Plagiocephaly

Causes, symptoms, treatment and more about when your child has a flat spot on their head, called plagiocephaly.

What is plagiocephaly?

Plagiocephaly (PLAY-gee-oh-SEF-uh-lee) is a flat spot on the back or side of your baby’s head. This condition is also called “deformational plagiocephaly” or “positional plagiocephaly.” It is caused by pressure on the skull bones. This usually happens because of the way a baby likes to sleep. A flat spot on your baby’s head is generally not a concern. Your child’s healthcare provider will check to see if there is a problem.

![Young child's head with flat spot](image)

What are the causes?

Many things can cause plagiocephaly. They include:

- **Medical problems or delayed development.** These conditions may make it harder for your baby to change positions.
- **If your baby prefers to look in 1 direction.** If the neck muscles are too tight on 1 side, it can limit how much the baby can move their neck. This is called torticollis. It can cause your baby to always rest on the same spot on the back of their head.
- **Premature birth.** The skull bones of premature babies are softer than the skulls of babies born at full term. Babies born early also tend to move their head less often.
- **Being crowded in the womb.** Crowding can happen if there is more than 1 baby in the womb, as with twins. Sometimes it happens if the mother has a womb with an unusual shape or has noncancerous tumors made of fibrous tissue (uterine fibroids).
What are the symptoms?

Plagiocephaly can look different depending on which part of the skull has a flat spot. It can be very mild and hard to see, or it can be easy to see.

- Often only the back of the head has a flat spot.
- Sometimes the forehead or face is also uneven.
- The flatness is often more on 1 side than the other (asymmetric). This is because babies like to rest on 1 side more than the other.
- Sometimes the flatness only affects the back of the head (symmetric). That happens if your baby always lies looking up without turning their head.

Flat spots are common in very young babies and do not always mean there is a problem. Your child's healthcare provider will check to see if your baby needs treatment.

How is it diagnosed?

To diagnose this condition, your child's doctor or nurse practitioner will check your child's head for:

- Bony ridges
- Flat areas
- Uneven forehead
- Two sides of the face that do not match each other (asymmetric)
- Ears that are at different levels on the skull

Your child's healthcare provider will also check your child’s development. Some children with this condition have mild developmental delays (although plagiocephaly does not cause the delays).

Plagiocephaly can sometimes look like a condition that causes 1 or more of the soft fibrous seams (sutures) in a baby's skull to close earlier than normal (craniosynostosis). This condition needs a different kind of treatment. We are experienced in looking for the signs that tell these conditions apart.

How is it treated?

Treatment depends on the cause, your child’s age and how much their skull is affected.

- If muscle tightness limits your baby’s movement in the neck (torticollis), our team may recommend exercises or refer your child to a physical therapist (PT).
- If lying in the same position is the cause and your baby is 4 months or younger, the most important treatment is to change the position of their head when they lie down. We will teach you how to keep your baby off the flat portion of their head as much as possible. **It is still important to put babies to sleep on their backs to lower the risk of sudden unexpected infant death syndrome (SUIDS).**
- If changing your baby's position does not reduce the flatness and your baby is 5 months or older, a special helmet may help fix your baby's uneven head shape.
Helmet therapy

Our team will talk to you if helmet therapy is right for your baby. Helmet therapy can depend on how much of your baby’s skull is flat. We use the STARband helmet. The helmet is hard plastic on the outside with a foam lining. It fits snugly on the round parts of your baby’s head, and is looser on the flat parts. This gives the flat parts more room to expand as your baby’s head grows.

A health professional called an orthotist will make a custom-made helmet for your child. A laser scan measures your baby’s head; the scan does not hurt.

Your baby wears the helmet 23 hours each day. After your baby starts wearing the helmet, they will need to have it adjusted 1 time each month as your child’s head grows. How long your baby’s treatment lasts depends on their age and how flat their head is at the start of treatment. Often children wear the helmet for 3 to 5 months. In general, helmet therapy works best for children who start it before 9 months of age.

Check with your insurance company to find out if they cover helmet therapy.