

Cooling Therapy for Your Baby

For parents of NICU babies

What is cooling therapy?

Cooling therapy (*therapeutic hypothermia*) is done to lower a baby's body temperature. This therapy helps protect a baby's brain after periods when less oxygen was able to reach the brain.

A lack of oxygen around the time of and during birth can cause brain injury in a newborn baby. This brain injury can cause death or permanent disability.



A baby receiving cooling therapy.

Once brain injury occurs, it cannot be treated or reversed. But, cooling the brain right after the lack of oxygen occurs may slow down the processes that are underway. This means it may limit the extent of the brain damage. Studies show that cooling is helpful in long-term outcomes in most babies who survive the lack of oxygen.

Cooling may seem like an unusual therapy, but it is well studied, in both babies and adults. This type of therapy is used often in neonatal intensive care units (NICUs) across the U. S. and around the world.

How is cooling therapy done?

Cooling therapy uses a special cooling blanket to lower your baby's temperature from the normal body temperature of 98.6°F to 92.3°F (from 37°C to 33.5°C). Cooling begins as soon as possible after birth and will continue for about 3 days. A probe in your baby's rectum will provide an ongoing reading of body temperature.

We will use *amplitude-integrated electroencephalography* (aEEG) to monitor your baby's brain activity during this therapy. This monitoring allows us to watch closely how your baby's brain responds during the cooling process. Your baby will have electrodes on their head for this monitoring.



An aEEG monitor showing brain activity

Your baby's care team will check both the temperature probe and the brain activity shown on the aEEG often during cooling therapy.

After the cooling period, your baby will be slowly warmed until their body temperature has returned to normal.

What are the risks?

All therapy involves some risk. Your nurses and doctors will monitor your baby closely and will treat any changes in:

- Heart rate, blood pressure, and overall blood flow
- Skin appearance
- Movement and activity, which might mean your baby is having pain or discomfort
- Blood sugar levels
- Breathing
- Shivering, a normal and expected effect of cooling that may be treated with medicine

During the Therapy

Cooling therapy uses a lot of equipment and monitors. It may be very stressful to see your baby hooked up to all the equipment. We want to help you as much as we can during this time, so please ask questions if there is something you don't understand.

Each parent copes with stress differently – some want to know every detail about what is going on, while others only want the overall picture. If you want, we can explain in detail the equipment and treatment your baby will receive during cooling therapy, as well as tell you about what we are seeing in your baby during the therapy.

Cooling therapy takes about 3 days. You will not be able to hold your baby during this time. But, we can help you to touch and be near your baby as much as you would like. When you are ready, please ask your nurse about touching your baby.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

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