



Torticollis and Plagiocephaly Care at The Children's Institute of Pittsburgh

The expert staff at The Hospital at The Children's Institute of Pittsburgh has the experience and knowledge needed to successfully treat children with torticollis and plagiocephaly at all four outpatient locations. By teaching families how to best work with their child, outpatient therapists facilitate improvements in the child's neck and trunk movement, strength, balance, use of arms in a symmetrical manner, and overall gains in gross motor skills that can otherwise be limited by torticollis and plagiocephaly.

Information for Parents and Caregivers

Torticollis is a term used to describe an abnormal posture of the head and neck, usually with tilt of the head to one side and a rotation of the head to the opposite side. It is not a diagnosis in and of itself, but a sign of an underlying problem. The cause of torticollis can be acquired or congenital; it can be muscular or non-muscular in origin. The most common cause of torticollis in infants is generally muscular in origin (congenital muscular torticollis). The muscular causes of torticollis often involve the sternocleidomastoid muscle, and frequently other muscles of the face, neck, shoulders, and trunk also are affected.

Plagiocephaly is a term used to describe an asymmetrical shape of the cranium. It can result from constant pressures on one portion of the head (being in the same position all of the time) or from early closure of one of the sutures in the skull. You may see this as a flat spot on the back or side of the head. There is a natural molding of the head that occurs in utero, during the birth process, and after birth (depending on the infant's positioning throughout each day and the infant's ability to actively move his or her head).

Positive change in head shape should naturally occur during the first few weeks of life, but torticollis decreases an infant's ability to move his head and neck. As a result, plagiocephaly often develops. Plagiocephaly also can develop without the presence of torticollis if the position of the infant's head is not changed frequently throughout the day.

To reduce the risk of plagiocephaly and to promote appropriate overall development, it is very important for infants to spend supervised time playing on their bellies each day, while continuing to sleep on their backs.

Alert your physician immediately if:

- Your child's head tends to stay turned/tilted to one side
- Your child has difficulty turning his or her head equally to each side
- Your child's skull is flattening on the back or side
- Your child is not able to keep his or her head centered when sitting or laying on the back or belly

Importance of Early Treatment

The skull grows fastest within the first six months of life and is most susceptible to shaping during this time. If your child is not able to develop control of motor function in midline, it will be difficult for other skills to develop appropriately. A physical therapy evaluation can be done as early as 2 weeks of age and should be requested as soon as a problem is suspected. A physical therapist will instruct you on positioning, stretching, strengthening, and the need for devices such as collars and helmets. A physical therapist also will monitor your child's overall development to ensure the best possible outcome.



Positioning Guidelines for Caregivers

It is recommended that your child's position be changed frequently throughout the day. Keep in mind that lying on the back and sitting in a car seat, infant swing, or bouncer seat all provide pressure to the back of the head. When your child is not able to fully move his or her head on one's own, changing the pressure points on the head, you must do it for the child.

The examples listed below will help to prevent or improve an abnormal head shape. This information is intended as a general guideline only - your physician or physical therapist may alter these guidelines. For further information, please contact your physician or physical therapist.

- Provide daily supervised tummy time while your baby is awake. Often, infants initially fuss and resist this position, but it is very important to their overall development that they spend time in this position every day. Start with just a minute or two each session and gradually increase the time.
- When you put your baby down to sleep, alternate the end of the crib at which your infant's head is placed.
- When doing diaper changes, alternate the end of the changing table at which your infant's head is placed, with yourself positioned off to one side of the table so that your baby is encouraged to turn his or her head and look at you.
- When placing toys on a stroller, swing, crib or infant seat, place them to the side of which your infant prefers not to look.
- When carrying your child, alternate the hip or arm you use.
- A head support safety-approved for use in car seats may be needed to maintain a midline head position while in the car seat. Your physical therapist also can show you other positioning strategies.
- Whether breast or bottle-feeding, alternate the side to which the breast or bottle is presented.

Information for Primary Care Physicians

Early intervention is critical. As a primary care physician, you are in the best position to facilitate this. It is recommended that parents of all infants be instructed to:

- Look for signs of the development of torticollis and plagiocephaly.
- Use strategies such as repositioning and supervised tummy time when awake.
- Limit time spent in car seats, swings, and other positioning devices that contact the back of the head.

Assessment of head shape, cervical range of motion, head posture and midline orientation of the head and hands at each well-baby visit is recommended. Infants should be referred to physical therapy as soon as torticollis or plagiocephaly are suspected, even as early as 2 to 4 weeks of age. In the great majority of cases, the earlier the intervention is initiated, the better the outcome will be. It becomes more difficult to implement positioning and stretching strategies once children are self-mobile.

Feel confident referring your patients to The Hospital at The Children's Institute. Our staff includes several APTA Pediatric Physical Therapy Certified Specialists. We are committed to quality and successful outcomes, helping our amazing kids reach their fullest potential.

After Referral

Once a child is referred to The Children's Institute for physical therapy, a thorough evaluation of head shape, cervical range of motion, posture, midline orientation, strength and overall development of fine and gross motor skills relevant to the child's age is performed. A plan of treatment is developed in conjunction with the caregivers and caregiver education regarding a home program begins.

Throughout the course of treatment, the child will be reassessed at each visit, the home program and caregiver competency with the home program will be updated and recommendations for referral to other appropriate specialists will be made as needed. This may include the use of cervical positioners and cranial molding helmets.

