

# Consistent blood pressure control may cut rate of second stroke in half

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Stroke survivors who consistently control their blood pressure may reduce the likelihood of a second stroke by more than half, according to new research in the American Heart Association journal *Stroke*.

For the study, researchers analyzed the results from the Vitamin Intervention for Stroke Prevention (VISP) trial, which enrolled 3,680 ischemic stroke patients ages 35 and older in 1996-2003. Ischemic strokes are caused by a clot or other blockage in a blood vessel supplying the brain. Participants had been tested for several [risk factors](#), including [blood pressure levels](#) at baseline, a month after the start of the study, at six months and every six months thereafter up to 24 months.

Researchers determined results after controlling for age, sex and prior history of stroke, heart disease and other factors. Blood pressure was considered "controlled" at 140 mmHg over 90 mmHg or lower.

## Researchers found:

- Fewer than 30 percent of [stroke survivors](#) studied maintained consistent blood pressure control more than 75 percent of the time.
- Among individuals with elevated blood pressure at baseline ([systolic blood pressure](#) over 153 mm Hg), second stroke rate was reduced by 54 percent among participants who kept their blood pressure under control more than 75 percent of the time,

compared with those who kept it under control less than 25 percent of the time.

"It's not enough to control blood pressure some of the time. Averages do not take into account variability in [blood pressure readings](#) from one check to the next," said Amytis Towfighi, M.D., study lead author and assistant professor of neurology at the Keck School of Medicine at the University of Southern California in Los Angeles, Calif. "Fluctuations in blood pressure may be associated with greater cardiovascular risk."

Changes in care management may be needed to ensure patients maintain consistent control of blood pressure. Rather than check blood pressure during clinic visits only, it should be done regularly, perhaps at home by machines that can remotely transmit the data, she said.

"One of the things we really emphasize is getting patients involved in their own care, and learning how to control their risk factors," said Towfighi, who is also associate chief medical officer at Rancho Los Amigos National Rehabilitation Center in Downey, Calif.

Reducing salt intake, eating a healthy diet (rich in whole grains, fruits and vegetables) and exercising regularly can also reduce stroke risk.

With the low percentage of trial participants controlling their blood pressure from one check to the next, "you can only imagine how poor [blood pressure control](#) is outside of the clinical trial setting," Towfighi said.

In the study, participants with a history of heart attacks were most likely to keep their blood pressure under control most of the time, possibly suggesting patients and healthcare practitioners are more aware of controlling [blood pressure](#) after heart attack but less diligent after stroke.

Provided by American Heart Association

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