MEDICAL POLICY – 9.03.508
Orthoptic and Vision Therapy, Visual Perceptual Training, Vision Restoration Therapy, and Neurovisual Rehabilitation

BCBSA Ref. Policy: 9.03.03
Effective Date: June 1, 2019
Last Revised: May 7, 2019
Replaces: 9.03.03
RELATED MEDICAL POLICIES: None

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).

<table>
<thead>
<tr>
<th>Service</th>
<th>Medical Necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office-based vergence / accommodate therapy</strong></td>
<td><strong>Office-based vergence/accommodative therapy</strong> may be considered medically necessary when:</td>
</tr>
<tr>
<td></td>
<td>• The patient has a diagnosis of symptomatic convergence insufficiency</td>
</tr>
<tr>
<td></td>
<td><strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• At least 12 weeks of home-based therapies, consisting of any one of the following, have been completed with no improvement:</td>
</tr>
<tr>
<td></td>
<td>o Push-up exercises using an accommodative target</td>
</tr>
<tr>
<td></td>
<td>o Push-up exercises with additional base-out prisms</td>
</tr>
<tr>
<td></td>
<td>o Jump-to-near convergence exercises</td>
</tr>
<tr>
<td></td>
<td>o Stereogram convergence exercises</td>
</tr>
<tr>
<td></td>
<td>o Recession from a target</td>
</tr>
<tr>
<td></td>
<td>o Maintaining convergence for 30-40 seconds</td>
</tr>
<tr>
<td></td>
<td><em>Note:</em> See <strong>Additional Information</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service</th>
<th>Investigational</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Orthoptic training (eye exercises) or vision therapy</strong></td>
<td>Orthoptic training (eye exercises) or vision therapy is considered investigational for the treatment of learning and reading disabilities, including dyslexia.</td>
</tr>
<tr>
<td><strong>Orthoptic eye exercises or vision therapy</strong></td>
<td>Orthoptic eye exercises or vision therapy are investigational for all other conditions, including but not limited to the following:</td>
</tr>
<tr>
<td></td>
<td>• Slow reading</td>
</tr>
<tr>
<td></td>
<td>• Visual disorders other than convergence insufficiency such as:</td>
</tr>
<tr>
<td></td>
<td>o Exotropia (eye deviates outward) without convergence insufficiency</td>
</tr>
<tr>
<td></td>
<td>o Nystagmus (involuntary movement of the eyeballs)</td>
</tr>
<tr>
<td></td>
<td>o Convergence excess (esotropia is greater for near vision than far vision)</td>
</tr>
<tr>
<td></td>
<td>o Divergence insufficiency</td>
</tr>
<tr>
<td>Service</td>
<td>Investigational</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>o Divergence excess</td>
</tr>
<tr>
<td></td>
<td>o Stroke or traumatic brain injury with visuospatial deficit, hemispatial neglect, or visual loss</td>
</tr>
<tr>
<td>Visual perceptual training</td>
<td>Visual perceptual training is investigational for the treatment of perceptual dysfunctions such as the following:</td>
</tr>
<tr>
<td></td>
<td>• Any type of learning disability</td>
</tr>
<tr>
<td></td>
<td>• Language disorders, including developmental delay</td>
</tr>
<tr>
<td></td>
<td>• All other indications</td>
</tr>
<tr>
<td>Vision restoration therapy</td>
<td>Vision restoration therapy is investigational for the treatment of visual field deficits due to the following:</td>
</tr>
<tr>
<td></td>
<td>• Ischemic optic neuropathy</td>
</tr>
<tr>
<td></td>
<td>• Neurotrauma</td>
</tr>
<tr>
<td></td>
<td>• Stroke</td>
</tr>
<tr>
<td></td>
<td>• All other indications</td>
</tr>
<tr>
<td>Neuro-visual (optometric) rehabilitation (may see as 97110, 97530)</td>
<td>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:</td>
</tr>
<tr>
<td></td>
<td>• Cerebrovascular accident/stroke</td>
</tr>
<tr>
<td></td>
<td>• Concussion</td>
</tr>
<tr>
<td></td>
<td>• Encephalopathy</td>
</tr>
<tr>
<td></td>
<td>• Post-surgical brain complications</td>
</tr>
<tr>
<td></td>
<td>• Traumatic brain injury</td>
</tr>
<tr>
<td></td>
<td>• Vestibular dysfunction</td>
</tr>
</tbody>
</table>

**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
  - Recession from a target
**Documentation Requirements**

- Maintaining convergence for 30-40 seconds

**Coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT</td>
<td></td>
</tr>
<tr>
<td>92065</td>
<td>Orthoptic and/or pleoptic training, with continuing medical direction and evaluation</td>
</tr>
<tr>
<td>97110</td>
<td>Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility</td>
</tr>
<tr>
<td>97530</td>
<td>Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes</td>
</tr>
<tr>
<td>HCPCS</td>
<td></td>
</tr>
<tr>
<td>V2799</td>
<td>Vision service, miscellaneous</td>
</tr>
</tbody>
</table>

**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**

**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, visual perceptual training, vision restoration 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, visual perceptual training, vision restoration 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.

Additional Information

This policy addresses office-based orthoptic training. It does not address standard vision therapy with lenses, prisms, filters, or occlusion (ie, 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 ages 9 to 17 years. If patients 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 is 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 less than 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 patient of at least 500 seconds of arc on stereoacuity testing

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).
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 of 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 (eg, when looking at near objects). The diagnosis of convergence insufficiency is made when patients 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.

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 persons may have an unstable binocular vision and report that letters appear to move around, causing visual confusion.
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

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 patients 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.
**Nystagmus**

Nystagmus is characterized by rapid, involuntary, back-and-forth oscillations of the eye, usually affecting both eyes, and may be congenital or acquired. (Dell’osso, 1991).

**Convergence Excess**

Convergence excess defined by the American Optometric Association is “a sensory-motor anomaly of the binocular vision system, characterized by a tendency for the eyes to overconverge at near.” It describes an eye muscle imbalance that tends to make the eyes turn inward and may lead to headaches, blurred vision and the inability to read, focus or do close work comfortably.

**Visual Perceptual Training/Therapy**

Visual perceptual training is a psychoeducational intervention proposed to treat learning disabilities. It was developed to treat visual-motor or perceptual-cognitive deficiencies that are claimed to contribute to delay in speech and language development in children. The Handbook of Visual Perceptual Training (the Handbook) defines visual perceptual disabilities 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.” Visual perceptual training may include “motor rhythm activities, body image training, spatial and directional relationships.” (Cunningham and Reagan, 1972)

Visual perceptual training is not the same as vision therapy/orthoptic training, even though there may be similar aspects in each form of training/therapy. Vision therapy or orthoptic training is eye exercises that are generally provided and monitored by an optometrist and are directed at correcting specific eye movements. Visual perceptual training may be provided by psychologists or behavioral health providers, or occupational therapists and is directed at visual perceptual disorders that supposedly affect one’s learning ability. Individualized programs that usually occur for thirty hours over a six-week time period center around five main activities: coordination of eye-motor movements, distinguishing foreground from background, visual memory, spatial position, and relationship to space.

Learning disabilities or disorders are an inability to acquire, retain, or use specific skills or information. Reading disorders are the most common subset of the learning disabilities. Treatment of learning disabilities generally includes specialized educational and tutoring
approaches; teaching learning skills by building on a child’s abilities and strengths at the same time as correcting and compensating for any disability or weaknesses.

**Visual Restoration Therapy (VRT)**

Vision restoration therapy (VRT), a home-based program, targets the vision center of the brain and is meant to improve visual function in patients with visual field deficits that are a result of brain injury or stroke. Patients use a computer screen to focus on a displayed central point and respond each time they see a light stimuli appear. The light stimuli are presented in the area which is most likely to recover visual function, an area that should change as therapy progresses and vision is improved. (Nova Vision).

**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 use office-based orthoptic training, the evidence includes a TEC Assessment, several randomized controlled trials, and nonrandomized comparative studies. Relevant outcomes are symptoms and functional outcomes. The most direct evidence on office-based orthoptic training comes from a 2008 randomized controlled trial that demonstrated office-based vision or orthoptic training improves symptoms of convergence insufficiency in a greater percentage of patients than a home-based vision exercise program consisting of pencil push-ups or home computer vision exercises. Subgroup analyses of this randomized controlled trial 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. The evidence is insufficient to determine the effects of the technology on health outcomes.
For individuals who have learning disabilities who receive office-based orthoptic training, the evidence includes a TEC Assessment as well as nonrandomized comparative and noncomparative studies. Relevant outcomes are functional outcomes. A 1996 TEC Assessment did not find evidence that orthoptic training improved outcomes for individuals with learning disabilities. Since that publication, peer-reviewed studies have not directly demonstrated an improvement 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 the effects of the technology on health outcomes.

**Vision Therapy for Nystagmus**

No well-designed clinical trials evaluating the use of vision therapy for nystagmus were identified.

**Vision Therapy for Convergence Excess**

For individuals who have convergence excess, the evidence includes a retrospective case series published in 1997 (Gallaway and Scheiman) of 83 patients seen over a 3 year period treated with vision therapy. The subjects had a mean age of 11.8 years (range of 7 to 32 years). The therapy consisted of home therapy and office visits. The mean number of vision therapy sessions was 18.5 (range of 9 to 32). Statistically and clinically significant changes in direct and indirect measures of negative fusional vergence were observed. Total elimination of symptoms was reported by 84% of the patients. However, the design of the study and possible patient selection bias limit the support of these findings.

**Vision Therapy for Divergence Insufficiency**

No well-designed clinical trials evaluating the use of vision therapy for divergence insufficiency were identified.
**Vision Therapy for Divergence Excess**

No well-designed clinical trial evaluating the use of vision therapy for divergence excess were identified.

**Vision Therapy for Stroke and Traumatic Brain Injury**

A systematic review conducted by Hunt et al in 2016 reviewed evidence in oculomotor-based vision assessment in individuals recovering from a mild traumatic brain injury (mTBI). The objectives were to identify changes in the oculomotor-based vision following mTBI, differentiate methods of assessment, assess the level and quality of evidence, and determine clinical recommendations, if warranted. 20 articles met the inclusion criteria of having a mild traumatic brain injury (mTBI) and an assessment of oculomotor-based vision was performed. Findings suggested that measurements of saccades, smooth pursuit, and vergence were useful in detecting changes in mTBI cases. Assessment methods used were tracker protocols, optometric assessment, and the King-Devick test. The authors concluded the evidence was insufficient to warrant clinical recommendations. More research is needed to develop reliable, valid and clinically useful assessment protocols. Three RCTs were performed by Thiagarajan and Ciuffreda in 2013 and 2014 evaluating vision therapy after traumatic brain injury. These trials showed improvement with the use of vision therapy but only consisted of 12 patients.

For individuals who have had a stroke, the evidence includes a matched-pair RCT. Subjects were matched according to their functional activity level and assigned to a control (n=12 or experimental group (n=12). Each group received task-specific activities for 4 weeks. van Wyk et al in 2014 assessed the effect of saccadic eye movement training with visual scanning exercises (VSEs) integrated with task-specific activities on unilateral spatial neglect (USN) post stroke. Assessments were conducted weekly over 4 weeks. A statistically significant difference was noted on the King-Devick Test (P=.021), Star Cancellation Test (P= .016), and Barthel Index (P= .004). The authors concluded that intensive saccadic eye movement training with VSE integrated with task-specific activities had a significant effect on USN post-stroke. However, long-term follow-up and further studies are needed with larger patient populations to verify these results.

Pollock et al (2011) in a Cochrane review of thirteen studies, evaluated the effects of interventions for visual field defects after stroke. There were 344 randomized participants, of which 285 were post stroke. Only six of the studies however, compared the effect of an intervention with a control group and therefore were included in the review. The authors thus concluded that there was insufficient evidence to reach generalizable conclusions regarding the
benefits of visual prisms (substitutive intervention) for patients with visual field defects after stroke.

**Vision Therapy for Dyslexia and Other Reading and Learning Disabilities**

Based on review of the peer reviewed medical literature, there is a lack of quality evidence on the efficacy of orthoptic training/vision therapy for treating dyslexia and other learning and reading disabilities. Small RCTs of vision therapy have been published, but the results were inconsistent and the studies were flawed by design limitations of small sample size and poorly defined patient criteria.

The American Academy of Pediatrics does not support its use. They concluded that vision therapy is ineffective in the treatment of learning disabilities and report that the scientific evidence does not substantiate the claim that visual therapy improves visual efficiency. Therefore, they state that diagnostic treatment approaches that are not backed by scientific evidence cannot be endorsed or recommended.

The American Academy of Ophthalmology policy statement regarding learning disabilities, dyslexia and vision states that treatment approaches for dyslexia and other learning disabilities that lack scientific evidence of efficacy such as behavioral vision therapy, eye muscle exercises, or colored filters and lenses are not endorsed or recommended.

**Visual Perceptual Therapy**

Based on review of the medical literature there is insufficient evidence in the peer reviewed literature to conclude that visual perceptual training is effective for the treatment of learning disabilities or disorders. The American Association for Pediatric Ophthalmology and Strabismus (AAPOS) state, “There is no scientific evidence to suggest that any ophthalmologic manipulation or therapy, including vision training, orthoptic exercises, visual perceptual training, or colored spectacle lenses will improve academic performance in children with learning disabilities.”

The available data supporting the use of visual perceptual therapy to treat learning or developmental disabilities is weak and inconclusive, and derived primarily from uncontrolled or poorly controlled studies with significant methodological flaws. There are no well-designed clinical trials that indicate visual perceptual therapy is an effective treatment for learning disabilities or disorders.
Vision Restoration Therapy

Mueller et al (2007) performed a clinical observational analysis of visual fields of 302 patients before and after treatment with computer-based VRT over a 6 month time period. The visual field defects were due to ischemia, hemorrhage, head trauma, tumor removal, or anterior ischemic optic neuropathy. The primary outcome measurement was visual field assessment with super-threshold perimetry. The patients’ ability to detect super-threshold stimuli in the previously deficient area of the visual field was improved by 17.2% with VRT. Notable improvements were seen in 70.9% of the patients. Conventional perimetry validated visual field enlargements and patient testimonials confirmed the improvement in daily visual functions. However, the lack of a control group limits the validity of the results of this study.

McFadzean (2006) reviewed the controversial findings for NovaVision’s VRT. It is claimed that NovaVision’s computerized therapy results in expansion of the visual field in optic nerve and occipital lesions, but the outcome has been challenged due to unsatisfactory perimetric control of central fixation and disputed mechanisms. The author notes that NovaVision’s VRT should not gain clinical acceptance in light of unacceptable perimetric standards and equivocal results.

There is insufficient evidence of efficacy for this treatment. The number of participants in the few available published studies is small and follow-up time is short.

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 patient management regarding the use of neurovisual rehabilitation following brain injuries in children.

Ongoing and Unpublished Clinical Trials

Some currently unpublished trials that might influence this review are listed in Table 1.
Table 1. Summary of Key Trials

<table>
<thead>
<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02207517</td>
<td>Convergence Insufficiency Treatment Trial - Attention and Reading Trial (CITT-ART)</td>
<td>324</td>
<td>Apr 2019</td>
</tr>
<tr>
<td>Unpublished</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT01515943</td>
<td>Effectiveness of Home-Based Therapy for Symptomatic Convergence Insufficiency</td>
<td>204</td>
<td>Jun 2015 (completed)</td>
</tr>
<tr>
<td>NCT02771106</td>
<td>Neuroimaging and Neurovision Rehabilitation of Oculomotor Dysfunction in Mild Traumatic Brain Injury</td>
<td>30</td>
<td>January 2019</td>
</tr>
<tr>
<td>NCT03160131</td>
<td>Rehabilitation of Visual Function After Brain Injury</td>
<td>25</td>
<td>July 2020 (Not Yet Recruiting)</td>
</tr>
</tbody>
</table>

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 4 physician specialty societies (5 reviewers) and 3 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

*American Academy of Pediatrics et al*

In 2009, 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.\(^2\) 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 4 associations also published a joint technical report on learning disabilities, dyslexia, and vision.\(^1\) The 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.

---

**References**


<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>07/01/18</td>
<td>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.</td>
</tr>
<tr>
<td>09/21/18</td>
<td>Minor update. Added Consideration of Age statement.</td>
</tr>
<tr>
<td>06/01/19</td>
<td>Annual Review, approved May 7, 2019. Policy updated with literature review through January 2019; no references added. Policy statements unchanged.</td>
</tr>
</tbody>
</table>

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2019 Premera All Rights Reserved.

**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.
Discrimination is Against the Law

Premera Blue Cross complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. Premera does not exclude people or treat them differently because of race, color, national origin, age, disability or sex.

Premera:
• Provides free aids and services to people with disabilities to communicate effectively with us, such as:
  • Qualified sign language interpreters
  • Written information in other formats (large print, audio, accessible electronic formats, other formats)
• Provides free language services to people whose primary language is not English, such as:
  • Qualified interpreters
  • Information written in other languages

If you need these services, contact the Civil Rights Coordinator.

If you believe that Premera has failed to provide these services or discriminated in another way on the basis of race, color, national origin, age, disability, or sex, you can file a grievance with:
Civil Rights Coordinator - Complaints and Appeals
PO Box 91102, Seattle, WA 98111
Toll free 855-332-4535, Fax 425-918-5592. TTY 800-842-5357
Email AppealsDepartmentInquiries@Premera.com

You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Civil Rights Coordinator is available to help you.

You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights, electronically through the Office for Civil Rights Complaint Portal, available at https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, or by mail or phone at:
U.S. Department of Health and Human Services
200 Independence Avenue SW, Room S09F, HHH Building
Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD)
Complaint forms are available at

Getting Help in Other Languages

This Notice has Important Information. This notice may have important information about your application or coverage through Premera Blue Cross. There may be key dates in this notice. You may need to take action by certain deadlines to keep your health coverage or help with costs. You have the right to get this information and help in your language at no cost.
Call 800-722-1471 (TTY: 800-842-5357).

Arabic (Arabic):
لا يمكن منحك هذه المعلومات علماً أن تأتي هذه المعلومات من مصادر موثوقة.

Chinese (Chinese):
本通知有重要的訊息。本通知可能有關於您透過 Premera Blue Cross 提交的申請或保險的重要訊息。本通知內可能有重要な日記。您可能需要在截止日期之前採取行動。以保留您的健康保險或費用補貼。您有權利免費以您的母語得到本訊息和幫助。請撥電話 800-722-1471 (TTY: 800-842-5357).

Oromo (Cushite):
Oromo 800-722-1471 (TTY: 800-842-5357).