

Craniosynostosis endoscopic repair

Skull holds and protects brain

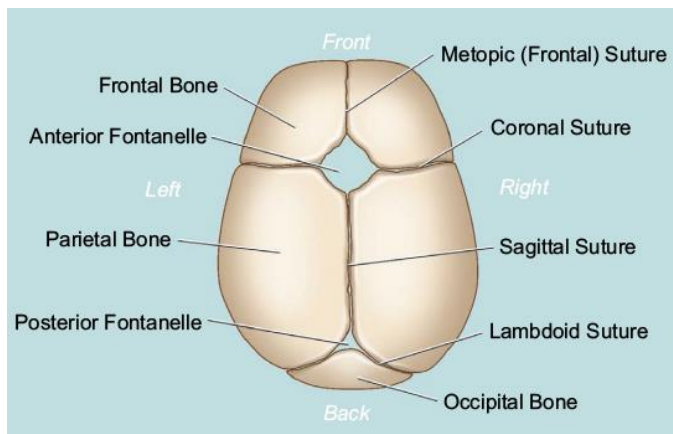
The skull is made of several different bones held together by loose connections we call sutures. The sutures form gaps between the bones. We call the gaps soft spots or fontanelles.

Sutures and fontanelles

Sutures and fontanelles allow the skull to grow as the brain grows. It is important that the skull bones stay open because your baby's brain grows quickly during the first 2 years.

Normally fontanelles and sutures close at different times.

- Back fontanelle (posterior) closes first, usually between 2 to 4 months.
- Front fontanelle (anterior) stays open well into your baby's 2nd year.



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Diagram of 2 fontanelles and 5 sutures

Craniosynostosis

Cranio is the skull. Synostosis is the fusion of 2 bones together.

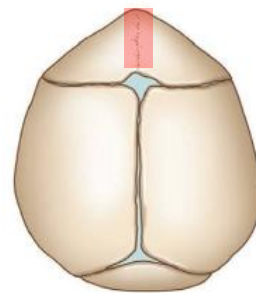
If a suture closes too early, the skull will stop growing in one direction but continue to grow in the other direction. We call this craniosynostosis.

If more than one suture closes at the same time, the skull cannot expand and the brain cannot grow. This increases the pressure inside the skull. We call this increased intracranial pressure. It is important to treat this to prevent brain damage.

Shape of head and face changes

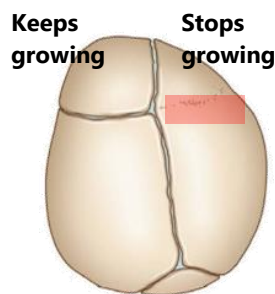
Craniosynostosis changes the shape of the head and face.

There are 4 main types of craniosynostosis. Each type involves the early closing of a different suture.



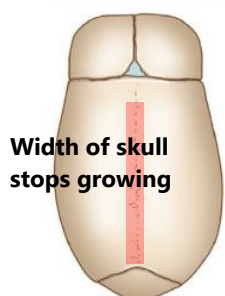
The metopic suture closes. Both frontal bones stop expanding. This gives the head a triangular shape.

Metopic synostosis



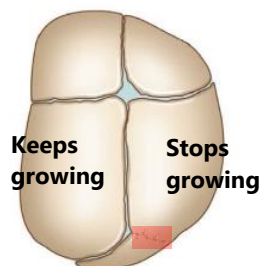
One side of the coronal sutures closes. The frontal bone on that side stops expanding.

Coronal synostosis



The sagittal suture closes. The skull cannot widen. This makes the head longer and narrow.

Sagittal synostosis



The lambdoid suture closes. The back of the head stops expanding. This gives the back of the head a flattened look.

Lambdoid synostosis

Goal of surgery

- To allow for normal growth of the brain.
- To relieve any pressure caused by early suture closure.
- To restore or improve appearance and head shape.

Endoscopic cranial vault surgery

This surgery is for infants less than 4 months. Vault is another name for the skull.

An endoscope is a thin tube with a light and camera. The neurosurgeon makes a small incision over the area of skull that is not growing and through the endoscope, removes the band of fused bone.

Post-operative care

Swelling

There will be some swelling around the forehead and eyes. This will slowly decrease in 3 to 4 days.

Incisions

There will be a few small incisions on the head.

Pain medicine

Your infant may have some discomfort the first few days after surgery. The neurosurgery team will order pain medicine as needed

Activity

No rough playing such as bouncing in a swing until your team approves.

Shower or Bath

You may wash your infant's hair 48 hours after surgery with a gentle shampoo. Do not let incisions get under water until your doctor approves.

When to call your neuro team

Drainage or signs of infection

Fever:

Persistent fever over 101°F (degrees Fahrenheit) or 38.3° C (degrees Celsius).

Area around incision:

- Becomes very red.
- Develops increasing pain or tenderness.
- Has increased swelling.
- Has pus at incision site that smells foul, or looks yellow or white.



Please remember that every child is different. It may take your child longer to heal than another child.

It is always important to call the clinic if you have any questions or concerns.

Helmet

You will have an appointment with a helmet specialist, called the orthotist, after your child recovers from surgery.

This helmet is very important because it guides the reshaping of the skull, head, and face. Helmets are lightweight and most babies get use to wearing the helmet on the first day.

It is very important to follow all of the helmet instructions. This includes the times when you can take it off.



Infant wearing helmet

Follow-up appointments

Neurosurgeon

We will schedule all follow-up appointments before you go home. Our team will see you one month after surgery and usually 3 to 4 months later. We will check your baby's progress and measure the head growth.

Orthotist

You may have many appointments. This is necessary to measure the changes in your infant's head growth and to fit your infant for the next helmet.

Helmet therapy is very safe. If a helmet does not fit well it may irritate the skin or cause pressure sores.

Call your orthotist as soon as possible:

- If the color of skin on the head or face changes to pale, red, bluish, or looks darker.
- If the skin feels warm to the touch.
- If the skin looks puffy or irritated.

Neurosciences

For locations and contacts visit:

<https://www.cookchildrens.org/services/neurosciences/>

or



These instructions are only general guidelines. Your healthcare provider may give you special instructions. If you have questions or concerns, please call your healthcare provider.