Visual Perceptual Training

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Related Coverage Resources

Cognitive Rehabilitation
Occupational Therapy
Vision Therapy/Orthoptics

INSTRUCTIONS FOR USE

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Coverage Policy

Coverage for visual perceptual training varies across plans. Refer to the customer’s benefit plan document for coverage details.

Visual perceptual training is considered experimental, investigational or unproven for ANY indication.

Overview

This Coverage Policy addresses visual perceptual training. Visual perceptual training is generally provided by psychologists, other behavioral health providers, or occupational therapists and is directed toward visual perceptual disorders that purportedly affect the learning ability.

General Background

Visual perceptual training 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 (the Handbook), 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” (Cunningham and Reagan, 1972). It is thought that there is a close relationship between visual perception and the learning process and that visual perception dysfunction has been classified as a learning disability or disorder (Cunningham and Reagan, 1972). The
Handbook notes 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.”

Learning disabilities or disorders involve an inability to acquire, retain or broadly use specific skills or information. The cause of learning disabilities may include abnormalities in the basic processes that are involved in understanding or in using spoken or written language or numerical and spatial reasoning. Learning disorders are generally recognized when the child reaches school age. Reading disorders are the most common subset of the learning disabilities. The treatment usually includes specialized educational approaches and tutoring. The treatment approach is to teach learning skills by building on the child’s abilities and strengths while correcting and compensating for the disability and weaknesses (National Institute of Neurological Disorders and Stroke [NINDS], 2015). Treatment often involves a multi-disciplinary approach involving educators, psychologists, and physicians.

Training programs involving visual perceptual training were developed in the 1960s. In the Handbook, it is noted that visual perceptual training may include “motor rhythm activities, body image training, spatial and directional relationships and should be built upon previous successes and move from concrete to abstract” (Cunningham and Reagan, 1972). The Handbook recommends that after detection of the visual perceptual deficit, an individualized program be developed to meet the needs of the child. The Handbook indicates that 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.” The Handbook states that in the development of this program that “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 be thirty 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 vision therapy/orthoptics. There appear to be aspects of each therapy that are similar. Vision therapy or orthoptics are eye exercises that are generally provided and monitored by an optometrist and are directed at correcting specific eye movements. Visual perceptual training is generally provided by psychologists, other behavioral health providers, or occupational therapists and is directed toward visual perceptual disorders that purportedly affect the learning ability.

**Literature Review**
Insufficient evidence exists in the published, peer-reviewed literature to conclude that visual perceptual training is effective for the treatment of learning disabilities or disorders.

Olitsky and Nelson (2003) in their review article regarding reading disorders in children state that, “An extensive amount of literature supports the use of perceptual-motor training in the treatment of reading disabilities. 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 have shown them to be unfounded.”

**Professional Societies/Organizations**
The American Association for Pediatric Ophthalmology and Strabismus (AAPOS) at their website, in the frequently asked questions section for learning disabilities, state 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.”

In 2011, the American Academy of Pediatrics (AAP) published a joint technical report on learning disabilities, dyslexia, and vision. The report states that, “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. There is no valid evidence that children who participate in vision therapy are more responsive to educational instruction than children who do not participate” (Handler, et al., 2011). This report supports the following 2009 joint statement by the AAP, American Academy of Ophthalmology (AAO), and AAPOS.
A joint statement by the AAP, AAO, and AAPOS (2009, reaffirmed 2014) on learning disabilities, dyslexia, and vision states that, “Currently, there is inadequate scientific evidence to support the view that subtle eye or visual problems, including abnormal focusing, jerky eye movements, misaligned or crossed eyes, binocular dysfunction, visual-motor dysfunction, visual perceptual difficulties, or hypothetical difficulties with laterality or “trouble crossing the midline” of the visual field, cause learning disabilities.” The statement notes that, “scientific evidence does not support the assumption that vision therapy is capable of correcting subtle visual defects, nor does it prove eye exercises or behavioral vision therapy to be effective direct or indirect treatments for learning disabilities.”

Use Outside of the US
No relevant information.

Coding/Billing Information

Note: 1) This list of codes may not be all-inclusive.

2) Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Experimental/Investigational/Unproven when used to report visual perceptual training:

<table>
<thead>
<tr>
<th>CPT® Codes</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>90899</td>
<td>Unlisted psychiatric service or procedure</td>
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<tr>
<td>92499</td>
<td>Unlisted ophthalmological service or procedure</td>
</tr>
<tr>
<td>99199</td>
<td>Unlisted special service, procedure or report</td>
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</tbody>
</table>


References


7. Handler SM, Fierson WM, Section on Ophthalmology; Council on Children with Disabilities; American Academy of Ophthalmology; American Association for Pediatric Ophthalmology and Strabismus;


