Jaundice in babies

Newborn babies are often affected by jaundice, which makes their skin and eyes have a yellowish tinge. ‘Physiological jaundice’ is caused by a build-up of a chemical called bilirubin in the baby’s blood and tissues. Bilirubin is normally processed by the liver, but a newborn’s liver takes a few days to process it, so about six out of 10 newborns have jaundice to varying degrees. The condition is more common among premature babies.

Jaundice usually appears on the second or third day. If your baby is full-term and healthy, mild jaundice is nothing to worry about and will resolve by itself within a week or so. However, a premature or sick baby or a baby with very high levels of bilirubin will need close monitoring and medical treatments.

Other causes of jaundice in babies include blood group antibodies, haemolytic anaemia, hepatitis and galactosaemia.

**Symptoms of jaundice in babies**

The symptoms of jaundice in babies depend on the cause and severity, but may include:

- a yellow tinge to the skin, usually appearing first on the face and scalp
- a yellow tinge to the white parts of the eyes (sclera)
- a yellow tinge spreading to the skin of the body (in moderate jaundice)
- palms of the hands and soles of the feet turning yellow (in severe jaundice)
- unusual drowsiness
- feeding difficulties
- in some cases, light-coloured faeces (poo) and dark urine.

Talk to the maternity staff if you have any concerns about your baby showing any of these symptoms.

**Physiological jaundice**

Bilirubin is a waste product of the body’s break-down of old and damaged red blood cells. The liver helps to eliminate bilirubin as waste.

In the mother’s uterus, the baby's bilirubin is sent down the umbilical cord and eliminated by the mother’s body. After birth, the baby's liver has to eliminate the bilirubin itself, and it can take a few days to function at full speed. In the meantime, the excess bilirubin in the baby's body causes symptoms of jaundice.

Every newborn has elevated bilirubin, but only around 60 per cent of full-term babies will have noticeable symptoms. Treatment isn't usually necessary, unless the baby has very high bilirubin levels, or is premature or sick. Dehydration (loss of water) or poor weight gain can make jaundice worse.

**Other causes of jaundice in babies**

Jaundice can also be caused by a range of other conditions and events including:

- Breastmilk – the mother's breasts produce small amounts of colostrum in the first few days after childbirth. Until the milk 'comes in', the limited amounts of fluid received from breastfeeding may affect the functioning of the baby's liver. Certain enzymes in breast milk are also thought to contribute to 'breast milk jaundice'.
• Neonatal hepatitis – some of the viruses that can trigger hepatitis in babies include cytomegalovirus, rubella, and hepatitis A, B and C. In around eight out of 10 cases the cause isn't known, but viral infections are suspected. Babies with neonatal hepatitis may have been exposed to the viral infection in the womb, or within the first month or so of life.

• Rh (Rhesus) and ABO blood group incompatibilities – the mother may produce antibodies that can attack the baby's red blood cells during the later stages of pregnancy. This means that higher than normal levels of damaged red blood cells have to be eliminated from the body, which in turn triggers high bilirubin levels. The baby may be born anaemic and develop severe jaundice within hours of birth.

• Haemolytic anaemia – this can be an inherited autoimmune disorder, where the baby’s immune system destroys red blood cells. It can also be a complication of other disorders, such as serious infections (sepsis).

• Galactosaemia – galactose is a milk sugar. A baby with galactosaemia lacks the enzyme needed to break down galactose. The high levels of milk sugar can cause cirrhosis of the liver and subsequent jaundice.

• Biliary atresia – the ducts that allow the flow of bile from the liver to the small intestine are destroyed, for reasons unknown. Without bile ducts, bile builds up in the liver and causes symptoms of jaundice. The baby’s faeces are always very pale.

### Diagnosis of the cause of jaundice in babies

The underlying cause of jaundice in babies must be found. Some of the diagnostic tests may include:

- physical examination
- blood tests
- ultrasound scans
- liver biopsy
- exploratory surgery.

### Treatment for jaundice in babies

Treatment for jaundice in babies depends on the cause, but may include:

- Mild jaundice – if the baby is otherwise healthy and well, no treatment is necessary. The baby’s liver will take only a few days to process bilirubin properly.
- Moderate jaundice – phototherapy is the most common treatment. Phototherapy transforms the bilirubin in the baby’s skin into a less harmful chemical. Your baby is placed in a warm incubator under blue lights. To maximise exposure to the lights, your baby will be undressed and wear eye protection. Alternatively a ‘biliblanket’ may be used. A biliblanket is a pad placed directly against the baby that bathes the baby in light. Treatment usually lasts one or two days. To prevent dehydration and increase the bilirubin excretion, your baby will require regular feeding every three to four hours.
- Severe jaundice – phototherapy is usually the primary treatment, but in very severe cases a blood transfusion may be needed. This is very uncommon.
- Breastmilk jaundice – breastfeeding is almost always continued. Phototherapy is usually the primary treatment.
- Neonatal hepatitis – there is no specific medical treatment. Options may include vitamin and mineral supplements, or drugs to improve the flow of bile.
- Haemolytic anaemia – treatment depends on the cause. For example, the treatment for haemolytic anaemia caused by infection by malarial parasites includes anti-malarial medications.
- Galactosaemia – the principal treatment is to make sure the baby’s diet contains no galactose or lactose (another milk sugar). Typically, this means stopping breastfeeding and using special formulas.
- Biliary atresia – involves surgery to connect a tiny section of the liver to the small intestine to allow bile to drain effectively. Around 75 per cent of babies will experience good to moderate bile flow. For others, the only option may be a liver transplant.

### Where to get help

- Your doctor
- Maternal and Child Health Line (24 hours) Tel. 13 22 29
Things to remember

- Jaundice shows up in babies as a yellowish tinge to the skin and eyes.
- About six out of 10 newborns have jaundice to varying degrees.
- Most jaundice is 'physiological jaundice' which is caused by an excess of a chemical called bilirubin.
- Physiological jaundice will resolve by itself once the baby's liver is functioning at full speed.
- Other less common causes of jaundice include haemolytic anaemia, hepatitis and galactosaemia.

This page has been produced in consultation with, and approved by:

North East Valley Division of General Practice

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