

## What can you do for your baby?

It is important that you are a part of your baby's care. Talk to the staff caring for your baby about everything that you can do. The nurses will help you to provide as much care as possible, but just being there is important.

During this difficult time, it is important that you take care of yourself. Make sure that you receive the postnatal care you need so that you are as healthy as possible. Having a baby in intensive or special care can be stressful for families.

**Ask as many questions as you need to.** It is important that you understand your baby's treatment and progress.

## What about the future?

This is one of the most important questions you will have, but it is often one of the hardest questions to answer with certainty. HIE is a complex condition and it can take time to discover your baby's future and possible needs.

Some babies recover fully and have no long-term difficulties while others may develop difficulties that require help and support. This includes problems with learning, thinking, speaking (cognitive problems) and problems with walking and movement (sometimes called cerebral palsy).

The staff looking after your baby will gradually be able to put together the results from the different investigations your baby has undergone to give a better understanding of what the future may hold. It is likely that you will be offered a follow-up appointment after you have gone home with your baby to assess your baby's development and to provide the necessary help and support required.

## Further Information

You can also find further information and help from the organisations listed below.

BLISS – [www.bliss.org.uk](http://www.bliss.org.uk)

Birth Trauma Association –  
[www.birthtraumaassociation.org.uk](http://www.birthtraumaassociation.org.uk)

PEEPS – [www.peeps-hie.org](http://www.peeps-hie.org)

CoolTriP



Cooling for Transfer  
Integrated care Pathway



London Neonatal  
Operational Delivery Network

**HYPOXIC  
ISCHAEMIC  
ENCEPHALOPATHY  
(HIE)**

*Parent information Leaflet*



## What is HIE?

Hypoxic-ischaemic encephalopathy (HIE) may be diagnosed when a baby's brain does not receive enough oxygen and/or blood flow around the time of birth. Sometimes this is also referred to as 'asphyxia' or 'birth asphyxia'. HIE affects the brain but low oxygen and/or blood flow can also affect your baby's lungs, liver, heart, bowel and kidneys.

It is not always possible to know what causes HIE, but we do know that lack of oxygen to the baby can lead to brain injury. When diagnosed, HIE is graded as **mild, moderate or severe**. While some babies will recover without any long-term effects (particularly those who had mild HIE), babies with moderate to severe HIE may go on to develop long term disabilities and some babies sadly may not survive.

## Treatment Options

Treatment options vary according to the symptoms your baby may have.

**Mild HIE** - Most babies with mild HIE recover quickly and fully. Doctors will monitor the baby to ensure they do not need any further treatment after the initial lack of oxygen.

**Moderate to severe HIE** - These babies will most likely receive intensive care and receive a treatment known as cooling or therapeutic hypothermia. This is when baby's temperature is lowered to 33.5 degrees Celsius from the usual 37 degrees Celsius. Several medical trials have shown that cooling to 33.5 degrees Celsius can limit the extent of brain injury associated with HIE and improve long-term outcome for some babies.

## Cooling Treatment

If your baby has been identified as needing cooling, the process will be started as soon as possible. If you baby is not already in a regional neonatal intensive care unit, it will be necessary to transfer your baby as ongoing care needs to be provided in a specialist centre. Your baby will be placed on a special cooling mattress or wrapped in a cooling wrap to bring the body temperature down to 33.5 degrees Celsius. Cooling treatment is safe and the team caring for your baby will closely monitor your baby and they will be able to talk to you about possible side effects of cooling treatment.

## Intensive Care

In addition to cooling, some babies would need **intensive care management** as the lack of oxygen around the time of birth can affect all the baby's organs.

Your baby may require help with their **breathing**. Depending on the level of support required, your baby may need a machine to help with providing adequate oxygen and pressure.

Your baby's **blood pressure** will be closely monitored and if low and medications may be required to increase it.

**Seizures (fits)** can often occur in babies with HIE. This may be detected from observing the baby or by monitoring of the baby's brain activity using a machine called the 'cerebral function monitor' (CFM) which can detect seizures. Seizures may be treated with medication. Seizures associated with HIE will usually settle after 3-4 days, however, your baby may remain on medications for some time after.

**Pain killers and sedation** may also be given to ensure your baby is not in any distress. Close monitoring of your baby, including regular blood tests, will ensure that the best treatment is provided for your baby.