MEDICAL POLICY – 9.03.03
Orthoptic Training for the Treatment of Vision or Learning Disabilities

BCBSA Ref. Policy: 9.03.03
Effective Date: July 1, 2017
Last Revised: June 6, 2017
Replaces: N/A

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
Orthoptic training may be considered medically necessary when:
- The patient has a diagnosis of symptomatic convergence insufficiency
- At least 12 weeks of home-based therapies, consisting of any one of the following, have been completed with no 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

Orthoptic training is considered not medically necessary for the treatment of learning disabilities.

Orthoptic training is investigational for all other conditions not listed in the Medical Necessity section above, including but not limited to the following:
- Slow reading
- Visual disorders other than convergence insufficiency

**Coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>CPT</td>
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<tr>
<td>92065</td>
<td>Orthoptic and/or pleoptic training, with continuing medical direction and evaluation</td>
</tr>
<tr>
<td>HCPCS</td>
<td></td>
</tr>
<tr>
<td>V2799</td>
<td>Vision service, miscellaneous</td>
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</tbody>
</table>
Related Information

This policy addresses office-based orthoptic training, including vergence/accommodative therapy. This policy 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 per week, has been shown to improve symptomatic convergence insufficiency in children aged 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 (PFV) less than 15 prism diopters blur or break) on PFV testing using a prism bar

AND

- Near point of convergence (NPC) break of more than 6 cm

AND

Appreciation by the patient of at least 500 seconds of arc on stereoacuity testing

Evidence Review
Description

Orthoptic training refers to techniques designed to correct accommodative and convergence dysfunction/convergence insufficiency. 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. Orthoptic training is used to treat convergence insufficiency and has also been investigated as a treatment of attention deficient disorders, dyslexia, and dysphasia.

Clinical input from academic medical centers and physician specialty societies have 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.

Summary of Evidence

The evidence for use of office-based orthoptic training in individuals who have convergence insufficiency includes a TEC Assessment, 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 office-based vision/orthoptic training improves symptoms of convergence insufficiency in more patients than a home-based vision exercise program consisting of pencil push-ups or home computer vision exercises. Subanalyses 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. The evidence is insufficient to determine the effects of the technology on health outcomes.

The evidence for office-based orthoptic training in individuals who have learning disabilities includes a TEC Assessment and 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 2 earlier studies that addressed other types of vision therapies were mixed in reporting improvements in reading. The evidence is insufficient to determine the effects of the technology on health outcomes. Therefore orthoptic training is considered not medically necessary to treat learning disorders.

**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>
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<tr>
<td><strong>Ongoing</strong></td>
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<tr>
<td>NCT02207517</td>
<td>Convergence Insufficiency Treatment Trial - Attention and Reading Trial (CITT-ART)</td>
<td>324</td>
<td>Apr 2019</td>
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<tr>
<td><strong>Unpublished</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>NCT01515943</td>
<td>Effectiveness of Home-Based Therapy for Symptomatic Convergence Insufficiency</td>
<td>204</td>
<td>Jun 2015 (completed)</td>
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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 provide appropriate reviewers who collaborate with and make recommendations during this process, 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 2010 to 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 August 2009, the American Academy of Pediatrics (AAP), American Academy of Ophthalmology (AAO), American Association for Pediatric Ophthalmology and Strabismus (AAPOS), and the American Association of Certified Orthoptists (AACO) issued a joint policy statement on pediatric learning disabilities, dyslexia, and vision. For vision therapy, the policy 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, AAP, AAO, AAPOS, and AACO also published a joint technical report on learning disabilities, dyslexia, and vision. 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 (NCD). In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.

References


## History

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
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<tbody>
<tr>
<td>02/10/15</td>
<td>New Policy. Add to Vision section. Policy created with literature search through December 4, 2013; references 12 and 18 added. Policy statements unchanged.</td>
</tr>
<tr>
<td>03/31/15</td>
<td>Annual Review. Policy updated with literature review through December 3, 2014; references 22 and 25 added. Policy statements unchanged. ICD-9 and ICD-10 diagnosis and procedure codes removed; these are not utilized in policy adjudication.</td>
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