BRIGHAM HEALTH
BRIGHAM AND WOMEN'S HOSPITAL

Hypothermia Treatment (Whole Body Cooling) for Neonatal Encephalopathy: Information for Parents

Whole Body Cooling Highlights

- For babies born at 34 weeks or older
- Body temperature is cooled to 33.5 C or 92.3 F by a cold blanket
- Lasts 72 hours with the rewarming process adding an additional 12-15 hours
- Helps to lessen or prevent brain injury
- An MRI is done at the end of therapy

Terminology

Hypoxic = not enough oxygen
Ischemic = not enough blood flow
Encephalopathy = signs of brain insult

Why is my baby receiving this treatment?

Your baby might have Neonatal encephalopathy (NE). NE can happen at any time – before birth, during birth or after birth. NE can be caused when there is less than normal amounts of oxygen or blood flow to the brain. How long the brain was without oxygen or blood can impact how serious the brain injury will be. This condition can also be called Hypoxic Ischemic Encephalopathy (HIE). As a result of NE, your baby might be irritable, sleepy, have reduced response to stimulation and sometimes loss of consciousness and breathing problems. One way to prevent or reduce brain damage is to cool your baby for up to 72 hours.

What are the benefits of therapeutic hypothermia?

For babies with NE, research has shown that if the brain is cooled just a few degrees below normal body temperature soon after birth, it will slow down brain activity, and reduce the chance of brain damage.

How is hypothermia treatment provided?

Your baby will lie on a special cooling blanket that has water running through it. The water temperature will be automatically adjusted to warm or cool the body. We begin treatment within 6 hours of your baby being born and cool your baby for 3 days (72 hours). While caring for your baby, we will monitor your baby's heart rate, breathing patterns and temperature. We will also be checking your baby's brain activity with monitors. Your baby will be getting nutrition through intravenous (IV) therapy and if available, a small amount of mother's milk. Your baby will receive small doses of medicine to keep him/her comfortable during the treatment. Once the therapy is completed, your baby will be slowly rewarmed to normal body temperature. This rewarming takes up to 15 hours. Soon after your baby will be evaluated for safe feeding by mouth. Breastfeeding moms can pump and store milk until your baby is ready to transition receiving increased amounts of mother's milk safely.

Does the cooling blanket affect other parts of my baby's body?

It is normal for your baby to have a slower heart rate and breathing rate during the cooling treatment. It is also normal for your baby to be quiet and sleepy. It is important that your baby rests.

Are there any risks associated with therapeutic hypothermia?

There have been several studies looking at the risks of whole body cooling. No major risks have been found, there are few rare side effects and benefits far outweigh the risks. We will be watching how your baby responds and adapt to cooling, we will monitor her/his vital signs and laboratory values closely during treatment.

How can you help your baby during this time?

You are welcome to be with your baby during this time and you may be able to hold your baby in the cooling blanket. Very often your baby will need to rest and might be sensitive to touch and or noise. Your baby's nurse will help you participate in your baby's care and will give you advice on when gently touch, sing and talk to your baby.

We realize this is a difficult time for you and your family. Your baby is being cared for by a large team of doctors, nurses, respiratory therapists, social workers, and family support personnel. Any member of your baby's team will be happy to answer your questions and concerns.