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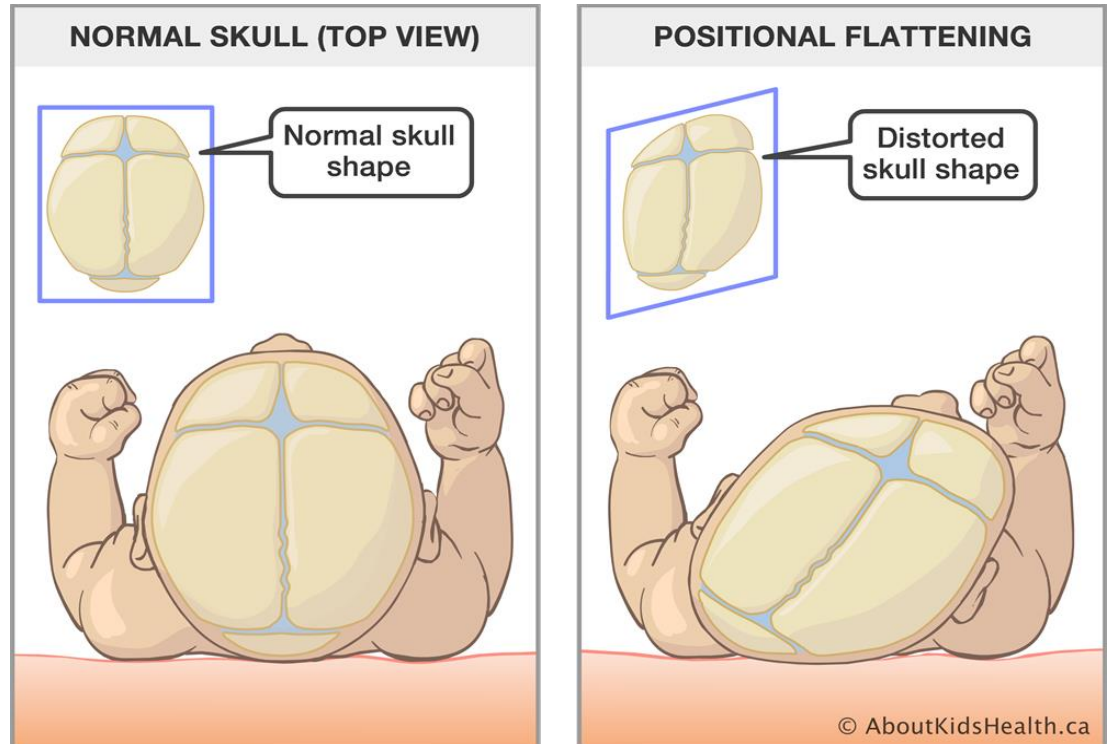
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## HEAD SHAPE AND POSITIONING

### What is positional plagiocephaly (a.k.a. “flat head”)?

Some babies develop flattening on one side of the back of the head. This usually occurs if they lay on that side more often. A baby’s skull is flexible, and will flatten if it is always laying on the same side, usually by 6-8 weeks of age. This flattening is called positional plagiocephaly.



Your family doctor and pediatrician examine your baby’s head when assessing them. As long as the skull is otherwise normal on their exam, plagiocephaly is not dangerous for your baby. Often, it will even go away on its own by 1-2 years of age. However, in some cases the head shape may stay somewhat flat if untreated - some parents are concerned about this because of its cosmetic appearance.

### What can I do to prevent/treat positional plagiocephaly?

Infants should always be placed to sleep on their backs, to reduce the risk of sudden infant death syndrome (SIDS). However, you can lay their head facing different directions (left or right), to prevent the pressure on their skull from always being in one spot.

You can also alternate where their head and feet point in the crib or basinet – babies will generally turn towards the more “exciting side” (e.g. towards the open room rather than a wall), so this will help them turn in different directions.



Finally, you should place your baby on their belly (in “tummy time”) when they’re awake, ideally for 10-15 minutes, three times a day. This strengthens their neck muscles, and relieves pressure on the back of their head.

### **What is congenital torticollis?**

Some babies are born with a shorter/tenser muscle on one side of the neck than on the other. This causes the baby to have a hard time turning the head to one side. Because of this, babies with torticollis are more likely to develop plagiocephaly, as they will usually lay their head on their preferred side. If you suspect your baby has torticollis, speak to your pediatrician. They may recommend exercises to help stretch the neck muscle and improve its mobility. They may also refer you to a physiotherapist. You should still do all of the usual prevention/treatment for positional plagiocephaly.

Do NOT do neck stretching exercises on you baby without first speaking with a physician or physiotherapist about it. We advise against taking your baby to a chiropractor, as there is no evidence for chiropractic treatments in children, and there have been cases of serious injury in children (e.g. paralysis). A link with examples of exercises is included below.

### **What if the positional plagiocephaly is severe?**

If your baby’s head shape is very skewed (moderate or severe positional plagiocephaly), your doctor may discuss physiotherapy and/or moulding therapy (“helmet therapy”) with you. A physiotherapist would work with you on exercises to improve your baby’s head shape. They would also assist with treating congenital torticollis if it’s present.

Plagiocephaly helmets are medical devices which stabilize the skull and apply pressure to certain areas in order to change the skull’s shape. They are not covered by Alberta Health Services, but are available for purchase through private clinics in Calgary. Please note that according to studies, helmet therapy does NOT change how your baby’s head shape will look in the end. What it does is speeds up the rate of correction, though on average the end-result is the same.

For more information:

- <https://www.aboutkidshealth.ca/plagiocephaly>
- [https://www.caringforkids.cps.ca/handouts/pregnancy-and-babies/preventing\\_flat\\_heads](https://www.caringforkids.cps.ca/handouts/pregnancy-and-babies/preventing_flat_heads)
- <https://myhealth.alberta.ca/Health/aftercareinformation/pages/conditions.aspx?hwid=abp1475>

# When Your Baby Has Positional Plagiocephaly

## What is positional plagiocephaly?

- Positional plagiocephaly is when your baby has an atypical head shape. There is a flattened area on one side of the back of the head (see Figure 1).
- Plagiocephaly:
  - is caused by outside pressure on the skull
  - can happen quickly
  - develops most often in the first 6–8 weeks after a baby is born

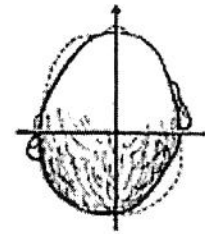


Figure 2

## Will plagiocephaly affect other parts of my baby's head or face?

- If your baby has plagiocephaly, you might notice these changes on the same side of the head that is flattened:
  - the ear might look like it is shifted forward
  - the forehead might stand out more
  - your baby's face might not look the same on both sides (the cheek might look fuller and the eye might look wider)

## What causes plagiocephaly?

- Most often, positional plagiocephaly is caused by sleeping on the back and always turning the head to the same side.
- Plagiocephaly might develop because of tightness and/or weakness in the neck muscles.
- Positional plagiocephaly can develop before birth if:
  - the baby sits low in the pelvis
  - there is less room in the uterus than normal (e.g., twins or triplets)
- There are more babies with plagiocephaly because of positioning in:
  - baby swings
  - infant carrier car seats
  - overhead baby gyms
  - the “Back to Sleep” campaign, which recommends your baby sleep on the back to prevent sudden infant death syndrome (SIDS)

## What are the best ways to position my baby?

- When your baby has plagiocephaly, position your baby off the flattened area as much as possible. This will create counter pressure on the side that is not flat, which can help reshape the head.
- Your healthcare provider will show you what positions are best when your baby:
  - feeds
  - plays
  - sleeps
  - has a diaper change

## **What about positioning when my baby is asleep?**

- When your baby is asleep:
  - position your baby on the back (until at least 12 months old) to decrease the risk of SIDS
  - position the head at the end of the crib so your baby will look away from the flattened side and towards the door (or out into the room)
  - put crib bar toys in a place where your baby has to look away from the flattened side of the head to see
  - turn (with your hands) your baby's head away from the flattened side (only do this when you are awake, you don't need to wake up during the night to do this)
- **Do not:**
  - use hanging mobiles
  - use positioning devices and/or towel rolls while your baby is asleep
  - let your baby sleep in a car seat, bouncy seat, or swing (unless your doctor tells you to)

## **What is the best position for my baby during play?**

- When you are with your baby for playtime, try these positions:
  - lay your baby on the side that is not flattened. Use a rolled towel behind the back and a small rolled towel in front of the tummy for support. This puts pressure on the more prominent side of the head, which helps the head to reshape.
  - position your baby on the stomach (tummy time) for a few minutes, several times a day
  - limit the time your baby spends in a car seat, bouncy seat, or swing
- Always try to position your baby's seat so any stimulation (e.g., siblings) is on the side that you want your baby to turn towards. Do this when your baby is in a:
  - play seat
  - bouncy seat or swing (if your healthcare provider says it is okay to use)
  - high chair
  - standing entertainment centre
  - jumper
- When in the car, encourage your baby to turn away from the flat side by:
  - putting any backseat passengers on the side opposite the flat area
  - put window stickers/decals, colourful blankets, or mirrors in a place that your baby has to turn away from the flattened area on the head to see

## **What do I need to know about feeding my baby?**

- When bottle feeding, hold your baby on the side of the head that is not flattened. The arm you use will depend on whether your baby wants to turn and look at you or look into the room.
- Feed your baby from the side of the head that is not flattened in a highchair.

## **What do I need to know about diaper changes and baths?**

- Always stand on the side opposite to the flattened area of the head.

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# When Your Baby has Brachycephaly

## What is brachycephaly?

- Brachycephaly is when your baby has an atypical head shape. There is a flattened area in the middle of the back of the head.
- The head will look wide (see Figure 1) and/or tall (see Figure 2).

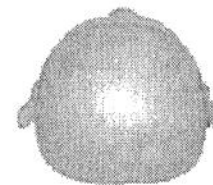


Figure 1

## What causes brachycephaly?

- Brachycephaly is caused by outside pressure on the skull. Most often, brachycephaly is caused by sleeping on the back looking straight up towards the ceiling and not turning the head.
- Brachycephaly can develop before birth if:
  - the baby sits low in the pelvis
  - there is less room in the uterus than normal (e.g., twins or triplets)
- There are more babies with brachycephaly because of positioning in:
  - baby swings
  - infant carrier car seats
  - overhead baby gyms
  - the “Back to Sleep” campaign, which recommends your baby sleep on the back to prevent sudden infant death syndrome (SIDS)



Figure 2

## Will brachycephaly affect other parts of my baby's head or face?

- Depending on how much flattening there is on the head:
  - your child's ears may look like they are shifted up or down
  - your child might have a bump above the ears
  - the head might look wider than normal
  - the head might be higher at the back, making the head look tall
  - your baby's face might not look the same on both sides (the cheek might look fuller and the eye might look wider on one side)

## What are the best ways to position my baby with brachycephaly?

- Your healthcare provider will show you what positions are best when your baby:
  - feeds
  - plays
  - sleeps
  - has a diaper change

### **What about positioning when my baby is asleep?**

- For sleeping, your baby should be positioned on the back with the head positioned to the left one night, and to the right the next night. Do not add any extra rolls or pillows to the crib.
- Remove hanging mobiles and use crib bar toys instead.
- Put crib toys on the outside crib rail only.

### **What is the best position for my baby during play?**

- When you are with your baby for playtime, try these positions:
  - alternate toys from the left side one time and on the right the next time
  - position your baby on the stomach (tummy time) for a few minutes several times a day
  - alternate sides when your baby is lying down (left side one time and the right side the next time)
- Limit the time your baby spends in a:
  - car seat
  - bouncy seat
  - swing
- Use a stroller or baby-wearing device (e.g., sling, Snuggli™, Baby Bjorn™) when you are out (instead of leaving your baby in the car seat) to encourage movement and looking around.
- Always put your baby's seat so any stimulation (e.g., siblings) is on the left or right side. Do this when your baby is in a:
  - play seat
  - high chair
  - jumper
  - bouncy seat or swing (if your healthcare provider says it is okay to use)
  - standing entertainment centre

### **What do I need to know about feeding my baby?**

- When bottle feeding, alternate the way you hold your baby (e.g., one feed your baby looks to the left to see you and the next feed your baby looks to the right).
- When breastfeeding, try different positions to alternate the direction your baby looks at you during a feeding.
- In a highchair, feed your baby from the left side one time and the right the next time.

### **What do I need to know about diaper changes and baths?**

- For diaper changes and baths, be on your baby's left side one diaper change/bath and on the right for the next.

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# Tummy Time With Your Baby

## What is tummy time?

- Tummy time is when your baby plays on his or her tummy.
- When awake, your baby needs to have tummy time. Do tummy time every day, starting when your baby is a newborn.



Figure 1

## What are the benefits of tummy time?

- When your baby has tummy time, it:
  - helps make the neck, arm, and body muscles stronger
  - can help your baby practice the movements needed to roll, sit, and crawl
  - lets your baby look around and see more things
  - can decrease the risk of developing flat spots on the head (e.g., plagiocephaly)
  - might help your baby to roll, sit, crawl, and pull up to standing earlier



Figure 2

## Tips for Tummy Time

- During tummy time:
  - keep your baby company
  - do face to face interactions
  - have your baby lay on your belly (see Figure 2)
  - play games (e.g., peek-a-boo, make funny faces)
- Do activities to entertain your baby during tummy time like:
  - blow bubbles (see Figure 3)
  - play with different toys or mirrors
  - read a book to your baby
- Support your baby with a rolled up towel, blanket, or cushion under the chest (see Figure 4).
- Don't do tummy time when your baby is hungry, tired, or upset.
- Start with lots of short periods of tummy time at first and slowly increase the time.
- Anyone can do tummy time with your baby including:
  - friends
  - siblings
  - relatives
  - caregivers



Figure 3

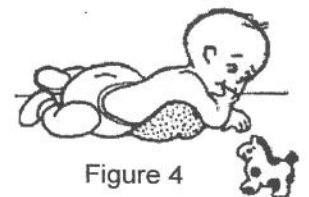


Figure 4

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