Reference documents:

Authors: Marie-France Whitty and Kathleen Nadeau, Physiotherapists, and Emanuela Ferretti, M.D., Neonatologist
© Centre hospitalier universitaire de Sherbrooke (CHUS)
www.chus.qc.ca - June 2005 - Revised November 2011 - Translated in English April 2012– 1-6-20027
WHAT IS PLAGIOCEPHALY?

Since 1999, Health Canada has recommended that babies sleep on their back to reduce the chance of sudden infant death syndrome. While this has significantly lowered infant mortality, there has been an increase in the number of babies developing flat areas on the head. This is called positional plagiocephaly.

Plagiocephaly does not affect development of the baby’s brain, but if flattening becomes permanent and pronounced it could impair the aesthetic appearance of the baby’s skull and face.

WHAT CAUSES PLAGIOCEPHALY?

A newborn baby’s neck muscles are weak. That is why a baby’s head turns to the side when lying on his back. Also, since a baby’s skull is soft, it will tend to flatten if always resting on the same side.

Infant 9 months old with right-sided congenital torticollis. The head is tilted to the right while the chin is turned to the left.

If premature fusion of the skull sutures is suspected, the doctor will recommend a closer examination.

For more severe positional plagiocephaly with facial asymmetry, your doctor can refer you to a plagiocephaly clinic at the Service d’aide à la motricité (SAM), for examination and an orthosis (cranial helmet) if necessary. The clinic is located at the Centre de réadaptation Estrie (CRE) in Sherbrooke.
WHEN SHOULD YOU CONSULT YOUR DOCTOR?

If plagiocephaly is already present, discuss it with your doctor. A specific counter-position will be necessary to correct the deformation as much as possible.

Counter-position:
- lay the baby on the side opposite the flattening at an angle of about 45°;
- place a rolled-up towel behind his shoulder and down his back, so that he can’t roll onto his back;

Place another rolled-up towel in front of the baby so that he can’t roll onto his tummy.

Counter-positioning is most effective before six months because the bony structures of the skull are still flexible. Also, after six months, the baby is more mobile and less willing to stay in one position.

Apply counter-positioning during the day, with supervision, until the shape of the skull is more symmetrical.

If the plagiocephaly persists in spite of counter-positioning, talk to your doctor again. If the doctor detects congenital torticollis, physiotherapy consultation should be advised.

HOW CAN PLAGIOCEPHALY BE PREVENTED?

To prevent plagiocephaly, it is very important to vary your baby’s position so that each day, he spends time looking to both sides.

During sleep

Alternate the baby’s position in his bed: place his head at the opposite end of the crib every other night.

During awake time

It is very important to have your baby spend time on his tummy, several times a day. You can also place him so that he is lying on one side, then the other, so that the weight of his skull is not always on the same side.
THE IMPORTANCE OF TUMMY POSITION IN YOUR CHILD’S MOTOR DEVELOPMENT

Being in tummy position several times a day during awake time will help your baby to:

• develop head control;
• avoid flat areas on the skull;
• strengthen shoulders and upper body muscles;
• learn to roll, crawl and reach objects.

When your baby is playing on his tummy and on his side, lay him on a firm surface like a rug on the floor or on a baby activity mat.

In the first months, there are several ways you can help your child to strengthen control of his head:

1. Lay down on your back and put the baby tummy down on your chest. When you talk, your baby will try to lift his head.

2. Lay the baby on his tummy on a firm surface, then place his arms and elbows in line with his shoulders so that he is supported on his forearms.

3. Roll up a small towel and place it under your baby’s chest, with his elbows in front of the towel. This will make it easier for your baby to hold up his head and raise his upper body.

4. Gradually increase the amount of tummy time by showing interesting toys to the baby. At first your baby will prefer contrasting colours (black and white, black and yellow). Later, he will be attracted by bright colours and the mirror.

WHAT TO DO IF YOU NOTICE A DEFORMATION OF YOUR BABY’S HEAD

If you notice that your baby is always looking in the same direction or that his head is tipped to one side, he is at risk of developing plagiocephaly or a flat area may already have developed.

To correct the situation, spend more time on the baby’s other side, e.g. when changing diapers, at sleep time or for bathing and feeding.

When your child can turn his head equally well to either side and the flattening has disappeared, alternate the baby’s positions as well as your position.