

Blood glucose in newborn babies

What is blood glucose?

Glucose is a type of sugar found in the blood. It is the body's main source of energy. Glucose is carried through the bloodstream to provide energy to all of the body's cells. The body needs glucose to function, grow and develop.

**Blood glucose
is also called
blood sugar**

Where does the glucose come from?

During pregnancy, glucose is passed from mother to baby through the placenta and umbilical cord. The baby uses some of the glucose as energy for activity and growth. The rest is stored in the baby's body, especially during the last weeks of pregnancy. The stored glucose can be used later, for energy during birth and the first few days until baby is feeding well.

If the baby is healthy and feeding well, breastmilk or formula provides all the glucose the baby needs. If the blood glucose becomes low, such as between feeds, the baby's body can make glucose from the stored sugar and fat. This keeps the baby's blood glucose level normal.

What happens to the blood glucose at birth?

It is normal for a baby's blood glucose level to drop within the first 1 or 2 hours after birth. A healthy, full-term baby can get glucose from the first feeding (colostrum or formula) to bring the blood glucose level back to normal. If needed, the baby can also make glucose from stored glucose and fat.

For some babies, it is harder to bring their blood glucose level back to normal. If the blood glucose is below normal it is called low blood glucose or hypoglycemia. Babies with low blood glucose don't feel well. If the glucose level stays low for a long time, their growth and development could be affected.

Which babies are at risk for low blood glucose?

Some babies are more likely to have low blood glucose in the first few hours or days of life. Babies at risk for low blood glucose may include:

- preterm babies, born more than 3 weeks early (less than 37 weeks gestational age)
- babies who are small for their dates (gestational age), especially those that have not grown well in the last 4 weeks before birth
- babies who are large for their dates (gestational age)
- babies born to mothers who had diabetes in pregnancy
- babies born to mothers on certain medications, such as medication for high blood pressure
- babies born with health problems such as infections or respiratory distress

Will my baby's blood glucose be tested?

If your baby is at risk for having low blood glucose we will test his/her blood glucose at 2 hours of age. The blood glucose will be rechecked as needed.

If your baby seems unwell or shows signs of low blood glucose, we will check his/her blood glucose as soon as possible.

If the blood glucose is low we will encourage you to feed your baby. If your baby is not able to feed, we may start an intravenous to give your baby some sugar. The nurse will recheck the blood glucose as needed.

How is my baby's blood glucose tested?

A small sample of blood is taken from your baby's heel or vein. It may be tested with a glucose meter at your baby's bedside or sent to the laboratory.

What is a normal blood glucose level?

Blood glucose levels vary naturally within a certain range. The range that is considered normal for your baby will depend on his/her age, condition and needs. Your baby's health care team will decide what level of blood glucose is best for your baby, as well as the best method of keeping it within that range.

If you have any questions about your baby's blood glucose, please talk with your baby's nurse or doctor.