

Fact Sheets on Conditions of the Visual System Treated with Vision Therapy

Optometric vision therapy, also referred to as visual training, is an individualized therapeutic and rehabilitative regimen prescribed to provide treatment for diagnosed visual dysfunctions. Vision therapy involves participation of the patient in a sequence of specific controlled visual tasks or procedures that modify visual function. The therapeutic application of lenses, prisms, filters, occlusion, and specialized equipment is used to stimulate changes in vision. Optometric vision therapy has been shown to be an effective treatment for many types of vision problems.

The enclosed fact sheets define conditions of the visual system amenable to treatment with vision therapy and cite their signs, symptoms, diagnostic factors, therapeutic management considerations, prescribed treatment regimens, duration of treatment, and follow up care.

The duration of treatment is influenced by the visual conditions present, their severity, and by complicating factors. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. When multiple conditions are present, a sequential approach to therapy may be necessary. In these cases, the time frame required to resolve these problems would be expected to be additive. There are other visual conditions which can be treated simultaneously. In these cases, the expected duration of therapy is estimated starting with the time recommended for the primary condition and adding approximately one-half of the projected time for each of the co-existing conditions.

The goals of the prescribed treatment regimen are to achieve desired visual outcomes, alleviate the signs and symptoms, meet the patient's needs, and improve their quality of life. If the number of therapy visits allotted does not provide resolution of the visual problem and there is an enduring medical necessity for treatment, additional insurance coverage should be requested on behalf of the patient with appropriate documentation. In certain cases, qualified optometric peer review may be indicated.

Consistent monitoring and documentation of the patient's progress is essential. Disruption in the continuity of treatment will predictably increase the duration of therapy and may have a negative effect on the outcomes. In cases of strabismus in which surgery is part of the treatment, it is often necessary to perform pre- and post-surgical therapy to achieve optimal visual function and to minimize the need for additional surgeries.

More complete information about vision therapy, including research and clinical studies on its' efficacy, and optometric peer review services are available on our website, www.covd.org.

VISION CONDITIONS – listed by ICD-10-CM code number

<u>ICD-10-CM#</u>	<u>CONDITION</u>	<u># HOURS OF THERAPY</u>
H52.523/.533	Accommodative Dysfunction	16
H52.531/.532/.533	Accommodative Excess	16-24
H53.031/.032.033	Strabismic Amblyopia	60
H53.011/.012/.013	Deprivation Amblyopia	30
H53.021/.022/.023	Refractive Amblyopia	12-56
H53.06/R48.3	Psychophysical Disturbances/Visual Agnosia	30
H53.30	General Binocular Vision Dysfunction	24
H53.34	Suppression of Binocular Vision	8-20
H53.33	Simultaneous Vision without Fusion	32-52
H53.32	Fusion with Defective Stereopsis	12
H53.31	Anomalous (Retinal) Correspondence	25
H50.011/.012	Monocular Comitant Esotropia	60
H50.05	Alternating Comitant Esotropia	60
H50.111/.112	Monocular Comitant Exotropia	45
H50.15	Alternating Comitant Exotropia	45
H50.311/.312	Intermittent Esotropia	40
H50.32	Intermittent Alternating Esotropia	40
H50.331/.332	Intermittent Exotropia	30
H50.34	Intermittent Alternating Exotropia	30
H50.21/.22	Hypertropia	36-48
H50.21/.22	Hypotropia	36-48
H50.411/.412	Cyclotropia	36-48
H50.40	Microtropia (Unspecified heterotropia)	30
H50.43	Accommodative Esotropia	40
H50.51	Basic Esophoria	30
H50.52	Basic Exophoria	30
H50.53	Vertical Heterophoria	30
H50.54	Cyclophoria	30
H50.55	Dissociated Vertical Deviation	40-60
H49.00/.01/.02/.03	Third Cranial Nerve Palsies, partial	30-40
H49.00	Third Cranial Nerve Palsies, total	60-80
H49.10/.11/.12/.13	Fourth Cranial Nerve Palsies	60-80
H49.20/.21/.22/.23	Sixth Cranial Nerve Palsies	30-40
H49.40/.41/.42/.43	External Ophthalmoplegia	32-40
H49.30/.31/.32/.33	Total Ophthalmoplegia	32-40
H50.611	Brown's Tendon Sheath Syndrome	32-40
H50.69	Limited Ductions	12-16
H50.811/.812	Duane's Syndrome	24-32
H50.89	Chronic Progressive Ophthalmoplegia	32-40
H51.11	Convergence Insufficiency	24
H51.12	Convergence Excess	24
H51.8	Divergence Insufficiency	35
H55.01	Congenital Nystagmus	24-36
H55.02	Latent Nystagmus	30-50
H55.03	Visual Deprivation Nystagmus	28-40
H55.81	Ocular Motor Dysfunction Deficiencies of Saccadic Eye Movement	12
H55.89	Ocular Motor Dysfunction Deficiencies of Pursuit Eye Movement	12
R94.113	Ocular Motor Dysfunction Abnormal Oculomotor Studies	12

These fact sheets were produced by Dr. Gabby Marshall, FCOVD and her team for the College of Optometrists in Vision Development (COVD). COVD certifies professional competency in vision therapy, serves as an informational and educational resource, and advances research and clinical care in vision development and therapy. For additional information, see our website, www.covd.org.

ACCOMMODATIVE DYSFUNCTION
ICD-10-CM: H52.523: Accommodation Disorder (Insufficiency)
H52.533: Accommodative Spasm

DEFINITION:

A non-presbyopic, non-refractive sensorimotor anomaly of the visual system characterized by inadequate accommodative accuracy and/or stability, reduced accommodative facility and/or flexibility, reduced amplitude of accommodation, inadequate sustenance of accommodation, inertia of accommodation, or accommodative spasm.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with accommodative dysfunction are related to performance of prolonged visually demanding near-centered tasks. They may include, but are not limited to, the following:

1. transient blurred vision (ICD: H53.8)
2. diminished accuracy
3. abnormal postural adaptation/working distance (ICD: R29.3)
4. inconsistent work product
5. reduced efficiency and productivity
6. diminished performance with time on task/difficulty sustaining near visual function
7. difficulty shifting focus from one distance to another
8. asthenopia (ICD: H53.149)
9. pain in or around the eye (ICD: H57.13)
10. headaches (ICD: R51)
11. avoidance of visually demanding tasks
12. distance blur after performing near work
13. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
14. general fatigue (ICD: R53.83)
15. illusory movement (ICD: H53.10)

DIAGNOSTIC FACTORS:

Accommodative dysfunction is characterized by one or more of the following diagnostic findings:

1. low accommodative amplitude relative to age
2. reduced accommodative facility (monocular)
3. reduced accommodative flexibility
4. reduced accommodative stability
5. reduced ranges of relative accommodation
6. abnormal lag of accommodation
7. unstable accommodative, refractive and retinoscopic findings
8. inconsistent vergence findings

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most accommodative dysfunctions require optometric vision therapy which incorporates the prescription of specific treatments in order to:

1. enhance accommodative amplitudes relative to age
2. enhance ability to sustain accommodation
3. enhance relative ranges of accommodation
4. enhance accommodative facility, flexibility and stability relative to age
5. integrate accommodation with ocular motor skills
6. enhance accommodative/convergence relationship
7. integrate accommodative function with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered accommodative dysfunction usually requires 16 hours of office therapy in addition to therapy provided for concurrent conditions.
2. Accommodative dysfunction may require substantially more office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

ACCOMMODATIVE EXCESS / SPASM
ICD-10-CM: H52.531/.532/.533

DEFINITION:

A non-presbyopic, non-refractive sensorimotor anomaly of the visual system characterized by reduced accommodative facility and/or flexibility, over-accommodation, or accommodative spasm.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with accommodative excess are related to performance of prolonged visually demanding near-centered tasks. They may include, but are not limited to, the following:

A) More common signs and symptoms

1. Transient blurred vision (ICD: H53.8)
2. Diminished accuracy
3. Abnormal postural adaptation/working distance (ICD: R29.3)
4. Inconsistent work product
5. Reduced efficiency and productivity
6. Diminished performance with time on task/difficulty sustaining near visual function
7. Difficulty shifting focus from near to far
8. Asthenopia (ICD: H53.149)
9. Pain in or around the eye (ICD: H57.13)
10. Headaches (ICD: R51)
11. Avoidance of visually demanding tasks
12. Distance blur after performing near work

B) Less common signs and symptoms

1. Inaccurate/inconsistent visual attention, concentration, and/or awareness
2. Distractibility while performing visually demanding tasks
3. General fatigue (ICD: R53.83)
4. Illusory movement (ICD: H53.10)

DIAGNOSTIC FACTORS:

Accommodative excess is characterized by one or more of the following diagnostic findings:

1. Low accommodative amplitude relative to age or latent hyperopia
2. Reduced accommodative facility (monocular)
3. Reduced accommodative flexibility
4. Reduced accommodative stability
5. Reduced ranges of negative relative accommodation
6. Lead of accommodation
7. Unstable accommodative findings
8. Unstable refractive findings
9. Unstable retinoscopic findings
10. Inconsistent vergence findings

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. extent of visual demands placed on the individual
5. patient compliance and involvement in the prescribed therapy regimen
6. type, scope, and results of prior interventions as well as etiological factors

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most accommodative excess cases require optometric vision therapy which incorporates the prescription of specific treatments in order to:

1. enhance accommodative amplitudes relative to age
2. enhance ability to sustain accommodation
3. enhance relative ranges of accommodation
4. enhance accommodative facility, flexibility, and stability relative to age
5. integrate accommodation with ocular motor skills
6. enhance accommodative/convergence relationship
7. integrate accommodative function with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered accommodative excess may require 16 to 24 sessions of office therapy in addition to therapy provided for the concurrent conditions.
2. Accommodative excess requires 32 to 48 sessions of office therapy if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should the signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

STRABISMIC AMBLYOPIA
ICD-10-CM: H53.031/.032/.033

DEFINITION:

An amblyopia present in the deviating eye of a strabismic individual characterized by a decrease in visual acuity and performance of the visual system not attributable to obvious structural or pathological anomalies, and not correctable with a refractive prescription.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with strabismic amblyopia may include, but are not limited to, the following:

1. eye turn, deviation (ICD: H51.9)
2. reduced monocular vision
3. inaccurate/inconsistent depth judgment
4. inaccurate eye-hand coordination
5. avoids eye contact
6. avoidance of visually demanding tasks
7. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
8. spatial disorientation
9. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Strabismic amblyopia is characterized by one or more of the following diagnostic findings:

1. reduced monocular acuity with refractive error compensated
2. strabismus (ICD:H50.9)
3. eccentric/unsteady foveal fixation
4. poor monocular performance skills such as oculomotor skills, spatial judgments, accommodation, sensitivity to crowding

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Optometric vision therapy is required to achieve maximum improvement in patients with strabismic amblyopia. Optometric vision therapy usually incorporates the prescription of specific treatments in order to:

1. address retinal image quality
2. normalize fixation accuracy, ocular motor control, accommodation (accuracy, amplitude, and facility)
3. enhance Just Noticeable Difference (JND), spatial resolution, spatial judgments, and visual information processing
4. address asymmetry of performance

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration depends upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of the strabismus.
2. The most commonly encountered strabismic amblyopia case usually requires 60 hours of office therapy.
3. Strabismic amblyopia may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

DEPRIVATION AMBLYOPIA
ICD-10-CM: H53.019/.011/.012/.013

DEFINITION:

Deprivation amblyopia is characterized by a decrease in visual acuity and deficient performance of the visual system attributed to a disruption in the normal image forming ability of the eye at an early age.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with deprivation amblyopia may include, but are not limited to, the following:

1. inaccurate/inconsistent depth judgment
2. inaccurate eye-hand coordination
3. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
4. reduced efficiency and productivity/inconsistent work product
5. difficulty visually tracking and/or following objects
6. loss of place, repetition and/or omission of words and/or lines of print while reading
7. diminished performance with increased time on task
8. spatial disorientation/incoordination/clumsiness (ICD: R27.8/R41.0)
9. distractibility while performing visually demanding tasks
10. inconsistent visual attention/concentration and/or awareness
11. difficulty sustaining near visual function
12. general fatigue (ICD: R53.83)/ avoidance of visually demanding tasks

DIAGNOSTIC FACTORS:

Deprivation amblyopia is characterized by one or more of the following diagnostic findings:

1. presence or history of form deprivation factors including, but not limited to: cataracts, ptosis, persistent hyperplastic primary vitreous, corneal leukoma, nystagmus, and occlusion
2. reduced monocular or binocular visual acuity/eccentric/unsteady foveal fixation
3. poor monocular performance skills such as oculomotor skills, spatial judgments, accommodation, sensitivity to crowding

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors

5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most cases of deprivation amblyopia require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. address retinal image quality
2. normalize fixation accuracy, ocular motor control, accommodation (accuracy, amplitude, and facility)
3. enhance Just Noticeable Difference (JND), spatial resolution, spatial judgments, and visual information processing
4. address asymmetry of performance

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration depends upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of the associated visual conditions.
2. The most commonly encountered deprivation amblyopia case which is not complicated by a strabismus usually requires 30 hours of office therapy.
3. Deprivation amblyopia may require substantially more office therapy, if complicated by associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

REFRACTIVE AMBLYOPIA
ICD-10-CM: H53.023
Right Eye: H53.021, Left Eye: H52.022

DEFINITION:

Refractive Amblyopia is characterized by a decrease in visual acuity and deficient performance of the visual system not attributable to obvious structural or pathological anomalies, and not correctable with a refractive prescription. Amblyopia results in deficient visual acuity and an array of defective nonacuity factors. Refractive Amblyopia is a consequence of poor image quality caused by a lack of optical correction of significant ametropia during the formative period of visual development.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with Refractive Amblyopia may include, but are not limited to, the following:

<ul style="list-style-type: none"> • Difficulty visually tracking and/or following objects 	<ul style="list-style-type: none"> • Inaccurate/inconsistent depth judgment
<ul style="list-style-type: none"> • Loss of place, repetition, and/or omission of words and/or lines of print while reading 	<ul style="list-style-type: none"> • Spatial disorientation
<ul style="list-style-type: none"> • Need to utilize a marker to avoid loss of place 	<ul style="list-style-type: none"> • Asthenopia (IC: H53.149)
<ul style="list-style-type: none"> • Abnormal postural adaptation/abnormal working distance (ICD: R29.3) 	<ul style="list-style-type: none"> • Inaccurate/inconsistent visual attention, concentration, and/or awareness
<ul style="list-style-type: none"> • Diminished accuracy with increased time on task 	<ul style="list-style-type: none"> • Distractibility
<ul style="list-style-type: none"> • Inaccurate/inconsistent work product 	<ul style="list-style-type: none"> • Difficulty sustaining near visual function
<ul style="list-style-type: none"> • Reduced efficiency and productivity 	<ul style="list-style-type: none"> • Abnormal general fatigue
<ul style="list-style-type: none"> • Visual field neglect 	<ul style="list-style-type: none"> • Incoordination/clumsiness (ICD: R27.8)
<ul style="list-style-type: none"> • Inaccurate eye-hand coordination 	

DIAGNOSTIC FACTORS:

Refractive Amblyopia is characterized by one or more of the following diagnostic findings:

<ul style="list-style-type: none"> • Reduced monocular or binocular visual acuity 	<ul style="list-style-type: none"> • Spatial uncertainty
<ul style="list-style-type: none"> • Relatively high isometropia (ICD: H52) 	<ul style="list-style-type: none"> • Anomalous eye movements (ICD: R94.113)
<ul style="list-style-type: none"> • Suppression of binocular vision (ICD: H53.34) 	<ul style="list-style-type: none"> • Increased effects of crowding
<ul style="list-style-type: none"> • Anisometropia (ICD: H52.31) 	<ul style="list-style-type: none"> • Increased saccadic latency and reduced saccadic accuracy
<ul style="list-style-type: none"> • Binocular vision disorder (ICD: H53.30) 	<ul style="list-style-type: none"> • Depressed contrast sensitivity
<ul style="list-style-type: none"> • Reduced stereopsis (ICD: H53) 	<ul style="list-style-type: none"> • Decreased accommodative function (ICD: H52.539)
<ul style="list-style-type: none"> • Accommodative disorder (ICD: H52.539) 	<ul style="list-style-type: none"> • Poor speed and span of recognition
<ul style="list-style-type: none"> • Deficient saccadic (ICD: H55.81) and/or pursuit (ICD: H55.89) eye movements 	<ul style="list-style-type: none"> • Faulty eye-hand coordination
<ul style="list-style-type: none"> • Inaccurate and/or unsteady foveal fixation 	

Note: Additional testing may be appropriate as part of the differential diagnostic workup to rule out or define other potential causes of reduced visual acuity and visual performance. Other potential causes include refractive, stimulus deprivation, psychogenic, and structural/pathological defects.

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow up, based on the urgency and nature of the patient's conditions and unique needs. The management of the case and duration of treatment would be affected by:

- The severity of symptoms and diagnostic factors including onset and duration of the problem
- The implications of associated visual conditions
- Implications of patient's general health and effects of medications taken
- Etiological factors
- Extent of visual demands placed upon the individual
- Patient compliance and involvement in the prescribed therapy regimen
- Type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Successful treatment of Refractive Amblyopia must address the abnormal refractive condition and the defective performance of the amblyopic visual system. A small percentage of cases are successfully managed by prescription of therapeutic lenses and/or prisms. However, most patients with Refractive Amblyopia require orthoptics/vision therapy (including prism/lens therapy). Optometric vision therapy usually incorporates the prescription of specific treatments in order to:

- Provide a clear optical image
- Normalize and equalize fixation accuracy
- Normalize and equalize oculomotor control
- Normalize and equalize accommodative accuracy and responses
- Normalize visual discrimination
- Eliminate abnormal suppression
- Develop normal accommodative/convergence relationships
- Establish normal binocular function

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide for third-party claims processing and review purposes. Treatment duration will depend on the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted.

- The most commonly encountered Refractive Amblyopia which is not complicated by strabismus usually requires 36 to 48 hours of office therapy.
- Uncomplicated cases of Refractive Amblyopia characterized by mild Amblyopia and stable binocular function may require 12 to 20 hours of office therapy.
- Refractive Amblyopia complicated by:
 - Suppression: up to an additional 12 hours of office therapy
 - General binocular disorder: up to an additional 32 hours of office therapy
 - Eccentric/unsteady foveal fixation: up to an additional 16 hours of office therapy
 - Strabismus: up to an additional 56 hours of office therapy
 - Associated conditions such as stroke, head trauma, or other systemic condition may require substantially more office therapy

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation should be provided at the appropriate intervals. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy for the maintenance of long-term stability. Some cases may require additional therapy due to decompensation.

PSYCHOPHYSICAL DISTURBANCES
ICD-10-CM: R48.3 (Visual Agnosia)
H53.16: Psychophysical Visual Disturbance

DEFINITION:

Psychophysical disturbances are disturbances that result from the interaction of physical stimuli and their mental or perceptual correlates. Among these may be agnosia, disorientation syndrome, hallucinations, and Streff (non-malingering) syndrome of bilateral amblyopia.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with psychophysical disturbances vary widely with the individual and may include, but are not limited to, the following:

1. reduced visual acuity, distance and/or near
2. asthenopia
3. sensation of target movement
4. head turns or tilts
5. inaccurate spatial judgements
6. incoordination and/or clumsiness
7. defective stereopsis and depth judgements
8. abnormal postural adaptations and working distances
9. general fatigue
10. motion sickness
11. dizziness after sustained task
12. diminished accuracy with increased task time
13. subjective visual phenomena (formed and unformed images)
14. nystagmoid-like eye movements
15. spurious visual field defects

DIAGNOSTIC FACTORS:

Psychophysical disturbances are characterized by one or more of the following diagnostic findings:

1. reduced visual acuity, distance and/or near
2. absence of fusion or reduced fusion ranges
3. reduced stereopsis
4. inaccurate visual-motor coordination
5. functional visual field defects
6. visual information processing deficiencies

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Successful treatment of psychophysical disturbances must address any defective performance of the visual systems and in some cases the general physiological well being of the patient. In some cases with emotional overtones, consultation with a professional for this aspect of the condition is indicated. Vision therapy (including prism/lens therapy) is usually required to achieve maximum improvement in patients with psychophysical disturbances. Most psychophysical disturbances cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. maximize visual acuity
2. eliminate suppression
3. develop adequate fusional ranges
4. develop adequate vergence facility
5. develop adequate fusional stability
6. normalize adequate depth judgements and stereopsis
7. normalize accommodative/convergence relationships
8. eliminate previously supporting head turns and tilts
9. integrate binocular function with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Some cases demonstrating psychophysical disturbances can be managed entirely by the prescription of lenses and/or prisms. Most cases of psychophysical disturbance require vision therapy.
2. The most commonly encountered cases of psychophysical disturbance usually require 30 hours of office therapy.
3. Complicating conditions such as suppression, strabismus and/or visual information processing deficits may warrant increased therapy time.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

GENERAL BINOCULAR VISION DYSFUNCTION ICD-10-CM: H53.30

DEFINITION:

General binocular vision dysfunction is a sensory anomaly characterized by the inability to efficiently, accurately, and/or comfortably sustain binocular vision.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with general binocular vision dysfunction may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.11)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. asthenopia (ICD: H53.149)
11. transient blurred vision
12. transpositions when copying from one source document to another
13. illusory movement
14. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
15. spatial disorientation
16. photophobia (ICD: H53.149)
17. inconsistent visual attention/concentration and/or awareness
18. general fatigue (ICD: R53.83)
19. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
20. motion sickness (ICD: T75.3XXA)
21. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

General binocular vision dysfunction is characterized by one or more of the following diagnostic findings:

1. restricted or imbalanced fusional vergence ranges/vergence instability
2. asthenopia/vertigo/diplopia responses during/after testing
3. abnormal relationship between accommodation and vergence
4. steep forced vergence fixation disparity curve/abnormal fixation disparity
5. abnormal AC/A-CA/C relationship
6. fragile fusion exhibited in secondary and tertiary positions of gaze
7. reduced fusional recoveries/facility/flexibility
8. anomalous slow vergence adaptation

THERAPEUTIC MANAGEMENT CONSIDERATIONS

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most general binocular vision dysfunctions require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional ranges, adequate fusional stability, and adequate vergence flexibility
2. enhance accommodative/convergence relationships
3. integrate binocular function with information processing
4. integrate binocular skills with accurate motor responses
5. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
6. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered general binocular vision dysfunction usually requires 24 hours of office therapy.
2. General binocular vision dysfunction may require substantially more office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

SUPPRESSION OF BINOCULAR VISION

ICD-10-CM: H53.34

DEFINITION:

Suppression is a cortical phenomenon characterized by a decreased sensitivity to visual information from one eye under binocular conditions. The magnitude and depth of suppression is often variable and asymmetric, and is highly dependent upon the attributes of the target and environment, the patient's attention, and associated visual conditions. Clinically significant suppression can be found to co-exist with non-strabismic and strabismic anomalies.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with suppression may include, but are not limited to, the following:

1. eye turn/deviation (ICD: H51.9)
2. inaccurate/inconsistent depth judgment
3. incoordination/clumsiness (ICD:R27.8)
4. inaccurate eye-hand coordination
5. inconsistent work product
6. reduced efficiency and productivity
7. photophobia
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation
10. asthenopia
11. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks

DIAGNOSTIC FACTORS:

Changes in the patient's attention, binocular status, and stimulus conditions can alter the pattern of suppression. Suppression is characterized by one or more of the following diagnostic findings:

1. lack of awareness and utilization of visual information (partial or complete) from one eye when tested under binocular conditions
2. defective stereopsis (ICD: H53.32)
3. aberrant vergence and/or accommodative ranges
4. lack of diplopia and/or visual confusion in the presence of binocular misalignment (strabismus)
5. reduced monocular acuity under binocular conditions
6. range and depth of suppression area
7. latent target movement under vergence testing without report of diplopia

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions

3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Suppression is a visual deficit that is associated with other strabismic and non-strabismic anomalies. Successful and long-lasting treatment of suppression is dependent upon the effectiveness of the treatment of the associated visual conditions. In most patients that demonstrate suppression, the treatment requires optometric vision therapy as well as lenses and/or prisms. The optometric management of suppression incorporates the prescription of specific treatments in order to:

1. equalize performance of the two visual systems
2. increase awareness and utilization of visual information
3. establish accurate and stable motor alignment
4. establish stable sensory binocular fusion with stereopsis
5. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Suppression is not an independently treated condition. Its presence in conjunction with other conditions adds time to the overall treatment of those conditions.
2. The most common form of suppression found in a non-strabismic case can add up to 8 hours of office therapy. The most common forms of suppression in a strabismic case can add up to 20 hours of office therapy.
3. Suppression of binocular vision may require substantially more office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

SIMULTANEOUS VISION WITHOUT FUSION
ICD-10-CM: H53.33

DEFINITION:

Simultaneous vision without fusion is a cortical, visual phenomenon existing in the absence of correspondence between the two visual channels coupled with the absence of suppression.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with simultaneous vision without fusion may include, but are not limited to, the following:

1. diplopia (ICD: H53.2)
2. strabismus (horizontal, vertical, or cyclo)
3. inaccurate/inconsistent depth judgment
4. inaccurate eye-hand coordination
5. spatial distortions and faulty localization
6. asthenopia (ICD:H53.149)
7. inconsistent visual attention/concentration and/or awareness
8. headache (ICD: R51)
9. general fatigue (ICD: R53.83)
10. reduced efficiency and productivity
11. motion sickness (ICD: T75.3XXA)
12. incoordination/clumsiness (ICD: R27.8)
13. faulty visual information processing
14. blur

DIAGNOSTIC FACTORS:

Simultaneous vision without fusion has one or more of the following diagnostic findings:

1. diplopia, visual confusion, defective stereopsis
2. strabismus, aniseikonia, and/or anisometropia
3. active avoidance of bifoveal stimulation which may be accompanied by rapid changes in deviation or conjugate eye movements
4. inability to alleviate diplopia with prism neutralization and/or target alignment in instrument

THERAPEUTIC MANAGEMENT CONSIDERATIONS

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions as well as etiological factors

PRESCRIBED TREATMENT REGIMEN:

Simultaneous vision without fusion usually accompanies a binocular anomaly such as strabismus. Optometric vision therapy is required for effective treatment of simultaneous vision without fusion and incorporates the prescription of specific treatments in order to:

1. establish normal correspondence and fusion
2. establish sensorimotor binocular alignment
3. normalize vergence, accommodative, and stereoscopic responses
4. integrate binocular and oculomotor skills
5. increase binocular endurance and stamina
6. integrate visual skills with higher level information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment of simultaneous vision without fusion requires resolution of associated strabismus.
2. The complication of simultaneous vision without fusion in association with constant exotropia can add an additional 32-46 hours of office therapy to the strabismus program.
3. The complication of simultaneous vision without fusion in association with constant esotropia can add an additional 36-52 hours of office therapy to the strabismus program.
4. Associated conditions such as head trauma, stroke, and systemic conditions may add substantially to the therapy program.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

FUSION WITH DEFECTIVE STEREOPSIS
ICD-10-CM: H53.32

DEFINITION:

The sensory anomaly referred to as defective stereopsis is characterized by an inability to accurately and rapidly process, recognize, and respond to binocular disparity.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with defective stereopsis may include, but are not limited to, the following:

1. diplopia (ICD: H53.2), intermittent
2. eye turn/deviation (ICD:H51.9)
3. inaccurate/inconsistent depth judgment
4. inaccurate eye-hand coordination
5. tendency to cover/close one eye
6. spatial disorientation
7. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
8. asthenopia (ICD: H53.149)
9. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
10. general fatigue (ICD: R53.83)
11. avoidance of visually demanding tasks
12. motion sickness (ICD: T75.3XXA)
13. incoordination/clumsiness (ICD: R27.8)
14. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks

DIAGNOSTIC FACTORS:

Defective stereopsis has one or more of the following diagnostic findings:

1. difficulty perceiving crossed and/or uncrossed disparity
2. inconsistent or delayed responses to stereoscopic stimuli
3. difficulty accurately responding to stereoscopic stimuli as vergence and/or accommodative demands vary.

THERAPEUTIC MANAGEMENT CONSIDERATIONS

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Defective stereopsis usually accompanies a binocular anomaly. Optometric vision therapy is required for effective treatment of defective stereopsis and incorporates the prescription of specific treatments in order to:

1. enhance processing of stereoscopic visual information
2. increase the speed and accuracy of responses based on stereoscopic information
3. integrate stereoscopic responses with vergence and accommodative demands
4. integrate stereoscopic processing with motor responses
5. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Defective stereopsis is not an independently treated condition, but a complication adding to the treatment hours of associated conditions. Full treatment requires resolution of associated visual conditions.
2. The complication of defective stereopsis usually requires 12 hours of office therapy.
3. Fusion with defective stereopsis may require substantially more office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

ANOMALOUS (RETINAL) CORRESPONDENCE

ICD-10-CM: H53.31

DEFINITION:

Anomalous correspondence is a cortical, visual adaptation to a strabismus existing when the visual direction of the fovea of one eye corresponds with the perceived visual direction of a non-foveal location of the fellow eye.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with anomalous correspondence may include, but are not limited to, the following:

1. better than expected performance on tasks requiring binocular vision
2. post-surgical increase in the angle of deviation
3. absence of diplopia
4. avoids eye contact
5. avoidance of visually demanding tasks

DIAGNOSTIC FACTORS:

Anomalous correspondence is characterized by one or more of the following diagnostic findings:

1. characteristics of diplopia inconsistent with the magnitude and/or direction of the strabismus
2. significant difference between subjective and objective angle of squint.

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The treatment of anomalous correspondence requires optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. re-establish normal common spatial projection
2. habituate normal common spatial projection

DURATION OF TREATMENT:

Anomalous correspondence is an adaptation associated with strabismus. The presence of anomalous correspondence adds to the complexity of the case and the treatment length of the strabismus therapy. The following treatment ranges are provided as a guide and may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of the strabismus.
2. Anomalous retinal correspondence existing with intermittent strabismus usually requires an additional 25 hours of office therapy.
3. Anomalous correspondence may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

MONOCULAR COMITANT ESOTROPIA

ICD-10-CM: H50.011, H50.012

DEFINITION:

A sensorimotor anomaly of the binocular visual system in which the foveal line of sight of one eye deviates inward and fails to intersect the object of fixation. The angle of deviation remains constant for all positions of gaze. [NOTE: Cases of monocular comitant esotropia may be accompanied by functional amblyopia and anisometropia.]

SIGNS AND SYMPTOMS:

The signs and symptoms associated with monocular comitant esotropia may include, but are not limited to, the following:

1. avoids eye contact
2. inaccurate/inconsistent depth judgment and/or eye-hand coordination
3. reduced monocular acuity, tendency to cover/close one eye
4. diplopia (ICD: H53.2) or awareness of suppression
5. eye turn, deviation (ICD:H51.9)
6. avoidance of visually demanding tasks
7. reduced efficiency and productivity/diminished accuracy/inconsistent work product
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation
10. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Monocular comitant esotropia is characterized by one or more of the following diagnostic findings:

1. strabismus, esotropia (ICD:H50.00)
2. unilateral deviation, often associated with amblyopia
3. asymmetrical performance between the two eyes
4. deviation influenced minimally by accommodation

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. The treatment of monocular comitant esotropia requires the use of optometric vision therapy, which may include the use of lenses and/or prisms. In some cases, surgery may be required in conjunction with pre-and post-surgical optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. equate monocular skills
2. address fusion (sensory) development
3. address associated visual conditions
4. establish bifoveal fixation
5. normalize fusional vergence ranges, facility, flexibility, and stability
6. normalize accommodative/convergence relationships/normalize depth judgments and/or stereopsis
7. integrate binocular function with information processing
8. reduce esophoria
9. normalize abductive ranges
10. integrate binocular skills with accurate motor responses
11. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
12. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered monocular comitant esotropia usually requires 60 hours of office therapy.
2. Monocular comitant esotropia may require substantially more office therapy, if complicated by associated factors such as amblyopia, anomalous correspondence, prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

NOTE: Monocular Noncomitant Esotropia (ICD-10-CM: H50.041/042) has the same defining and diagnostic features except that the deviation is not the same in all positions of gaze. The protocol is the same as for monocular comitant esotropia. It is advisable to treat the patient in the position of gaze that is most commonly used for them occupationally/avocationally. Noncomitancy may add 20 hours of office treatment to the program.

ALTERNATING COMITANT ESOTROPIA ICD-10-CM: H50.05

DEFINITION:

A sensorimotor anomaly of the binocular visual system in which the foveal line of sight of either eye deviates inward and fails to intersect the object of fixation. The angle of deviation remains constant for all positions of gaze.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with alternating comitant esotropia may include, but are not limited to, the following:

1. avoids eye contact
2. inaccurate/inconsistent depth judgment
3. tendency to cover/close one eye
4. diplopia (ICD: H53.2)
5. eye turn, deviation (ICD:H51.9)
6. avoidance of visually demanding tasks
7. inaccurate eye-hand coordination
8. reduced efficiency and productivity/diminished accuracy/inconsistent work product
9. diminished performance with time on task
10. difficulty sustaining near visual function
11. inconsistent visual attention/concentration and/or awareness
12. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
13. spatial disorientation
14. incoordination/clumsiness (ICD: R27.8)
15. distractibility while performing visually demanding tasks
16. general fatigue (ICD: R53.83)
17. loss of place, repetition and/or omission of words and/or lines of print while reading
18. transposition when copying from one source document to another

DIAGNOSTIC FACTORS:

Alternating comitant esotropia is characterized by one or more of the following diagnostic findings:

1. strabismus, esotropia (ICD:H50.00)
2. comitant
3. alternating fixation
4. symmetrical performance between the two eyes
5. deviation minimally influenced by accommodation

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken

4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. The treatment of alternating comitant esotropia requires the use of optometric vision therapy, which may include the use of lenses and/or prisms. In some cases, surgery may be required in conjunction with pre-and post-surgical optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. equate monocular skills
2. address fusion (sensory) development
3. address associated visual conditions
4. establish bifoveal fixation
5. normalize fusional vergence ranges, facility, flexibility, and stability
6. normalize accommodative/convergence relationships
7. integrate binocular function with information processing
8. reduce esophoria
9. normalize abduction ranges
10. integrate binocular skills with accurate motor responses
11. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
12. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered alternating comitant esotropia usually requires 60 hours of office therapy.
2. Alternating comitant esotropia may require substantially more sessions of office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

NOTE: Alternating Noncomitant Exotropia (ICD-10-CM: H50.08) has the same defining and diagnostic features except that the deviation is not the same in all positions of gaze. The protocol is the same as for monocular comitant estropia. It is advisable to treat the patient in the position of gaze that is most commonly used for them occupationally/avocationally. Noncomitancy may add 20 hours of office treatment to the program.

MONOCULAR COMITANT EXOTROPIA **ICD-10-CM: H50.111, H50.112**

DEFINITION:

A sensorimotor anomaly of the binocular visual system in which the foveal line of sight of one eye deviates outward and fails to intersect the object of fixation. The angle of deviation remains constant for all positions of gaze.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with monocular comitant exotropia may include, but are not limited to, the following:

1. avoids eye contact
2. inaccurate/inconsistent depth judgment
3. reduced monocular acuity; tendency to cover/close one eye
4. diplopia (ICD: H53.2) or awareness of suppression
5. eye turn, deviation (ICD:H51.9)
6. avoidance of visually demanding tasks
7. inaccurate eye-hand coordination
8. photophobia
9. distractibility while performing visually demanding tasks
10. reduced efficiency and productivity/diminished accuracy/inconsistent work product
11. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
12. spatial disorientation
13. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Monocular comitant exotropia is characterized by one or more of the following diagnostic findings:

1. strabismus, exotropia (ICD:H50.10)
2. comitant and unilateral deviation
3. asymmetrical performance between the two eyes

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. The treatment of monocular comitant exotropia requires the use of optometric vision therapy, which may include the use of lenses and/or prisms. In some cases, surgery may be required in conjunction with pre-and post-surgical optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. equate monocular skills
2. address fusion (sensory) development
3. address associated visual conditions
4. establish bifoveal fixation
5. normalize fusional vergence ranges, facility, flexibility, and stability
6. normalize accommodative/convergence relationships
7. integrate binocular function with information processing
8. reduce exophoria
9. normalize adductive ranges
10. integrate binocular skills with accurate motor responses
11. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
12. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered monocular comitant exotropia usually requires 45 hours of office therapy.
2. Monocular comitant exotropia may require substantially more office therapy, if complicated by associated factors such as amblyopia, anomalous correspondence, prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary.

Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

NOTE: Monocular Nocomitant Exotropia (ICD-10-CM: H50.141/142) has the same defining and diagnostic features except that the deviation is not the same in all positions of gaze. The protocol is the same as for monocular comitant exotropia. It is advisable to treat the patient in the position of gaze that is most commonly used for them occupationally/avocationally. Non-comitancy may add 20 hours of office treatment to the program.

ALTERNATING COMITANT EXOTROPIA

ICD-10-CM: H50.15

DEFINITION:

A sensorimotor anomaly of the binocular visual system in which the foveal line of sight of either eye deviates outward and fails to intersect the object of fixation. The angle of deviation remains constant for all positions of gaze.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with alternating comitant exotropia may include, but are not limited to, the following:

1. avoids eye contact
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. photophobia; tendency to cover/close one eye
4. eye turn, deviation (ICD:H51.9)
5. avoidance of visually demanding tasks
6. inaccurate eye-hand coordination
7. reduced efficiency and productivity/diminished accuracy/inconsistent work product
8. diminished performance with time on task
9. difficulty sustaining near visual function
10. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
11. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
12. spatial disorientation/incoordination/clumsiness (ICD: R27.8)
13. loss of place, repetition &/or omission of words or lines of print while reading
14. transpositions when copying from one source to another

DIAGNOSTIC FACTORS:

Alternating comitant exotropia is characterized by one or more of the following diagnostic findings:

1. strabismus, exotropia (ICD:H50.10) with comitant and alternating fixation
2. symmetrical performance between the two eyes

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. The treatment of alternating comitant exotropia requires the use of optometric vision therapy, which may include the use of lenses and/or prisms. In some cases, surgery may be required in conjunction with pre-and post-surgical optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. equate monocular skills
2. address fusion (sensory) development
3. address associated visual conditions
4. establish bifoveal fixation
5. normalize fusional vergence ranges, facility, flexibility, and stability
6. normalize accommodative/convergence relationships
7. integrate binocular function with information processing
8. reduce exophoria
9. normalize adduction ranges
10. integrate binocular skills with accurate motor responses
11. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
12. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered alternating comitant exotropia usually requires 45 hours of office therapy.
2. Alternating comitant exotropia may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary.

Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

NOTE: Alternating Noncomitant Exotropia (ICD-10-CM: H50.18) has the same defining and diagnostic features except that the deviation is not the same in all position of gaze. The protocol is the same as for alternating comitant exotropia. It is advisable to treat the patient in the position of gaze that is most commonly used for them occupationally/avocationally. Noncomitancy may add 20 hours of office therapy to the treatment program.

INTERMITTENT ESOTROPIA

ICD-10-CM: H50.311, H50.312

DEFINITION:

A sensorimotor anomaly of the binocular vision system in which the foveal line of sight of one eye periodically deviates inward and fails to intersect the object of fixation.

SIGNS AND SYMPTOMS:

The signs and symptoms with intermittent esotropia may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. eye turn, deviation (ICD:H51.9)
11. avoids eye contact
12. transient blurred vision/illusory movement
13. difficulty visually tracking &/or following objects
14. loss of place, repetition &/or omission of words &/or lines of print while reading
15. transpositions when copying from one source to another
16. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
17. spatial disorientation
18. inconsistent visual attention/concentration and/or awareness
19. general fatigue (ICD: R53.83)
20. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
21. motion sickness (ICD: T75.3XXA)
22. incoordination/clumsiness (ICD: R27.8)
23. awareness of the need for volitional control of eyes
24. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Intermittent esotropia is characterized by one or more of the following diagnostic findings:

1. intermittent strabismus
2. delayed re-establishment of binocular fusion from a dissociated state
3. excessively low negative fusional vergence ranges/recoveries
4. diplopia (ICD: H53.2) reported under binocular testing
5. shallow amblyopia/reduced stereopsis

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most intermittent esotropias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional vergence ranges, stability, and flexibility
2. enhance accommodative/convergence relationships
3. reduce esophoria/esotropia
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered intermittent esotropia usually requires 40 hours of office therapy.
2. Intermittent esotropia may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

INTERMITTENT ALTERNATING ESOTROPIA

ICD-10-CM: H50.32

DEFINITION:

A sensorimotor anomaly of the binocular vision system in which the foveal line of sight of either eye occasionally deviates inward and fails to intersect the object of fixation.

SIGNS AND SYMPTOMS:

The signs and symptoms with intermittent alternating esotropia may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)/ headaches (ICD: R51)
6. difficulty sustaining near visual function
7. avoidance of visually demanding tasks
8. inaccurate eye-hand coordination
9. eye turn, deviation (ICD:H51.9)
10. avoids eye contact
11. transient blurred vision/illusory movements
12. difficulty visually tracking or following objects
13. loss of place, repetition &/or omission of words or lines of print while reading
14. transpositions when copying from one source to another
15. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
16. spatial disorientation
17. inconsistent visual attention/concentration and/or awareness
18. general fatigue (ICD: R53.83)
19. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
20. motion sickness (ICD: T75.3XXA)
21. incoordination/clumsiness (ICD: R27.8)
22. awareness of the need for volitional control of eyes
23. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Intermittent alternating esotropia is characterized by one or more of the following diagnostic findings:

1. intermittent convergent strabismus(alternating)
2. delayed re-establishment of binocular fusion from a dissociated state
3. excessively low negative fusional vergence ranges/recoveries
4. diplopia (ICD: H53.2) reported under binocular testing
5. shallow amblyopia/reduced stereopsis

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment is to address the diagnostic factors & alleviate the presenting signs and symptoms associated with the diagnosed condition. Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most intermittent alternating esotropias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional ranges, fusional stability, and vergence flexibility
2. enhance accommodative/convergence relationships
3. reduce esophoria/esotropia
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered intermittent alternating esotropia usually requires 40 hours of office therapy.
2. Intermittent alternating esotropia may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

INTERMITTENT EXOTROPIA

ICD-10-CM: H50.331, H50.332

DEFINITION:

A sensorimotor anomaly of the binocular vision system in which the foveal line of sight of one eye occasionally deviates outward and fails to intersect the object of fixation.

SIGNS AND SYMPTOMS:

The signs and symptoms with intermittent exotropia may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. eye turn, deviation (ICD:H51.9)
11. avoids eye contact
12. transient blurred vision/illusory movement
13. loss of place, repetition or omission of words &/or lines of print while reading
14. transpositions when copying from one source to another
15. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
16. spatial disorientation
17. photophobia (ICD: H53.149)
18. inconsistent visual attention/concentration and/or awareness
19. general fatigue (ICD: R53.83)
20. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
21. motion sickness (ICD: T75.3XXA)
22. incoordination/clumsiness (ICD: R27.8)
23. awareness of the need for volitional control of eyes
24. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Intermittent exotropia is characterized by one or more of the following diagnostic findings:

1. intermittent strabismus(unilateral)
2. delayed re-establishment of binocular fusion from a dissociated state
3. excessively low fusional vergence ranges/recoveries
4. diplopia reported under binocular testing

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/vocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most cases of intermittent exotropia require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional ranges, fusional stability, and vergence flexibility
2. enhance accommodative/convergence relationships
3. enhance near point of convergence
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered intermittent exotropia usually requires 30 hours of office therapy.
2. Intermittent exotropia may require substantially more office therapy, if complicated by associated conditions such as prior eye muscle surgery, cerebral vascular accident, head trauma, and /or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

INTERMITTENT ALTERNATING EXOTROPIA

ICD-10-CM: H50.34

DEFINITION:

A sensorimotor anomaly of the binocular vision system in which the foveal line of sight of either eye occasionally deviates outward and fails to intersect the object of fixation.

SIGNS AND SYMPTOMS:

The signs and symptoms with intermittent alternating exotropia may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)/ headaches (ICD: R51)
6. difficulty sustaining near visual function
7. avoidance of visually demanding tasks
8. inaccurate eye-hand coordination
9. eye turn, deviation (ICD:H51.9)
10. avoids eye contact
11. transient blurred vision/illusory movement
12. difficulty visually tracking and/or following objects
13. loss of place, repetition, and/or omission of words and/or lines of print while reading
14. transpositions when copying from one source document to another
15. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
16. spatial disorientation
17. photophobia (ICD: H53.149)
18. inaccurate/inconsistent visual attention/concentration and/or awareness
19. general fatigue (ICD: R53.83)
20. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
21. motion sickness (ICD: T75.3XXA)
22. incoordination/clumsiness (ICD: R27.8)
23. awareness of the need for volitional control of eyes
24. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Intermittent alternating exotropia is characterized by one or more of the following diagnostic findings:

1. intermittent strabismus(alternating)
2. delayed re-establishment of binocular fusion from a dissociated state
3. excessively low fusional vergence ranges/recoveries
4. diplopia reported under binocular testing

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most intermittent alternating exotropias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional ranges, fusional stability, and vergence flexibility
2. enhance accommodative/convergence relationships
3. enhance near point of convergence
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered intermittent alternating exotropia usually requires 30 hours of office therapy.
2. Intermittent alternating exotropia may require substantially more of office therapy, if complicated by associated conditions such as prior eye muscle surgery, cerebral vascular accident, head trauma, and /or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

HYPER/HYPO/CYCLO STRABISMUS
ICD-10-CM: H50.21/22, H50.21/22, H50.411/412

DEFINITION:

Hyper/hypotropia is a strabismus characterized by the upward/downward deviation of the line of sight of deviating eye relative to the fixating eye. Cyclotropia is a meridional deviation around the antero-posterior axis of the deviating eye relative to the fixating eye.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with vertical heterophoria may include, but are not limited to, the following:

1. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn/tilt
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue/motion sickness/dizziness after sustained task
4. diplopia (ICD: H53.2)
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia
8. diminished performance with increased task time
9. inconsistent visual attention/concentration and/or distractibility while performing visually demanding tasks
10. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
11. spatial disorientation/incoordination/clumsiness (ICD: R27.8)
12. inaccurate spatial judgements

DIAGNOSTIC FACTORS:

Hyper/hypo/cyclo strabismus is typically characterized by one or more of the following diagnostic findings:

1. amblyopia and/or suppression (both of monocular and binocular vision)
2. reduced stereopsis
3. absence of fusion
4. non-comitancy
5. inaccurate visual-motor coordination

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most dissociated vertical deviation cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered vertical/cyclo strabismus usually requires 36 to 48 hours of office therapy.
3. Vertical/cyclo strabismus therapy may be complicated by an associated horizontal deviation and or associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions. This may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

MICROTROPIA

ICD-10-CM: H50.40

DEFINITION:

Microtropia (monofixation syndrome) is a sensorimotor anomaly characterized by a constant small angle esotropia with anomalous correspondence.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with microtropia may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. inaccurate/inconsistent depth judgment
4. pain in or around the eye (ICD: H57.13)
5. headaches (ICD: R51)
6. difficulty sustaining near visual function
7. avoidance of visually demanding tasks
8. inaccurate eye-hand coordination
9. transient blurred vision/illusory movement
10. transpositions when copying from one source document to another
11. avoids eye contact
12. diplopia (ICD: H53.2)/tendency to close or cover one eye/eye turn, deviation(ICD: H51.9)
13. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
14. spatial disorientation
15. photophobia (ICD: H53.149)
16. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
17. general fatigue (ICD: R53.83)
18. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
19. motion sickness (ICD: T75.3XXA)
20. incoordination/clumsiness (ICD: R27.8)
21. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Microtropia is characterized by one or more of the following diagnostic findings:

1. small angle strabismus
2. anomalous correspondence (ICD: H50.42)
3. eccentric fixation
4. central suppression (ICD: H53.34)
5. defective stereopsis (ICD: H53.32)

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most microtropia cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges, flexibility and stability
2. enhance accommodative/convergence relationships
3. integrate binocular function with information processing
4. integrate binocular skills with accurate motor responses
5. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
6. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered microtropia usually requires 30 hours of office therapy.
2. Microtropia may require substantially more office therapy, if complicated by associated factors such as amblyopia, prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

ACCOMMODATIVE ESOTROPIA ICD-10-CM: H50.43

DEFINITION:

A sensorimotor anomaly of the binocular vision system in which the foveal line of sight of either eye occasionally deviates inward and fails to intersect the object of fixation. The deviation is due to excessive convergence accompanying uncorrected hyperopia and/or high AC/A (accommodative convergence/accommodation) ratio.

SIGNS AND SYMPTOMS:

The signs and symptoms with accommodative esotropia may include, but are not limited to, the following:

1. transient blurred vision
2. reduced efficiency and productivity/diminished accuracy/inconsistent work product
3. diminished performance with time on task
4. diplopia (ICD: H53.2)/tendency to close or cover one eye/eye turn, deviation (ICD:H51.9)
5. inaccurate/inconsistent depth judgment
6. pain in or around the eye (ICD: H57.13)
7. headaches (ICD: R51)
8. difficulty sustaining near visual function
9. avoidance of visually demanding tasks
10. inaccurate eye-hand coordination
11. avoids eye contact
12. difficulty visually tracking or following objects
13. loss of place, repetition &/or omission of words &/or lines of print while reading
14. transpositions when copying from one source document to another
15. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
16. spatial disorientation
17. photophobia (ICD: H53.149)
18. inconsistent visual attention/concentration and/or awareness
19. general fatigue (ICD: R53.83)
20. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
21. motion sickness (ICD: T75.3XXA)
22. incoordination/clumsiness (ICD: R27.8)
23. awareness of suppression and the need for volitional control of eyes
24. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Accommodative esotropia is characterized by one or more of the following diagnostic findings:

1. strabismus, esotropia (ICD:H50.00)/deviation reduces with accommodative inhibition
2. eso deviation significantly greater at near than far
3. high AC/A ratio

THERAPEUTIC MANAGEMENT CONSIDERATIONS

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most intermittent alternating esotropias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. reduce accommodative influence upon the strabismus
2. enhance and equalize accommodative accuracy, amplitude, and facility
3. enhance fusional vergence ranges, flexibility and stability
4. enhance accommodative/convergence relationships
5. integrate binocular function with information processing
6. reduce esophoria/esotropia
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. enhance accommodative stability and flexibility/enhance relative accommodative ranges
10. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered accommodative esotropia usually requires 40 hours of office therapy.
2. Accommodative esotropia may require substantially more office therapy, if complicated by associated factors such as a partially non-accommodative component of the esotropia, prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

BASIC ESOPHORIA ICD-10-CM: H50.51

DEFINITION:

A sensorimotor anomaly of the binocular vision system characterized by a tendency for the eyes to over-converge at distance and near.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with esophoria may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
10. spatial disorientation
11. inconsistent visual attention/concentration and/or awareness
12. general fatigue (ICD: R53.83)
13. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
14. motion sickness (ICD: T75.3XXA)
15. awareness of the need for volitional control of eyes
16. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Esophoria encompasses one or more of the following diagnostic findings:

1. esophoria at distance and near
2. low negative fusional vergence ranges at distance and near
3. low negative fusional vergence flexibility
4. poor vergence stability
5. eso fixation disparity
6. low negative fusional vergence recoveries at distance and near
7. steep base-in component of forced vergence fixation disparity curve

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most esophorias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. reduce esophoria
2. enhance and develop fusional vergence ranges, stability, and flexibility
3. enhance accommodative/convergence relationships
4. integrate binocular function with information processing
5. integrate binocular skills with accurate motor responses
6. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
7. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered esophoria usually requires 30 hours of office therapy.
2. Esophorias may require substantially more office therapy, if complicated by associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

BASIC EXOPHORIA

ICD-10-CM: H50.52

DEFINITION:

A sensorimotor anomaly of the binocular visual system, characterized by a tendency for the eyes to diverge at distance and near relative to the normative data.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with exophoria may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. asthenopia (ICD: H53.149)
11. transient blurred vision
12. loss of place, repetition, and/or omission of words &/or lines of print while reading
13. transpositions when copying from one source document to another
14. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
15. spatial disorientation
16. photophobia (ICD: H53.149)
17. inconsistent visual attention/concentration and/or awareness
18. general fatigue (ICD: R53.83)
19. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
20. motion sickness (ICD: T75.3XXA)
21. incoordination/clumsiness (ICD: R27.8)
22. awareness of the need for volitional control of eyes

DIAGNOSTIC FACTORS:

Exophoria encompasses one or more of the following diagnostic findings:

1. higher than expected exophoria at distance and near
2. low positive fusional vergence ranges/facility and/or flexibility
3. poor vergence stability
4. exo fixation disparity
5. steep base-out component of forced vergence curve

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most exophorias require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. reduce or eliminate excessive exophoria
2. enhance compensating adductive vergence ranges
3. develop adequate fusional ranges, adequate fusional stability, and adequate vergence flexibility
4. enhance accommodative/convergence relationships
5. integrate binocular function with information processing
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered exophoria usually requires 30 hours of office therapy.
2. Exophoria may require substantially more sessions of office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

VERTICAL HETEROPHORIA

ICD-10-CM: H50.53

DEFINITION:

A sensorimotor anomaly of the binocular visual system characterized by a tendency for the eyes to vertically misalign.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with vertical heterophoria may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. eye turn, deviation (ICD:H51.9); compensatory head tilt (ICD:R29.3)
11. facial asymmetry
12. loss of place, repetition &/or omission of words &/or lines of print while reading
13. neck discomfort from postural adaptation
14. difficulty visually tracking &/or following objects
15. illusory movement
16. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
17. spatial disorientation
18. photophobia (ICD: H53.149)
19. inconsistent visual attention/concentration and/or awareness
20. distractibility while performing visually demanding tasks
21. general fatigue (ICD: R53.83)
22. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
23. motion sickness (ICD: T75.3XXA)
24. incoordination/clumsiness (ICD: R27.8)
25. awareness of the need for volitional control of eyes
26. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Vertical heterophoria is characterized by one or more of the following diagnostic findings:

1. vertical heterophoria at distance and/or near
2. unbalanced supra/infra vergence ranges
3. restricted supra/infra vergence recoveries
4. vertical fixation disparity/associated phoria

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most vertical heterophoria cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop fusional stability
2. enhance accommodative/convergence relationships
3. integrate binocular function with information processing
4. reduce vertical phoria
5. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near, enhance fusional vergence flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered vertical heterophoria usually requires 30 hours of office therapy.
2. Vertical heterophoria may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, non-comitant deviations, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

CYCLOPHORIA
ICD-10-CM: H50.54

DEFINITION:

A sensorimotor anomaly of the binocular visual system characterized by an abnormal tendency for the eyes to rotate around the anterior-posterior axis.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with cyclophoria may include, but are not limited to, the following:

1. asthenopia (ICD:H53.149)
2. pain in or around the eye (ICD: H57.13)
3. headaches (ICD: R51)
4. reduced efficiency and productivity/diminished accuracy/inconsistent work product
5. diminished performance with time on task
6. tendency to close or cover one eye
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. compensatory head tilt (ICD: R29.3)
10. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
11. inconsistent visual attention/concentration and/or awareness
12. distractibility while performing visually demanding tasks
13. general fatigue (ICD: R53.83)
14. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
15. motion sickness (ICD: T75.3XXA)
16. incoordination/clumsiness (ICD: R27.8)
17. difficulty visually tracking and/or following objects
18. loss of place, repetition and/or omission of words or lines of print while reading

DIAGNOSTIC FACTORS:

Cyclophoria is characterized by one or more of the following diagnostic findings:

1. cyclodeviation measured at distance and/or near
2. cyclodeviation reported under tests of dissociation

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most cyclophoria require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional vergence ranges, stability, and flexibility in all positions of gaze
2. reduce cyclophoria
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. integrate binocular skills with accurate motor responses
6. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
7. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered cyclophoria usually requires 30 hours of office therapy.
2. Cyclophoria may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, non-comitant deviations, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

DISSOCIATED VERTICAL DEVIATION

ICD-10-CM: H50.55

DEFINITION:

A sensorimotor anomaly of the binocular vision system characterized by the non-fixating eye turning upward under conditions of dissociation.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with dissociated vertical deviation may include, but are not limited to, the following:

1. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
2. eye turn, deviation (ICD: H50.9)/diplopia (ICD: H53.2)
3. inaccurate/inconsistent depth judgment
4. spatial disorientation

DIAGNOSTIC FACTORS:

Dissociated vertical deviation is characterized by the diagnostic finding that either eye turns upward when covered.

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms of the diagnosed condition. Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most dissociated vertical deviation cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered dissociated vertical deviation evident in a non-strabismic case usually requires 40 hours of office therapy.
3. The most commonly encountered dissociated vertical deviation evident in a strabismic case usually requires 60 hours of office therapy.
4. Dissociated vertical deviation may require substantially more office therapy, if complicated by associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

THIRD CRANIAL NERVE PALSIES **ICD-10-CM: H49.00/.01/.02/.03**

DEFINITION:

A paralytic/paretic strabismus in which partial or complete innervation to the extra-ocular muscles innervated by the third cranial nerve has been impaired.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with third cranial nerve palsies may include, but are not limited to, the following:

1. ptosis
2. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn/tilt
3. defective stereopsis and inaccurate/inconsistent depth judgment
4. general fatigue after sustained task/asthenopia/diminished performance with increased task time
5. diplopia (ICD: H53.2)
6. inaccurate eye-hand coordination
7. reduced efficiency and productivity/diminished accuracy/inconsistent work product
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation/incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Third cranial nerve palsies are characterized by one or more of the following findings:

1. sudden onset diplopia
2. secondary deviation greater than primary deviation
3. gradual progression of deviation through stages (i.e. deviation in primary gaze, over-action of antagonist muscle leading to contracture of deviation, and, finally, spread of comitance of the deviation)
4. eye is deviated down and out with ipsilateral ptosis
5. the pupil ipsilateral to the deviation may or may not be dilated

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs.

Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of paralytic strabismus such as third nerve palsies, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms and, possibly, a ptosis crutch and/or lid taping. Many third cranial nerve palsy cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. to decrease the ptosis using a ptosis crutch and/or neuromuscular exercises
2. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
3. enhance accommodative/convergence relationships
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. enhance fusional vergence facility and flexibility
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered third cranial nerve palsy usually requires 60 to 80 hours of office therapy.
3. The rare, uncomplicated third nerve palsies usually require 30 to 40 hours of office therapy.
4. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

FOURTH CRANIAL NERVE PALSIES

ICD-10-CM: H49.10/.11/.12/.13

DEFINITION:

A paralytic/paretic strabismus in which partial or complete innervation to the extra-ocular muscle innervated by the fourth cranial nerve has been impaired.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with fourth cranial nerve palsies may include, but are not limited to, the following:

1. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn/tilt
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue after sustained task
4. diplopia (ICD: H53.2)
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia and diminished performance with increased task time
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation/incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Fourth cranial nerve palsies are characterized by one or more of the following findings:

1. sudden onset diplopia
2. secondary deviation greater than primary deviation
3. gradual progression of deviation through stages (i.e. deviation in primary gaze, over-action of antagonist muscle leading to contracture of deviation, and, finally, spread of comitance of the deviation)
4. eye is deviated upward

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of paralytic strabismus such as fourth nerve palsies, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many fourth cranial nerve palsy cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered fourth cranial nerve palsy usually requires 60 to 80 hours of office therapy.
3. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

SIXTH CRANIAL NERVE PALSIES

ICD-10-CM: H49.20/.21/.22/.23

DEFINITION:

A paralytic/paretic strabismus in which partial or complete innervation to the extra-ocular muscles innervated by the sixth cranial nerve has been impaired.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with sixth cranial nerve palsies may include, but are not limited to, the following:

1. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue after sustained task
4. diplopia (ICD: H53.2)
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia and diminished performance with increased task time
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation/incoordination/clumsiness (ICD: R27.8)
10. decrease in visual acuity

DIAGNOSTIC FACTORS:

Sixth cranial nerve palsies are characterized by one or more of the following findings:

1. sudden onset diplopia
2. secondary deviation greater than primary deviation
3. gradual progression of deviation through stages (i.e. deviation in primary gaze, over-action of antagonist muscle leading to contracture of deviation, and, finally, spread of comitance of the deviation)
4. eye is deviated inward

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of paralytic strabismus such as sixth nerve palsies, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many sixth cranial nerve palsy cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered cases of sixth cranial nerve palsy usually require 30 to 40 hours of office therapy.
3. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

EXTERNAL, TOTAL, CHRONIC PROGRESSIVE OPHTHALMOPLÉGIA
ICD-10-CM: H49.40/.41/.42/.43, H49.30/.31/.32/.33, H50.89

DEFINITION:

External, total, chronic progressive ophthalmoplegia is a rare disorder affecting ocular motility and functioning of the levator palpebrae muscles.

SIGNS AND SYMPTOMS:

The signs and symptoms of external, total, chronic progressive ophthalmoplegia may include, but are not limited to, the following:

1. bilateral ptosis
2. decreased ocular motility in all positions of gaze.
3. abnormal head or neck posture (i.e. patient's chin may be maximally elevated to permit vision in advanced stages of ophthalmoplegia)
4. head tilt/turn
5. diplopia (rare)
6. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
7. spatial disorientation/incoordination/clumsiness (ICD: R27.8)
8. muscles of mastication may become involved in addition to extra-ocular muscles and levator muscles

DIAGNOSTIC FACTORS:

External, total, chronic progressive ophthalmoplegia is characterized by one or more of the following:

1. bilateral ptosis
2. may be myogenic or nuclear in etiology
3. non-comitant ocular motility

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of external, total, chronic progressive ophthalmoplegia, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms and, possibly, a ptosis crutch and/or lid taping. Many external, total, chronic progressive ophthalmoplegia cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. to decrease the ptosis using a ptosis crutch and/or neuromuscular exercises
2. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
3. enhance accommodative/convergence relationships
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. enhance fusional vergence facility and flexibility
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered external, total, or chronic progressive ophthalmoplegia usually requires 32 to 40 hours of office therapy.
3. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

BROWN'S TENDON SHEATH SYNDROME

ICD-10-CM: H50.611

DEFINITION:

Brown's tendon sheath syndrome is a structural anomaly of ocular motility. The syndrome is characterized by a short superior oblique tendon sheath which restricts elevation of the adducted eye in free space as well as under the forced duction test.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with Brown's tendon sheath syndrome may include, but are not limited to, the following:

1. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn/tilt
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue after sustained task
4. diplopia in primary gaze(ICD: H53.2)
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia and diminished performance with increased task time
8. divergence pattern in upward gaze (i.e. "V-pattern")
9. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
10. spatial disorientation/incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Brown's tendon sheath syndrome is characterized by one or more of the following findings:

1. diplopia in primary gaze
2. absence of elevation upon adduction
3. near normal elevation in primary position and abduction
4. positive forced duction test (i.e. restriction of passive elevation)
5. occasional over-action of the ipsilateral superior oblique muscle.

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of Brown's syndrome, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many Brown's syndrome cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered Brown's Syndrome usually requires 32 to 40 hours of office therapy.
3. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

**LIMITED DUCTIONS (OTHER CONDITONS)
ICD-10-CM: H50.69**

DEFINITION:

A condition in which binocular function is compromised in a position of gaze other than primary gaze.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with limited ductions (other conditions) may include, but are not limited to, the following:

1. diplopia (ICD: H53.2) in a position of gaze other than primary gaze
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue after sustained task
4. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia and diminished performance with increased task time
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation/incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Limited ductions (other conditions) are characterized by one or more of the following findings:

1. diplopia (ICD: H53.2) in a position of gaze other than primary gaze
2. non-comitant eye movements
3. strabismus in a position of gaze other than primary gaze

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions such as Duane's syndrome or parietic strabismus
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many limited duction cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered case of limited duction adds 12 to 16 hours of office therapy to associated conditions. Associated factors such as prior eye muscle surgery, cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

DUANE'S SYNDROME

ICD-10-CM: H50.811, H50.812

DEFINITION:

Duane's syndrome is characterized by three potential categories of disorders:

Duane's Type I: marked limitation/absence of abduction, normal or slightly restricted adduction, globe retraction on adduction, narrowing of the palpebral fissure upon adduction, and widening of the palpebral fissure upon attempted abduction.

Duane's Type II: marked limitation/absence of adduction, normal or slightly restricted abduction, globe retraction on abduction, narrowing of the palpebral fissure upon abduction, and widening of the palpebral fissure upon attempted adduction.

Duane's Type III: combination of restriction or absence of abduction and adduction with globe retraction and narrowing of the palpebral fissure upon attempted adduction.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with Duane's syndrome may include, but are not limited to, the following:

1. eye turn, deviation (ICD:H51.9); sensation of monocular viewing; head turn
2. defective stereopsis and inaccurate/inconsistent depth judgment
3. general fatigue after sustained task
4. diplopia (ICD: H53.2)
5. inaccurate eye-hand coordination
6. reduced efficiency and productivity/diminished accuracy/inconsistent work product
7. asthenopia and diminished performance with increased task time
8. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
9. spatial disorientation/incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Duane's syndrome is characterized by one or more of the following findings:

1. limitation of either adduction or abduction
2. globe retraction and narrowing of the eye upon attempted adduction
3. eye is deviated inward

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of Duane's syndrome, co-management with medicine (i.e. internists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many Duane's syndrome cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
2. enhance accommodative/convergence relationships
3. enhance depth judgments and/or stereopsis
4. integrate binocular function with information processing
5. enhance fusional vergence facility and flexibility
6. integrate binocular skills with accurate motor responses
7. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
8. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered cases of Duane's syndrome usually require 24 to 32 hours of office therapy.
3. Associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions may warrant an increase in treatment period.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

CONVERGENCE INSUFFICIENCY ICD-10-CM: H51.11

DEFINITION:

A sensorimotor anomaly that affects the binocular visual system and is characterized by an inability to adequately converge or sustain convergence for visual tasks at near.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with convergence insufficiency may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. transient blurred vision/illusory movement
5. pain in or around the eye (ICD: H57.13)
6. headaches (ICD: R51)
7. difficulty sustaining near visual function
8. avoidance of visually demanding tasks
9. inaccurate eye-hand coordination
10. loss of place, repetition, and/or omission of words and/or lines of print while reading
11. transpositions when copying from one source to another
12. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
13. spatial disorientation
14. photophobia (ICD: H53.149)
15. inconsistent visual attention/concentration and/or awareness
16. general fatigue (ICD: R53.83)
17. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
18. motion sickness (ICD: T75.3XXA)
19. incoordination/clumsiness (ICD: R27.8)
20. awareness of the need for volitional control of eyes
21. asthenopia (ICD: H53.149)

DIAGNOSTIC FACTORS:

Convergence insufficiency encompasses one or more of the following diagnostic findings:

1. higher than expected exophoria at near
2. low accommodative convergence/accommodation (AC/A) ratio
3. receded near point of convergence (NPC)
4. low positive fusional vergence ranges/ facility/ flexibility at near
5. exo fixation disparity/steep base-out component of forced vergence curve
6. asthenopia/vertigo/diplopia responses during/after nearpoint testing

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions
8. occupational/avocational goals

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most convergence insufficiencies require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. enhance fusional ranges, fusional stability, and vergence flexibility
2. enhance accommodative/convergence relationships
3. enhance near point of convergence
4. integrate binocular function with information processing
5. integrate binocular skills with accurate motor responses
6. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
7. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered convergence insufficiency usually requires 24 hours of office therapy.
2. Convergence insufficiency may require substantially more office therapy, if complicated by associated conditions such as cerebral vascular accident, head trauma, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

CONVERGENCE EXCESS ICD-10-CM: H51.12

DEFINITION:

A sensorimotor anomaly of the binocular visual system characterized by a tendency for the eyes to over-converge at near.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with convergence excess may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. transient blurred vision/illusory movement
5. loss of place, repetition and/or omission of words and/or lines of print while reading
6. transpositions when copying from one source to another
7. pain in or around the eye (ICD: H57.13)
8. headaches (ICD: R51)
9. difficulty sustaining near visual function
10. avoidance of visually demanding tasks
11. inaccurate eye-hand coordination
12. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
13. spatial disorientation
14. photophobia (ICD: H53.149)
15. inconsistent visual attention/concentration and/or awareness
16. distractibility while performing visually demanding tasks
17. general fatigue (ICD: R53.83)
18. awareness of the need for volitional control of eyes
19. asthenopia (ICD: H53.149)
20. difficulty changing fixation from near to far

DIAGNOSTIC FACTORS:

Convergence excess encompasses one or more of the following diagnostic findings:

1. near esophoria significantly greater than distance phoria
2. high AC/A ratio
3. restricted negative vergence ranges at near
4. low negative fusional vergence flexibility
5. eso fixation disparity at near
6. low positive relative accommodation (PRA)
7. steep base-in component of the forced vergence curve

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most convergence excesses require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. reduce nearpoint esophoria
2. enhance and develop fusional vergence ranges, stability, and flexibility
3. enhance accommodative/convergence relationships
4. integrate binocular function with information processing
5. integrate binocular skills with accurate motor responses
6. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
7. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered convergence excess usually requires 24 hours of office therapy.
2. Convergence excess may require substantially more office therapy, if complicated by associated factors such as cerebral vascular accident, head trauma, and/or systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

DIVERGENCE INSUFFICIENCY

ICD-10-CM: H51.8

DEFINITION:

A sensorimotor anomaly of the binocular visual system characterized by a tendency for the eyes to over-converge at distance.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with divergence insufficiency may include, but are not limited to, the following:

1. reduced efficiency and productivity/diminished accuracy/inconsistent work product
2. diminished performance with time on task
3. diplopia (ICD: H53.2)/tendency to close or cover one eye
4. inaccurate/inconsistent depth judgment
5. pain in or around the eye (ICD: H57.13)
6. avoidance of visually demanding tasks
7. spatial disorientation
8. photophobia (ICD: H53.149)
9. inconsistent visual attention/concentration and/or awareness
10. dizziness/vertigo (ICD: R42); especially during/after sustained visually demanding tasks
11. motion sickness (ICD: T75.3XXA)
12. incoordination/clumsiness (ICD: R27.8)
13. awareness of the need for volitional control of eyes
14. asthenopia (ICD: H53.149)
15. headaches (ICD: R51)
16. eye turn, deviation (ICD: H51.9)
17. transpositions when copying from one source document to another
18. transient blurred vision

DIAGNOSTIC FACTORS:

Divergence insufficiency encompasses one or more of the following diagnostic findings:

1. higher than expected esophoria at distance
2. low AC/A ratio
3. low distance negative fusional vergence ranges/ facility/ flexibility
4. eso fixation disparity at distance

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Most divergence insufficiency cases require optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. reduce esophoria
2. enhance and develop fusional vergence ranges, stability, and flexibility
3. enhance accommodative/convergence relationships
4. integrate binocular function with information processing
5. integrate binocular skills with accurate motor responses
6. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
7. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. The most commonly encountered divergence insufficiency usually requires 35 hours of office therapy.
2. Divergence insufficiency may require substantially more office therapy, if complicated by associated factors such as cerebral vascular accident, head trauma, and systemic and/or neurologic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

CONGENITAL NYSTAGMUS ICD-10-CM: H55.01

DEFINITION:

Congenital nystagmus is a nystagmus which is present at birth. It is a genetically transmitted binocular nystagmus (may be jerk or pendular).

SIGNS AND SYMPTOMS:

The symptoms and signs associated with congenital nystagmus may include, but are not limited to, the following:

1. reduced corrected vision
2. head turn/tilt
3. defective stereopsis and/or depth judgment; inaccurate spatial judgments
4. abnormal postural adaptations and/or working distances
5. incoordination and clumsiness
6. asthenopia
7. sensation of target movement
8. general fatigue
9. diminished accuracy with increased task time
10. motion sickness
11. dizziness after sustained visual tasks
12. diplopia

DIAGNOSTIC FACTORS:

Although additional diagnostic tests may be performed to rule out other causes (i.e. refractive, other types of nystagmus, psychogenic, and other structural/pathological defects) of reduced visual acuity and reduced visual performance, congenital nystagmus is characterized by and/or associated with one or more of the following findings:

1. reduced best corrected visual acuity
2. absence of fusion and/or reduced fusion ranges
3. reduced stereopsis
4. suppression
5. inaccurate visual-motor coordination
6. extra-ocular muscle paresis/paralysis
7. albinism
8. strabismus (i.e. esotropia, dissociated vertical deviation)
9. oscillopsia
10. comitant ocular motilities

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of congenital nystagmus, co-

management with medicine (i.e. neurologists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many congenital nystagmus cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. improve visual fixation (thereby improve visual acuity) , smooth pursuits, and saccades monocularly and then binocularly
2. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
3. enhance accommodative/convergence relationships
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. enhance fusional vergence facility and flexibility
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered congenital nystagmus usually requires 24 to 36 hours of office therapy.
3. Complicating conditions such as reduced VA and/or strabismus may warrant increased therapy time.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

LATENT NYSTAGMUS

ICD-10-CM: H55.02

DEFINITION:

Latent nystagmus is a nystagmus which is induced by covering either of the two eyes, but otherwise absent.

SIGNS AND SYMPTOMS:

The symptoms and signs associated with latent nystagmus may include, but are not limited to, the following:

1. reduced corrected vision
2. head turn/tilt
3. jerk nystagmus upon reduced monocular brightness, occlusion, or optical blur of one eye
4. defective stereopsis and/or depth judgment; inaccurate spatial judgments
5. abnormal postural adaptations and/or working distances
6. incoordination and clumsiness
7. asthenopia
8. sensation of target movement
9. general fatigue
10. diminished accuracy with increased task time
11. motion sickness
12. dizziness after sustained visual tasks

DIAGNOSTIC FACTORS:

Although additional diagnostic tests may be performed to rule out other causes (i.e. refractive, other types of nystagmus, psychogenic, and other structural/pathological defects) of reduced visual acuity and reduced visual performance, latent nystagmus is characterized by and/or associated with one or more of the following findings:

1. reduced best corrected visual acuity
2. absence of fusion and/or reduced fusion ranges
3. reduced stereopsis
4. suppression
5. inaccurate visual-motor coordination
6. extra-ocular muscle paresis/paralysis
7. oscillopsia, under monocular conditions
8. jerk nystagmus upon reduced monocular brightness, occlusion, or optical blur of one eye

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of latent nystagmus, co-management with medicine (i.e. neurologists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many latent nystagmus cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. improve visual fixation (thereby improve visual acuity), smooth pursuits, and saccades monocularly and then binocularly
2. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
3. enhance accommodative/convergence relationships
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. enhance fusional vergence facility and flexibility
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered latent nystagmus usually requires 30 to 50 hours of office therapy.
3. Complicating conditions such as suppression and/or strabismus may warrant increased therapy time.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

VISUAL DEPRIVATION NYSTAGMUS

ICD-10-CM: H55.03

DEFINITION:

Visual deprivation nystagmus is an ocular nystagmus which is attributed to early onset, reduced, central visual acuity.

SIGNS AND SYMPTOMS:

The symptoms and signs associated with visual deprivation nystagmus may include, but are not limited to, the following:

1. reduced corrected vision
2. head turn/tilt
3. pendular nystagmus with irregular eye movements
4. defective stereopsis and/or depth judgment; inaccurate spatial judgments
5. abnormal postural adaptations and/or working distances
6. incoordination and clumsiness
7. asthenopia
8. sensation of target movement
9. general fatigue
10. diminished accuracy with increased task time
11. motion sickness
12. dizziness after sustained visual tasks

DIAGNOSTIC FACTORS:

Although additional diagnostic tests may be performed to rule out other causes (i.e. refractive, other types of nystagmus, psychogenic, and other structural/pathological defects) of reduced visual acuity and reduced visual performance, visual deprivation nystagmus is characterized by and/or associated with one or more of the following findings:

1. reduced best corrected visual acuity
2. absence of fusion and/or reduced fusion ranges
3. reduced stereopsis
4. suppression
5. inaccurate visual-motor coordination
6. oscillopsia, under monocular conditions
7. pendular nystagmus with irregular eye movements
8. strabismus
9. oculomotor dysfunctions

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. In cases of visual deprivation nystagmus, co-management with medicine (i.e. neurologists, neuro-ophthalmology and/or ophthalmology) is often in order due to systemic complications. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

Some cases are successfully managed by the prescription of therapeutic lenses and/or prisms. Many visual deprivation nystagmus cases benefit from optometric vision therapy, which incorporates the prescription of specific treatments in order to:

1. improve visual fixation (thereby improve visual acuity), smooth pursuits, and saccades monocularly and then binocularly
2. develop adequate fusional vergence ranges and stability in all positions of gaze at distance and near
3. enhance accommodative/convergence relationships
4. enhance depth judgments and/or stereopsis
5. integrate binocular function with information processing
6. enhance fusional vergence facility and flexibility
7. integrate binocular skills with accurate motor responses
8. integrate binocular skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
9. increase visual stamina/integrate newly established skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated factors. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Full treatment requires resolution of associated visual conditions.
2. The most commonly encountered visual deprivation nystagmus usually requires 28 to 40 hours of office therapy.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

**OCULAR MOTOR DYSFUNCTION
DEFICIENCIES OF SACCADIC EYE MOVEMENTS
ICD-10-CM: H55.81**

DEFINITION:

A sensorimotor anomaly of the oculomotor system whose characteristic feature is the inability to perform accurate, effective ocular saccadic and/or fixational eye movement patterns.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with ocular motor dysfunction may include, but are not limited to, the following:

1. difficulty visually tracking and/or following objects
2. loss of place, repetition, and/or omission of words and/or lines of print while reading
3. need to utilize a marker to avoid loss of place
4. transposition when copying from one source document to another
5. diminished accuracy
6. inaccurate/inconsistent work product
7. reduced efficiency and/or productivity
8. inaccurate eye-hand coordination
9. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
10. spatial disorientation/dizziness/motion sickness (ICD: T75.3XXA)
11. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
12. difficulty sustaining near visual function
13. general fatigue
14. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Ocular motor dysfunction is characterized by one or more of the following diagnostic findings:

1. increased saccadic latency
2. decreased saccadic accuracy
3. accuracy of ocular saccades below expecteds
4. difficulty separating head/body and eye movements
5. difficulty sustaining adequate saccadic eye movement under cognitive demands
6. inability to follow targets in proper sequence
7. need for tactile/kinesthetic reinforcement while performing ocular motor activities
8. inability to adequately sustain fixation/erratic fixation
9. abnormal findings in electro-oculography studies
10. increased time required to perform tasks dependent upon saccadic eye movements

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most ocular motor dysfunctions require optometric vision therapy which incorporates the prescription of specific treatments in order to:

1. develop accurate fixational skills and ocular saccades
2. integrate saccades with other ocular motor skills
3. integrate ocular motor skills with accurate motor responses as well as with sensory skills (vestibular, kinesthetic, tactile, and auditory)
4. integrate ocular motor skills with vergence and accommodative systems
5. integrate ocular motor skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Deficiencies in saccadic eye movement seldom occur as an isolated condition. The most commonly encountered deficiencies in saccadic eye movement usually require 12 hours of office therapy, in addition to therapy provided for concurrent conditions.
2. Deficiencies in saccadic eye movement require substantially more office therapy, if complicated by associated conditions such as head trauma, cerebral vascular accident, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

**OCULAR MOTOR DYSFUNCTION
DEFICIENCIES OF PURSUIT EYE MOVEMENTS
ICD-10-CM: H55.89**

DEFINITION:

A sensorimotor anomaly of the ocular motor system that is characterized by an inability to perform accurate, effective duction or version eye movements.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with ocular motor dysfunction may include, but are not limited to, the following:

1. difficulty visually tracking and/or following objects
2. loss of place, repetition, and/or omission of words and/or lines of print while reading
3. need to utilize a marker to avoid loss of place
4. transposition when copying from one source document to another
5. diminished accuracy
6. inaccurate/inconsistent work product
7. reduced efficiency and/or productivity
8. inaccurate eye-hand coordination
9. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
10. spatial disorientation/dizziness/motion sickness (ICD: T75.3XXA)
11. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
12. difficulty sustaining near visual function
13. general fatigue
14. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Ocular motor dysfunction is characterized by one or more of the following diagnostic findings:

1. accuracy of ocular pursuits below expecteds
2. difficulty separating head/body and eye movements
3. difficulty sustaining adequate pursuit (duction or version) eye movements under cognitive demands
4. need for tactile/kinesthetic reinforcement while performing ocular motor activities
5. abnormal findings in electro-oculography studies
6. need for saccadic movements while performing pursuits at normal speed

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

1. the severity of symptoms and diagnostic factors, including onset and duration of the problem
2. the complications of associated visual conditions
3. implications of patient's general health, cognitive development, physical development, and effects of medications taken
4. etiological factors
5. extent of visual demands placed upon the individual
6. patient compliance and involvement in the prescribed therapy regimen
7. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most ocular motor dysfunctions require optometric vision therapy which incorporates the prescription of specific treatments in order to:

1. develop accurate ocular pursuit (duction or version) skills
2. integrate pursuits with other ocular motor skills
3. integrate ocular motor skills with accurate motor responses as well as with sensory skills (vestibular, kinesthetic, tactile, and auditory)
4. integrate ocular motor skills with vergence and accommodative systems
5. integrate ocular motor skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

1. Deficiencies in pursuit eye movements seldom occur as an isolated condition. The most commonly encountered deficiencies in pursuit eye movements usually require up to an additional 12 hours of office therapy, in addition to therapy provided for concurrent conditions.
2. Deficiencies in pursuit eye movement require substantially more office therapy, if complicated by associated conditions such as head trauma, cerebral vascular accident, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.

**OCULAR MOTOR DYSFUNCTION
ABNORMAL OCULOMOTOR STUDIES
ICD-10-CM: R94.113**

DEFINITION:

A sensorimotor anomaly of the oculomotor system whose characteristic feature is the inability to perform accurate, effective ocular pursuit, duction, version, saccadic, and/or fixational eye movement patterns.

SIGNS AND SYMPTOMS:

The signs and symptoms associated with ocular motor dysfunction may include, but are not limited to, the following:

1. difficulty visually tracking and/or following objects
2. loss of place, repetition, and/or omission of words and/or lines of print while reading
3. need to utilize a marker to avoid loss of place
4. transposition when copying from one source document to another
5. diminished accuracy
6. inaccurate/inconsistent work product
7. reduced efficiency and/or productivity
8. inaccurate eye-hand coordination
9. abnormal postural adaptation/abnormal working distance (ICD: R29.3)
10. spatial disorientation/dizziness/motion sickness (ICD: T75.3XXA)
11. inconsistent visual attention/concentration or distractibility while performing visually demanding tasks
12. difficulty sustaining near visual function
13. general fatigue
14. incoordination/clumsiness (ICD: R27.8)

DIAGNOSTIC FACTORS:

Ocular motor dysfunction is characterized by one or more of the following diagnostic findings:

11. increased saccadic latency
12. decreased saccadic accuracy
13. accuracy of ocular pursuits and/or saccades below expecteds
14. difficulty separating head/body and eye movements
15. difficulty sustaining adequate ocular motor performance under cognitive demands
16. inability to follow targets in proper sequence
17. need for tactile/kinesthetic reinforcement while performing ocular motor activities
18. inability to adequately sustain fixation/erratic fixation
19. abnormal findings in electro-oculography studies
20. sluggish eye movements

THERAPEUTIC MANAGEMENT CONSIDERATIONS:

The doctor of optometry determines appropriate diagnostic and therapeutic modalities, and frequency of evaluation and follow-up, based on the urgency and nature of the patient's conditions and unique needs. Vision disorders that are not totally cured through vision therapy may still be ameliorated with significant improvement in visual function and quality of life. The management of the case and duration of treatment would be affected by:

7. the severity of symptoms and diagnostic factors, including onset and duration of the problem
8. the complications of associated visual conditions
9. implications of patient's general health, cognitive development, physical development, and effects of medications taken
10. etiological factors
11. extent of visual demands placed upon the individual
12. patient compliance and involvement in the prescribed therapy regimen
13. type, scope, and results of prior interventions

PRESCRIBED TREATMENT REGIMEN:

The goal of the prescribed treatment regimen is to address the diagnostic factors and alleviate the presenting signs and symptoms associated with the diagnosed condition. Most ocular motor dysfunctions require optometric vision therapy which incorporates the prescription of specific treatments in order to:

8. develop accurate pursuit, duction, version, and saccadic eye movement skills
9. integrate ocular motor skills with accurate motor responses
10. integrate ocular motor skills with other sensory skills (vestibular, kinesthetic, tactile, and auditory)
11. integrate ocular motor skills with vergence and accommodative systems
12. integrate ocular motor skills with information processing

DURATION OF TREATMENT:

The following treatment ranges are provided as a guide. Treatment duration will depend upon the particular patient's condition and associated circumstances. When duration of treatment beyond these ranges is required, documentation of the medical necessity for additional treatment services may be warranted for third-party claims processing and review purposes.

3. An ocular motor dysfunction seldom occurs as an isolated condition. The most commonly encountered ocular motor dysfunction usually requires up to an additional 12 hours of office therapy, in addition to therapy provided for concurrent conditions.
4. Ocular motor dysfunction requires substantially more office therapy, if complicated by associated conditions such as head trauma, cerebral vascular accident, and/or other systemic conditions.

FOLLOW-UP CARE:

At the conclusion of the active treatment regimen, periodic follow-up evaluation is required. Should the signs, symptoms, or other diagnostic factors recur, further therapy may be medically necessary. Therapeutic lenses may be prescribed during or at the conclusion of active vision therapy to assist in the maintenance of long-term stability.