

POSITIONAL PLAGIOCEPHALY (HEAD SHAPE DEFORMITY)

What is positional plagiocephaly?

Positional plagiocephaly means that a person has a misshapen or asymmetrically-shaped head, with the skull usually flattened in one area. It is caused by excessive or constant pressure on the bones of the skull either before or after birth.

Normally, when babies are born, the bones of their skulls have not yet joined together. The spaces between these skull bones are a baby's "soft spots." The open skull bones allow the baby's brain to grow rapidly for the first year of life. However, the fact that a baby's head is still soft also means that, with pressure, it can take on a different shape. As the baby's skull bones join together, or "fuse," this flattened head shape can become permanent.

Who has an increased chance of developing positional plagiocephaly?

Several conditions can increase the chance that a baby will develop plagiocephaly. When a mother is pregnant with multiple babies (such as twins or triplets), the babies may be too crowded to move about freely in the womb, therefore receiving constant pressure on their skulls. Babies born to mothers with unusually-shaped wombs or uterine fibroids may also be crowded before birth.

Once born, all babies have some pressure on their skulls from such things as mattresses and baby carriers. However, infants who cannot or do not move from one position to another may develop flattened skulls from this pressure. Premature infants can develop plagiocephaly because their skull bones are softer than those of full-term babies, and they cannot move their heads as easily. Infants with torticollis (a condition causing limited movement of the neck) have a strong preference to look in one direction and may also develop skull asymmetry. In addition, babies with medical problems or delayed development may have difficulty moving from one position to another, increasing their chance for plagiocephaly.

Most health care providers today encourage parents to put their babies to sleep on their backs to reduce the risk of SIDS (Sudden Infant Death Syndrome). If, in addition to sleeping on their backs, infants also spend many daytime hours on their backs or in firm baby carriers, they may have pressure on the backs of their heads almost constantly. These babies may develop flattened head shapes.

What should you do if your baby has been diagnosed with positional plagiocephaly?

You should ask your primary care doctor or pediatrician to refer you to a specialist. They will need to rule out a condition called "craniosynostosis" in which a baby's skull bones join together too early. The best treatment for your baby starts with a clear understanding of the cause of positional plagiocephaly. Your medical specialists will then work together to plan the best course of treatment.

If your baby is less than six months old, you should reposition his or her head frequently. Keep your baby off the flat area of the head as much as possible. Increase "tummy time" by placing your baby on his or her stomach as much as possible during waking hours. Limit your use of infant carriers and use front carriers or backpacks instead. If your baby has torticollis, ask your doctor about exercises you can do with your infant. You may also want to see a physical therapist who can improve your baby's ability to move his or her neck in all directions.

What are the treatment options when repositioning does not correct the problem?

If repositioning alone is not effective, moderate or severe positional plagiocephaly may be treated by using a helmet or band. These devices take advantage of a baby's rapid head growth to improve the shape of the skull. To be most effective, helmet or band use should begin when a baby is between four and seven months old. Some types use light pressure on the head, while others have a space for the flattened portion of the head to gradually grow into. A baby must wear the helmet approximately 23 hours a day for several months. Treatment time varies depending on the severity of the plagiocephaly and the age of the child. Children using helmets or bands need frequent follow-up care during treatment.

What if my child is more than seven months old when the plagiocephaly is diagnosed?

Typically, the skull bones are more "moldable" before seven months, but helmet or band therapy can be started later. The treatment may just take longer and might have more limited results.

Will treatment for plagiocephaly increase my child's risk of SIDS?

No. Wearing a helmet in no way interferes with your baby's breathing or sleeping in any position.

Will plagiocephaly damage my child's brain? Will helmet or band treatment?

No. There is no evidence that positional plagiocephaly, or helmet or band treatment will damage your baby's brain.

For further information on cleft lip and palate, or for a referral to a cleft palate/craniofacial team, please contact:

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