

Protecting your baby from low blood glucose

This leaflet explains why your baby may be at an increased risk of having low blood glucose and how you can avoid this risk.

What is low blood glucose?

It's when your blood is below 4mmol/L. It's also known as low blood sugar or hypoglycaemia. It is a condition that can harm your baby's development but if treated promptly in most cases, low blood glucose quickly improves within 24 to 48 hours and your baby will have no further problems

What increases your baby's risk of low blood glucose?

We will advise you of this risk if your baby is small, premature or unwell at birth. They may also be at risk if you have diabetes or take medication such as beta-blockers. Your baby may have low blood glucose in the first few hours and days after birth.

It's especially important to keep your baby warm and feed as often as possible to maintain normal blood glucose levels.

What should you do if your baby is at risk of low blood glucose?

We recommend some blood tests to check their blood glucose. Extremely low blood glucose, if not treated, can cause brain injury resulting in developmental problems. If we detect low blood glucose quickly, we can treat it to avoid harm to your baby.

What does the blood test for low blood glucose involve?

We do a heel prick blood test and only need a very small amount of blood. You can hold your baby in skin-to-skin contact while we do the test.

We'll need the first blood test before your baby's second feed (2 to 4 hours after birth) and repeat it until the blood glucose levels stabilise.

You and your baby will need to stay in hospital for the blood tests. You'll know the result of the tests straight away.

What happens if your baby's blood glucose is low?

Your baby should feed as soon as possible and have skin-to-skin contact. If the level is very low the neonatal team may transfer baby immediately to the Neonatal Unit for appropriate treatment to raise the blood glucose.

We'll do another blood glucose test before the next feed or within 2 to 4 hours.

If you're breastfeeding and your baby doesn't breastfeed straight away, a member of staff will review your baby to work out why. If they're satisfied that your baby's well, they'll support you to hand express your milk and give it by syringe or cup depending on volume.

If your baby hasn't breastfed and you can't express any of your milk, we may recommend that you use infant formula.

We may prescribe a dose of dextrose (sugar) gel as part of the feeding plan. This can be an effective way to bring your baby's glucose level up.

If you're breastfeeding and we've advised you to give your baby some formula, it's likely to be for one or a few feeds only. You should continue to offer breastfeeds and try to express milk as often as possible to stimulate your milk supply.

If your baby is too sleepy or unwell to feed, or if the blood glucose is still low after feeding, they may need to go to the Neonatal unit. We'll explain any treatment that your baby might need.

In most cases, low blood glucose quickly improves within 24 to 48 hours and your baby will have no further problems.

How to avoid low blood glucose

Skin-to-skin contact

Having your baby on your chest helps keep them calm, warm and helps establish breastfeeding. During skin-to-skin contact, your baby should wear a hat and be kept warm, with a blanket or towel.

Keep your baby warm

Put a hat on your baby for at least 12 hours after birth and until all observations are normal while in hospital. Keep your baby in skin contact on your chest covered with a blanket.

Look into your baby's eyes to check their well-being in this position or keep your baby warm with blankets if placed in a cot.

Feed as soon as possible after birth

Ask a member of staff to support you with feeding until you feel confident. Make sure you know how to tell if breastfeeding is going well, or how much formula to give your baby.

Feed as often as possible in the first few days

Offer your baby a feed whenever you notice early 'feeding cues.' These include:

- rapid eye movements under the eyelids
- mouth and tongue movements
- body movements and sounds
- sucking on a fist.

Don't wait for your baby to cry. This can be a late sign of hunger.

Feed for as long, or as much, as your baby wants

Make sure your baby gets as much milk as possible.

If you're bottle feeding, don't necessarily expect your baby to finish a bottle. Let them take as much milk as they want using a paced feeding technique.

Feed as often as your baby wants, but don't leave your baby more than 3 hours between feeds

If your baby doesn't show any feeding cues, hold skin-to-skin and start to offer a feed about 2.5 hours after the start of the previous feed.

Express your milk (colostrum)

If you're breastfeeding and your baby struggles to feed, try to give some expressed breast milk.

A member of staff will show you how to hand express your milk, or search online and watch the UNICEF hand expression video.

If possible, it's good to have a small amount of expressed milk saved in case you need it later, so try to express a little extra breast milk in between feeds.

Ask your Midwife how to store your expressed milk or refer to our leaflet 'Expressing your breastmilk - a guide'.

If you are worried about your baby, what should you do?

If your baby seems unwell, this could be a sign that they have low blood glucose. As well as doing blood tests, we'll monitor your baby to check they're well.

Watching your baby as well is important, as you're with them all the time so know your baby best.

Tell staff if you're worried that there's something wrong with your baby. Parents' instincts are often correct.

How can you tell if your baby might be unwell?

Check that your baby is feeding well

In the first few days your baby should feed actively with deep sucks and swallows and leave the breast satisfied at least every 3 hours until the blood glucose is stable. Then at least 8 times in 24 hours.

Ask a member of staff how to tell if your baby is attached and feeding effectively at the breast, or how much formula they need. If your baby becomes less interested in feeding than before, this may be a sign they're unwell so you must inform a member of staff.

Check that your baby is warm enough

Your baby should feel slightly warm to touch although hands and feet can sometimes feel a little cooler. If you use a thermometer to check, the temperature should be between 36.5C and 37.5C inclusive.

Check that your baby is alert and responding to you

When your baby's awake, they'll look at you and pay attention to your voice and gestures. If you try to wake your baby, they should respond to you in some way. Inform a member of staff if your baby's responses concern you.

Check your baby's muscle tone

A sleeping baby is very relaxed but should still have some muscle tone in their body, arms and legs and should respond to touch.

If your baby feels completely floppy with no muscle tone when you lift their arms or legs, or if your baby makes strong repeated jerky movements, this is a sign they may be unwell. It can be normal to make brief, light jerky movements (the startle reflex), but this shouldn't be constant. Ask us if you're not sure about your baby's movements.

Check your baby's lips and tongue colour

Look at the colour of the lips and tongue. They should be pink.

Check that your baby is breathing easily

Babies' breathing can be quite irregular, sometimes pausing for a few seconds and then breathing very fast for a few seconds.

You must get help if you notice that your baby:

- breathes very fast for a continuous period (more than 60 breaths per minute)
- struggles to breathe with very deep chest movement, nostrils flaring or making noises with each breath out

Who should you contact if you are worried?

If any of the conditions noted above give rise to concern you should contact:

- any member of clinical staff if you're in hospital
- your community midwife if you're at home
- NHS 111 out of hours.

Call 999 or take your baby to your nearest paediatric A&E if you're really worried.

Going home with your baby

We recommend that your baby stays in hospital for 24 hours after birth. You can go home if your baby's blood glucose is stable and they're feeding well.

Before you go home, make sure you know how to tell if your baby is getting enough milk. A member of staff will explain the normal pattern of changes in the colour of dirty nappies and the number of wet/dirty nappies.

Make sure your baby feeds well at least 8 times every 24 hours (most babies feed more often than this). Respond to your baby's feeding cues if they want to feed more frequently and/or in clusters.

There's no need to wake your baby to feed every 2 to 3 hours if they've had at least 8 feeds over 24 hours, unless we've recommended this. You can now start to feed your baby responsively. Your midwife will explain this.

As with all newborn babies, you should look for signs that your baby is well and get medical advice if you're worried.

How can you help reduce healthcare associated infections?

Infection prevention and control is important to the wellbeing of our patients so we have procedures in place. Keeping your hands clean is an effective way of preventing the spread of infections.

You, and anyone visiting you, must use the hand sanitiser available at the entrance to every ward before coming in and after you leave. You may need to wash your hands at the sink using soap and water. Hand sanitisers are not suitable for dealing with patients who have symptoms of diarrhoea.

About our patient information

We aim to make the information as up to date and accurate as possible, but please note that it's subject to change. You must always check specific advice on any concerns you may have with your doctor.

Patient information – alternative formats

If you'd like a copy of this information on audiotape, in large print or translated, call the Patient Advice Liaison Service (PALS) on 01296 831120 or email bht.pals@nhs.net

Approvals:

Maternity Guidelines Group: Feb 2019, V2 Jun 2023

SDU: Jul 2018, V2 6.9.23

Clinical Guidelines Subgroup: Oct 2018, V2 Jun 2023

BMV: Dec 2018, V2 May 2023

Equality Impact Assessment: 13.11.18, V2 Jun 2023

Patient Experience Group: Jun 2019, V2 to be sent

Division of Women, Children & Sexual Health Services