

# Flat Head Syndrome (Deformational Plagiocephaly)



## What is deformational plagiocephaly?

Flat head syndrome (deformational plagiocephaly) is when a baby's head develops a lasting flat spot. The flat spot may be either on one side of the head or on the back of the head. This happens when a baby sleeps in the same position most of the time or because of problems with the neck muscles.

This condition is different from craniosynostosis. In craniosynostosis, a baby's skull bones fuse together before they are supposed to. In deformational plagiocephaly, the skull bones don't fuse.

## What causes deformational plagiocephaly?

The skull flattens when a baby's head stays in one position for long periods of time. Sometimes a baby is born with this flattening because of a tight space in the uterus. This may happen if you are having twins or other multiples. Other factors that may increase the risk for flat head syndrome include:

- **Muscular torticollis.** This is a problem that is present at birth (congenital). One or more of the neck muscles is extremely tight. So the baby's head stays in the same position.
- **Early birth (prematurity).** The skull bones of premature babies are softer. And many premature babies spend a lot of time in the hospital on respirators with their heads in the same position.
- **Back sleeping.** Babies who sleep on their back or in a car seat without changing positions for long periods of time can develop flat heads. But to reduce the risk for SIDS (sudden infant death syndrome), babies should always sleep on their back until they are 1 year old.

## Which children are at risk for deformational plagiocephaly?

A baby is more likely to have this condition if any of the following are true:

- They are the first-born child
- The baby is a boy
- The baby was born with the help of forceps or vacuum extraction
- The baby has torticollis

## What are the symptoms of deformational plagiocephaly?

This problem may not be noticeable or present at birth. It may develop during the first few months of life. A flat spot may appear on either side or the back of the head as the baby grows.

## How is deformational plagiocephaly diagnosed?

Your baby's healthcare provider will check your baby's head from all positions. They will also feel your child's head, particularly along the suture lines. Your baby's healthcare provider will also take measurements of your baby's head to figure out how serious the condition is.

## How is deformational plagiocephaly treated?

Treatment will depend on your baby's symptoms, age, and general health. It will also depend on how severe the condition is. Some babies don't need treatment. The condition may go away when the baby begins to turn their head on their own or sit up.

For other babies, treatment may include:

- Changing your baby's sleep position by turning their head to the opposite side

- Having your baby spend time on their tummy (stomach) while awake and supervised

Your baby may need to wear a special band or helmet if the problem is moderate to severe and turning the baby's head hasn't helped. Helmets are often made of an outer hard shell with a foam lining. Gentle pressure helps to reform the head. As the head grows, adjustments are made. Some studies have shown that helmets weren't helpful for moderate to severe skull deformation.

The average treatment with a helmet is often 3 to 6 months. This will depend on the age of the baby and the severity of the condition. Your baby's healthcare provider will need to check your child carefully and often. Helmets must be prescribed by a licensed healthcare provider with craniofacial experience.

## What are possible complications of deformational plagiocephaly?

As babies grow and develop, they will move and reposition themselves. This removes the pressure that may have caused the condition. But if the flat spot is moderate to severe, it may not get better on its own. If treatment is not started early enough, the head may continue to be uneven.

## What can I do to prevent deformational plagiocephaly?

This condition has increased since the national Back to Sleep campaign began. This campaign was started to decrease deaths from SIDS. It has been very successful. It is important that young babies who can't roll over or move on their own not be placed on their belly to sleep. To help prevent a flat head:

- Let your baby have tummy time while you are watching.
- Reduce the time your baby spends in car seats and baby carriers.
- Hold your baby, giving the baby time to be upright.

## When should I call my child's healthcare provider?

If you notice that your baby's head is misshapen or you are worried about a flat spot, have your baby checked by their healthcare provider.

## Key points about deformational plagiocephaly

- Flat head syndrome (deformational plagiocephaly) is when a baby's head develops a lasting flat spot, either on one side or on the back of the head.
- With this condition, the skull bones don't fuse together.
- The first step in treating this condition is to change your baby's head position.
- Some cases need the baby to wear a helmet or remodeling band.
- Mild cases often go away on their own with simple ways to change a baby's head position.

## Next steps

Tips to help you get the most from a visit to your child's healthcare provider:

- Know the reason for the visit and what you want to happen.
- Before your visit, write down questions you want answered.
- At the visit, write down the name of a new diagnosis, and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you for your child.
- Know why a new medicine or treatment is prescribed and how it will help your child. Also know what the side effects are.
- Ask if your child's condition can be treated in other ways.

- Know why a test or procedure is recommended and what the results could mean.
- Know what to expect if your child does not take the medicine or have the test or procedure.
- If your child has a follow-up appointment, write down the date, time, and purpose for that visit.
- Know how you can contact your child's provider after office hours. This is important if your child becomes ill and you have questions or need advice.

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