

# MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	Cranial Orthotics
Policy Number	1.01.32
Category	Equipment/Supplies
Original Effective Date	10/18/01
Committee Effective Date	06/27/02, 07/24/03, 06/24/04, 06/23/05, 06/22/06, 04/26/07, 04/24/08, 12/11/08, 12/10/09, 12/09/10, 12/08/11, 12/06/12, 12/12/13, 12/11/14, 12/10/15, 12/8/16, 12/14/17, 12/13/18, 12/12/19
Revised Effective Date	12/22/22
Archived Date	12/10/20
Archived Review Date	12/16/21, 12/22/22
Product Disclaimer	<ul style="list-style-type: none"> <li>• If a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.</li> <li>• If a commercial product (including an Essential Plan or Child Health Plus product), medical policy criteria apply to the benefit.</li> <li>• If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.</li> <li>• If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.</li> <li>• If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.</li> </ul>

## POLICY STATEMENT

- I. Based upon our criteria and assessment of the peer-reviewed literature, cranial orthotics (e.g., helmet or cranial remodeling band) are considered **medically appropriate** in children aged three to 18 months old, after a failed two month trial of conservative treatment when used to treat:
  - A. severe (i.e., cranial vault asymmetry greater than 12 mm or cranial vault asymmetry index (CVAI) greater than or equal to 8.75%), non-synostotic (positional) plagiocephaly in conditions where the axis of the skull has been rotated; or
  - B. non-synostotic plagiocephaly with torticollis; or
  - C. brachycephaly, when the cranial index is less than 76% or greater than 90%.
- II. In all other instances, cranial orthotics used to treat non-synostotic (positional) plagiocephaly have not been demonstrated to improve patient outcomes, as their primary beneficial outcome is aesthetic, and, therefore, are considered **not medically necessary**.
- III. Based upon our criteria and assessment of the peer-reviewed literature, cranial orthotics used in the post-surgical treatment of synostotic plagiocephaly have been demonstrated to improve patient outcomes and, therefore, are considered **medically appropriate**.
- IV. Cranial orthotics as the sole treatment of synostotic plagiocephaly have not been medically proven to be effective and, therefore, are considered to be **not medically necessary**.
- V. Cranial orthotics (e.g., helmets) that are used primarily and customarily for convenience or safety are **ineligible for coverage**, even though they may have some remote, medically related use (e.g., head protection during seizures or self-injurious behavior).

## Medical Policy: CRANIAL ORTHOTICS

Policy Number: 1.01.32

Page: 2 of 5

*Refer to Corporate Medical Policy #1.01.00 Durable Medical Equipment.*

*Refer to Corporate Medical Policy #1.01.25 Orthotics.*

### **POLICY GUIDELINES**

- I. Cranial index (CI) is defined as the ratio of  $width \div length \times 100$ . A CI ranging from 76-90% is considered normocephalic.
- II. Preauthorization is contract dependent. Please contact your local Customer Care (Member/Provider) Department, to determine coverage under a member's subscriber contract.
- III. Coverage for external prosthetic devices is contract dependent. Orthotics will only be covered if the member's subscriber contract includes an orthotic benefit or a rider for external prosthetic devices that covers orthotics.
- IV. In general, replacement cranial orthotics are considered **not medically necessary**.

### **DESCRIPTION**

A cranial orthotic is a device used for non-invasive treatment of non-synostotic or positional plagiocephaly. It involves the use of a custom-molded orthotic device, either a helmet or band that can progressively mold the shape of the cranium. Dynamic orthotic cranioplasty (DOC) has also been proposed as a postoperative adjunct for those undergoing surgery for synostotic plagiocephaly. Treatment is typically initiated around five to six months of age and continues for an average of four to five months.

Plagiocephaly refers to an asymmetrically shaped head. Deformations of the head attributable to pre-natal or perinatal compression usually resolve in the first few months of life. The severity of deformational plagiocephaly can be determined using measurements of face and skull (e.g., skull base asymmetry, cranial vault asymmetry, cephalic index). Cranial vault asymmetry (CVA) is determined by measuring the distance from one predesignated point on the skull to another, comparing the right and left sides. Specifically, CVA is measured across the midline using spreading calipers: from the left most lateral point on the head (eurion) to the anterior prominence of the right most lateral point on the frontozygomatic suture (frontozygomaticus) and then repeating the measurement on the opposite side. There are three categories of asymmetry, depending on the CVA index. The categories are defined as: (1) normal CVA, less than three mm, (2) moderate CVA, three to 12 mm, and (3) severe CVA, greater than 12 mm.

The cranial vault asymmetry index (CVAI) is the measure in millimeters at 30° from the center of the nose or the outer edge of the eyebrow. CVAI is calculated in percent from the absolute difference between the two measurements from the left and right side, 30° from the center of the nose, then divided by the greater of the two 30° measurements. A CVAI of Symmetry less than 3.5% is considered within normal limits (level 1), 3.5 to 6.25% is considered minimal (level 2), and 6.25 to 8.75 is considered moderate (level 3). A CVAI between 8.75 and 11.0% (level 4) is considered moderately severe, for which a cranial orthosis may be considered. A CVAI that is greater than 11.0% (level 5) is considered severe, and treatment with a cranial orthosis is recommended.

Plagiocephaly can be divided into synostotic and non-synostotic types.

- I. Synostotic plagiocephaly is an asymmetrically shaped head due to premature closure of the sutures of the cranium.
- II. In plagiocephaly without synostosis, the sutures remain open. Plagiocephaly without synostosis, also called positional or deformational plagiocephaly, can be secondary to various environmental factors including, but not limited to: premature birth, restrictive intrauterine environment, birth trauma, torticollis, cervical anomalies, and sleeping position.
- III. Brachycephaly results from bilateral coronal synostosis. The cranium is shortened in length and increased in both width and height, or the cranium is elongated and narrow. Mild, transient brachycephaly can also occur as a positional deformity without sutural synostosis in normal babies who are placed in the "back to sleep" position to minimize the risk of sudden infant death syndrome. This form is also especially common in babies who suffer from hypotonia in infancy.

**Medical Policy: CRANIAL ORTHOTICS**

**Policy Number: 1.01.32**

**Page: 3 of 5**

Conservative treatment (e.g., repositioning therapy) should be trialed for a minimum of two months, for children under six months of age. Conservative treatment may consist of any or all of a course of parent/caregiver education, a home exercise program, or physical therapy. The home exercise program incorporates repositioning techniques, which includes reducing the amount of awake time the infants spend on their back, supervised tummy-time, and periodically changing the location of the crib in the nursery. In the first four months of life, conservative treatment may reverse early skull repositioning, but as the infant ages and begins to move independently, the repositioning techniques may become less effective.

**RATIONALE**

The primary beneficial outcome of orthotic treatment for positional plagiocephaly is aesthetic improvement of the shape of the head. There have been no studies that have assessed and compared with a well-matched control group, the neurocognitive development of school-aged children with untreated non-synostotic plagiocephaly. Cranial orthotics used to treat non-synostotic (positional) plagiocephaly in cases other than where the axis of the skull has been rotated have not been demonstrated to improve patient outcomes, as its primary beneficial outcome is aesthetic. None of the reviewed trials have randomization, with entry into the helmet arm being guided by clinical opinion or other factors.

In 2011, the American Academy of Pediatrics (AAP) published a revision of its 2003 policy on the prevention and management of positional skull deformities in infants. The AAP indicated that, in most cases, the diagnosis and successful management of deformational plagiocephaly can be assumed by the pediatrician or primary health care clinician and that mechanical methods, if performed early in life, may be effective in preventing further skull deformity and may reverse existing deformity. In most cases an improvement is seen over a two to three-month period with repositioning and neck exercises, especially if these measures are instituted as soon as the condition is recognized. The use of helmets and other related devices seems to be beneficial primarily when there has been a lack of response to mechanical adjustments and exercises, and the best response to helmets occurs in the age range of four to 12 months of age.

The 2005 policy statement from the AAP task force on sudden infant death syndrome stated that consideration should be given to early referral of infants with plagiocephaly when it is evident that conservative measures have been ineffective, as orthotic devices may help avoid the need for surgery in some cases. In 2022, the AAP updated a policy statement entitled “SIDS and Other Sleep-Related Infant Deaths: Expansion of Recommendations for a Safe Infant Sleeping Environment.” In the policy statement, the AAP recommended placing infants on their backs for sleep, with supervised awake “tummy time” for the prevention of plagiocephaly. The policy refers readers to its 2011 clinical report on the prevention and management of positional deformities in infants, which stated that “skull-molding helmets are an option for patients with severe deformity or skull shape that is refractory to therapeutic physical adjustments and position changes”.

**CODES**

- *Eligibility for reimbursement is based upon the benefits set forth in the member’s subscriber contract.*
- ***CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.***
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*

**CPT Codes**

<b>Code</b>	<b>Description</b>
No specific code(s)	

*Copyright © 2022 American Medical Association, Chicago, IL*

**Medical Policy: CRANIAL ORTHOTICS****Policy Number: 1.01.32****Page: 4 of 5****HCPSC Codes**

<b>Code</b>	<b>Description</b>
L0112	Cranial cervical orthosis, congenital torticollis type, with or without soft interface material, adjustable range of motion joint, custom fabricated
L0113	Cranial cervical orthosis, torticollis type, with or without joint, with or without soft interface material, prefabricated, includes fitting and adjustment
S1040	Cranial remolding orthotic, pediatric, rigid, with soft interface material, custom fabricated, includes fitting and adjustment(s)

**ICD10 Codes**

<b>Code</b>	<b>Description</b>
Q67.0-Q67.4	Congenital musculoskeletal deformities of head, face, spine, and chest (code range)

**REFERENCES**

- \*Collett BR, et al. Development in toddlers with and without deformational plagiocephaly. Arch Pediatr Adolesc Med 2011 Jul;165(7):653-8.
- \*Goh JL, et al. Orthotic (helmet) therapy in the treatment of plagiocephaly. Neurosurg Focus 2013 Oct;35(4):E2.
- \*Hutchison BL, et al. Deformational plagiocephaly: a follow-up of head shape, parental concern and neurodevelopment at ages 3 and 4 years. Arch Dis Child 2011;96:85-90.
- \*Kluba S, et al. What is the optimal time to start helmet therapy in positional plagiocephaly? Plast Reconstr Surg 2011 Aug;128(2):492-8.
- \*Kunz F, et al. Head orthosis therapy in positional plagiocephaly: influence of age and severity of asymmetry on effect and duration of therapy. Plast Reconstr Surg 2017 aug;140(2):349-358.
- Kreutz M, et al. Racial asymmetry correction with moulded helmet therapy in infants with deformational skull base plagiocephaly. J Craniomaxillofac Surg 2018 Jan;46(1):28-34.
- \*Lam S, et al. Factors influencing outcomes of the treatment of positional plagiocephaly in infants: a 7-year experience. J Neurosurg Pediatr 2017 Mar;19(3):273-281.
- \*Laughlin J, et al. Prevention and management of positional skull deformities in infants. Pediatrics 2011;128(6):1236-41.
- \*Lee MC, et al. Three-dimensional analysis of cranial and facial asymmetry after helmet therapy for positional plagiocephaly. Child Nerv Syst 2015 Jul;31(7):1113-20.
- \*Lipira AB., et al. Helmet versus active repositioning for plagiocephaly: a three-dimensional analysis. Pediatrics 2010;126:e936-45.
- \*Moon RY, et al. Task force on Sudden Infant Death Syndrome: Sleep-Related Infant Deaths: Updated 2022 Recommendations for Reducing Infant Deaths in the Sleep Environment. Pediatrics. 2022 Jul;150(1).
- \*Persing J, et al. Prevention and management of positional skull deformities in infants. American Academy of Pediatrics Committee on Practice and Ambulatory Medicine, Section on Plastic Surgery and Section on Neurological Surgery. Pediatrics Jul 2003;112(1 Pt 1):199-202.
- \*Tamber MS, et al. Guidelines: Congress of Neurological Surgeons Systematic Review and Evidence-Based Guideline on the Role of Cranial Molding Orthosis (helmet) Therapy for Patients with Positional Plagiocephaly. Neurosurgery 2016 Nov;79(5):E632-E633.

**Medical Policy: CRANIAL ORTHOTICS**

**Policy Number: 1.01.32**

**Page: 5 of 5**

\*Teighraeber JF, et al. Deformational posterior plagiocephaly: diagnosis and treatment. Cleft Palate-Craniofacial 2002 Nov;39(6):582-6.

Weissler EH, et al. An evidence-based approach to nonsynostotic plagiocephaly. Plast Reconstr Surg 2016 Oct;138(4):682e-9e.

\*key article

**KEY WORDS**

Adjustable banding, DOCTM, Dynamic Orthotic Cranioplasty, Helmet.

**CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS**

There is currently no National Coverage Determination (NCD) or Local Coverage Determination (LCD) for Cranial Orthotics.