

Home phototherapy for babies with jaundice

<https://kingstonhospital.nhs.uk/information/home-phototherapy-for-babies-with-jaundice>

This offers information for anyone who uses home phototherapy to treat a baby with jaundice.

What is jaundice?

Jaundice in newborn babies is common and usually harmless. It causes yellowing of your baby's skin and the whites of their eyes. It can be more difficult to see in darker skin tones.

Jaundice is the build-up of a substance called bilirubin, that occurs naturally in our bodies as we process red blood cells.

Newborn babies, and especially babies born early, have an immature liver which means they cannot process bilirubin well. This creates a backlog which builds up and is then deposited in the skin and eyes.

Jaundice usually develops 2 days after birth. In premature babies this may take longer (sometimes 5 to 7 days).



6 out of 10 full-term babies will develop jaundice



8 out of 10 premature babies will develop jaundice

Full-term means over 37 weeks gestation. Premature means babies born before 37 weeks gestation.

At extremely high levels, bilirubin can pass into the brain and cause brain damage. This is rare in the UK because we catch and treat jaundice early on.

What is phototherapy?

To treat jaundice, we put babies on phototherapy.

Phototherapy is a blue light which breaks down the bilirubin instead of their liver breaking it down.

The bilirubin is then excreted via your baby's urine.

If your baby's bilirubin levels are low enough for home treatment, you can treat them with home phototherapy.

What happens when you recommend home phototherapy for my baby?

If we recommend home phototherapy for your baby, you can expect the following.

- The Kingston Paediatric Outreach Nursing Team (PONT) will closely monitor your baby at home. Your baby will also remain under the care of the Kingston Hospital neonatal team.
- Before you go home, PONT will visit you on the ward to show you how to use a special phototherapy blanket called a Biliblanket and how to care for your baby on home phototherapy.
- When you are home you can also use the instructions in this leaflet.
- The amount of time your baby is on phototherapy depends on the bilirubin level shown in their blood test. Most babies are on phototherapy for 2 to 3 days.
- PONT will visit you every day at home and take a bilirubin blood test. They will also check how you and your baby are doing, weigh your baby and check their vital signs (pulse, temperature etc).
- PONT will discuss your baby's results, and their vital signs, with doctors at the hospital.
- PONT will contact you to tell you whether your baby needs to remain on the Biliblanket or whether you can switch it off at 9pm that evening.
- If they recommend you switch off the Biliblanket, the PONT team will return the following morning to take another bilirubin blood test.
- If your baby's bilirubin level remains low, PONT will tell you that your baby can be discharged from our care. PONT will arrange a time to pick up the phototherapy equipment from your home.
- Sometimes a baby's blood test shows an increase of bilirubin again. If this happens, PONT will tell you that your baby either needs to go back onto phototherapy or they may need to monitor them by doing another bilirubin blood test the following day.

What is included in the Bilisoft 2.0 phototherapy system?

The Bilisoft 2.0 phototherapy system consists of three parts:

- A charging lead
- A Bilisoft phototherapy unit
- A fibre optic pad and fibre optic pad cover, which form the Biliblanket.

How do I prepare my baby for their phototherapy session?

To prepare your baby for their session, do the following (see photos below).

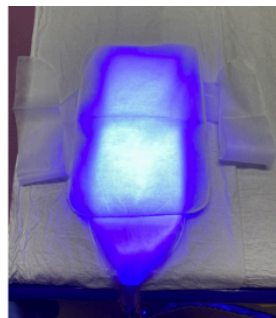
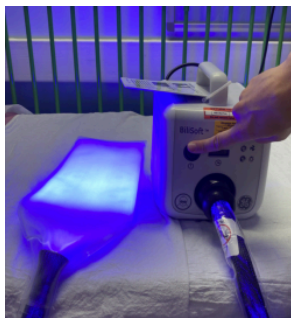
- Plug the fibre optic pad lead into the front of the Bilisoft phototherapy unit.
- Insert the charging lead into the back of the Bilisoft phototherapy unit and plug the other end in at the wall.
- Press the on button to check that the system is working.
- **Switch the system off again** until you have everything set up for your baby.

- Lay the fibre optic pad down on a flat surface. Make sure the side with the writing is facing down and the blank side is facing up.
- Apply the fibre optic pad cover over the fibre optic pad. Make sure the ties of the fibre optic pad cover face away from you.
- Make sure your baby is **only wearing a nappy** and nothing else.
- Make sure your baby is **wearing their eye mask**.
- Lay your baby down on their back on the fibre optic pad, with their head pointing away from the fibre optic cable.
- Make sure the top of the fibre optic pad is in line with their shoulders.
- Secure the cover ties under their arms.
- Once your baby is in a comfortable position, switch on the light.

Your baby **must** wear the eyemask to shield their eyes while they are using the Bilisoft system.

Do not remove your baby's eyemask.

Leave the eyemask on even when you change their nappy, clean them up (if they are sick), cuddle them or feed them.



How do I use the phototherapy system?

- Leave your baby on the Biliblanket for the maximum amount of time recommended by PONT.
- Leave them on the Biliblanket while you are feeding them or cuddling them or comforting them.
- Only take the baby off the Biliblanket if you change their nappy or if they have been sick and you need to clean them up.
- Put them back on the Biliblanket as soon as you have either changed their nappy or cleaned them up.
- PONT will give you spare covers in case they become soiled and need to be changed.

Only keep your baby off the Biliblanket **while you change their nappy or clean up their vomit.**

If you keep them off their Biliblanket for longer, their bilirubin levels may increase.

This can be dangerous and we may have to admit your baby into hospital again.



Feeding your baby if they have high bilirubin levels

It is important that your baby feeds well as this helps to flush out the bilirubin from their bowel when they poo.

If you are breastfeeding your baby, we advise that your baby feeds for 10 to 20 minutes at least every 3 hours.

If your baby is struggling to feed this much, PONT will suggest you supplement your breastfeeds with top ups of expressed breast milk or formula.

→ Contact the infant feeding team (see Contacts section) if you need help with feeding your baby

Top ups

Jaundice makes your baby sleepy and sometimes this means they do not feed well. If they do not feed well they will not flush out the bilirubin successfully. This becomes a cycle: they cannot flush out the bilirubin because they are too sleepy to feed.

In these situations, PONT will suggest you use top ups of expressed milk or formula for your baby. These top ups mean your baby gets more milk to flush out the bilirubin.

- Top ups are a short term measure to help your baby. Although some mothers prefer not to give their babies formula, PONT will suggest a short term formula top up if they believe this is necessary for your baby.
- As your baby becomes more alert, PONT and your midwifery team will reduce the top ups as your baby reestablishes themselves again fully onto the breast.
- If your baby requires bottle top ups, we advise putting them on the breast for 5 minutes only. This means they do not get too tired and they can feed according to the top up volumes recommended by PONT.

Recommended top ups for your baby

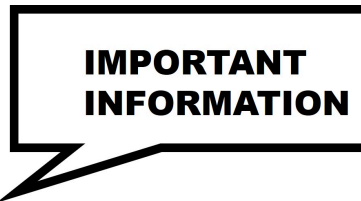
Your baby's birth name	
Your baby's birth weight	

Day of life (1st day or life, 2nd day of life etc)	Millilitres per kg per day	Feed volume every ___ hours

Day of life (1st day or life, 2nd day of life etc)	Millilitres per kg per day	Feed volume every ___ hours

Your baby's next feed time


- Your baby's feed time begins at the point when they start to feed (not when they finish feeding).
- For example, if your baby is feeding every 3 hours, it means they feed at 9am, 12 midday, 3pm, 6pm, 9pm, midnight, 3am and 6am. This makes sure they get their 8 feeds per day, even if they are slow feeders.



Seek help if you notice that your baby:

- feels hot or cold to touch and has a temperature of >37.5 degrees or below 36.0 degrees
- is not waking for feeds or is falling asleep quickly when feeding
- is not interested in feeding
- is irritable, does not like being moved and has a high pitched cry
- appears pale or their skin looks mottled (irregular patches of shade or colour)
- becomes floppy
- exhibits laboured breathing
- is persistently vomiting
- has blue skin around their lips
- has a rash that does not fade under pressure (eg if you gently press a glass onto it)
- is causing you to worry.

<p>If you need help between 8am and 6pm</p>	 <p>Contact PONT on 020 8934 2327 or 07789 371951</p>
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<p>If you need help between 6pm and 8am</p>	 <p>Call switchboard on 020 8546 7711 and ask them to bleep the neonatal registrar</p> <p>If you cannot get through via switchboard, call the neonatal unit on 020 8934 2420 or 020 8934 2421 and ask for the neonatal doctors</p>
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Contacts

Kingston PONT 020 8934 2327 or 07789 371951
khn-tr.pont@nhs.net

Kingston Hospital neonatal team 020 8934 2420 or 020 8934 2421

Kingston Hospital infant feeding team 020 8546 7711 ext 2848 or 07385 949049
khft.infantfeedingteam@nhs.net

<p>Translate</p>	<p>Please speak to a member of staff before or during your visit to the hospital if you require translation.</p>
<p>Accessibility</p>	<p>Please contact the Patient Experience Team on 020 8934 3850 if you need this information in a different format. For information accessibility please visit Kingston Hospital AccessAble www.accessable.co.uk/kingston-hospital-nhs-foundation-trust</p>
<p>Support services</p> <p>Visit the hospital website, ask a member of staff, or ring us for details.</p>  <p>www.kingstonhospital.nhs.uk</p> <p>Switchboard 020 8546 7711</p>	<ul style="list-style-type: none"> • 'Find Us' page for maps, transport, registering a blue badge, disabled access • Information, advice and support for patients and relatives (PALS) 020 8934 3993 • Pastoral and Spiritual Support 020 8546 7711 • Learning Disability Liaison Team 020 8934 6895