

Cranial remolding helmet

A cranial remolding [helmet](#), or [orthosis](#), is a [device](#) used to treat head shape deformities such as [plagiocephaly](#), [brachycephaly](#), and [scaphocephaly](#). The helmet treatment is effective in infants from 3-18 months of age, but optimal when started younger due to the decrease in growth rate as the child ages.

- 1: Rudolph CM, Awad AN, Toth K, Adamo MA, Carpenter C. Endoscopic Strip Craniectomy and Helmet Therapy for Sagittal Craniosynostosis: An Analysis of Cranial Growth Changes in the Early Postoperative Period. *Cleft Palate Craniofac J*. 2022 Oct 11;10556656221131119. doi: 10.1177/10556656221131119. Epub ahead of print. PMID: 36217735.
- 2: Graham T, Wang J. Development and Validation of a Prediction Model for the Treatment Time of Deformational Head Shapes Using a Cranial Remolding Orthosis. *Children (Basel)*. 2022 Mar 4;9(3):354. doi: 10.3390/children9030354. PMID: 35327726; PMCID: PMC8947519.
- 3: Junn A, Dinis J, Long A, Hauc S, Phillips S, Junn AH, Reategui A, Lopez J, Persing JA, Alperovich M. Disparities in Access to Cranial Remodeling Orthosis for Deformational Plagiocephaly. *Cleft Palate Craniofac J*. 2021 Dec 30;10556656211069816. doi: 10.1177/10556656211069816. Epub ahead of print. PMID: 34967227.
- 4: Abernethy LM, England DL, Price CA, Stevens PM, Wurdeman SR. Modified Cephalic Index Measured at Superior Levels of the Cranium Revealed Improved Correction With Helmet Therapy for Patients With Sagittal Suture Craniosynostosis. *J Craniofac Surg*. 2022 Jan-Feb 01;33(1):e88-e92. doi: 10.1097/SCS.0000000000008070. PMID: 34387265.
- 5: Wolfswinkel EM, Sanchez-Lara PA, Jacob L, Urata MM. Postoperative helmet therapy following fronto-orbital advancement and cranial vault remodeling in patients with unilateral coronal synostosis. *Am J Med Genet A*. 2021 Sep;185(9):2670-2675. doi: 10.1002/ajmg.a.62256. Epub 2021 May 19. PMID: 34008890.
- 6: Marsalek P, Sotola M, Rybansky D, Repa V, Halama R, Fusek M, Prokop J. Modeling and Testing of Flexible Structures with Selected Planar Patterns Used in Biomedical Applications. *Materials (Basel)*. 2020 Dec 30;14(1):140. doi: 10.3390/ma14010140. PMID: 33396971; PMCID: PMC7795973.
- 7: Ryall JJ, Xue Y, Turner KD, Nguyen PD, Greives MR. Assessing the quality of life in infants with deformational plagiocephaly. *J Craniomaxillofac Surg*. 2021 Jan;49(1):29-33. doi: 10.1016/j.jcms.2020.11.005. Epub 2020 Nov 17. PMID: 33239212.
- 8: Graham T, Millay K, Wang J, Adams-Huet B, O'Briant E, Oldham M, Smith S. Significant Factors in Cranial Remolding Orthotic Treatment of Asymmetrical Brachycephaly. *J Clin Med*. 2020 Apr 5;9(4):1027. doi: 10.3390/jcm9041027. PMID: 32260587; PMCID: PMC7231243.
- 9: Herlin C, Captier G, Bigorre M, Chan-Seng E, Roujeau T. Partial hybrid cranial vault remodeling in late correction of scaphocephaly and revision surgery. A monocentric retrospective study of nine consecutive cases. *Neurochirurgie*. 2020 Apr;66(2):110-115. doi: 10.1016/j.neuchi.2019.10.004. Epub 2019 Oct 23. PMID: 31655099.
- 10: Wendling-Keim DS, Macé Y, Lochbihler H, Dietz HG, Lehner M. A new parameter for the

management of positional plagiocephaly: the size of the anterior fontanelle matters. *Childs Nerv Syst.* 2020 Feb;36(2):363-371. doi: 10.1007/s00381-019-04215-y. Epub 2019 Jun 17. PMID: 31209640.

11: Nguyen DC, Farber SJ, Skolnick GB, Naidoo SD, Smyth MD, Kane AA, Patel KB, Woo AS. One hundred consecutive endoscopic repairs of sagittal craniosynostosis: an evolution in care. *J Neurosurg Pediatr.* 2017 Nov;20(5):410-418. doi: 10.3171/2017.5.PEDS16674. Epub 2017 Aug 25. PMID: 28841109.

12: Han MH, Kang JY, Han HY, Cho YH, Jang DH. Relationship between starting age of cranial-remolding-orthosis therapy and effectiveness of treatment in children with deformational plagiocephaly. *Childs Nerv Syst.* 2017 Aug;33(8):1349-1356. doi: 10.1007/s00381-017-3427-9. Epub 2017 May 8. PMID: 28484866.

13: Matarazzo CG, Schreen G, Lago-Rizzardi CDD, Peccin MS, Pinto FC. Orthotic treatment of positional brachycephaly associated with osteogenesis imperfecta. *Prosthet Orthot Int.* 2017 Dec;41(6):595-600. doi: 10.1177/0309364616685596. Epub 2017 Jan 17. PMID: 28094678.

14: Roby BB, Finkelstein M, Tibesar RJ, Sidman JD. Prevalence of positional plagiocephaly in teens born after the “Back to Sleep” campaign. *Otolaryngol Head Neck Surg.* 2012 May;146(5):823-8. doi: 10.1177/0194599811434261. Epub 2012 Jan 12. PMID: 22241785.

15: Brown L, Proctor MR. Endoscopically assisted correction of sagittal craniosynostosis. *AORN J.* 2011 May;93(5):566-79; quiz 580-1. doi: 10.1016/j.aorn.2010.11.035. PMID: 21530705.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**



Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=cranial_remolding_helmet

Last update: **2024/06/07 02:58**