What is jaundice?

Jaundice is a common condition that affects 60% to 80% of newborn babies in their first weeks of life. When babies have jaundice their skin, whites of the eyes and mucous membranes turn yellow because of the buildup of a yellow waste product in the body called bilirubin.

Jaundice is a normal adaptation to life outside of the womb. Jaundice in newborn babies usually lasts one to two weeks. Very few babies will experience serious problems and jaundice will usually go away on its own without the need for treatment.

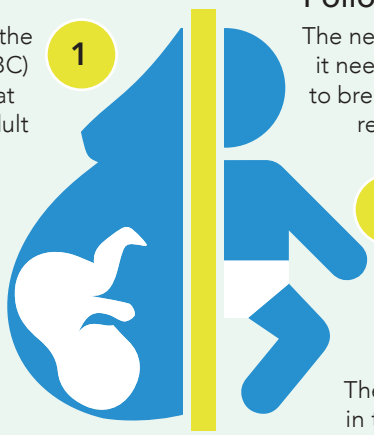
The medical term for jaundice is hyperbilirubinemia.

Why do so many babies get jaundice?

In the womb

1 Because oxygen levels are lower inside the womb, babies' fetal red blood cells (fRBC) are composed of fetal hemoglobin that attach to oxygen more strongly than adult hemoglobin.

2 When RBCs break down, they create bilirubin. One of the placenta's jobs is to remove this bilirubin so that it doesn't build up in the baby's body.



Following birth

3 The newborn baby now gets all the oxygen it needs by breathing air. The fRBCs start to break down quickly to make new RBCs, resulting in lots of extra bilirubin.

4 The baby's liver is now responsible for removing bilirubin from its body; many newborns have a hard time doing this because their livers are still developing.

5 The extra bilirubin starts to build up in the baby's skin, eyes and mucous membranes making them appear yellow.

Types of jaundice

There are two types of jaundice:

PHYSIOLOGIC JAUNDICE	PATHOLOGIC JAUNDICE
• Most babies will get this kind of jaundice. • Usually appears within three to six days after birth. • Usually goes away on its own with little or no need for medical treatment.	• Is rare. • Usually results from an underlying condition—something the baby is born with. • This condition can either: » increase bilirubin levels in the baby's body or, » make it difficult for them to remove bilirubin from their body.

This document provides client-friendly information based on the Association of Ontario Midwives' *Clinical Practice Guideline No. 18: Midwifery Management of Hyperbilirubinemia in the Healthy Term and Late Preterm Neonate*. It is designed to help you better understand some of the considerations and choices you may face while receiving care from your midwife. It is not intended to replace the informed choice discussions that you and your midwife will have. If you have any questions, concerns or ideas after reading over this document, please share them with your midwife.

What are the common causes of pathologic jaundice?

- A mismatch between the blood type of the birthing parent and their baby. This is most common when a parent with type O blood is carrying a fetus with either type A or B blood.
- A mismatch between proteins on red blood cells called 'Rh Factor.' This happens when a Rh-negative parent gives birth to a Rh-positive baby and has not received a Rh immune globulin (i.e. WinRho®).
- A bacterial infection in the baby.
- Lack of a protein called G6PD in the baby.

There are blood tests that will help you and your midwife understand if there is an underlying pathologic cause. Identifying underlying pathologic causes will help make sure your baby receives the proper treatment.

I heard that jaundice can make some babies really sick. Is this true?

Very rarely, some babies develop a serious form of jaundice called severe hyperbilirubinemia.

Babies with severe hyperbilirubinemia have very high levels of bilirubin in their blood and their bodies. When there is too much bilirubin in a baby's blood, it can enter their brain and their nervous system. If these babies don't get medical treatment, they can develop long-term disabilities and neurological delays, such as cerebral palsy and hearing loss. However, it is extremely rare that babies experience any long-term complications from jaundice.

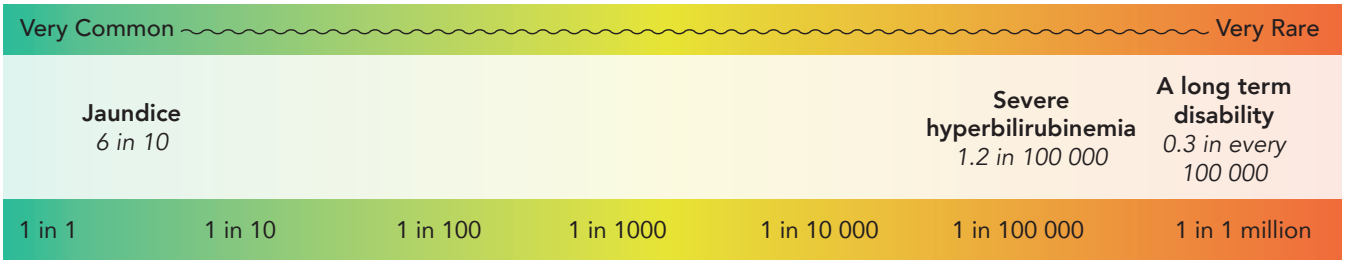
Babies who receive regular care from their midwife and develop severe hyperbilirubinemia are normally:
- diagnosed early
- treated effectively, and
- do not have any major complications.

Most babies who have severe hyperbilirubinemia grow up to be healthy children and adults.

What can increase my baby's risk of developing severe hyperbilirubinemia?

- Pathologic jaundice or jaundice that appears within the first 24 hours of life.
- Being born early (especially by more than two weeks before their due date).
- Having a sibling who had jaundice that required medical treatment.
- Not feeding well and/or refusing to feed.

Your baby's likelihood of developing:



How will my baby be tested for jaundice?

Screening can help your midwife know if your baby needs treatment for their jaundice. Screening can take place in a hospital, a clinic or at home.

Your midwife will let you know what your options are for screening in your community.

Clinical and visual assessment

As part of your newborn's care, your midwife will assess your baby to check for any signs of jaundice that may mean that your baby's bilirubin level needs to be tested.

When checking for clinical and visual signs that your baby might have jaundice your midwife will be assessing:

- your baby's weight
- your baby's feeding patterns
- if your baby has any risk factors for jaundice
- if your baby's skin or the whites of their eyes look yellow

If your baby looks visibly jaundiced at any point in time, your midwife will recommend that they receive a screening test. It can sometimes be difficult to tell if a baby's skin looks yellow, especially if their skin tone is darker. A screening test will give you a more accurate result than a visual assessment.

SCREENING OPTIONS

Your midwife will likely offer to screen your baby for jaundice in the first 24 to 72 hours. Your baby can receive this initial screening test even if they are not visibly jaundiced.

For most babies, jaundice usually becomes visible between the third to fifth days of life. Your midwife will offer a screening test at this time if they notice that your baby appears jaundiced.

BILIMETRE

A bilimetre is a device that is used to screen for jaundice. It works by releasing a flash of light to measure bilirubin through the skin. Testing bilirubin levels with bilimetres is pain-free for the baby.

If your midwife has access to a bilimetre, they will press the device onto your baby's forehead or chest. The measurement will be displayed immediately, and your midwife will discuss your baby's result with you.

If your midwife is concerned about your baby's bilirubin level from the bilimetre result, they will recommend that your baby also receives a blood test. Though bilimetre and blood test results are both good methods of bilirubin screening, blood tests are more accurate at measuring bilirubin levels than bilimetres.

BLOOD TEST

Blood tests are another way your baby's bilirubin level can be measured.

If your baby is receiving a blood test, your midwife will either:

- draw blood from their heel and bring the sample to a lab
- ask you to bring your baby to a lab for their blood to be drawn by a nurse or technician
- ask you if you would like to stay in the hospital until 24 hours for your baby's blood to be drawn by a nurse in the hospital

If your baby's bilirubin level is **high**, your midwife will discuss this result with you and will let you know what your baby's treatment options are.

If your baby's bilirubin level is **not high**, your midwife will continue to monitor your baby for signs of jaundice, and will let you know if another test is needed at a later point in time.

What are some signs that my baby's jaundice is more serious?

If the whites of your baby's eyes and skin look yellow, AND your baby:

- **does not want to feed.** Your baby should eat every two to four hours, eight to 12 times per day, for a minimum of 20 minutes each time.
- **is very sleepy all the time and hard to wake up.** Your baby should sleep for stretches no longer than four to six hours in a 24-hour period without waking to feed.
- **is not producing enough wet and dirty diapers.** You should expect: day 1 = 1 wet diaper, day 2 = 2 wet diapers, day 3 = 3 wet diapers. Once mature milk comes in (between third and fifth day), expect six to eight wet diapers a day and two or more stools that are liquid yellow, green or brown. Stools that look 'seedy' are normal.
- **has a high-pitched cry.**

Contact your midwife right away.

Can I continue nursing my baby if they have jaundice?

Yes. Babies get rid of extra bilirubin through their pee and poo. If your baby develops jaundice, it is very important that they feed well and often to help them produce more wet and dirty diapers. Nursing your baby can actually prevent their jaundice from getting worse.

Your midwife will help you and your baby nurse starting soon after the birth. They will also visit you regularly after your baby is born and will follow up with any feeding concerns you have.

How is more severe jaundice treated?

Phototherapy is the most common way to treat jaundice that is more severe. Phototherapy exposes your baby to special lights that are absorbed through their skin. This light helps them break down the extra bilirubin into a form that is more easily removed through their pee and poo.

For more information about phototherapy, please see: *What is phototherapy and why does my baby need it?* —Available on the Client Handouts page on OntarioMidwives.ca

Breast milk jaundice

A very small number of babies who are exclusively given human milk can develop something called breast milk jaundice.

Breast milk jaundice:

- is a type of physiologic jaundice
- usually appears after the fifth day of life
- can last for more than 12 weeks, and
- almost always goes away on its own without treatment

Questions

- If you have any concerns or questions after reading this pamphlet, talk to your midwife. If it helps, you can write your questions or ideas here to reference at your next appointment:

_____

_____

_____

_____

_____

Association of Ontario Midwives
Delivering what matters.