

Intensive blood pressure lowering safe for clot-buster-treated stroke patients, but doesn't lessen disability

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Intensive blood pressure lowering safely reduced the risk of bleeding in the brain in ischemic stroke patients being treated with clot-busting drugs, but did not improve post-stroke recovery, according to late breaking science presented at the American Stroke Association's International Stroke Conference 2019, a world premier meeting for researchers and clinicians dedicated to the science and treatment of cerebrovascular disease.

The large international clinical trial, Enhanced Control of Hypertension and Thrombolysis Stroke (ENCHANTED) study will be simultaneously published in *The Lancet*.

Bleeding in the brain can be a major side effect of clot-busting stroke treatment. While more intensive blood pressure lowering has been suggested to decrease bleeding risk, there have been longstanding concerns that this additional treatment could worsen the stroke damage in the brain, according to co-lead investigator Craig Anderson, M.D., Ph.D., professor of Neurology and Epidemiology at the University of New South Wales in Sydney, Australia and executive director of The George Institute in China.

Researchers investigated whether intensive lowering of systolic blood pressure (the top number in a [blood pressure reading](#)) to less than 140 millimeters of mercury (mm Hg) could lessen post-[stroke](#) disability and

could safely reduce the risk of bleeding in the brain better than lowering [systolic blood pressure](#) to the standard recommended target of less than 180 mm Hg over three days.

More than 2,000 [patients](#) (average age 67, 38 percent women) from 110 hospitals in 15 countries were treated between 2013 and 2018.

Researchers found:

- * The level of disability at 90 days did not differ between patients receiving intensive or standard blood pressure management.

- * Significantly fewer patients had bleeding within the brain after intensive compared to standard blood pressure management.

- * Large and serious bleeding in the brain were lower with intensive blood pressure lowering.

- * No harm was identified for intensive blood pressure management.

Researcher said the results were influenced by the difference in blood pressure management between the patient groups being less than planned, with many patients in the standard treatment group receiving more blood pressure management lowering than typically used in clinical practice.

"This study clearly shows intensive blood pressure lowering has the potential to make thrombolysis treatment safer, by reducing the risk of serious bleeding in the brain," Anderson said.

More research is required to better understand why the reduced risk of bleeding in the brain did not translate into improved overall outcome for patients.

"These findings also highlight the need for more research to better understand the underlying mechanisms of benefit and harm of early intensive blood pressure lowering in the patients receiving modern reperfusion therapy with thrombolysis and devices, given that the reduction in [brain](#) hemorrhage failed to translate into improvements in overall recovery for patients," added Professor Tom Robinson, co-lead investigator and head of the Cardiovascular Research Centre at the University of Leicester, United Kingdom.

Provided by American Heart Association

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