

Deformational Plagiocephaly (Flat Head Syndrome)

What Is Plagiocephaly?

Deformational plagiocephaly, also called “flat head syndrome,” is a condition in which a baby’s head has an uneven or irregular shape caused by external forces.

Flat head syndrome is often associated with another condition called [torticollis](#). Torticollis occurs when the muscle on the side of the neck gets shortened or tightened. Simple deformational plagiocephaly can often appear to be a more serious condition, such as [craniosynostosis](#).



What Causes Plagiocephaly?

Deformational plagiocephaly can occur while a baby is still growing in the uterus. It can also develop after birth.

Causes Before Birth

Before delivery, a baby drops into the mother’s pelvis. If it happens too early, the baby’s head might rest against a flat surface, where it can build pressure and cause flattening. Infants at greater risk for this occurrence include unusually large babies, breech babies and multiple birth babies.

Other causes of deformational plagiocephaly before birth include:

- Pressure inside a uterus that is either too small or crowded (in a multiple birth pregnancy).
- Unusual fetal positioning inside the uterus.
- A uterus that contains too little amniotic fluid.

Causes After Birth

After birth, deformational plagiocephaly can occur if a baby frequently lies in the same position. As the head begins to flatten, it naturally rests on that flat area, potentially worsening the problem.

The American Academy of Pediatrics (AAP) Task Force on Infant Positioning and Sudden Infant Death Syndrome (SIDS) recommends placing infants on their backs to sleep. This recommendation has led to a dramatic reduction in cases of SIDS. Gillette Children's Specialty Healthcare fully supports this recommendation.

However, since AAP introduced the "Back to Sleep" program in 1992, baby flat head syndrome has become more common because babies are spending more time on their backs, in one position. To help lower the risk of deformational plagiocephaly while also protecting against SIDS, our craniofacial team recommends frequent "tummy time" during waking hours and play to balance out positioning.

Plagiocephaly and Prematurity

Babies born early might be at greater risk for deformational plagiocephaly because their skull bones are softer than those of full-term babies. Additionally, premature babies often remain in a fixed position during their longer hospital stay, increasing the likelihood of a flat spot developing.

Plagiocephaly and Torticollis

Babies often develop plagiocephaly as a result of muscular [torticollis](#), a condition in which a muscle on the side of the neck is short or tight. Torticollis can limit a baby's ability to turn toward the affected shoulder, causing them to consistently hold their head in one position. Over time, this one-sided positioning can flatten one side of the head.

Plagiocephaly Symptoms and Effects

If your baby has flat head syndrome, you might notice a flat spot on the back or side of the skull. That flatness gives the skull an uneven or irregular shape. Because the head naturally rests on the slightly flattened area, the condition can get worse if not treated.

Plagiocephaly Diagnosis and Treatment

Infants are typically diagnosed with deformational plagiocephaly between 4 and 8 months of age. If your baby develops the condition before birth, it is sometimes diagnosed earlier than 4 months.

If you or your pediatrician notices your child has an irregular head shape, the Gillette team of craniofacial experts can do a series of tests to form a diagnosis. By confirming a diagnosis of plagiocephaly we can rule out craniosynostosis, a more serious condition that requires surgery.

Sometimes plagiocephaly corrects itself. But it can also get worse if not treated. We can't predict whether your child has the type of plagiocephaly that corrects itself. That's why we guide families and caregivers in their decision to treat the condition with a custom-made baby helmet called the Gillette [CranioCap® orthosis](#).

Babies who have [torticollis](#), a condition that sometimes accompanies plagiocephaly, might benefit from additional treatment options, including [physical therapy](#). However, alternative therapies, such as chiropractic or other manual techniques, have not been shown to improve deformational plagiocephaly.

Integrated Care

If your child has flat head syndrome, the Gillette team of specialists will work closely with you and your family to create the right plagiocephaly treatment plan for your child. Our experts can guide you through the services your child will need.

Your child might receive care from specialists in the following areas related to diagnosing and treating deformational plagiocephaly:

- [Craniofacial and plastic surgery.](#)
- [Orthotics.](#)
- [Physical therapy.](#)
- [Child life.](#)
- [Social work.](#)

The family-focused specialists at Gillette treat more than 1,000 children each year who have deformational plagiocephaly. Our experts can quickly distinguish deformational plagiocephaly from more serious conditions—such as craniosynostosis—to properly treat your child.

[Make An Appointment](#) [651-290-8707](#) [Refer a Patient](#) [651-325-2200](#)

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](#).