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Fontanelles - bulging

A bulging fontanelle is an outward curving of an infant's soft spot (fontanelle).

Considerations

The skull is made up of many bones. There are 8 bones in the skull itself and 14 bones in the face area. They join together to form a solid, bony cavity that protects and supports the brain. The areas where the bones join together are called the sutures.

The bones are not joined together firmly at birth. This allows the head to change shape to help it pass through the birth canal. The sutures get minerals added to them over time and harden, firmly joining the skull bones together.

In an infant, the space where 2 sutures join forms a membrane-covered "soft spot" called a fontanelle (fontanel). The fontanelles allow for growth of the brain and skull during an infant's first year.

There are normally several fontanelles on a newborn's skull. They are located mainly at the top, back, and sides of the head. Like the sutures, fontanelles harden over time and become closed, solid bony areas.

- The fontanelle in the back of the head (posterior fontanelle) most often closes by age 1 to 2 months.
- The fontanelle at the top of the head (anterior fontanelle) most often closes within 7 to 19 months.

The fontanelles should feel firm and very slightly curved inward to the touch. A tense or bulging fontanelle occurs when fluid builds up in the brain or the brain swells, causing increased pressure inside the skull.

When the infant is crying, lying down, or vomiting, the fontanelles may look like they are bulging. However, they should return to normal when the infant is in a calm, head-up position.

Causes

Reasons a child may have bulging fontanelles include:

- Encephalitis. Swelling (inflammation) of the brain, most often due to infections.
- Hydrocephalus. A buildup of fluid inside the skull.
- Increased intracranial pressure.
- Meningitis. Infection of the membranes covering the brain.

Home Care

If the fontanelle returns to normal appearance when the child is calm and head-up, it is not a truly bulging fontanelle.

When to Contact a Medical Professional

Immediate, emergency care is needed for any infant who has a truly bulging fontanelle, especially if it occurs along with fever or excess drowsiness.

What to Expect at Your Office Visit

The health care provider will perform a physical exam and ask questions about the child's medical history, such as:

- Does the "soft spot" return to normal appearance when the infant is calm or head-up?
- Does it bulge all the time or does it come and go?
- When did you first notice this?
- Which fontanelles bulge (top of the head, back of the head, or other)?
- Are all the fontanelles bulging?
- What other symptoms are present (such as fever, irritability, or lethargy)?

Diagnostic tests that may be done are:

- CT scan of the head
- MRI scan of the head
- Spinal tap (lumbar puncture)

Alternative Names

Soft spot - bulging; Bulging fontanelles

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