

Are childhood stroke outcomes associated with BP, blood glucose, temperature?

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Infarct (tissue damage) volume and hyperglycemia (high blood glucose) were associated with poor neurological outcomes after childhood stroke but hypertension and fever were not, according to an article published online by *JAMA Neurology*.

After pediatric patients experience an arterial ischemic [stroke](#), there are no evidence-based guidelines available for the best management of blood pressure, blood glucose levels and temperature.

Lori C. Jordan, M.D., Ph.D., of the Vanderbilt University Medical Center, Nashville, and coauthors looked at the prevalence of abnormal blood pressure, blood glucose levels and temperature measures with neurological outcomes.

They conducted a review of children (median age of 6 years) who had their first arterial ischemic stroke between 2009 and 2013. The study included 98 children and blood pressure, [blood glucose](#) and temperature data collected for five days after stroke. Hypertension was present in 64 children, hypotension in 67 patients, hyperglycemia in 17 and fever in 37.

The authors note the strongest association with poor neurological outcome was an infarct size of 4 percent or greater of brain volume damage. Hyperglycemia also was associated, according to the results. However, hypertension and fever did not have a significant association with infarct size, poor outcome or death.

Study limitations include [blood pressure](#) measurement technique.

"Future prospective studies are needed to clarify the associations between these potentially modifiable physiological parameters and pediatric stroke outcomes," the authors conclude.

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