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## Cranial sutures

Cranial sutures are fibrous bands of tissue that connect the bones of the skull.

### Information

An infant's skull is made up of 6 separate cranial (skull) bones:

- Frontal bone
- Occipital bone
- Two parietal bones
- Two temporal bones

These bones are held together by strong, fibrous, elastic tissues called sutures.

The spaces between the bones that remain open in babies and young children are called fontanelles. Sometimes, they are called soft spots. These spaces are a part of normal development. The cranial bones remain separate for about 12 to 18 months. They then grow together as part of normal growth. They stay connected throughout adulthood.

Two fontanelles usually are present on a newborn's skull:

- On the top of the middle head, just forward of center (anterior fontanelle)
- In the back of the middle of the head (posterior fontanelle)

The posterior fontanelle usually closes by age 1 to 2 months. It may already be closed at birth.

The anterior fontanelle usually closes sometime within 7 to 19 months of age.

The sutures and fontanelles are needed for the infant's brain growth and development. During childbirth, the flexibility of the sutures allows the bones to overlap so the baby's head can pass through the birth canal without pressing on and damaging their brain.

During infancy and childhood, the sutures are flexible. This allows the brain to grow quickly and protects the brain from minor impacts to the head (such as when the infant is learning to hold his head up, roll over, and sit up). Without flexible sutures and fontanelles, the child's brain could not grow enough. The child would develop brain damage.

Feeling the cranial sutures and fontanelles is one way that health care providers follow the child's growth and development. They are able to assess the pressure inside the brain by feeling the tension of the fontanelles. The fontanelles should feel flat and firm. Bulging fontanelles may be a sign of increased pressure within the brain. In this case, providers may need to use imaging techniques to see the brain structure, such as CT scan or MRI scan. Surgery may be needed to relieve the increased pressure.

Sunken, depressed fontanelles are sometimes a sign of dehydration.

## Alternative Names

Fontanelles; Sutures - cranial

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