

Intensive blood pressure control has potential to reduce risk of atrial fibrillation

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Intensive blood pressure control may reduce the risk of atrial fibrillation (AFib), an irregular heartbeat that can lead to serious complications such as stroke, heart failure and heart attacks, according to scientists at Wake Forest School of Medicine.

In a study published in the May 4 edition of the American Heart Association journal *Hypertension*, the researchers found that lowering a systolic [blood pressure](#) to less than 120 resulted in a 26% lower risk of AFib compared to [systolic blood pressure](#) of less than 140.

"This is the first evidence from a [randomized controlled trial](#) that showed benefit in reducing the risk of atrial fibrillation as a result of aggressive blood pressure control to a target of less than 120 mm Hg," said the study's lead author, Elsayed Z. Soliman, M.D., professor of epidemiology and prevention at Wake Forest School of Medicine, part of Wake Forest Baptist Health.

This analysis, using data from the National Institutes of Health Systolic Blood Pressure

(SPRINT) trial, included 8,022 study participants who were randomized into one of two groups: 4,003 participants in an intensive blood pressure control group (target less than 120 mm Hg) and 4,019 participants in a standard lowering group (target less than 140 mm Hg).

Participants were followed for up to five years. During that time, only 88 AFib cases occurred in the intensive blood pressure lowering group while 118 cases occurred in the standard blood pressure lowering group. Soliman's team showed that the benefit of intensive blood pressure lowering on reducing the risk of AFib was similar in all groups of the participants regardless of sex, race or levels of blood pressure.

"Hypertension is the most common modifiable risk factor for atrial fibrillation," Soliman said. "And now, we have a potential pathway for prevention."

The landmark SPRINT study, which published its main results in 2015, enrolled participants with hypertension who were at increased risk of cardiovascular disease. The trial was designed to answer how aggressive blood pressure control affects cardiovascular health and showed that intensive treatment significantly reduced the rates of death and cardiovascular disease. As a result of the trial, the American Heart Association and American College of Cardiology updated their clinical guidelines for high blood pressure.

Previous SPRINT findings published by Wake Forest Baptist researchers have shown that lowering blood [pressure](#) reduces risk of cognitive impairment and may slow age-related brain damage.

Provided by Wake Forest University Baptist Medical Center

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