

Treatment of babies who have perinatal asphyxia (lack of oxygen before birth).

We know that your baby has been very unwell. Your doctor will already have spoken to you about what has happened to your baby and discussed the treatment needed.

You have been given this leaflet because your baby has been born with perinatal asphyxia and is being offered cooling treatment, and this information will help you to understand more about what this means.



What is perinatal asphyxia?

We do not always know what causes perinatal asphyxia but we do know that lack of oxygen to the baby's brain can lead to brain injury. This injury may be severe and some babies will not survive. If a baby with perinatal asphyxia does survive, there is a chance that the baby will be disabled. Disability can be severe or it can be very mild but some degree of disability occurs in about half of all babies born with perinatal asphyxia.

The only standard treatment we have for perinatal asphyxia is intensive care treatment. There are no specific

treatments that definitely help this condition. However, researchers continually try to find ways to improve the health of babies such as yours.

There has been much research over recent years into the use of cooling as a possible treatment that could limit the amount of brain injury caused by perinatal asphyxia.



What is cooling?

Cooling means that a baby is cooled from the normal body temperature of 37°C (98.6°F) down to a temperature of 33.5°C (92.3°F). The baby is kept cool for about three days (72 hours). Cooling is started as early as possible after birth, and after 72 hours of cooling the baby's temperature is slowly returned to normal.



How might cooling help?

There have been several studies that have looked at the effect of cooling after brain injury. These include studies in animals, studies in adults and some studies in babies born with perinatal asphyxia. The recent reported studies of newborn babies with perinatal asphyxia have suggested that cooling may help them, but further studies need to be completed before we can be sure that cooling is more helpful than intensive care alone. There may also

be side effects from cooling that we do not yet know about. Therefore it is still not clear whether cooling will improve longer term outcomes for babies born with perinatal asphyxia.

One of the largest of these studies of newborn babies with perinatal asphyxia is called the TOBY Study, carried out by researchers based at Imperial College London and the University of Oxford. The research was funded by the Medical Research Council. 325 babies are being studied, but the full results will not be known until the end of 2008. This is because information must be collected at 18 months of age from all surviving babies so that the longer-term effects of cooling can be analysed. The last babies were recruited to the TOBY Study in November 2006.



How will my baby be treated with cooling?

Your baby will receive the standard intensive care and in addition your baby will be cooled. This means that your baby will be nursed on a special cooling mattress that cools their whole body to the desired temperature. The mattress is filled with fluid that can be cooled or warmed. You will still be able to touch your baby just as you would if they were not on a cooling mattress.

Another way of cooling babies is to use a cooling cap, which is placed on the baby's head, but this is less common.

We will aim to cool your baby for three days (72 hours). After this time the cooling will be stopped and your baby's temperature will slowly return to normal. The mattress can be used to help re-warm your baby.

Your baby's temperature will be measured closely to make sure that this stays at around 33.5°C (92.3°F). It is important to know exactly what your baby's temperature is during cooling and re-warming, and we usually do this by measuring the temperature from a small probe placed in the baby's bottom (which measures rectal temperature).

What are the possible side effects of cooling?

From studies which have been performed in animals or adults and from the existing studies of newborn babies we know that cooling may lead to problems with blood pressure control, abnormal heart rhythm, bleeding and clotting problems, and chemical and sugar imbalances in the blood.

The doctors and nurses looking after your baby are aware of this and your baby will be closely monitored for signs of these unusual complications.

Your baby's doctors can decide to stop the cooling early if they consider this to be best for your baby.

What happens now?

Thank you for reading this information leaflet. If you wish to discuss anything about the treatment your baby is receiving please speak to the doctor and nurse in the neonatal unit.

Local contact details:

Some information about

Cooling
treatment
for babies with
perinatal
asphyxia