



Jaundice

What is jaundice?

A common condition in newborns, jaundice refers to the yellow color of the skin and eyes caused by excess **bilirubin** in the blood. Bilirubin is produced by the normal breakdown of red blood cells.

Normally bilirubin passes through the liver and is excreted as bile through the intestines. Jaundice occurs when bilirubin builds up faster than it is cleared from the body. Reasons for this include:

- Bilirubin is being made faster than the liver can clear it from the body.
- Too large an amount of bilirubin is reabsorbed from the intestines before the body gets rid of it in the stool.

What causes jaundice?

There are several types of newborn jaundice. The following are the most common:

- **Physiological (normal) jaundice:** occurring in more than 50% of term newborns, this jaundice is due to the immaturity of the baby's liver, which leads to a slow processing of bilirubin. It generally appears at 2 to 4 days of age and disappears by 1 to 2 weeks of age.
- **Jaundice of prematurity:** this occurs in 75% of premature babies since they take longer to adjust to excreting bilirubin effectively.
- **Breast milk jaundice:** in 1-2% of breastfed babies, jaundice can be caused by substances produced in their mother's breast milk that can cause the bilirubin level to rise. These substances can prevent the excretion of bilirubin through the intestines. It starts at 4 to 7 days and normally lasts from 3 to 10 weeks.
- **Blood group incompatibility (Rh or ABO problems):** if a baby has a different blood type than the mother, the mother might produce antibodies that quickly destroy the infant's red blood cells. This creates a sudden buildup of bilirubin in the baby's blood. Incompatibility jaundice usually begins during the first 24 hours of life.

Are there risk factors for jaundice?

There are a number of risk factors for jaundice. These include:

Prematurity
Infection

Vacuum/forceps birth
Resuscitation

Bruising
Delayed feeding

Birth weight <2500g
Rh incompatibility

How can it affect my baby?

Newborn jaundice usually appears around the second or third day of life. It begins at the head and progresses downward. A jaundiced baby's skin will appear yellow first on the face, followed by the chest and stomach, and finally, the legs. It can also cause the whites of an infant's eyes to appear yellow.

Jaundice can make babies sleepy, which in turn can lead to feeding problems (a sleepy baby may not wake itself to feed and/or maintain a strong latch). This in turn can lead to significant weight loss (>10% of body weight). Because of this, it is recommended that jaundiced babies be fed frequently, even if it means waking them.

Extremely high levels of bilirubin - usually above 20 mg - can cause deafness, cerebral palsy, or brain damage in some babies. In rare cases, jaundice may indicate the presence of hepatitis.



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How is jaundice diagnosed?

A simple test for jaundice is to gently press your fingertip on the tip of your child's nose or forehead. If the skin shows white, there is no jaundice; if it shows a yellowish color, your baby has jaundice. It is most accurate to do this while holding your baby in natural light. It should be noted that this is a subjective test, resulting in over-diagnosis of jaundice in babies of Asian descent.

The most accurate test for jaundice involves taking a small sample of your baby's blood with a heel-prick to measure the bilirubin level.

How is jaundice treated?

- Mild increases in bilirubin level usually don't require treatment.
- Frequent feedings (at least 10 to 12 times in 24 hours) can speed up the rate that stool passes through the intestine. This can reduce the amount of bilirubin that is reabsorbed from the bowel.
- Moderate jaundice can be treated with at-home phototherapy. The baby is exposed, with as little clothing as possible, to sunlight through a sunny window (never direct sun), making sure to not let him/her get chilled.
- Higher bilirubin levels can be treated with in-hospital phototherapy. This is where the baby is placed, with as little clothing as possible, under a special type of light (often called a bili-lamp). This light causes a chemical change to occur in the bilirubin molecules in the tissues under the skin. Once this chemical change occurs, the bilirubin can be excreted by the liver without the liver having to convert (conjugate) it. During the treatment, the baby will be placed in an isolette to keep him/her warm and the his/her eyes will be protected from the bright light with eye patches.

If your baby needs this type of phototherapy, you may be eligible for the Home Phototherapy Program. Ask your midwife.

- Dangerously high bilirubin levels, can also be treated by performing exchange blood transfusions (replacing the blood high in bilirubin with blood that is lower in bilirubin).

When to call your midwife

You should call your midwife if jaundice is noted during the first 24 hours of life, the jaundice can be seen in the arms or legs, your baby develops a fever over 38 degrees Celsius (100.4 degrees Fahrenheit), or if your child starts to look or act sick.