



Baby Head Deformity

WHEN DOES NATURE NEED A NUDGE?

Grant Monaghan & Associates are accredited and certified orthotists who are dedicated to the pursuit of excellence in medical cranial assessments and orthoses. We are passionate about this intervention because it is a single intervention that is transformative and has life-long benefits for a child. As with most things, information is power and to help you make an informed decision, please find some useful information about baby head deformities here.



Treatment is a simple and non-invasive procedure.



If you are concerned about your baby's head shape or have been referred by your paediatrician or physiotherapist, book for a screening to obtain the information you need to make an informed decision.

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IN AFRICA TO OBTAIN THE
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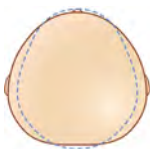
¹as at March 2024

1 *What Kinds of Head Shape Deformities do we Commonly See?*

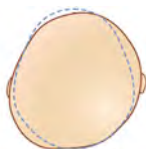
The most prevalent head deformity is deformational plagiocephaly. This is when the baby's head appears misshapen, asymmetrical, or flat on one side immediately after birth, or develops this deformation in the first few months of life.

Deformational brachycephaly is when the entire back of the baby's head is flat and the head is very wide.

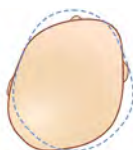
Deformational scaphocephaly is when the head is excessively long for its width.



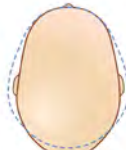
BRACHYCEPHALY



**ASYMMETRICAL
BRACHYCEPHALY**



PLAGIOCEPHALY



SCAPHOCEPHALY

2 *What is Craniosynostosis?*

Craniosynostosis is a premature fusion of the sutures in the baby's head and could also cause head shape deformity. This condition is much less common than deformational plagiocephaly. In the event that this is suspected your paediatrician will refer you to a paediatric craniofacial or plastic surgeon. The specialist will examine your baby and may order an X-ray, CT-scan or MRI to rule out the possibility of craniosynostosis.



3

What is Torticollis?

Torticollis is when the baby has limited neck movement due to a neck muscle weakness or tightness. It is identified by a pronounced head tilt, asymmetrical skin folds or uneven hair loss on one side. Physiotherapy and stretching exercises are the best treatments for torticollis in babies of up to six months of age. After six months, the condition becomes difficult to treat, thus emphasising the importance of early referral to paediatric physiotherapy.

Considering the above, one might think that the recommendation to put a baby to sleep on their back may encourage head shape abnormalities. However, this advice is of primary importance to reduce the risk of sudden baby death syndrome (SIDS). Although associated with some risk of skull deformity, healthy babies should always be placed down for sleep on their backs.

It is a misconception that these deformities resolve on their own, and early education, intervention and treatment is important.

These interventions will depend on the baby's age and the severity of the deformity.

THIS WOULD INCLUDE:

- Diagnosis and assessment of severity
- Early parent education, especially in high risk cases
- Limiting time in carriers and positional devices
- Focusing strictly on repositioning strategies
- Supervised "tummy-time"
- Paediatric physiotherapy at three months or earlier if there are:
 - Cranial deformity
 - Strong positional head/neck preference

- o Torticollis
- o Developmental delay
- Use of a cranial remoulding orthotic for severe deformities at four months, and moderate at six months of age

The American Academy of Pediatrics (AAP) suggests physicians evaluate the baby's head at each visit from the top, sides, front and back. This might include other measurements between anatomical points on the head called anthropometric data. The assessment includes not only the flatness of the back of the head, but possible ear or eye shift and cheek and jaw deformity. This data is used to determine the severity of the condition.

4 *What causes the deformation?*

The plasticity and open sutures of the newborn's skull makes it susceptible to external pressures in the womb during the birth process and after birth. Restricted space inside the mother's womb can create excessive contact on certain areas of the baby's head. This may cause deformation in babies positioned in a breech position, multiple foetuses, or in babies who spend excessive time with the head confined in the birth canal. The skulls of premature babies are particularly susceptible to deformation.

Usually, the baby's head becomes more symmetrical and better proportioned within six weeks after birth. However, the flattened areas may not resolve if the baby's head continuously rests in the same position. Babies born with symmetrical, round heads sometimes develop flat spots and asymmetry due to the same reasons related to spending too much time in a single position.



OTHER FACTORS COULD ALSO AGGRAVATE THIS, INCLUDING:

- Excessive time in carriers, car seats, strollers
- Tight clothing and covering that prevents spontaneous movement
- Insufficient "tummy-time"
- Torticollis



Tummy time

All babies benefit from frequent changes in body and head

positions incorporated with "tummy-time" whenever the baby is awake and supervised. "Tummy-time" is not only a good way to take pressure off the flattened areas, it also builds strong neck and trunk muscles and will help the baby learn to roll and sit, as they grow.



Use of a cranial remoulding orthosis is indicated for moderate deformity that persists past six months, and severe deformity past four months of age. After these ages, repositioning strategies are less effective and difficult to accomplish to insure reversal of the deformities.



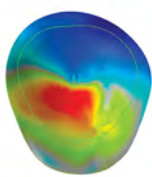
What is a Cranial Remoulding Orthoses?

The cranial remoulding orthoses derives its name from their purpose — symmetry through active remoulding. The orthosis is a plastic and foam custom moulded device designed to gently and safely correct the baby's head shape. The orthotic allows natural growth, steering this growth to improve symmetry, improve proportion and correct deformity.

Cranial deformities become less responsive to orthotic treatment beyond eight months of age, and though some correction can be gained up to 14 months, the window of opportunity typically closes at 12 months of age. Multiple studies have demonstrated that cranial remoulding orthoses are more effective than repositioning in correcting skull deformities. Many babies benefit from concurrent physiotherapy and orthotic intervention, particularly if the baby has significant neck/torticollis issues.



**BEFORE
TREATMENT**



**SCANNER
DATA**



**AFTER
TREATMENT**

7 *How long should a Cranial Remoulding Orthosis be worn?*

Most babies wear a cranial remoulding orthosis for about three months if they begin treatment prior to eight months of age.

The orthotist will document your baby's head shape throughout the treatment program with measurements and scans. Periodically, the documentation will be compared to the original measurements and scans to ensure improvement is maintained and correction achieved.





**FOR MORE INFORMATION OR TO BOOK
A CONSULTATION, PLEASE CONTACT
GRANT OR TERENCE.**

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provides a general overview on this
topic and may not apply to everyone.*

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