Newborns often have an abnormally shaped head. This is part of the natural birthing process as the head changes its shape to pass through the birth canal. Following birth, head shape returns to normal within several weeks. However, when head asymmetry persists, it is important to differentiate deformational plagiocephaly from craniosynostosis.

The skull is made up of several pieces of bone joined together at growth centers or “sutures.” In craniosynostosis, a cranial suture closes too soon resulting in an abnormal head shape, face, and orbits. Craniosynostosis occurs 1 in 2000 live births, usually affecting more boys than girls. Surgery is performed to correct head shape and decrease the risk of raised pressure on the brain.

Plagiocephaly
Helmet therapy is recommended at 4 to 7 months of age for moderate-to-severe cases unresponsive to repositioning, and cases associated with torticollis.
Craniosynostosis

Normal Head Shape

Unicoronal Craniosynostosis
Flattening of forehead and brow.
Second most common.

Sagittal Craniosynostosis
Long narrow skull.
Most common craniosynostosis.

Bicoronal Craniosynostosis
Tall flat, retracted forehead.
Usually associated with a syndrome.

Metopic Craniosynostosis
Triangle shaped skull. Prominent midline ridge. Third most common.

Lambdoid Craniosynostosis
Can be confused with deformational plagiocephaly.

Surgery for Craniosynostosis
The type of surgery depends upon the age of diagnosis which is confirmed by CAT scan. Surgeries are either a minimally invasive endoscopic assisted strip craniectomy for infants less than 4 months old, or a more involved orbital and cranial vault reconstruction for older infants. Advantages of the endoscopic technique include shorter operative time, shorter hospitalization, less blood loss, less scarring, less swelling, and a smooth round head.

Surgery before 6 months

Surgery after 6 months