

Cooling your baby to protect his or her brain

Periods of lack of oxygen before and around the time of birth can injure a baby's brain. One way to try to reduce injury is to cool the baby (decrease the baby's temperature) for several days.

"Total body cooling" is a treatment we provide in the Neonatal Intensive Care Unit (NICU). Your doctor feels it will help your baby. Reading this information can help you understand how and why we would use this treatment for your baby.

What is total body cooling?

Total body cooling lowers your baby's body temperature (from 37°C to 33–34°C). This is done using a special cooling blanket that surrounds your baby. This may also be done by turning off the heat provided in the incubator or overhead warmer and if needed, placing cool packs around your baby. Your baby's body temperature will be cooled for 72 hours.

During this time, you can touch and hold your baby's hand. You cannot hold your baby in your arms or have skin-to-skin contact as this would warm your baby. Your baby will feel cool and may look slightly blue. This is a normal response to cooling.

After 72 hours, we will slowly bring your baby's temperature back to normal.

What are the benefits?

Research has shown that cooling may reduce further injury to the brain caused by periods of lack of oxygen. Cooling gives babies a greater chance of surviving without serious disability.

This treatment has been studied for several years. It is now used in many centres for neonatal care, including the NICU at McMaster Children's Hospital.

Are there any side effects?

We know that most babies tolerate cooling well. Cooling does cause the heart rate to slow down. It may lower the number of platelets, the cells in the blood that help with clotting and may also raise the level of acid in the blood. However, these effects do not usually need any extra treatment.

We currently do not know if cooling has effects later in a baby's life.

If your baby has this treatment, the health care team will monitor your baby's temperature closely. Your baby may be on a special monitor (CFM) that helps monitor your baby's brain. If there are any signs that cooling is not helping or may harm your baby, the doctor will stop the cooling.

**If you have any questions about cooling or your baby,
please speak with a member of your care team.**