contact lenses, may be medically indicated as a part of amblyopia treatment in addition to other modalities, such as patching and/or pharmacologic treatment. Unless amblyopia is treated during childhood, recovery of vision is rarely achieved."

The AAO and the American Academy of Pediatrics (AAP) Joint Statement on Learning disabilities, dyslexia, and vision (reaffirmed 2014) states that symptomatic convergence insufficiency can be treated with near-point exercises, prism convergence exercises, or computer-based convergence exercises. Most of these exercises can be performed at home, and extensive in-office vision therapy is usually not required. Alternatively, for other patients, reading glasses with base-in prism or minus lenses can be used as treatment.

The AAO Preferred Practice Pattern® for Refractive Errors & Refractive Surgery (2017) addresses Visual Training under 'Prevention of myopia progression', stating that visual training purported to reduce myopia includes exercises such as near-far focusing change activities. There are no scientifically acceptable studies that document that these treatments are clinically effective, and, therefore, this therapy is not recommended.

The AAO Preferred Practice Pattern® for Vision Rehabilitation (2017) addresses patients who have vision loss.

The AAO Visual Training for Refractive Errors Complementary Therapy Assessment (CTA) (Aug 2013) states exercises may include, muscle relaxation techniques, biofeedback, eye patches, eye massages, the use of under-corrected prescription lenses, and/or nutritional supplements. The AAO concludes "No evidence was found that visual training:

- has any effect on the progression of myopia,
- improves visual function for patients with hyperopia or astigmatism, or
- improves vision lost through disease processes" (AAO, 2013).

American Optometric Association (AOA): The AOA Optometric Clinical Practice Guideline (CPG18) on Care of the Patient with Accommodative and Vergence Dysfunction (revised 2010) discusses three general phases of vision therapy: accommodation, vergence, and accommodative/vergence interaction. The AOA stated that the success of vision therapy lies in the improvement of both the accommodative and vergence adaptation systems, because these systems are the most important for a person's long-term comfort. The goal of vision therapy is to re-establish automated, effortless accommodative and vergence responses under any stimulus condition. Improvement of amplitudes alone is not sufficient. The AOA noted there is a paucity of data demonstrating the efficacy of using home-based vision therapy alone. If in-office therapy is not available, home computerized vision therapy with push-ups should be offered as an alternative (AOA, 2010).

The AOA Optometric Clinical Practice Guideline (CPG12) on Care of the Patient with Strabismus: Esotropia and Exotropia (revised 2010) states:

- Indications for treating strabismus with vision therapy vary, depending on the type of strabismus and the patient's sensorimotor fusion status. Vision therapy is successful in the treatment of many forms of strabismus. The prognosis is most favorable for patients with intermittent strabismus, especially intermittent exotropia, who have sensorimotor fusion at some point in space and those with recently developed strabismus. Nevertheless, some patients with constant or longstanding strabismus may also be successfully treated with vision therapy, especially when there is fusion potential.
- The optometrist may prescribe active vision therapy or refer the patient to an optometrist who has advanced training or clinical experience with strabismus. The time required for therapy depends upon the type of strabismus, the presence or absence of associated visual adaptations and/or visual anomalies, and patient compliance. Office treatment usually requires 24–75 hours of therapy. Patients are usually treated for 30–60 minutes once or twice a week in the office. In addition, home treatment may also be prescribed, often requiring 20-60 minutes per day. During office visits, the optometrist reviews home treatment and prescribes appropriate changes as the patient shows progress with therapy (AOA 2010).

The AOA Optometric Clinical Practice Guideline (CPG20) on Care of the Patient with Learning Related Vision Problems (revised 2008) states that the management of learning related vision problems should be directed at the identification and treatment of specific visual deficits. Learning related vision problems are usually managed in a progressive sequence. Treatment should begin with consideration of refractive status. Next, visual efficiency deficits should be treated aggressively, using lenses, prisms, and vision therapy. The Optometric Clinical Practice Guideline for Care of the Patient with Accommodative and Vergence Dysfunction offers more detailed management recommendations. At the conclusion of therapy, ocular motility should be more accurate, and the incidence of accompanying head and body movement lower. Correction of refractive error and treatment of visual efficiency dysfunctions can result in improved visual information processing. Nevertheless, the treatment of vision information processing deficits usually requires vision therapy, which can begin during the later stages of visual efficiency therapy. Many vision therapy techniques and procedures available to address visual information processing problems are described in several recommended compilations. Computerized vision therapy programs are available for office and home therapy. Occupational or physical therapy can complement optometric vision therapy when the deficiencies are severe.

The AOA Optometric Clinical Practice Guideline (CPG4) on Care of the Patient with Amblyopia (revised 2004) states that active vision therapy for amblyopia is designed to remediate deficiencies in four specific areas: eye movements and fixation, spatial perception, accommodative efficiency, and binocular function. The goal of vision therapy is remediation of these deficiencies, with subsequent equalization of monocular skills and, finally, integration of the amblyopic eye into binocular functioning. Active monocular and binocular amblyopia therapies, as opposed to passive management (e.g., occlusion), reduce the total treatment time needed to achieve the best visual acuity (AOA 2004).

US Preventive Services Task Force (USPSTF): The US Preventive Services Task Force Evidence Report on Vision Screening in Children Aged 6 Months to 5 Years (Jonas, et al., 2017) does not address convergence insufficiency. The stated objective was to review the evidence on screening for and treatment of amblyopia, its risk factors, and refractive error. The conclusion noted that “Studies directly evaluating the effectiveness of screening were limited and do not establish whether vision screening in preschool children is better than no screening. Indirect evidence supports the utility of multiple screening tests for identifying preschool children at higher risk for vision problems and the effectiveness of some treatments for improving visual acuity outcomes.”

Visual Perceptual Training - Literature Review

Insufficient evidence exists in the published, peer-reviewed literature to conclude that visual perceptual training is effective for the treatment of learning disabilities or disorders (Anderson, 2003; Cunningham and Reagan, 1972).

Visual Perceptual Training - Professional Societies/Organizations

American Association for Pediatric Ophthalmology and Strabismus (AAPOS): The AAPOS glossary on Vision Therapy (2016) states “The scientific evidence does not support the use of eye exercises or behavioral/perceptual vision therapy in improving the long-term educational performance in children with learning disabilities.”

American Academy of Pediatrics, American Academy of Ophthalmology, American Academy of Pediatric Ophthalmology and Strabismus (AAPOS), and American Association of Certified Orthoptists: A joint policy statement on Learning disabilities, dyslexia, and vision states that scientific evidence does not support the claims that visual training, muscle exercises, ocular pursuit-and-tracking exercises, behavioral/perceptual vision therapy, training glasses, prisms, and colored lenses and filters are effective direct or indirect treatments for learning disabilities. There is no valid evidence that children who participate in vision therapy are more responsive to educational instruction than children who do not participate (Handler, et al., 2011)

Centers for Medicare & Medicaid Services (CMS)

- National Coverage Determinations (NCDs): None.
- Local Coverage Determinations (LCDs): None

Use Outside of the US

No relevant information.

Coding/Billing Information

- Note:** 1) This list of codes may not be all-inclusive.
 2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

CPT® Codes	Description
92065†	Orthoptic and/or pleoptic training, with continuing medical direction and evaluation

ICD-10-CM Diagnosis Codes	Description
H51.11	Convergence insufficiency

†Note: Considered Experimental/Investigational/Unproven when used to report Visual Perceptual training for any indication.

Considered Experimental/Investigational/Unproven:

CPT® Codes	Description
92065	Orthoptic and/or pleoptic training, with continuing medical direction and evaluation

ICD-10-CM Diagnosis Codes	Description
	All other codes

Considered Experimental/Investigational/Unproven when used to report Visual Perceptual training:

CPT® Codes	Description
92499	Unlisted ophthalmological service or procedure

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