

Common treatment for brain injury not effective for some newborns

April 28 2023



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Therapeutic hypothermia, the only evidence-based treatment for newborns born with neonatal encephalopathy (NE) at or after 36 weeks, is not effective for reducing death or moderate/severe disability in

newborns born between 33 and 35 weeks, according to a new study. The research will be presented at the [Pediatric Academic Societies \(PAS\) 2023 Meeting](#), held April 27-May 1 in Washington, D.C.

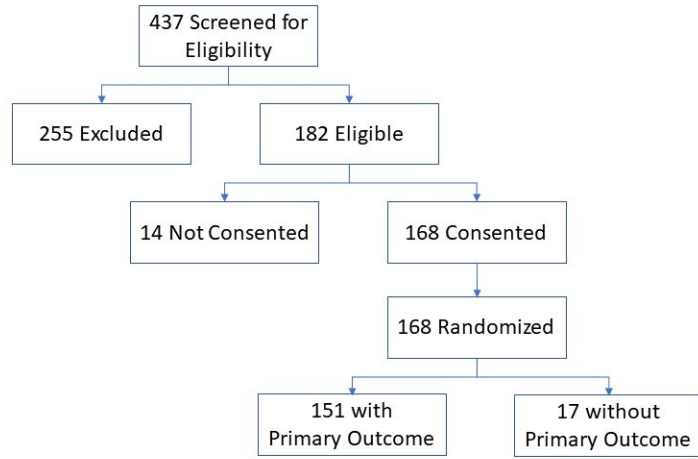
Researchers examined the effectiveness of whole-body therapeutic [hypothermia](#)—a commonly used treatment to lower [newborns'](#) body temperature and protect against the effects of moderate or severe NE—in younger newborns. NE is a brain condition experienced at or near birth, often caused by reduced oxygen to the brain. While evidence supports the use of therapeutic hypothermia for newborns born at 36 weeks or later, many clinicians use the treatment for infants at 35 weeks' gestation or less.

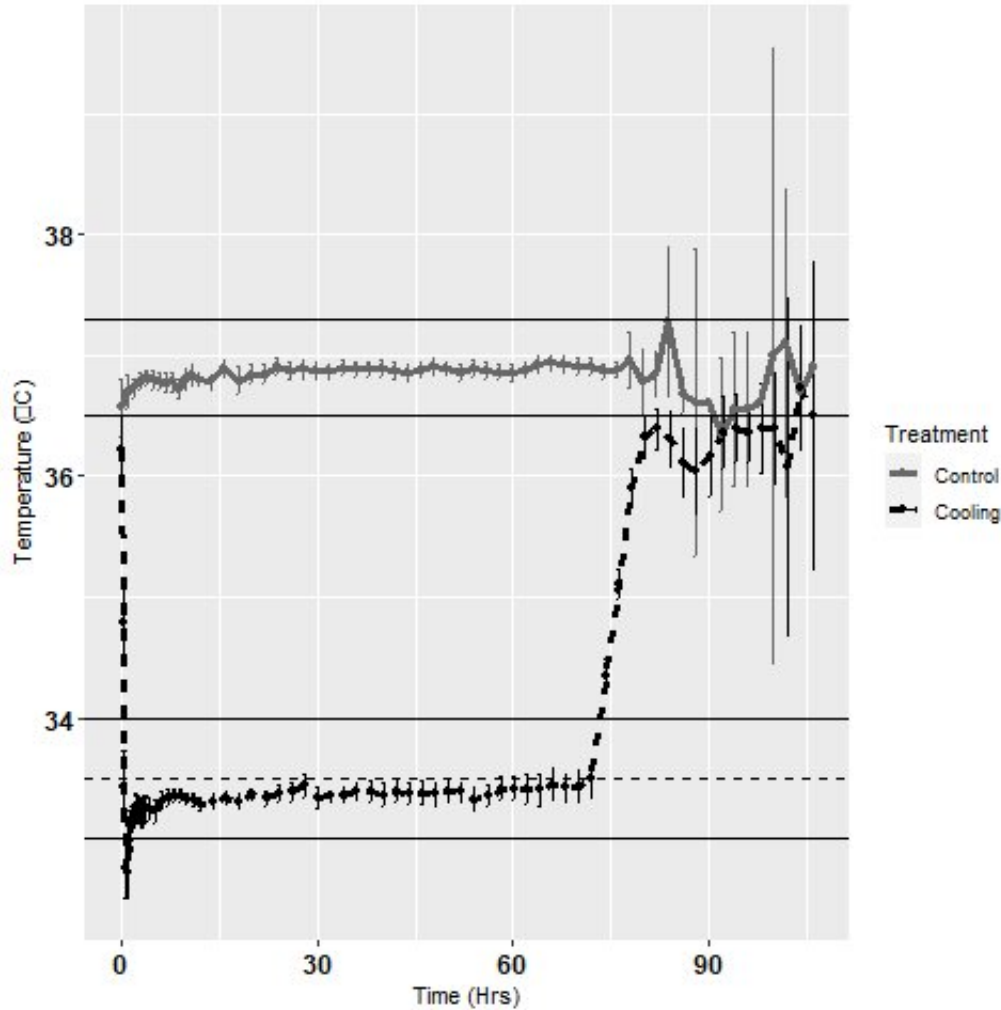
The trial enrolled 168 newborns born between 33-36 weeks who had NE. Half of these newborns received therapeutic hypothermia, while the other half maintained a normal temperature for 72 hours. Trial participants received a brain MRI at seven to 21 days and neuro-developmental testing with hearing and vision assessment at 18-22 months.

Researchers found a 77% probability of increased [death](#) compared to newborns for whom researchers maintained a normal temperature. The researchers found no evidence that therapeutic hypothermia reduced the combined outcome of death or moderate/severe disability among trial participants. Outcomes were assessed at 18-22 months old.

Reasons for exclusion	
Reason	Count
Did not meet inclusion criteria	135
Clinical cooling initiated by physician	47
Etiology of NE unlikely to be hypoxic-ischemic	21
Did not meet inclusion criteria & etiology of NE unlikely to be hypoxic-ischemic	4
Did not meet inclusion criteria & clinical cooling initiated by physician	2
Other	46

Reasons for no Primary Outcome	
Reason	Count
Lost to Follow-up	10
Seen, but incomplete visit (No Bayley III)	4
Consent withdrawn no additional data	2
Follow-up visit not yet completed	1





"Despite no evidence supporting its use in younger newborns, clinicians continue to use therapeutic hypothermia in newborns younger than 36 weeks," said Roger G. Faix, M.D., professor of pediatrics/neonatology at the University of Utah and presenting author. "These study findings are clear: [therapeutic hypothermia](#) is ineffective in more premature newborns."

The trial, which was funded by the Eunice Kennedy Shriver National

Institute of Child Health and Human Development of the National Institutes of Health, was conducted in 16 Neonatal Research Network NICUs between 2015 and 2020.

Provided by American Pediatric Society

Citation: Common treatment for brain injury not effective for some newborns (2023, April 28) retrieved 23 June 2024 from <https://medicalxpress.com/news/2023-04-common-treatment-brain-injury-effective.html>

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