



NEWBORN EMERGENCY TRANSPORT SERVICE: INFORMATION FOR PARENTS

Hypoxic Ischaemic Encephalopathy
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Newborn Emergency Transport Service Medical Guidelines
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Perth Western Australia
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HYPOXIC ISCHAEMIC ENCEPHALOPATHY (HIE)

What is HIE?

HIE is a condition which occurs when a baby has not had enough oxygen to the brain and other organs before or around the time of birth.

Which babies get HIE?

Babies can get HIE for a number of reasons. The fetus can become distressed if there is a problem with the placenta or the umbilical cord, if the mother has a large haemorrhage before or during labour, or if there is difficulty in delivering your baby. This may cause an interruption in the blood flow to your baby. It can also be caused by infection. Sometimes we are not able to find out the reason for HIE.

How do we treat HIE?

HIE can be a difficult condition to treat, and babies can be very sick. We provide support to the baby, and try to protect the brain from further injury.

Supporting the baby may include helping them to breathe with a breathing tube and ventilator machine, giving intravenous fluids to provide nutrition, and medications to support the different organs of the body.

We help to protect the brain from further injury by cooling your baby, usually to 33-34°C. This cooling process is usually done for 72 hours, and then the baby is warmed up to normal temperature over a 12 hour period. Your baby may feel cool to touch, may be a bit irritable and may appear as if they are shivering; this is a normal response to cooling. You will not be able to cuddle your baby during this time. We believe the long-term benefits of cooling outweigh these drawbacks.

How long will my baby be sick?

This is difficult to predict, and depends on how sick your baby is. Your baby is likely to be in hospital for at least 1 week, but some babies may stay in hospital for several weeks.

Are there any complications?

Any organ of the body can be affected by HIE, such as the kidneys, liver, heart and lungs. Most of these organs repair over time, and most babies have recovery of these organs. Some babies develop seizures (which may only happen in the first few days, or may continue for longer than this). The medications used to initially treat seizures can make babies sleepy; sometimes if they are too sleepy, we might need to place them on a breathing machine (ventilator) for a short while until the effect of the medicine wears off.

Are there any long-term problems?

Many babies with HIE have good outcomes, and may only have mild (or no) difficulties with their development. Some babies, however, may be at risk of more significant long-term problems. We will talk to you about your baby before you go home, and will usually do an MRI scan of your baby's brain, as well as an EEG. Development can be difficult to predict, and the main test of how your baby will be affected is close monitoring over time. Your baby will have regular appointments with a paediatrician so we can monitor their growth and development. If we are worried that your baby may have long term problems, we will make sure that the appropriate support is available to help them achieve their full potential.

This information is intended as a guide only. If you have any concerns, please feel free to discuss with the NETS doctor retrieving your baby.