

Neonatal jaundice

Information for parents and carers

We have written this factsheet to give you information about neonatal jaundice. It explains what neonatal jaundice is, the signs to look out for and how it is treated. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this factsheet.

What is neonatal jaundice?

Neonatal jaundice is a common condition in newborn babies that causes a yellowing of the skin and the whites of the eyes.

How common is neonatal jaundice?

Approximately 60% of term babies (babies born after 37 weeks) and 80% of preterm babies (babies born before 37 weeks) develop jaundice during the first week after birth.

What causes neonatal jaundice?

When a baby is born, they have a high number of red blood cells in their blood. These red blood cells carry oxygen around the body and are broken down and replaced frequently. Bilirubin is a yellow substance which is produced when red blood cells are broken down. It is normally processed by the liver and removed from a baby's body through their stools (poo).

Neonatal jaundice is a symptom of hyperbilirubinemia (a condition in which there is a build-up of bilirubin in the blood). For newborn babies (particularly those born prematurely), this usually occurs because their liver isn't fully developed and is less effective at removing the bilirubin from their blood.

Bruising at birth may also increase the number of red blood cells which need to be broken down.

Neonatal jaundice will usually resolve by the time a baby is about two weeks old, especially if they are feeding well. This is because their liver will become more effective at removing bilirubin from their blood.

What are the symptoms of neonatal jaundice?

If your baby has neonatal jaundice, their skin will look slightly yellow in bright light. Changes in skin colour can be more difficult to spot if your baby has a darker skin tone. If you are unsure, gently press the skin on your baby's nose or forehead. You may see a yellow tinge as you let go.

You may also notice a yellowing of:

- the whites of your baby's eyes
- the inside of your baby's mouth (their gums or the roof of their mouth)
- the soles of your baby's feet
- the palms of your baby's hands

You should take every opportunity to look for signs of neonatal jaundice, especially during your baby's first 72 hours. You can do this when you are bathing your baby or changing your baby's nappy or clothes. It's easier to see the signs of neonatal jaundice in bright (natural, where possible) light.

Your midwife can show you how to look for signs of neonatal jaundice if you are unsure. Your midwifery and health visiting team will also look for signs of jaundice every time they examine your baby.



What should I do if I think my baby has neonatal jaundice?

If you notice any symptoms of neonatal jaundice or you have any concerns about your baby, contact your midwife, health visitor or general practitioner (GP) immediately to arrange an appointment for their wellbeing to be assessed. They will arrange a postnatal clinic appointment for you to attend with your baby within six hours of you identifying the symptoms.

Seek urgent medical help from your midwife, health visitor or GP if your baby:

- develops any symptoms of neonatal jaundice before they are 24 hours old
- becomes reluctant to feed
- is sleepy and difficult to wake
- is not gaining weight properly
- has pale, chalk-coloured stools (poo) or dark urine that stains their nappy
- is ill in any way

Your baby may need to be seen straight away.

If jaundice develops within 24 hours of your baby's birth, persists after two weeks, or develops after your baby is two weeks old, it can be a symptom of an underlying health condition or a problem with your baby's liver.

How is neonatal jaundice diagnosed?

If your baby has symptoms of neonatal jaundice, your midwifery or paediatric team will need to check the level of bilirubin in your baby's blood. This can be done one of two ways:

- using a bilirubinometer (a small handheld device that measures the level of light reflected by your baby's skin)
- taking a sample of blood from your baby's heel

In most cases, a bilirubinometer will be used. This will allow your midwifery or paediatric team (healthcare team that specialises in the care of babies, children and young people) to give you your baby's bilirubin result immediately. A blood sample is usually only necessary if:

- your baby develops neonatal jaundice within 24 hours of birth
- your baby is more than 14 days old
- your baby's bilirubinometer result is particularly high

Your midwifery or paediatric team will plot your baby's bilirubin level on a treatment threshold graph against their age to decide whether any treatment is necessary. If treatment is needed, this process will be repeated each time your baby's bilirubin level is measured. Please ask your midwifery or paediatric team to discuss your baby's graph with you.

How is neonatal jaundice treated?

Most babies with neonatal jaundice will not need any treatment because the level of bilirubin in their blood is lower than the treatment threshold on the graph. If this is the case for your baby, their jaundice symptoms will usually disappear within 10 to 14 days and will not cause your baby any harm. Your midwifery or paediatric team will advise you to continue to observe your baby's wellbeing during this time. Your midwifery or paediatric team may also assess your baby's feeding and offer additional support and advice if appropriate, as frequent and effective feeding will help your baby's liver remove the bilirubin from their bloodstream.

However, if the level of bilirubin in your baby's blood is higher than the treatment threshold on the graph, they may need treatment, as high levels of bilirubin can be harmful if not treated. Approximately 1 in 20 babies with neonatal jaundice will need treatment.

Your baby is more likely to need treatment for neonatal jaundice if **you**:

- were less than 38 weeks pregnant when your baby was born
- have previously given birth to a baby who needed treatment for neonatal jaundice (phototherapy or an exchange transfusion)
- have a family history of:
 - red blood cell abnormalities including spherocytosis (a condition which causes red blood cells to be round instead of disc-shaped)
 - glucose 6 phosphate dehydrogenase, also known as G6PD (an inherited enzyme deficiency)

Your baby is more likely to need treatment for neonatal jaundice if **they**:

- are visibly jaundiced during the first 24 hours after birth
- have a different blood type to you (this is known as blood group incompatibility and can occur if you have rhesus negative blood and your baby has rhesus positive blood)
- breastfeed exclusively and aren't effectively positioned and attached to your breast during each feed (speak to your midwife, health visitor or a member of the infant feeding team if you would like support with feeding your baby)

Phototherapy

Neonatal jaundice is treated with a light therapy known as phototherapy. Phototherapy involves placing your baby under a special blue light which changes the bilirubin in their blood into a form that their liver can break down more easily.

Phototherapy is usually given on Burley ward or on the transitional care unit on F level at Princess Anne Hospital. However, in some circumstances, phototherapy can be given at home. If this is appropriate for your baby, your paediatric team will discuss this with you, give you a separate factsheet about the home phototherapy service and answer any questions you may have.

For this treatment, we will undress your baby, apart from a nappy, so that as much of their skin is exposed to the light as possible. We will also make sure your baby's eyes are covered and always protected while they receive the treatment.

We will then either:

- place your baby on their back in a cot or in an incubator with a phototherapy light above them **or**
- wrap your baby in a phototherapy blanket (this will allow you to comfort, cuddle and feed your baby without us needing to stop the treatment)



We will monitor your baby while they receive the treatment to ensure:

- they are not too hot or too cold
- they remain hydrated (this may involve us weighing your baby and assessing their wet nappies)
- the treatment is effective (we may discuss additional tests for conditions that may have caused the jaundice with you)

Feeding your baby regularly will help to reduce their bilirubin level. We will support you with feeding, cuddling and changing your baby while they receive treatment.

We will continue this treatment until your baby's bilirubin level falls to a safe level (below the treatment threshold). The length of time this takes varies from baby to baby. A member of your midwifery or paediatric team will discuss this with you.

If your baby's bilirubin levels are very high or do not respond to the phototherapy, we may need to admit them to the neonatal unit for a more intensive course of phototherapy. We will discuss this with you if necessary.

Skin care advice

Do not use any creams, lotions or oils on your baby's skin while they are receiving phototherapy, as these can cause your baby's skin to burn.

Phototherapy can cause a mild skin rash. If you notice a rash or have any concerns about your baby's skin, please contact a member of the team caring for your baby.

What happens if high levels of bilirubin are not treated?

Kernicterus

High levels of bilirubin can damage a newborn baby's brain and/or spinal cord (central nervous system) if not treated. This rare but serious complication is called kernicterus. Kernicterus affects less than 1 in 100,000 babies.

Your baby may be at risk of developing kernicterus if:

- they have a very high level of bilirubin in their blood
- the level of bilirubin in their blood is rising rapidly
- they do not receive treatment for neonatal jaundice

Symptoms of kernicterus include:

- poor feeding
- irritability
- a high-pitched cry
- lethargy (excessive sleepiness)
- brief pauses in breathing (apnoea)
- unusually floppy muscle tone
- seizures and muscle spasms

If kernicterus is left untreated, babies can develop serious and permanent problems, such as:

- cerebral palsy (a condition that affects movement and co-ordination)
- hearing loss
- involuntary twitching of different parts of their body
- abnormal eye movements
- poor development of the teeth
- learning difficulties and/or developmental delays

Very high levels of bilirubin in newborn babies can also be life-threatening.

Kernicterus is usually treated with an intensive course of phototherapy. In rare circumstances, treatment for kernicterus may involve an exchange transfusion. During an exchange transfusion, your baby's blood will be replaced with blood from a blood donor, gradually removing the bilirubin from their body. If this is necessary, your baby will receive care in our neonatal unit. Your midwife or paediatric team will discuss this with you and answer any questions you may have.

What should I do if my baby's neonatal jaundice does not clear up?

If your baby has neonatal jaundice for more than two weeks, your baby may need further tests to assess their liver function and look for underlying health conditions. Contact the health professional who is providing your baby's care. This may be your midwife, health visitor or GP.

Contact us

If you have any questions or concerns about neonatal jaundice, please contact us using the details below.

Community midwifery co-ordinator
Telephone: **023 8120 4871** (every day, 8am to 5pm)

Outside of these hours, please contact Broadlands Birth Centre.
Telephone: **023 8120 6012**

If you have any questions or concerns about feeding your baby, please contact the maternity infant feeding team.

Maternity infant feeding team
Telephone: **07786 267584** (every day)

If the team are unable to answer your call, please leave a voicemail with your name, number and a short message, and a member of the team will aim to get back to you within 48 hours.

Useful links

www.childliverdisease.org/liver-information/baby-jaundice

www.nhs.uk/conditions/jaundice-newborn

www.nhs.uk/conditions/jaundice-newborn/complications

www.nhs.uk/conditions/rhesus-disease

www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Pregnancyandbirth/Checking-your-baby-is-well-1165-PIL.pdf

www.uhs.nhs.uk/Media/UHS-website-2019/Patientinformation/Pregnancyandbirth/Signs-that-your-baby-may-be-unwell-587-PIL.pdf

www.uhs.nhs.uk/departments/maternity-services/maternity-and-parent-information/information-factsheets

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