NICE National Institute for Health and Care Excellence

NICE Pathways

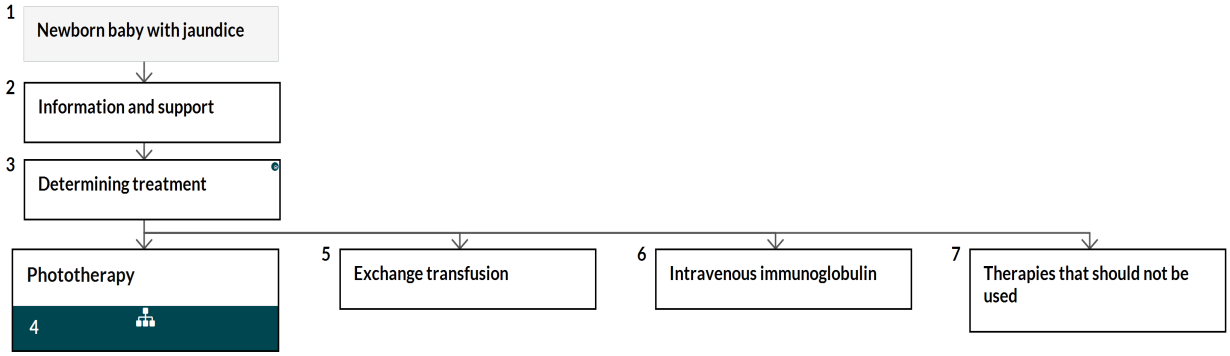
Neonatal jaundice: treatment

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/neonatal-jaundice
NICE Pathway last updated: 20 April 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Newborn baby with jaundice

No additional information

2 Information and support

Offer parents or carers information about treatment for hyperbilirubinaemia, including:

- anticipated duration of treatment
- reassurance that breastfeeding, nappy-changing and cuddles can usually continue.

Encourage mothers of breastfed babies with jaundice to breastfeed frequently, and to wake the baby for feeds if necessary.

Provide lactation/feeding support to breastfeeding mothers whose baby is visibly jaundiced.

3 Determining treatment

Use the bilirubin level to determine the management of hyperbilirubinaemia in all babies (see threshold table [See page 7] and the treatment threshold graphs from the CG98 full guideline).

Follow expert advice about care for babies with a conjugated bilirubin level greater than 25 micromol/litre because this may indicate serious liver disease.

Do not use the albumin/bilirubin ratio when making decisions about the management of hyperbilirubinaemia.

Do not subtract conjugated bilirubin from total serum bilirubin when making decisions about the management of hyperbilirubinaemia (see management thresholds in the threshold table [See page 7] and the treatment threshold graphs from the CG98 full guideline).

Baby under 24 hours old with suspected or obvious jaundice

Measure and record the serum bilirubin level urgently (within 2 hours).

Arrange a referral to ensure that an urgent medical review is conducted (as soon as possible and within 6 hours) to exclude pathological causes of jaundice.

Interpret bilirubin levels according to the baby's postnatal age in hours and manage hyperbilirubinaemia according to the threshold table [See page 7] and the treatment threshold graphs from the CG98 full guideline.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

Jaundice in newborn babies under 28 days

3. Management of hyperbilirubinaemia: treatment thresholds

4 Phototherapy

See Neonatal jaundice / Neonatal jaundice: phototherapy

5 Exchange transfusion

Offer parents or carers information on exchange transfusion including:

- the fact that exchange transfusion requires that the baby be admitted to an intensive care bed
- why an exchange transfusion is being considered
- why an exchange transfusion may be needed to treat significant hyperbilirubinaemia
- the possible adverse effects of exchange transfusions
- when it will be possible for parents or carers to see and hold the baby after the exchange transfusion.

Use a double-volume exchange transfusion to treat babies:

- whose serum bilirubin level indicates its necessity (see threshold table [See page 7] and the treatment threshold graphs from the CG98 full guideline) **and/or**
- with clinical features and signs of acute bilirubin encephalopathy.

During exchange transfusion do not:

- stop continuous intensified phototherapy
- perform a single-volume exchange
- use albumin priming

- routinely administer intravenous calcium.

Following exchange transfusion:

- maintain continuous intensified phototherapy
- measure serum bilirubin level within 2 hours and manage according to the threshold table [See page 7] and the treatment threshold graphs from the CG98 full guideline.

6 Intravenous immunoglobulin

Offer parents or carers information on IVIG including:

- why IVIG is being considered
- why IVIG may be needed to treat significant hyperbilirubinaemia
- the possible adverse effects of IVIG
- when it will be possible for parents or carers to see and hold the baby.

Use IVIG (500 mg/kg over 4 hours) as an adjunct to continuous intensified phototherapy in cases of rhesus haemolytic disease or ABO haemolytic disease when the serum bilirubin continues to rise by more than 8.5 micromol/litre per hour.

7 Therapies that should not be used

Do not use any of the following to treat hyperbilirubinaemia:

- agar
- albumin
- barbiturates
- charcoal
- cholestyramine
- clofibrate
- D-penicillamine
- glycerin
- manna
- metalloporphyrins
- riboflavin
- traditional Chinese medicine

- acupuncture
- homeopathy.

Consensus-based bilirubin thresholds for management of babies 38 weeks or more gestational age with hyperbilirubinaemia

Age (hours)	Bilirubin measurement (micromol/litre)	
0	>100	>100
6	> 125	> 150
12	> 150	> 200
18	> 175	> 250
24	> 200	> 300
30	> 212	> 350
36	> 225	> 400
42	> 237	> 450
48	> 250	> 450
54	> 262	> 450
60	> 275	> 450
66	> 287	> 450
72	> 300	> 450

78	> 312	> 450
84	> 325	> 450
90	> 337	> 450
96+	> 350	> 450
Action	**Start phototherapy**	**Perform an exchange transfusion unless the bilirubin level falls below threshold while the treatment is being prepared**

Glossary

IVIG

intravenous immunoglobulin

Sources

Jaundice in newborn babies under 28 days (2010 updated 2016) NICE guideline CG98

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after

careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.