CONDITION

Jaundice and breastfeeding

Jaundice and breastfeeding describes yellowing in a breastfed newborn caused by bilirubin buildup, sometimes linked to low milk intake.

WHAT IT IS
Bilirubin buildup causing yellow skin in breastfed newborns

BODY SYSTEM
Liver and digestive system

MAIN SYMPTOMS
Yellow skin, yellow eyes, sleepiness, poor feeding

WHAT CAUSES IT
Immature bilirubin processing, low milk intake, breast milk factors

HOW IT IS DIAGNOSED
Bilirubin measurement, examination, and sometimes blood tests

MAIN TREATMENT
Feeding support, monitoring, and sometimes light therapy

CAN IT BE CURED?
Yes - usually resolves as bilirubin falls

IS IT AN EMERGENCY?
Sometimes - hard waking or neurological signs

LONG-TERM OUTLOOK
Usually full recovery with timely monitoring and treatment

Overview

Jaundice is yellowing of the skin and the whites of the eyes. It is caused by a buildup of bilirubin, a yellow substance made when the body breaks down old red blood cells.

Newborns produce more bilirubin than older children and adults. Their liver is also less able to remove it. As a result, mild jaundice is common during the first days of life.

Breastfeeding can be linked with jaundice in two different ways.

Suboptimal intake jaundice happens when a newborn is not taking in enough milk. It usually appears during the first week. Low milk intake can slow the passage of meconium, the dark first stool. This allows more bilirubin to be absorbed back into the blood. The older term "breastfeeding jaundice" can be misleading because breastfeeding itself is not the problem.

Breast milk jaundice usually becomes noticeable after the first week or continues after earlier jaundice would normally be improving. The baby is generally feeding, growing, and otherwise well. Natural substances in breast milk may affect how bilirubin is processed, although the exact cause is not fully understood.

Most jaundice settles without causing harm. However, a very high bilirubin level can affect the brain. A newborn's bilirubin level should therefore be assessed rather than judged only by skin colour.

Symptoms

The main sign is yellow colouring. It may first be seen on the face and whites of the eyes. As the bilirubin level rises, yellowing may become visible on the chest, abdomen, arms, or legs.

Jaundice can be harder to see in brown or black skin. Looking at the whites of the eyes and gums may help, but appearance alone cannot show how high the bilirubin is. Pressing the skin is also not a reliable substitute for testing.

A baby with mild jaundice may have no other symptoms. Signs that feeding may not be effective include:

Dark urine that stains the diaper and pale, white, grey, or chalk-coloured stools are not typical of uncomplicated breast milk jaundice. They can indicate a problem with bile flow from the liver and need prompt medical assessment.

- Difficulty staying awake for feeds
- A weak latch or little swallowing
- Fewer wet or dirty diapers than expected for age
- Continued dark, sticky meconium
- Excessive weight loss or poor weight gain

Causes and risk factors

In the first few days, newborn jaundice often reflects normal changes after birth. The baby has many red blood cells, these cells have a shorter life span, and the immature liver needs time to process the bilirubin they release.

Low milk intake can add to this buildup. Possible reasons include difficulty attaching to the breast, ineffective sucking, infrequent feeding, pain during feeds, delayed milk production, or a

medical problem affecting the baby or parent. Babies born early may be sleepier and less effective at feeding.

Breast milk jaundice is different. It occurs in a baby who is usually taking enough milk and growing appropriately. It may run in families, but it does not mean the breast milk is harmful or unsuitable.

Other conditions can raise bilirubin independently of feeding. These include:

These causes matter because treatment and follow-up may differ. Jaundice beginning in the first 24 hours after birth requires urgent assessment.

- Premature birth
- Bruising or a collection of blood under the scalp after birth
- Differences between the baby's and birth parent's blood groups
- Faster-than-normal breakdown of red blood cells
- Glucose-6-phosphate dehydrogenase, or G6PD, deficiency
- Infection
- Liver, thyroid, or metabolic conditions

Diagnosis

A healthcare professional will examine the baby and ask about when the yellow colour began. They will also review feeding, weight change, wet and dirty diapers, pregnancy and birth details, and any family history of severe newborn jaundice or blood disorders.

Bilirubin can be estimated with a device placed against the skin. This is called a transcutaneous bilirubin test. A blood sample measures the total serum bilirubin more accurately and is used when the skin reading is high, treatment is being considered, or the result needs confirmation.

The result is interpreted using the baby's age in hours, gestational age at birth, and medical risk factors. A bilirubin number that is acceptable for one baby may need treatment in another.

Further blood tests may be needed if bilirubin is high, rising quickly, or lasting longer than expected. These may look for anaemia, blood group incompatibility, increased red blood cell breakdown, infection, G6PD deficiency, or thyroid problems.

If jaundice continues beyond the early newborn period, the blood may be tested for direct, or conjugated, bilirubin. A high direct bilirubin level can signal a liver or bile-flow problem. It is not explained by ordinary breast milk jaundice.

Treatment and management

Treatment is based on the bilirubin level, the baby's age, and other risk factors. Mild jaundice may need only feeding support and a planned repeat examination or bilirubin test.

Breastfeeding can usually continue. Effective milk transfer helps the baby pass bilirubin in urine and stool. A trained professional may watch a feed, help with positioning and attachment, and check whether swallowing is occurring. Expressing milk may be useful when the baby cannot feed effectively at the breast.

Some babies need additional milk for a period. Depending on the circumstances, this may be expressed breast milk, screened donor milk, or infant formula. Supplementation is decided case by case; it does not automatically mean breastfeeding must stop. Plain water or glucose water does not treat jaundice and can be unsafe for newborns.

Phototherapy is the main treatment when bilirubin reaches the treatment threshold. The baby is placed under special blue light, which changes bilirubin into forms the body can remove more easily. Phototherapy is not ultraviolet light and does not tan the skin.

Feeding usually continues during phototherapy. The care team monitors temperature, hydration, weight, and bilirubin. A repeat bilirubin test may be needed after treatment because the level can sometimes rise again.

Very severe jaundice may require intensive phototherapy or, rarely, an exchange transfusion. This procedure gradually replaces some of the baby's blood. Treatment to reduce immune-related red blood cell breakdown is used only in specific situations.

Sunlight is not a safe substitute for phototherapy. Its intensity is unpredictable, and direct exposure can cause overheating or sunburn.

Complications

The main concern is an extremely high level of unconjugated bilirubin, the form that has not yet been processed by the liver. It can enter the brain and cause acute bilirubin encephalopathy.

Early warning signs may include unusual sleepiness, poor feeding, a high-pitched cry, low muscle tone, or difficulty waking. Later signs can include stiffness, backward arching, seizures, or pauses in breathing. These symptoms are an emergency.

Permanent injury from bilirubin is called kernicterus. It can cause hearing loss, movement difficulties, problems with eye movements, and developmental disability. It is uncommon when jaundice is recognised, measured, and treated in time.

Low milk intake can also lead to dehydration, low blood sugar, and excessive weight loss. These problems need feeding assessment and medical care rather than waiting for milk intake to improve on its own.

Prolonged yellowing can occasionally be the first sign of a liver or bile-duct condition. Pale stools and dark urine are especially important warning signs.

Prevention

Not all newborn jaundice can be prevented. Normal bilirubin production, an immature liver, breast milk jaundice, and inherited blood conditions are not caused by anything a parent did.

Early, effective feeding can reduce jaundice related to low milk intake. This includes feeding in response to early hunger cues, checking that the baby is swallowing, and getting help promptly if feeds are painful or ineffective.

Routine newborn bilirubin screening and follow-up after discharge help identify rising levels before symptoms become severe. The timing of follow-up should reflect the baby's bilirubin result, age, gestational age, feeding, and other medical risks.

Do not try to prevent or treat jaundice by giving water, exposing the baby to direct sunlight, or stopping breastfeeding without clinical advice.

Living with it and what to expect

Jaundice related to normal newborn changes often becomes most noticeable during the first several days and then fades. Jaundice caused by low milk intake should improve as feeding becomes effective and bilirubin is removed.

Breast milk jaundice can continue for several weeks and occasionally longer. During this time, the baby should remain alert enough to feed, gain weight, and produce appropriate wet and dirty diapers. Continuing yellow colour still needs follow-up until a professional is satisfied that the pattern is harmless.

Skin colour may improve gradually and does not always match the bilirubin level. Repeat testing is sometimes required even when the baby appears less yellow.

Most babies with uncomplicated jaundice recover fully and continue breastfeeding. Jaundice does not usually cause an ongoing liver problem. Long-term effects are mainly a concern when bilirubin becomes extremely high or when another medical condition is causing the jaundice.

Keep routine newborn and feeding appointments even if the baby seems well. These visits

allow weight, feeding, stool colour, and jaundice to be checked over time.

When to get medical help

Seek urgent same-day assessment if:

Call emergency services if the baby is very difficult to wake, becomes floppy or stiff, has a high-pitched cry, arches backwards, has a seizure, or has pauses in breathing.

Routine follow-up is appropriate when the baby has already been assessed, is feeding and growing well, has normal urine and stool colour, and has a clear plan for repeat weight or bilirubin checks.

- Jaundice appears during the first 24 hours after birth
- Yellowing is rapidly increasing or reaches the arms and legs
- The baby is increasingly sleepy or feeds poorly
- Wet or dirty diapers are becoming less frequent
- The baby has dark urine or pale, grey, white, or chalky stools
- Jaundice continues beyond about two weeks without being assessed
- Jaundice returns after it had clearly gone away
- The baby has a fever or seems generally unwell

Common questions

Can I keep breastfeeding a baby with jaundice?

Usually, yes. Breastfeeding helps remove bilirubin by supporting stool and urine production. A temporary feeding plan may be needed if milk transfer is low or the bilirubin is high, but this does not usually require breastfeeding to end.

How long does breast milk jaundice last?

It often continues for several weeks. In some healthy, growing babies, mild yellowing lasts longer. Persistent jaundice should still be assessed to rule out liver, blood, thyroid, or metabolic conditions.

Does a jaundiced baby always need formula?

No. The need for extra milk is based on feeding effectiveness, weight, hydration, bilirubin level, and medical risk. When supplementation is needed, options may include expressed breast

milk, donor milk, or formula.

Will putting my baby near a sunny window help?

Sunlight is not a recommended treatment. A window changes the light reaching the baby, and the dose cannot be controlled. It can also lead to overheating or skin injury. Medical phototherapy uses a specific type and intensity of light.

Is breast milk jaundice dangerous?

Breast milk jaundice in a thriving baby is usually harmless, but it should not be assumed without assessment. A bilirubin measurement and review of feeding, weight, urine, and stool help distinguish it from more serious causes.

Can jaundice come back after phototherapy?

Bilirubin can rise again after phototherapy stops, especially when the original cause is still present. Some babies need a planned repeat blood test. A visible return or worsening of yellowing should be reported promptly.

Sources

- American Academy of Pediatrics. Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation . Pediatrics . 2022;150(3):e2022058859.
- Academy of Breastfeeding Medicine. ABM Clinical Protocol #22: Guidelines for Management of Jaundice in the Breastfeeding Infant 35 Weeks or More of Gestation-Revised 2017 . Breastfeeding Medicine . 2017;12(5):250-257.
- National Institute for Health and Care Excellence. Jaundice in newborn babies under 28 days . Clinical guideline CG98.
- Centers for Disease Control and Prevention. Jaundice and breastfeeding .
- NHS. Newborn jaundice .