



BlueCross BlueShield
of Alabama

Name of Policy:

Visual Perceptual Training

Policy #: 334
Category: Therapy

Latest Review Date: November 2008
Policy Grade: B

Background:

As a general rule, benefits are payable under Blue Cross and Blue Shield of Alabama health plans only in cases of medical necessity and only if services or supplies are not investigational, provided the customer group contracts have such coverage.

The following Association Technology Evaluation Criteria must be met for a service/supply to be considered for coverage:

- 1. The technology must have final approval from the appropriate government regulatory bodies;*
- 2. The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes;*
- 3. The technology must improve the net health outcome;*
- 4. The technology must be as beneficial as any established alternatives;*
- 5. The improvement must be attainable outside the investigational setting.*

Description of Procedure or Service:

Visual Perceptual Training (VPT) is a treatment that has been proposed to treat learning disabilities. In particular, this training was developed to treat visual perceptual and/or visual motor disabilities associated with learning disabilities. In The Handbook of Visual Perceptual Training, visual perceptual disabilities are defined 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.” The authors note that “visual perceptual dysfunction represents an inefficient developmental functioning that is a handicap to cognitive process. It is related to both cognition and emotional development.” It is thought that there is a close relationship between visual perception and the learning process. Visual perception dysfunction has been classified as a learning disability and language disorder. The authors note that concomitant factors of visual perceptual dysfunction may include short attention span, hyperactivity, distractibility, social adjustment difficulties, delayed motor perceptual ability, depressed academic achievement, inadequate body image, and low frustration level.

Visual perception training programs involve an integrated program involving speech and language activities, a wide range of sensory modalities, and visual-motor perceptual activities. These activities include motor rhythm activities, body image training, spatial and directional relationships and should be built upon previous successes and move from concrete to abstract. The Handbook recommends that after detection of the visual perceptual deficit, an individualized program be developed to meet the needs of the child. The activities of the program are grouped into five main headings: coordination of eye-motor movements, distinguishing foreground from background, visual memory, spatial position, and relationship to space. In the development of this program, major emphasis was placed on relating all activities, whether motor, kinesthetic, visual or other, to reading, writing, and arithmetic. The Handbook recommends that a minimal length of time for this training to be 30 hours per child over a six-week period, with the daily period ranging from 30 minutes to an hour, or longer, depending on the child's attention span.

Visual perceptual training should be distinguished from optometric vision therapy. Visual perceptual training is directed toward perceptual dysfunctions that allegedly affect language and learning abilities. Vision therapy is a set of exercises directed toward specific deficiencies in the movements and/or focusing of the eye (e.g., strabismus, convergence insufficiency, esophoria, disorders of accommodation, etc). Patients receive vision therapy to treat visual disturbances that may theoretically cause developmental delays and learning disabilities. Patients may receive vision perception training to remedy developmental delays and learning disabilities without having any identified dysfunction of eye movements or focusing.

Vision therapy is provided by an optometrist. Visual perceptual training is generally performed by psychologists, psychotherapists, or other behavioral health professionals, or by occupational therapists.

Policy:

Visual perceptual training (VPT) does not meet Blue Cross and Blue Shield of Alabama's medical criteria for coverage and is considered *investigational*.

Blue Cross and Blue Shield of Alabama does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Cross and Blue Shield of Alabama administers benefits based on the members' contract and corporate medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

Key Points:

Hallahan and Mercer (2001) published a paper, "Learning Disabilities: Historical Perspectives". They noted that perceptual and perceptual-motor training have been the topic of several research studies. They noted that most of these studies found that, although these programs were sometimes effective in improving perceptual and/or perceptual-motor development, they were ineffective in improving academic performance. They noted that because of the ubiquitous

research-to-practice gap in education, the use of perceptual and perceptual-motor training hung on for a period of time. However, by the mid- 1980s, its use had waned considerably.

Olitsky and Nelson (2003) published a review article on reading disorders in children. They stated that an extensive amount of literature supports the use of perceptual-motor training in the treatment of reading disabilities. However, perceptual-motor training has not been demonstrated to be useful for reading disorders in other studies and review of the scientific merit of studies supporting their efficacy has shown them to be unfounded.

Professional Societies/Organizations

The American Association for Pediatric Ophthalmology and Strabismus (AAPOS) issued a statement on their website entitled “Learning Disabilities: Information for Parents” in 2005. They stated that 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 Committee on Children with Disabilities, American Academy of Pediatrics (AAP) and American Academy of Ophthalmology (AAO), and American Association for Pediatric Ophthalmology and Strabismus (AAPOS) issued a statement entitled “Learning Disabilities, Dyslexia, and Vision: A Subject Review” (1998, 2008). They stated that no scientific evidence supports claims that the academic abilities of children with learning disabilities can be improved with treatments what are based on (1) visual training, including muscle exercises, ocular pursuit, tracking exercises, or training glasses (with or without bifocals or prisms), (2) neurologic organizational training (laterality training, crawling, balance board, perceptual training), or (3) colored lenses. These more controversial methods of treatment may give parents and teachers a false sense of security that a child’s reading difficulties are being addressed, which may delay proper instruction or remediation. The expense of these methods is unwarranted and they cannot be substituted for appropriate educational measures. Claims of improved reading and learning after visual training, neurologic organization training, or use of colored lenses, are almost always based on poorly controlled studies that typically rely on anecdotal information. These methods are without scientific validation.

The American Academy of Ophthalmology (AAO) issued a statement on “Vision Therapy for Learning Disabilities” in 2001. They stated that it seems intuitive that oculomotor abilities and visual perception play a role in learning skills such as reading and writing. However, several studies in the literature demonstrate that eye movements and visual perception are not critical factors in the reading impairment found in dyslexia, but that brain processing of language plays a greater role.

Summary

Visual perceptual training has been proposed as a treatment for learning disabilities or disorders. VPT is considered behavioral training and educational training in nature. Evidence in the published, peer-reviewed scientific literature does not indicate that VPT is a treatment for any type of learning disability or disorder. The available evidence does not support the conclusion that VPT will improve learning skills or treat the underlying cause of the learning disability.

Key Words:

Visual perceptual training (VPT), learning disability

Approved by Governing Bodies:

Not applicable

Benefit Application:

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

ITS: Home Policy provisions apply

AT&T contracts: No special consideration

FEP contracts: FEP does not consider investigational if FDA approved. Will be reviewed for medical necessity.

Wal-Mart: Special benefit consideration may apply. Refer to member's benefit plan.

Pre-certification requirements: Not applicable

Pre-determination requirements: Pre-determinations will be performed as a courtesy review at the request of the physician and/or subscriber.

Coding:

CPT Codes: There are not specific CPT codes to report this service.

References:

1. American Academy of Child and Adolescent Psychiatry. *Practice parameters for the assessment and treatment of children and adolescents with language and learning disorders*. 1998, <http://www.aacap.org/galleries/practicparameters/lang.pdf>.
2. American Academy of Ophthalmology Complementary Therapy Task Force. *Complementary therapy assessment: Vision therapy for learning disabilities*. September 2001, http://one.aa.org/CE/practicguidelines/therapy_content.aspx?cid=8021c013-7e4b-43f3-aa1a-698307ae526c.
3. American Academy of Pediatrics. *Learning disabilities, dyslexia, and vision: A subject review*. Committee on children with disabilities, American Academy of Pediatrics (AAP) and American Academy of Ophthalmology (AAO), American Association for Pediatric Ophthalmology and Strabismus (AAPOS). *Pediatrics* 1998; 102(5): 1214-1219.
4. American Association for Pediatric Ophthalmology and Strabismus. *Learning disabilities: Information for parents*. 2005, <http://www.aapos.org/displaycommon.cfm?an=1&subarticlenbr=107>.
5. American Optometric Association. *Pediatric eye and vision examination*. 2nd ed., St. Louis, MO 2002. <http://www.aoa.org/documents/CPG-2.pdf>.
6. Anderson SW. *Neuropsychologic rehabilitation for visuoperceptual impairments*. *Neurology Clinics*, August 2003; 21(3): 729-740.
7. Beitchman JH and Young AR. *Learning disorders with a special emphasis on reading disorders: A review of the past 10 years*. *Journal of the American Academy Adolescent Psychiatry*, August 1997; 36(8): 1020-1032.
8. Cunningham SA and Reagan CL. *Handbook of visual perceptual training*. Charles C. Thomas Publisher 1972, Springfield, Illinois.

9. Fahle M. *Perceptual learning: Specificity versus generalization*. *Current Opinions Neurobiology*, April 2005; 15(2): 154-160.
10. Grigoriya L, Bernadskaya M, et al. *Visual perceptual training of children with multiple disabilities in Russia*. In: *Proceedings of ICEVI's Xth World Conference. Stepping Forward Together: Families and Professionals as Partners in Achieving an Education for All*. Sao Paulo, Brazil, August 3-8, 1997, <http://www.icevi.org/>.
11. Hallahan DP and Mercer CD. *Educational programming: Dominance of psychological processing and visual perceptual training*. In: *Learning Disabilities: Historical Perspectives*. Learning Disabilities Summit: Building a Foundation for the Future White Papers, Nashville, TN. National Research Center for Learning Disabilities, August 2001, <http://www.nrcl.org/resources/1dsummit/hallahan.pdf>.
12. Hicks C. *Remediating specific reading disabilities: A review of approaches*. *Journal of Research in Reading* 1986; 9(1): 39-55.
13. Keogh BK, et al. *Vision training revisited*. *Journal of Learning Disability*, April 1985; 18(4): 228-236.
14. Kronenberger WG, et al. *Learning disorders*. *Neurology Clinics*, November 2003; 21(4): 941-952.
15. Merck Manuals Online Medical Library. *Learning disabilities*. Merck and Co, August 2007, <http://www.merck.com/mmpe/sec19/ch299/ch299d.html>.
16. National Institute of Neurological Disorders and Strokes (NINDS). *NINDS Dyslexia Information Page*. Updated December 2007, <http://www.ninds.nih.gov/disorders/dyslexia/hyslexia.htm>.
17. National Institute of Neurological Disorders and Strokes (NINDS). *NINDS Learning Disabilities Information Page*. Updated February 2007, <http://www.ninds.nih.gov/disorders/learningdisabilities/learningdisabilites.htm>.
18. Olitsky SE, et al. *Reading disorders in children*. *Pediatric Clinics of North America*, February 2003; 50(1): 213-224.
19. Schoeman OJ. *The therapeutic value of visual-perceptual training and its effect on scholastic achievement*. *South African Medical Journal* 1996; 86(8): 983.
20. Seitz AR, et al. *Seeing what is not there shows the costs of perceptual learning*. *Proceedings National Academy Science USA*, June 2005; 102(25): 9080-9085.
21. Shaywitz SE. *Dyslexia*. *NEJM*, January 1998; 338(5): 307-312.
22. Tannock R. *Learning disorders*. Kaplan & Saddock's Comprehensive Textbook of Psychiatry, Chapter 35. Philadelphia: Lippincot, Williams and Wilkins 2005.

Policy History:

Medical Policy Group, November 2008 (3)

Medical Policy Administration Committee, December 2008

Available for comment December 5, 2008-January 19, 2009

This medical policy is not an authorization, certification, explanation of benefits, or a contract. Eligibility and benefits are determined on a case-by-case basis according to the terms of the member's plan in effect as of the date services are rendered. All medical policies are based on (i) research of current medical literature and (ii) review of common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plans contracts.