Protocol

Office-Based Orthoptic Training for the Treatment of Vision or Learning Disabilities

(90303)

(Formerly Orthoptic Training for the Treatment of Vision or Learning Disabilities)

Medical Benefit		**Effective Date**: 10/01/20	**Next Review Date**: 01/21
Preauthorization	Yes	**Review Dates**: 11/07, 11/08, 09/09, 09/10, 01/11, 01/12, 01/13, 01/14, 01/15, 01/16, 01/17, 01/18, 01/19, 01/20, 07/20	

Preauthorization is required.

The following protocol contains medical necessity criteria that apply for this service. The criteria are also applicable to services provided in the local Medicare Advantage operating area for those members, unless separate Medicare Advantage criteria are indicated. If the criteria are not met, reimbursement will be denied and the patient cannot be billed. Please note that payment for covered services is subject to eligibility and the limitations noted in the patient's contract at the time the services are rendered.

Populations	Interventions	Comparators	Outcomes
Individuals: • With convergence insufficiency	Interventions of interest are: • Office-based orthoptic training	Comparators of interest are: • Home-based vision exercises	Relevant outcomes include: • Symptoms • Functional outcomes
Individuals: • With learning disabilities	Interventions of interest are: • Office-based orthoptic training	Comparators of interest are: • Standard therapy without orthoptic training	Relevant outcomes include: • Functional outcomes

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 for treating attention deficit disorders, dyslexia, and dysphasia.

SUMMARY OF EVIDENCE

For individuals who have convergence insufficiency who receive 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.

Clinical input obtained in 2011 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.

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 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 the effects of the technology on health outcomes.

POLICY

Office-based vergence/accommodative therapy may be considered **medically necessary** for patients with symptomatic convergence insufficiency if, following a minimum of 12-weeks of home-based therapy (e.g., 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 30-40 seconds), symptoms have failed to improve.

Orthoptic eye exercises are considered **not medically necessary** for the treatment of learning disabilities.

Orthoptic eye exercises are **investigational** for all other conditions, including but not limited to the following:

- Slow reading
- Visual disorders other than convergence insufficiency.

POLICY GUIDELINES

This protocol 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 nine 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 are documented by:

- Exodeviation at near vision at least four 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 six cm; AND
- Appreciation by the patient of at least 500 seconds of arc on stereoacuity testing.

BACKGROUND

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 deficit disorders, dyslexia, dysphasia, and reading disorders.

Services that are the subject of a clinical trial do not meet our Technology Assessment and Medically Necessary Services Protocol criteria and are considered investigational. *For explanation of experimental and investigational, please refer to the Technology Assessment and Medically Necessary Services Protocol.*

It is expected that only appropriate and medically necessary services will be rendered. We reserve the right to conduct prepayment and postpayment reviews to assess the medical appropriateness of the above-referenced procedures. **Some of this protocol may not pertain to the patients you provide care to, as it may relate to products that are not available in your geographic area.**

REFERENCES

We are not responsible for the continuing viability of web site addresses that may be listed in any references below.

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