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MEDICAL POLICY – 9.03.508

Orthoptic Training for the Treatment of Vision or Learning Disabilities

BCBSA Ref. Policy:	9.03.03	
Effective Date:	June 1, 2024	RELATED MEDICAL POLICIES:
Last Revised:	May 13, 2024	None
Replaces:	9.03.03	

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Introduction

Orthoptic training is vision training. Eye health professionals prescribe a series of exercises done over several weeks to try to address eye problems such as "lazy eye" (amblyopia), misalignment (strabismus), and problems with eye movement. Medical studies show that vision training can be successful when used to train both eyes in working together (convergence insufficiency). Studies do not show that one type of orthoptic training (accommodative therapy) is helpful when the eyes have problems adjusting their focus from far objects to near ones. This policy describes when in-office vision training may be considered medically necessary. Medical studies do not show that vision training is successful in treating eye problems other than convergence insufficiency, or in treating slow reading or learning disabilities.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

Note: Some member contracts do not have benefits to cover vision therapy. Refer to member contract language for benefit determination on vision therapy (see **Benefit Application** below).

Service	Medical Necessity
Office-based vergence/accommodative therapy	**Office-based vergence/accommodative therapy* may be considered medically necessary when:** • The individual has a diagnosis of symptomatic convergence insufficiency **AND** • At least 12 weeks of home-based therapies, consisting of any ONE of the following, have been completed with no symptom improvement: ○ Push-up exercises using an accommodative target ○ Push-up exercises with additional base-out prisms ○ Jump-to-near convergence exercises ○ Stereogram convergence exercises ○ Recession from a target ○ Maintaining convergence for 30-40 seconds **Note:** *See **Additional Information**

Service	Investigational
Orthoptic training (eye exercises) or vision therapy	**Orthoptic training (eye exercises) is considered investigational for the treatment of learning and reading disabilities, including attention deficient disorders, dyslexia, and dysphasia.**
Orthoptic eye exercises or vision therapy	**Orthoptic eye exercises or vision therapy are investigational for all other conditions, including but not limited to the following:** • Slow reading • Visual disorders other than convergence insufficiency
Neuro-visual (optometric) rehabilitation (may see as CPT 97110, 97530)	**Neuro-visual (optometric) rehabilitation is investigational for any neurological condition adversely affecting the visual system after brain injury including, but not limited to, the following:** • Cerebrovascular accident/stroke

Service	Investigational
	• Concussion • Encephalopathy • Post-surgical brain complications • Traumatic brain injury • Vestibular dysfunction

Documentation Requirements

The medical records submitted for review should document that medical necessity criteria are met. The record should include:

- History and physical supporting the diagnosis submitted

AND

- Documentation of completion of 12 weeks of ANY of the following home-based therapies without improvement of symptoms, if applicable:
  - Push-up exercises using an accommodative target
  - Push-up exercises with additional base-out prisms
  - Jump to near convergence exercises, stereogram convergence exercises
  - Stereogram convergence exercises
  - Recession from a target
  - Maintaining convergence for 30-40 seconds

Coding

Code	Description
CPT	
92065	Orthoptic training
92066	Orthoptic training; under supervision of a physician or other qualified health care professional
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility (when used for neuro-visual rehabilitation)
97530	Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes (when used for neuro-visual rehabilitation)

Code	Description
HCPCS	
V2799	Vision service, miscellaneous

Note: CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).

Related Information

Additional Information

This policy addresses office-based orthoptic training. It does not address standard vision therapy with lenses, prisms, filters, or occlusion (i.e., for treatment of amblyopia or acquired esotropia prior to surgical intervention).

Up to 12 sessions of office-based vergence/accommodative therapy, typically performed once a week, has been shown to improve symptomatic convergence insufficiency in children aged 9 to 17 years. If individuals remain symptomatic after 12 weeks of orthoptic training, alternative interventions should be considered.

A diagnosis of convergence insufficiency is based on asthenopic symptoms (sensations of visual or ocular discomfort) at near point combined with difficulty sustaining convergence.

Convergence insufficiency and stereoacuity are documented by:

- Exodeviation at near vision at least 4 prism diopters greater than at far vision; **AND**
- Insufficient positive fusional vergence at near (positive fusional vergence <15 prism diopters blur or break) on positive fusional vergence testing using a prism bar; **AND**
- Near point of convergence break of more than 6 cm; **AND**
- Appreciation by the individual of at least 500 seconds of arc on stereoacuity testing

Benefit Application

Some member contracts do not have benefits to cover vision therapy. Refer to member contract language for benefit determination on vision therapy.

Orthoptic eye exercises may be offered by orthoptists, optometrists, or ophthalmologists.

If the request is for individual outpatient physical medicine and rehabilitation therapeutic procedures for treatment with vision therapy or neurovisual (optometric) rehabilitation, then these requests would be reviewed by Care Management.

If the request is for individual outpatient physical medicine rehabilitation-physical therapy and/or occupational therapy therapeutic procedures that are unrelated to vision therapy or neurovisual (optometric) rehabilitation, see the member contract to determine medical necessity review requirements. Please contact Customer Service to check the member's contract.

Consideration of Age

The age of office-based vergence/accommodative therapy discussed in Additional Information is based on Convergence Insufficiency Treatment Trial (CITT), a randomized clinical trial of 221 children age 9 to 17. This trial was conducted at multiple centers and funded by the National Eye Institute, a component of the National Institutes of Health (PMID 18852411).

Evidence Review

Description

Orthoptic training refers to techniques designed to correct accommodative and convergence insufficiency (or convergence dysfunction). Regimens may include push-up exercises using an accommodative target of letters, numbers, or pictures; push-up exercises with additional base-out prisms; jump-to-near convergence exercises; stereogram convergence exercises; and/or recession from a target. In addition to its use to treat convergence insufficiency, orthoptic training has been investigated as a treatment for attention deficient disorders, dyslexia, and dysphasia.

Background

Convergence Insufficiency

Convergence insufficiency is a binocular vision disorder associated with defects in the eyes' ability to turn inward toward each other (e.g., when looking at near objects). The diagnosis of convergence insufficiency is made when individuals have a remote near point of convergence or difficulty in sustaining convergence in conjunction with sensations of visual or ocular discomfort at near vision. Symptoms of this common condition may include eyestrain, headaches, blurred vision, diplopia, sleepiness, difficulty concentrating, movement of print, and loss of comprehension after short periods of reading or performing close activities. Prism reading glasses, home therapy with pencil push-ups, and office-based vision therapy and orthoptics have been evaluated for the treatment of convergence insufficiency.

Treatment

Orthoptic training refers to techniques designed to correct accommodative and convergence insufficiency (or convergence dysfunction), which may include push-up exercises using an accommodative target of letters, numbers, or pictures; push-up exercises with additional base-out prisms; jump-to-near convergence exercises; stereogram convergence exercises; and recession from a target.[1] A related but distinct training technique is behavioral or perceptual vision therapy, in which eye movement and eye-hand coordination training techniques are used to improve learning efficiency by optimizing visual processing skills.

In addition to its use in the treatment of accommodative and convergence dysfunction, orthoptic training is being investigated for the treatment of attention deficient disorders, dyslexia, dysphasia, and reading disorders.

Dyslexia and Learning Disabilities

Some learning disabilities, particularly those in which reading is impaired, have been associated with deficits in eye movements and/or visual tracking. For example, many dyslexic individuals may have an unstable binocular vision and report that letters appear to move around, causing visual confusion. Dyslexia is a neuro-developmental condition that causes reading difficulties in 5% to 10% of children (particularly boys). It is characterized by a deficiency in processing the phonological component of language that makes up written and spoken words. Proponents of

vision therapy propose that many dyslexics have impaired development of the magnocellular component of the visual system which is responsible for timing visual events when reading. Stein (2000) theorized that poor control of eye movements may cause unstable binocular fixation with unsteady vision and may explain why some individuals report that words move around on a page for them.

Because dyslexia is a language based disorder, treatment should be directed at this etiology. Vision problems can interfere with the process of reading, but children with dyslexia or related learning disabilities have been found to have the same visual function and ocular health as children without these conditions. There is insufficient scientific evidence currently to support the theory that certain eye or visual problems can cause or increase the severity of learning disabilities. 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 are not supported by scientific evidence.

Neuro-Visual (Optometric) Rehabilitation

Neuro-visual therapy is proposed as a nonsurgical individualized treatment designed to correct visual-motor or visual cognitive deficits. The therapy is intended to assist in developing new neurological pathways related to the eyes and visual perceptions. Rehabilitation over multiple sessions is theorized to help learning disabilities, reading, attention deficit disorders, eye-hand coordination and balance following brain injuries. Neurovisual rehabilitation is purported to enhance vision capabilities, reduce visual stress, and rehabilitate vision problems.

Summary of Evidence

For individuals who have convergence insufficiency who receive office-based orthoptic training, the evidence includes a TEC Assessment, systematic reviews, several randomized controlled trials (RCTs), and nonrandomized comparative studies. Relevant outcomes are symptoms and functional outcomes. The most direct evidence on office-based orthoptic training comes from a 2008 RCT that demonstrated that office-based vision or orthoptic training improves symptoms of convergence insufficiency in a greater percentage of individuals than a home-based vision exercise program consisting of pencil push-ups or home computer vision exercises. Subgroup analyses of this RCT demonstrated improvements in accommodative vision, parental perception of academic behavior, and specific convergence insufficiency-related symptoms. However, in

this trial as in others, the home-based regimen did not include the full range of home-based therapies, which may have biased results in favor of the orthoptic training. Another RCT published in 2019 did not find a difference in symptoms of convergence insufficiency between office-based orthoptic training plus home exercises and office-based placebo therapy plus home exercises, possibly due to notable improvements in symptoms in the placebo group. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have learning disabilities who receive office-based orthoptic training, the evidence includes nonrandomized comparative and noncomparative studies. Relevant outcomes are functional outcomes. Studies have not directly demonstrated improvements in reading or learning outcomes with orthoptic training. At least two earlier studies that addressed other types of vision therapies have reported mixed improvements in reading. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Additional Information

Clinical input was sought to help determine whether the use of orthoptic training for individuals with convergence insufficiency or learning disabilities would provide an improvement in net health outcome and whether the use is consistent with generally accepted medical practice. In response to requests, input was received from 4 physician specialty societies (5 reviewers) and 3 academic medical centers while this policy was under review in 2011.

Clinical input supported the use of office-based orthoptic training when home-based therapy has failed. Therefore, orthoptic training may be considered medically necessary in patients with convergence insufficiency whose symptoms have failed to improve with a home-based treatment trial of at least 12 weeks. Home-based therapy should include push-up exercises using an accommodative target, push-up exercises with additional base-out prisms, jump-to-near convergence exercises, stereogram convergence exercises, recession from a target, and maintaining convergence for 30 to 40 seconds.

Neuro-Visual (Optometric) Rehabilitation

There is a limited body of evidence addressing vision therapy in general and neurovisual rehabilitation specifically in children following brain injuries.

There is insufficient published evidence to assess the safety or impact on health outcomes or individual management regarding the use of neurovisual rehabilitation following brain injuries in children.

Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this review are listed in **Table 1**.

Table 1. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
Ongoing			
NCT03908112	Interventions for Convergence Insufficiency in Concussed Children (ICONICC)	264	March 2025

NCT: national clinical trial

Clinical Input Received from Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from four physician specialty societies (five reviewers) and three academic medical centers while this policy was under review in 2011. Although input supported the use of office-based orthoptic training when home-based therapy had failed, some reviewers indicated that home-based therapy would typically include more exercises than pencil push-ups. Recommended were push-up exercises using an accommodative target; push-up exercises with additional base-out prisms; jump to near convergence exercises; stereogram convergence exercises; recession from a target; and maintaining convergence for 30 to 40 seconds.

Practice Guidelines and Position Statements

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the policy conclusions.

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Academy of Pediatrics et al

In 2009 (reaffirmed in 2014 [25]), the American Academy of Pediatrics, American Academy of Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus, and the American Association of Certified Orthoptists issued a joint policy statement on pediatric learning disabilities, dyslexia, and vision. For vision therapy, the statement concluded:

> Currently, there is no adequate scientific evidence to support the view that subtle eye or visual problems cause learning disabilities. Furthermore, the evidence does not support the concept that vision therapy or tinted lenses or filters are effective, directly or indirectly, in the treatment of learning disabilities. Thus, the claim that vision therapy improves visual efficiency cannot be substantiated. Diagnostic and treatment approaches that lack scientific evidence of efficacy are not endorsed or recommended.

In 2011, these same four associations also published a joint technical report on learning disabilities, dyslexia, and vision.[1] This report concluded:

> There is inadequate scientific evidence to support the view that subtle eye or visual problems cause or increase the severity of learning disabilities… 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.

Medicare National Coverage

There is no national coverage determination.

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History

Date	Comments
07/01/18	New policy, approved June 12, 2018, effective October 5, 2018. This policy replaces policy 9.03.03 Orthoptic Training for the Treatment of Vision or Learning Disabilities. Orthoptic training or vision therapy policy statement changed from not medically necessary to investigational for the treatment of learning and reading disabilities, including dyslexia. Policy statements added as investigational: visual disorders other than convergence insufficiency such as, exotropia, nystagmus, convergence excess, divergence insufficiency, stroke or brain injury with visuospatial deficit, hemispatial neglect, or visual loss. Visual perceptual training, vision restoration therapy, and neurovisual (optometric) rehabilitation policy statements added as investigational.

Date	Comments
09/21/18	Minor update. Added Consideration of Age statement.
06/01/19	Annual Review, approved May 7, 2019. Policy updated with literature review through January 2019; no references added. Policy statements unchanged.
06/01/20	Annual Review, approved May 21, 2020. Policy updated with literature review through January 2020; practice guidelines section updated. References added. Policy statements unchanged.
06/01/21	Annual Review, approved May 20, 2021. Policy updated with literature review through January 13, 2021; references added and some references deleted. Policy statements unchanged.
01/01/22	Coding update, updated coding description for CPT code 92065.
06/01/22	Annual Review, approved May 23, 2022. Policy updated with literature review through December 20, 2021; References added. Policy statement unchanged.
01/01/23	Coding update. Added new CPT code 92066.
06/01/23	Annual Review, approved May 5, 2023. Policy updated with literature review through December 19, 2022; no references added. References removed. Policy title changed from "Orthoptic Training, Vision Therapy, Visual Perceptual Training, Vision Restoration Therapy, and Neuro-visual Rehabilitation" to "Orthoptic Training for the Treatment of Vision or Learning Disabilities." Removed policy statements on vision perceptual training, vision restoration therapy, and list of other visual disorders for which orthoptic eye exercises or vision therapy are considered investigational. Changed the wording from "patient" to "individual" throughout the policy for standardization.
06/01/24	Annual Review, approved May 13, 2024. Policy updated with literature review through January 15, 2024; no references added. Clarified that learning and reading disabilities could also include attention deficient disorders and dysphasia; policy intent unchanged, other policy statements unchanged.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.