SYMPTOM

Sutures - ridged

A ridged skull suture is a firm raised line where a baby's skull bones meet.

WHAT IT FEELS LIKE
A firm raised line on the baby's skull

WHERE IT IS FELT
Along the seams between a baby's skull bones

MOST COMMON CAUSES
Birth molding, overlapping skull bones, normal forehead-suture closure

WHEN IT IS URGENT
Bulging soft spot with fever, vomiting, or unusual sleepiness

USUALLY LASTS
Days after birth, or longer based on the cause

SEE A DOCTOR IF
Ridge persists, head shape changes, or head growth slows

Overview

Skull sutures are the flexible seams between the bones of a baby's skull. They allow the skull to change shape during birth and expand as the brain grows. A suture may sometimes feel like a firm, raised line.

This page is about skull sutures, not stitches used to close a wound.

Ridging is often temporary in a newborn. Pressure during birth can make the skull bones overlap slightly, producing a ridge that settles as the head changes shape. A ridge may also be felt along the middle of the forehead after that suture naturally closes.

Less often, a persistent ridge can be associated with craniosynostosis. This means one or more skull sutures have fused earlier than expected. The ridge alone cannot show whether a suture has fused. Head shape, head growth, age, and examination findings all matter.

What it may feel or look like

A ridged suture may feel like a narrow, firm line beneath the scalp. It can run across the top, side, or back of the head, or down the middle of the forehead. It usually feels like bone rather

than a soft lump.

You may also notice:

Soft spots, also called fontanelles, differ in size and close at different ages. A small or difficult-to-feel soft spot does not by itself mean there is a problem.

Do not repeatedly press the ridge or soft spot. Gentle touching during ordinary washing and care will not harm the brain.

- Slightly overlapping skull bones in a newborn
- An uneven, narrow, pointed, or flattened head shape
- One side of the forehead or face appearing different
- A forehead ridge without other changes in head shape
- A soft spot that seems smaller or harder to find

Common causes

Birth molding and overlapping bones are common reasons for ridging immediately after birth. The movable skull bones may shift or overlap as the baby passes through the birth canal. The head often becomes rounder and the ridge less noticeable over the following days.

Normal closure of the forehead suture can leave a ridge down the middle of the forehead. This is called a metopic ridge. A ridge without a narrow or triangular forehead may be a normal feature, but a clinician should assess a marked or changing ridge.

Normal skull shape differences can make some sutures or bony areas easier to feel. Hair thickness, head position, and lighting may make the ridge seem more noticeable.

Less common causes include craniosynostosis , in which a suture fuses too early. The resulting head shape depends on which suture is involved. The skull may become long and narrow, short and broad, triangular at the forehead, or uneven from side to side.

Craniosynostosis can occur on its own. Occasionally, it is part of a genetic syndrome that also affects the face, hands, feet, or other parts of the body. A previous skull operation or injury may also change how the skull surface feels.

Positional flattening can alter a baby's head shape, but it does not usually create a fused bony ridge. It may still need assessment because it can resemble some forms of craniosynostosis.

When to seek medical care

Arrange a routine appointment if the ridge remains after early newborn molding has settled, becomes more obvious, or is accompanied by an unusual head shape. Also book an appointment if you are concerned that the head is not growing, the face or eyes look uneven, or your child has developmental difficulties.

Contact a healthcare professional the same day if the soft spot is bulging while your baby is calm and upright, especially with fever, repeated vomiting, poor feeding, or unusual sleepiness. A bulging soft spot is different from a hard suture ridge and may indicate pressure or illness that needs prompt assessment.

Seek emergency help if your child:

A stable ridge without these symptoms is not usually an emergency. However, persistent ridging with an unusual head shape should not be left until much later, because early assessment can clarify whether normal growth is occurring.

- Has a seizure
- Is very difficult to wake
- Has trouble breathing
- Becomes suddenly weak or unresponsive
- Develops concerning symptoms after a significant head injury

How the cause is found

A clinician will ask when you first noticed the ridge, whether it has changed, and whether it was present soon after birth. Details about the pregnancy, delivery, feeding, development, previous injuries, and family head shapes may be helpful.

They will examine the head from several angles and gently feel the sutures and soft spots. Head circumference is measured and compared with earlier measurements on a growth chart. The eyes, face, jaw, neck movement, and development may also be checked.

Imaging is not always needed. When the examination does not give a clear answer, ultrasound or other imaging may be considered. A CT scan can show the skull bones in detail, but it uses radiation, so the need for it is assessed carefully.

If early fusion is suspected, your child may be referred to a specialist craniofacial or neurosurgical team. Genetic assessment may be offered when several sutures are involved or when there are other physical features.

Treatment and self-care

Temporary newborn ridging usually needs observation rather than treatment. Attend routine baby checks so head shape and growth can be followed.

Do not massage, press, or try to flatten a bony ridge. Avoid buying a shaping helmet without a specialist assessment. Helmets used for positional head flattening do not reopen a fused suture.

If neck tightness causes a baby to keep the head turned one way, a clinician may recommend positioning changes or physical therapy. Follow safe-sleep advice: place babies on their backs for every sleep, on a firm, flat sleep surface. Supervised tummy time while awake can help movement and reduce constant pressure on one area.

Confirmed craniosynostosis may be treated with surgery to allow skull and brain growth and improve head shape. The approach and timing depend on the affected suture, the child's age, symptoms, and specialist assessment.

What to expect

Ridging caused by birth molding often becomes less noticeable as overlapping skull bones settle. A normal forehead ridge may remain visible or easy to feel without causing health problems.

When a suture has fused early, the ridge and characteristic head shape may persist or become clearer as the head grows. Follow-up focuses on skull growth, development, vision, and signs of increased pressure inside the skull.

Most evaluations begin with examination and head measurements. Being referred to a specialist does not mean surgery will definitely be needed; it allows the head shape and sutures to be assessed by an experienced team.

Common questions

Can I damage my baby's brain by touching the ridge?

Gentle touching, shampooing, and ordinary care will not damage the brain. Avoid forceful or repeated pressure.

Does every forehead ridge mean craniosynostosis?

No. A ridge can remain after the forehead suture closes normally. The overall forehead shape

and head growth help distinguish this from early fusion.

Is a flat area the same as a ridged suture?

No. Positional flattening usually results from repeated pressure on one part of the head. It does not normally produce a fused ridge, although the head shapes can sometimes look similar.

Should I measure my baby's head at home?

Routine measurements are best taken by a healthcare professional using a consistent technique. Photographs from above and from the front may help show changes between appointments.

Sources

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