

Cranial and Cervical Orthoses

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Introduction

Cranial and cervical orthoses are addressed by this guideline.

Health Equity Consideration

Health equity is the highest level of health for all individuals; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which individuals are born, grow, live, work, and age. Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include the following: safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Criteria

Cranial orthoses are considered medically necessary when **all** of the following criteria are met:

- The individual is 3 to 18 months of age.
- The individual has moderate to severe nonsynostotic plagiocephaly, defined as either of the following:
 - Cephalic index greater than or equal to two standard deviations away from the mean in **Table 1** or
 - Greater than or equal to 12mm cranial asymmetry as measured by at least one of the following anthropometric measurements: cranial vault, skull base, orbitotragial depth
- There is documentation that two months of conservative management alone (e.g., physical therapy, repositioning, a home stretching program, or supervised awake prone positioning ["Tummy Time"]) is insufficient or contraindicated.

Table 1: Cephalic Index

Sex/Age	-2 SD	-1 SD	Mean	+1 SD	+2 SD
Male 16 days to 6 months	63.7	68.7	73.7	78.7	83.7
Male 6 to 12 months	64.8	71.4	78.0	84.6	91.2
Female 16 days to 6 months	63.9	68.6	73.3	78.0	82.7
Female 6 to 12 months	69.5	74.0	78.5	83.0	87.5

Note: Cephalic Index is measured by $[\text{Head width (eu - eu)} \times 100] \div [\text{Head length (g - op)}]$ **The cephalic index is considered abnormal if it is two standard deviations (SD) above or below the mean measurements.** Table adopted from American Academy of Orthotists and Prosthetists. (2004).

Synostotic Plagiocephaly

Use of a cranial orthosis is considered medically necessary following surgical correction of craniosynostosis when **all** of the following criteria are met:

- The individual has a documented diagnosis of craniosynostosis.
- The individual has undergone surgical correction (e.g., suture release, cranial vault remodeling).
- The cranial orthosis is prescribed for postoperative cranial remodeling, to:
 - guide skull shape during healing and growth, **or**
 - optimize cranial symmetry following surgical intervention
- The orthosis is being used within an appropriate postoperative period consistent with expected skull growth and remodeling.

Cervical orthoses are considered medically necessary when **both** of the following criteria are met:

- The orthotic is prescribed to support, immobilize, restrict motion of, or stabilize the cervical spine and at least **one** of the following conditions is present:
 - there is acute cervical spine injury or trauma
 - there is a need for post-operative or post-procedure stabilization
 - there is evidence of degenerative, inflammatory, or structural cervical conditions

- There is a documented functional and clinical need that the cervical orthosis provides external stabilization of the cervical spine and is required to perform **one** of following:
 - restrict cervical motion to prevent neurologic compromise or further injury
 - reduce pain and improve functional ability during a defined treatment period

Not Medically Necessary

Use of a cervical orthosis is considered not medically necessary for **any** of the following:

- The orthotic is used for preventive or routine use without an acute or chronic condition requiring immobilization.
- The individual has mild neck pain or strain expected to resolve without the use of cervical orthosis.

Use of a cranial orthosis is considered not medically necessary for **any** of the following:

- The orthosis is requested for cosmetic alterations of head shape.
- The orthosis is requested to treat mild plagiocephaly.

Additional orthotic devices

Use of an additional custom-molded cranial orthotic device to accommodate growth-related changes is considered medically necessary when there is persistent, significant asymmetry and further clinically meaningful correction is anticipated with ongoing therapy.

Evidence Discussion

Souza et al. (2025) conducted a prospective pilot study evaluating the impact of a 2024 guideline-based physical therapy program on cervical range of motion in eight infants aged 3 to 4 months with congenital muscular torticollis. After three to four months of intervention and an additional three-month follow-up, all four individuals with baseline passive cervical lateral flexion asymmetry greater than 5 degrees improved to less than 5 degrees, while three of five individuals with active range of motion asymmetry greater than 5 degrees demonstrated similar improvement. The authors concluded that implementation of a guideline-based intervention was associated with clinically meaningful improvements in both passive and active cervical lateral flexion range of motion, supporting early, standardized physical therapy management. Study limitations included the small sample size, absence of a control group, and potential variability in active range of motion assessment related to infant cooperation and single-session Muscle Function Scale measurements.

Parau et al. (2024) conducted a retrospective pilot cohort study evaluating factors influencing rehabilitation duration in 41 infants aged 0 to 6 months with torticollis who

received Vojta-based physiotherapy three times per week. Among individuals who initiated therapy within the first three months of life, 41% achieved full recovery of cervical rotation and tilt within 4 to 6 weeks, whereas those who began therapy at 5 to 6 months demonstrated longer treatment durations and poorer outcomes, with 15% showing no improvement after 14 to 16 weeks and requiring cranial orthoses and 23% reaching a treatment plateau after 10 to 14 weeks and requiring additional cervical collar support. The authors concluded that earlier initiation of physiotherapy was associated with shorter rehabilitation duration and more favorable functional outcomes. Study limitations included the retrospective design, single-center setting, absence of a control group, and lack of standardized long-term follow-up.

Behnammoghadam et al. (2023) conducted a scoping review of 10 peer-reviewed studies evaluating the incidence and risk factors of cervical collar-related pressure injury in individuals with head and neck trauma. Across eight studies that reported incidence, cervical collar-related pressure injury rates ranged widely from 1.1% to 78.4%, with most reported injuries classified as stage 1 or 2 when staging was assessed. The most consistently identified risk factors included longer duration of cervical collar use, intensive care unit admission, lower level of consciousness, mechanical ventilation, and prolonged hospitalization. The authors concluded that a substantial proportion of individuals requiring cervical immobilization experienced device-related pressure injuries and emphasized the need for heightened preventive strategies during cervical collar use. Study limitations included reliance on predominantly retrospective and descriptive study designs, small and heterogeneous samples, limited reporting of pressure injury severity and anatomical location, and the absence of high-quality randomized or prospective studies, which constrained the strength and generalizability of the findings.

A 2025 systematic review (Hamzelouei, et al.) evaluated the effectiveness of orthotic devices for the treatment of forward head posture by synthesizing evidence from 10 studies published between 2013 and 2024, involving a total of approximately 358 individuals aged 18 to 75 years. Orthotic interventions, used alone or in combination with exercise programs, consistently improved postural parameters, most notably the craniovertebral angle, with reported mean improvements ranging from approximately 3 degrees to 5 degrees across several randomized and quasi-experimental studies. Some studies also demonstrated associated reductions in muscle activity, neck disability scores, and pain measures, with several trials reporting statistically significant improvements compared to exercise-only or control groups, including sustained effects at follow-up intervals up to three months. The review concluded that orthotic devices demonstrated considerable potential to improve spinal alignment and forward head posture, particularly when used as adjuncts to therapeutic exercise. However, the overall quality of evidence was moderate, with most studies classified as medium methodological quality, notable heterogeneity in orthotic design, intervention duration, outcome measures, and limited long-term follow-up. The authors also identified comfort, usability, and design limitations as barriers to adherence, and emphasized the need

for higher-quality trials and standardized outcome measures to better define long-term clinical effectiveness.

Codes Addressed in This Guideline

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

HCPSC Code	Description
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
L0120	Cervical, flexible, non-adjustable, prefabricated, off-the-shelf (foam collar)
L0130	Cervical, flexible, thermoplastic collar, molded to patient
L0140	Cervical, semi-rigid, adjustable (plastic collar)
L0150	Cervical, semi-rigid, adjustable molded chin cup (plastic collar with mandibular/occipital piece)
L0160	Cervical, semi-rigid, wire frame occipital/mandibular support, prefabricated, off-the-shelf
L0170	Cervical, collar, molded to patient model
L0172	Cervical, collar, semi-rigid thermoplastic foam, two-piece, prefabricated, off-the-shelf
L0174	Cervical, collar, semi-rigid, thermoplastic foam, two piece with thoracic extension, prefabricated, off-the-shelf
L0180	Cervical, multiple post collar, occipital/mandibular supports, adjustable

HCPSC Code	Description
L0190	Cervical, multiple post collar, occipital/mandibular supports, adjustable cervical bars (somi, guilford, taylor types)
L0200	Cervical, multiple post collar, occipital/mandibular supports, adjustable cervical bars, and thoracic extension

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