

Cooling therapy helps babies bounce back

BY PATRICIA ANSTETT

FREE PRESS MEDICAL WRITER

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Cooling a newborn for three days on a temperature-controlled blanket can help to prevent or reduce brain damage caused by lack of oxygen during difficult births, a national study, headquartered in Detroit, has found.

The research, published in today's New England Journal of Medicine, provides hope for babies deprived of oxygen in the first six hours of life.

Newborns with that complication, which occurs in fewer than one in 1,000 U.S. births, die more often or face significant mental and physical disabilities, including cerebral palsy, mental retardation, blindness and hearing loss. Between 60,000 and 80,000 of the 4 million babies born in the United States each year are at high risk of death or disability because of birth problems that deprive them of oxygen.

The therapy uses a blanket with an electronically controlled cooling system that reduces a baby's body temperature to 92.8 degrees for 72 hours.

Most hospitals do not have the equipment. Continuing studies will determine how and when to best administer the treatment. For now, it only is available at hospitals that participate in the National Institute of Child Health and Human Development's Neonatal Research Network. Children's Hospital of Michigan in Detroit is the only hospital in the state offering the newborn therapy.

The study, headquartered at Children's Hospital, followed 208 babies, who had difficult births, at 15 U.S. centers for 18 months.

Some 102 babies got the cooling technique, a device from Cincinnati Sub Zero Medical. The other 106 babies were closely monitored without the treatment.

Forty-four of the babies who were cooled died or developed disabilities, compared with 64 of those who died or developed complications in the comparison group, said Dr. Seetha Shankaran, professor of pediatrics at the Wayne State University School of Medicine and division director of neonatal-perinatal medicine at Children's Hospital.

The study makes "an enormous contribution to the field of newborn medicine," said Dr. Rose Higgins, program officer for the network.

Cooling is believed to reduce a succession of abnormal events in the brain that occur after oxygen deprivation, Shankaran said. It reduces toxins that make the brain swell, causing death and disability.

Doctors still need to better understand why the therapy works and how it is best administered. One earlier study using a cooling cap device with newborns didn't show as much benefit, though the therapy used slightly warmer temperatures and had different criteria to choose babies for their study, Shankaran said.

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Parents of a Rochester Hills child saved by the treatment praised the study Wednesday.

"We were very grateful to be part of it," said Antoine Poussier, father of 3-year-old Jacques. The child was born Dec. 8, 2001, at Crittendon Hospital in Rochester Hills with his umbilical cord wrapped twice around his head, cutting off his oxygen supply. He was transferred to Children's Hospital, where the parents learned of the study. A doctor told Poussier: "Your wife is OK. Your son is not," he recalled. "This is his best opportunity," the doctor said.

"We didn't know if it would be two weeks or two months" or longer until they found out if their son was OK, Alexandra Poussier said Wednesday.

Jacques was cooled for three days and stayed at Children's Hospital for two weeks. He now has no health problems and is active in gymnastics and soccer.

Contact **PATRICIA ANSTETT** at 313-222-5021 or anstett@freepress.com.

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