

# Intense IV blood sugar control doesn't improve stroke outcomes

February 7 2019

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Intravenous (IV) insulin did not improve stroke outcomes compared to standard blood sugar (glucose) control using insulin shots—answering a worldwide debate about the best way to control glucose in stroke patients. These primary late-breaking findings were presented at the American Stroke Association's International Stroke Conference 2019.

Hyperglycemia, or increased glucose, is common in patients with acute ischemic stroke and is associated with poor recovery. There is a worldwide debate about the best way to control [glucose levels](#) in these patients.

The Stroke Hyperglycemia Insulin Network Effort (SHINE) study assessed the efficacy and safety of up to 72 hours of glucose control using continuous intravenous insulin infusion versus standard subcutaneous insulin injections in a multicenter, randomized, controlled trial of 1,151 patients enrolled at 63 sites across the United States.

Primary findings showed:

- Intense glucose therapy via IV insulin, which lowers glucose to a target of 80-130 milligrams per deciliter (mg/dL), does not improve functional outcomes at 90 days compared to standard glucose control using insulin shots, which aims to lower glucose below 180 mg/dL.
- In addition, intense glucose therapy increases the risk of very low blood glucose (hypoglycemia) and requires more resources such

as increased supervision from nursing staff.

"This study provides [clear evidence](#) to guide the control of glucose levels in patients experiencing [acute ischemic stroke](#) and hyperglycemia, or increased [glucose](#)," said Karen C. Johnston, M.D., M.Sc., professor of neurology and associate vice president for Clinical & Translational Research at the University of Virginia in Charlottesville.

Co-authors and disclosures are noted on the abstract.

The National Institute of Neurological Disorders and Stroke (NINDS) funded the study.

Provided by American Heart Association

Citation: Intense IV blood sugar control doesn't improve stroke outcomes (2019, February 7) retrieved 26 April 2024 from <https://medicalxpress.com/news/2019-02-intense-iv-blood-sugar-doesnt.html>

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