

Cooling may benefit children after cardiac arrest

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When the heart is stopped and restarted, the patient's life may be saved but the brain is often permanently damaged. Therapeutic hypothermia, a treatment in which the patient's body temperature is lowered and maintained several degrees below normal for a period of time, has been shown to mitigate these harmful effects and improve survival in adults.

Now, in the first large-scale multicenter study of its kind, physician-scientists are evaluating the effectiveness of the technique in infants and [children](#). Offered in the greater New York metropolitan area solely by Columbia University Medical Center researchers at NewYork-Presbyterian/Morgan Stanley Children's Hospital, the Therapeutic Hypothermia After Pediatric Cardiac Arrest (THAPCA) trial is funded by the National Heart, Lung and Blood Institute, part of the National Institutes of Health.

"A tragedy no matter how it happens, cardiac arrest can occur in children either as a complication from a serious medical condition or due to an accident or sudden illness. While arrest in children is rare, currently no other therapies have been shown to improve their chances of recovering," says Dr. Charles Schleien, a pediatrician and anesthesiologist at NewYork-Presbyterian/Morgan Stanley Children's Hospital and executive vice chairman of pediatrics and professor of pediatrics and anesthesiology at Columbia University College of Physicians and Surgeons. "In this study we are aiming to see whether therapeutic hypothermia can give these children a better chance at survival and long-term quality of life."

According to a 2008 review of pediatric cardiopulmonary resuscitation in the [journal Pediatrics](#), about 16,000 children suffer [cardiac arrest](#) each year in the United States.

Study participants will be randomly selected to either have their body cooled through [therapeutic hypothermia](#) or maintained at normal body temperature. In both groups, body heat will be adjusted using special temperature-control blankets. Those receiving hypothermia will have their body temperature reduced to between 89.6° and 93.2° Fahrenheit for two days, then slowly increased to a normal body temperature and maintained for another three days.

Co-led by Dr. Frank W. Moler at the University of Michigan C.S. Mott Children's Hospital and Dr. Michael Dean at the University of Utah, the six-year study involves a total of 34 study sites in North America.

Provided by New York- Presbyterian Hospital

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