Draft Revised Policy: Do Not Implement

Orthoptic Training for the Treatment of Vision or Learning Disabilities

DESCRIPTION

NOTE: This policy addresses office-based orthoptic training and does not address standard vision therapy with lenses, prisms, filters, or occlusion.

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 (e.g., pencil, letter, number or picture). To perform this exercise using a pencil, an individual holds the pencil vertically at arm's length with the sharpened tip at the top. The tip of the pencil should be just below eye level. The individual moves the pencil slowly toward the face focusing on the point. When the individual sees two pencils rather than one, the exercise is repeated.

Convergence insufficiency is a binocular vision disorder in which the eyes turn inward toward each other. 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, office-based vision therapy and orthoptics have been evaluated for the treatment of convergence insufficiency.

Convergence insufficiency is diagnosed by:

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

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 unstable binocular vision and report that letters may appear to move around, causing visual confusion. Currently, orthoptic training is being investigated for treatment of attention deficient disorders, dyslexia, dysphasia, and reading disorders.

Orthoptic training is also known as vision training, visual therapy, optometric vision therapy, orthoptics-eye exercises, orthoptic vision therapy, and syntonic optometry.

The proposal is to delete words or statements with a strikethrough.

POLICY

- Office-based orthoptic training for the treatment of symptomatic convergence insufficiency is considered ***medically necessary*** if the medical appropriateness criteria are met. **(See Medical Appropriateness below.)**

- Orthoptic eye exercises for the treatment of learning disabilities are considered ***investigational.***

- Orthoptic eye exercises for all other conditions/disease, including but not limited to, slow reading and visual disorders other than convergence insufficiency is considered ***investigational.***

MEDICAL APPROPRIATENESS

- Orthoptic training is considered medically appropriate if **ALL** the following criteria are met:
    - Office based
    - For the treatment of symptomatic convergence insufficiency
    - ~~Documentation submitted shows that symptoms failed to improve with at least a 12-week home-based orthoptic training session (e.g., pencil 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)~~

IMPORTANT REMINDERS

- Any specific products referenced in this policy are just examples and are intended for illustrative purposes only. It is not intended to be a recommendation of one product over another and is not intended to represent a complete listing of all products available. These examples are contained in the parenthetical e.g. statement.
- We develop Medical Policies to provide guidance to Members and Providers. This Medical Policy relates only to the services or supplies described in it. The existence of a Medical Policy is not an authorization, certification, explanation of benefits or a contract for the service (or supply) that is referenced in the Medical Policy. For a determination of the benefits that a member is entitled to receive under his or her health plan, the Member's health plan must be reviewed. If there is a conflict between the medical policy and a health plan or government program (e.g., TennCare), the express terms of the health plan or government program will govern.

ADDITIONAL INFORMATION

There is insufficient evidence in published studies to state whether orthoptic training for the treatment of vision or learning disabilities other than convergence insufficiency is effective.

SOURCES

Aletaha, M., Daneshvar, F., Mosallaei, M., Bagheri, A., & Khalili, M. R. (2018). Comparison of Three Vision Therapy Approaches for Convergence Insufficiency. Journal of Ophthalmic & Vision Research, 13 (3), 307–314. (Level 1 evidence)

Alvarez, T. L., Scheiman, M., Santos, E. M., Yaramothu, C., & d'Antonio-Bertagnolli, J. V. (2020). Convergence insufficiency neuro-mechanism in adult population study randomized clinical trial: clinical outcome results. *Optometry and Vision Science: official publication of the American Academy of Optometry,* 97 (12), 1061–1069. (Level 2 evidence)

American Academy of Ophthalmology (2014). *Joint statement: Learning disabilities, dyslexia, and vision – reaffirmed 2014.* Retrieved July 18, 2016 from http://www.aao.org/clinical-statement/joint-statement-learning-disabilities-dyslexia-vis.

American Academy of Ophthalmology (2021). *Ophthalmic technology assessment: home- and office-based vergence and accommodative therapies for treatment of convergence insufficiency in children and young adults.* Retrieved January 23, 2026 from http://www.aao.org/education/ophthalmic-technology-assessment/home-office-based-vergence-accommodative-therapies.

American Optometric Association (1998; last revised 2010). *Optometric clinical practice guideline: care of the patient with accommodative and vergence dysfunction.* Retrieved February 3, 2026 from http://www.aoa.org/practice/clinical-guidelines/clinical-practice-guidelines.

Bharadwai, S. R., & Candy, T. R. (2009). Accommodative and vergence responses to conflicting blur and disparity stimuli during development. *Journal of Vision*, 9 (11), 1-18. (Level 3 evidence)

Convergence Insufficiency Treatment Trial Study Group (2008). Randomized clinical trial of treatments for symptomatic convergence insufficiency in children. *Archives of Ophthalmology*, 126 (10), 1336–1349. (Level 1 evidence)

Council on Children with Disabilities, American Academy of Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus. (2011). Joint technical report - learning disabilities, dyslexia, and vision. *Pediatrics*, 127 (3), e818-e856.

Kulp, M., Mitchell, G. L., Borsting, E., Scheiman, M., Cotter, S., Rouse, M., et al. (2009). Effectiveness of placebo therapy for maintaining masking in a clinical trial of vergence/accommodative therapy. *Investigative Ophthalmology & Visual Science*, 50 (6), 2560-2566. (Level 3 evidence)

Ramsay, M., Davidson, C., Ljungblad, M., Tjärnberg, M., Brautaset, R., Nilsson, M. (2014). Can vergence training improve reading in dyslexics? *Strabismus,* 22 (4), 147-51. Abstract retrieved May 16, 2017 from PubMed database.

Scheiman, M., Gwiazda, J., & Li, T. (2011). Non-surgical interventions for convergence insufficiency. *The Cochrane Database of Systematic Reviews,* (3), CD006768. https://doi.org/10.1002/14651858.CD006768.pub2. (Level 2 evidence)

Schieman, M. (2009). Long-term effectiveness of treatments for symptomatic convergence insufficiency in children convergence insufficiency treatment trial study group. *Optometry and Vision Science,* 86 (9), 1096-1103. (Level 3 evidence)

Scheiman, M., Kulp, M. T., Cotter, S. A., Lawrenson, J. G., Wang, L., & Li, T. (2020). Interventions for convergence insufficiency: a network meta-analysis. The Cochrane Database of Systematic Reviews, 12 (12), CD006768. (Level 1 evidence)

Scheiman, M., Rouse, M., Kulp, M. T., Cotter, S., Hertle, R., & Mitchell, G. L. (2009). Treatment of convergence insufficiency in childhood: A current perspective. *Optometry and Vision Science,* 86 (5), 420-428. (Level 2 evidence)

Sreenivasan, V. & Bobier, W. (2014). Increased onset of vergence adaptation reduces excessive accommodation during the orthoptic treatment of convergence insufficiency. *Vision Research,* 111, 105-113. (Level 4 evidence)

EFFECTIVE DATE

ID_BT