Policy
Aetna considers strabismus repair medically necessary for adults 18 years of age or older only if both of the following criteria are met:

1. Diplopia is documented, or there is an impairment of peripheral vision due to esotropia (marked turning inward of eye); and
2. Restoration of alignment will restore ability to maintain fusion.

Aetna considers the use of amniotic membrane in strabismus surgery experimental and investigational because its clinical value has not been established. See CPB 293 - Corneal Graft with Amniotic Membrane Transplantation or Limbal Stem Cell Transplantation.

Aetna considers repair of strabismus cosmetic when there is no expected improvement of fusion.

Policy History
Last Review 06/23/2016
Effective: 09/25/2001
Next Review: 06/22/2017

Definitions

Additional Information

Clinical Policy Bulletin Notes
**Note:** Strabismus surgery is considered medically necessary for children diagnosed with strabismus.

**Background**
Strabismus is an inability of one eye to attain binocular vision with the other because of imbalances of muscles of the eyeball. The goals of strabismus surgery are to obtain normal visual acuity in each eye, to obtain or improve fusion, to eliminate any associated sensory adaptations or diplopia, and to improve visual fields.

In adults, the sudden onset of strabismus usually follows head trauma, intra-cranial hemorrhage, or brain tumor. Adults with new-onset strabismus develop diplopia. Correction of strabismus should result in binocular vision and fusion of images. Adults with congenital strabismus, however, usually have failure of visual development (amblyopia) in the deviating eye; correction of ocular mis-alignment is unlikely to achieve stereopsis and fusion.

Surgery for correction of strabismus consists of weakening or strengthening the extra-ocular muscles. For correction of exotropia, the lateral rectus muscle is weakened by recession. The muscle is detached at its insertion and then re-sewn posteriorly to the sclera at a distance not to exceed 8 mm from the original insertion while the medial rectus is cut at its insertion and a part of the muscle not to exceed 6 mm is resected. The muscle is sutured to its original insertion. The amount of recession and resection and the number of extra-ocular muscles resected or recessed are determined by the degree of ocular deviation (squint). In patients with esotropia, the medial rectus is recessed and the lateral rectus is resected. For vertical deviation, the vertical muscles are recessed, resected, tucked, or weakened by disinsertion (e.g., inferior oblique muscles).

*Use of Amniotic Membrane in Strabismus Surgery:*

In a prospective, randomized study, Kirsch et al (2014) evaluated the effect of amniotic membrane in reducing inflammation, fibrosis, adhesion formation, and ocular motility restrictions following strabismus surgery. In the 1st stage, a total of 17
rabbits underwent superior rectus muscle recession in both eyes. Surgery was performed in the same manner, but human amniotic membrane was placed over the muscle without sutures in the right eye after recession. After 15 days, the rabbits were killed and their orbits were exenterated and evaluated histopathologically to quantify tissue inflammation and fibrosis. In the 2nd stage, 5 rabbits underwent the same procedure but were killed after 30 days. A dynamometer was used to measure the force required to displace all eyes. At 15 days post-operatively, eyes with amniotic membrane exhibited an increased inflammatory response and less fibrosis than eyes without amniotic membrane. At 30 days post-operatively, eyes with amniotic membrane continued to exhibit increased inflammation and less fibrosis than eyes without amniotic membrane. In the dynamometer test, more force was needed to displace eyes without amniotic membrane after 15 days, but there was no significant difference between the forces needed at 30 days. The authors concluded that human amniotic membrane in rabbits led to an increase in the inflammatory process and a decrease in fibrosis formation following strabismus surgery.

<table>
<thead>
<tr>
<th>CPT Codes / HCPCS Codes / ICD-10 Codes</th>
</tr>
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</table>

Information in the [brackets] below has been added for clarification purposes. Codes requiring a 7th character are represented by "+":

ICD-10 codes will become effective as of October 1, 2015:

CPT codes covered if selection criteria are met:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>67311</td>
<td>Strabismus surgery, recession or resection procedure: one horizontal muscle</td>
</tr>
<tr>
<td>67312</td>
<td>two horizontal muscles</td>
</tr>
<tr>
<td>67314</td>
<td>one vertical muscle (excluding superior oblique)</td>
</tr>
<tr>
<td>67316</td>
<td>two or more vertical muscles (excluding superior oblique)</td>
</tr>
<tr>
<td>67318</td>
<td>Strabismus surgery, any procedure, superior oblique muscle</td>
</tr>
<tr>
<td>+ 67320</td>
<td>Transposition procedure (eg, for paretic extraocular muscle), any extraocular muscle (specify) (List separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
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<tr>
<td>67331</td>
<td>Strabismus surgery on patient with previous eye surgery or injury that did not involve the extraocular muscles (List separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>67332</td>
<td>Strabismus surgery on patient with scarring of extraocular muscles (eg, prior ocular injury, strabismus or retinal detachment surgery) or restrictive myopathy (eg, dysthyroid ophthalmopathy) (List separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>67334</td>
<td>Strabismus surgery by posterior fixation suture technique, with or without muscle recession (List separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>67335</td>
<td>Placement of adjustable suture(s) during strabismus surgery, including postoperative adjustment(s) of suture(s) (List separately in addition to code for specific strabismus surgery)</td>
</tr>
<tr>
<td>67340</td>
<td>Strabismus surgery involving exploration and/or repair of detached extraocular muscle(s) (List separately in addition to code for primary procedure)</td>
</tr>
<tr>
<td>67343</td>
<td>Release of extensive scar tissue without detaching extraocular muscle (separate procedure)</td>
</tr>
<tr>
<td>67345</td>
<td>Chemodenervation of extraocular muscle</td>
</tr>
</tbody>
</table>

**ICD-10 codes covered if selection criteria are met:**

- **H49.00 - H49.9** Paralytic strabismus
- **H50.00 - H50.9** Other strabismus

**ICD-10 codes not covered for indications listed in the CPB:**

- **Z41.1** Encounter for cosmetic surgery

**The above policy is based on the following references:**

13. Fawcett SL, Felius J, Stager DR. Predictive factors underlying the restoration of macular binocular vision in
AETNA BETTER HEALTH® OF PENNSYLVANIA

Amendment to
Aetna Clinical Policy Bulletin Number: 0566
Strabismus Repair

There are no amendments for Medicaid.

www.aetnabetterhealth.com/pennsylvania
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