

Understanding Cephalohematoma in Newborns: Causes, Risks, and Recovery

When a baby is born, the journey through the birth canal can sometimes leave marks. Most parents expect a bit of swelling or bruising after a vaginal delivery, and often this resolves on its own. But there is one type of swelling that looks similar yet behaves very differently: cephalohematoma. Unlike general scalp swelling, which usually fades in a day or two, a cephalohematoma is a collection of blood between the baby's skull bone and the periosteum, the fibrous membrane that covers the bone. This injury is caused by pressure and friction during delivery, often from forceps, vacuum extraction, or a prolonged second stage of labor. The swelling appears a few hours after birth and does not cross the suture lines of the skull, making it distinct from caput succedaneum, the more common soft-tissue swelling that crosses sutures and disappears quickly.

For parents and healthcare providers, recognizing a cephalohematoma early matters because the care plan is different. This is not a simple bruise. The blood is trapped under the periosteum, and the body reabsorbs it slowly, often over weeks or months. During that time, the area may feel firm and can calcify along the edges, creating a hard ridge. While most cephalohematomas resolve without problems, complications can arise if the condition is not monitored properly. Understanding what to watch for and when to seek further evaluation is key to a good outcome.

What Happens Inside a Cephalohematoma

Picture the baby's skull as a set of bony plates that are not yet fused. The periosteum is a tight, fibrous layer hugging each bone. When delivery forces shear blood vessels away from the bone surface, blood leaks into the space between the bone and the periosteum. Because the periosteum is attached at the edges of each skull bone, the swelling is confined to one bone, most often the parietal bone on one side. This explains why a [cephalohematoma](#) looks like a lopsided bump on the top or side of the head, not a symmetrical cap.

The blood inside is sterile and under pressure. Over the first week, the body begins breaking down the red blood cells, releasing bilirubin. This process can temporarily increase the baby's bilirubin levels, contributing to jaundice. For most newborns, the extra bilirubin is handled by the liver and excreted, but for some, especially those with a large cephalohematoma or other risk factors, the jaundice may become more pronounced and require phototherapy.

Common Causes and Risk Factors

Not every baby who goes through a difficult delivery develops a cephalohematoma, but certain conditions raise the odds significantly. The most common cause is the use of vacuum extraction or forceps during delivery. When a vacuum cup is applied to the baby's head to assist descent, the suction can separate the periosteum from the bone. Forceps can compress the head and create similar shearing forces. A prolonged second stage of labor, where the baby's head is stuck in the birth canal for a long time, also increases the risk because the pressure on the scalp is sustained and uneven.

Larger babies, first-time deliveries, and cases where the baby is positioned awkwardly also contribute. In some instances, maternal pelvic shape or a small birth canal can add to the compressive forces. The key point is that a cephalohematoma is a mechanical injury, not a sign of poor care in every case. However, when the injury is severe or combined with other birth trauma, it may warrant a closer look at the delivery management.

Signs and Symptoms to Watch For

A cephalohematoma usually becomes noticeable within the first 12 to 24 hours after birth. The bump is firm to the touch and does not move when you press it. Over the next few days, it may enlarge slightly as more blood accumulates, then stabilize. The overlying skin may appear normal, though sometimes there is a slight purple or red hue. Unlike a scalp hematoma, which can be puffy and boggy, a cephalohematoma feels like a tense, fixed mass.

Parents should keep an eye on the size of the swelling. If it grows significantly after the first day, that can indicate ongoing bleeding and should be checked by a pediatrician. Similarly, if the baby develops a fever or the area becomes red, warm, or tender, that could be a sign of infection, which is rare but serious. Jaundice that appears earlier or is more intense than expected also warrants a bilirubin level check.

Recovery and Long-Term Outlook

The body reabsorbs the trapped blood over several weeks. During this time, the cephalohematoma may feel harder as the edges calcify. Most babies show no lasting effects. The bump gradually flattens, and by the time the baby is a few months old, it is usually gone. Rarely, the calcification can persist as a small ridge, but this does not affect brain development or skull shape in a meaningful way.

Complications are uncommon but worth knowing. A large cephalohematoma can cause significant jaundice because the breakdown of blood releases bilirubin faster than the liver can process it. In very rare cases, the hematoma can become infected, or it can lead to a skull fracture underneath. An underlying linear skull fracture is more common with vacuum deliveries than with forceps, and while most fractures heal on their own, they need to be

documented. Another rare complication is osteomyelitis, an infection of the skull bone, which requires prompt antibiotic treatment.

When to Seek Medical Advice

If you suspect your baby has a cephalohematoma, the first step is to have your pediatrician confirm it. They can assess the size, location, and any associated jaundice. In most cases, no treatment is needed beyond routine monitoring. However, if the hematoma is very large, if jaundice becomes severe enough to require phototherapy, or if there are signs of infection, early intervention makes a difference. Some pediatricians recommend checking bilirubin levels a day or two after birth to catch any spike early.

For parents who are worried about the appearance or the long-term effects, know that a cephalohematoma does not change the shape of the skull permanently. Once the blood is reabsorbed, the skull growth continues normally. The baby's brain is well protected by the skull and the tough outer covering, so the hematoma itself does not press on the brain. The real concern is the systemic effects, mainly jaundice, and the rare risk of infection.

Prevention and Birth Planning

While not all cephalohematomas are preventable, certain steps can reduce the risk. For example, avoiding unnecessary use of vacuum or forceps, especially when the baby is large or the pelvis is small, can help. Good communication between the delivering provider and the mother about the progress of labor allows for timely decisions. If a vacuum or forceps is needed, gentle technique and limiting the number of pulls or the duration of suction can lower the chance of injury. For mothers with a history of fast or very prolonged labor, discussing options with the obstetrician ahead of time may also be beneficial.

In the end, a cephalohematoma is one of those birth events that sounds scary but usually resolves without incident. Knowing what it is, what to watch for, and when to ask for help gives parents confidence during the first few weeks of their baby's life. Every newborn is different, and a lump on the head is rarely a reason to panic. With good information and a calm approach, most families navigate this experience smoothly.