

Therapeutic Hypothermia for Cerebral Protection

Information Sheet

Why does my child need cerebral protection?

Your baby has a serious illness called neonatal encephalopathy. This means that his/her brain has become critically sick, which results in loss of normal movement, reduced response to normal stimulation and perhaps even loss of consciousness and the ability to breathe. With routine neonatal intensive care, a mechanical ventilator can support your baby's respirations and perhaps ensure his/her survival. Cerebral protection through the use of therapeutic hypothermia is needed to help prevent neurological damage.

What is therapeutic hypothermia?

Two recent medical studies demonstrated fewer deaths or neurological disabilities occurring in encephalopathic children whose brains were cooled to about 92°F (normal body temperature is 98.6°F). Children's offers this therapeutic hypothermia, or whole-body cooling, where neonates are placed on a water-filled cooling mattress to reduce body temperature to 92°F for 3 days (72 hours). This time period is long enough to interrupt injury. After the three days, the baby recovers to its normal body temperature and is observed in the NICU. This cooling program meets the National Institute of Health's Neonatal Network protocol, which demonstrates a reduction in death or serious disability from about two-thirds to about one-half of infants who develop serious neonatal encephalopathy within 6 hours of birth.

What happens after the therapeutic hypothermia process is finished?

Children's program provides continuous monitoring of electrical brain activity (EEG) to help assess your baby's need for medication (particularly sedatives to prevent seizures) and assess the brain's health during recovery. After recovery and discharge from the hospital, Children's offers developmental follow-up evaluations by our pediatric/neonatal neurologist and developmental psychologist, who is closely attuned to each baby's needs and eventually school performance.

How is Children's equipped for this process?

Children's Neonatal Protection Multi-disciplinary Team is led by Billie Short, MD, division chief, Neonatology; Stephen Baumgart, MD, Neonatology; and Taeun Chang, MD, Neonatal Neurology. The rest of the team includes neonatologists, neonatal and neurointensive neurologists, pediatric neurosurgeons and pediatric neuroradiologists, who are all specialized in this procedure.

How can I learn more about this program?

Your baby's doctor will describe our cooling program to you in more detail and answer any questions about this new therapy, its potential benefit and possible risks or unknowns. Children's Neonatal Protection team is available to answer any of your questions at 202-476-5040.

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