Hypocalcemia in the Newborn

What is hypocalcemia in the newborn?

Hypocalcemia is when a person doesn't have enough calcium in the blood. In babies, it's called neonatal hypocalcemia. Your baby may have it at different times and from different causes. There are two types of hypocalcemia in newborns:

- **Early hypocalcemia.** This happens in the first 2 to 3 days of a baby's life. To some degree, it's part of a normal developmental process. It's more likely to go away with nutrition support.
- **Late hypocalcemia.** This starts in the first week or weeks after birth and is less likely to go away.

What causes hypocalcemia in the newborn?

Early hypocalcemia can have many contributing factors and often goes away.

Late hypocalcemia is rare today. It was often caused by drinking cow's milk or formula that has too much phosphate, because calcium is linked to phosphorus levels in the body. This is no longer a common cause, but babies without enough vitamin D may have late hypocalcemia. Babies younger than 12 months old need 400 IU of vitamin D each day. All breastfed babies should take a vitamin D supplement daily. Formula-fed infants should also take a vitamin D supplement each day unless they are drinking 32 ounces of infant formula per day

Hypocalcemia can be caused by a problem with parathyroid hormone. This hormone is made by the parathyroid glands in the neck. It helps keep the amount of calcium and phosphorus at a normal level in the blood. Low parathyroid hormone levels can cause too little calcium in the blood. Many conditions, such as DiGeorge syndrome (22q11.2 deletion syndrome), may cause low parathyroid hormone levels. Low magnesium levels may also cause low calcium levels. This is because calcium levels are linked to levels of magnesium. High phosphorus and low calcium may be seen in people, including babies, with kidney failure. This is because the kidneys can't get rid of phosphorus.

Which newborns are at risk for hypocalcemia?

Hypocalcemia is more common in babies who are premature or who have a low birth weight. This is because their parathyroid glands are less mature. Babies whose growth was slower than expected before birth may be more likely to have severe hypocalcemia. This happens because less calcium crossed the placenta. Hypocalcemia can also occur in babies who have a difficult birth or in babies whose mothers have diabetes.

What are the symptoms of hypocalcemia in the newborn?

Symptoms of hypocalcemia may not be easy to see in newborns. Most infants have no symptoms. If a baby does have symptoms, they may include:

- Being grouchy or fussy (irritability)
- Muscle twitches
- Jitteriness
- Shaking (tremors)
- Poor feeding
- Lethargy
- Seizures

The symptoms of hypocalcemia in the newborn may seem like other health conditions. Make sure your child sees their healthcare provider for a diagnosis.

How is hypocalcemia in the newborn diagnosed?

Your baby's healthcare provider will examine your baby. They will also do tests to check the amount of calcium in the baby’s blood.

How is hypocalcemia in the newborn treated?

This condition may get better without treatment, especially if there are no symptoms. Early hypocalcemia most often goes away in a few days. Babies with hypocalcemia may have calcium supplements in their feedings or in an IV.

Key points about hypocalcemia in the newborn

- Hypocalcemia is when a child doesn't have enough calcium in the blood.
- There are two types of hypocalcemia in newborns. Early hypocalcemia starts a few days after birth and often goes away. Late hypocalcemia starts in the first weeks of life and may not go away.
- This condition is more common in babies who are premature or who have a low birth weight.
- Symptoms may be hard to see but may include poor feeding, muscle twitches, and lethargy.
- This condition may get better without treatment, especially if there are no symptoms.

Next steps

Tips to help you get the most from a visit to your child’s healthcare provider:

- Know the reason for the visit and what you want to happen.
- Before your visit, write down questions you want answered.
- At the visit, write down the name of a new diagnosis and any new medicines, treatments, or tests. Also write down any new instructions your provider gives you for your child.
- Know why a new medicine or treatment is prescribed and how it will help your child. Also know what the side effects are.
- Ask if your child’s condition can be treated in other ways.
- Know why a test or procedure is recommended and what the results could mean.
- Know what to expect if your child does not take the medicine or have the test or procedure.
- If your child has a follow-up appointment, write down the date, time, and purpose for that visit.
- Know how you can contact your child’s provider after office hours. This is important if your child becomes ill and you have questions or need advice.