

Researchers publish new results from SPRINT trial

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Jackson T. Wright Jr., MD, PhD, of University Hospitals Case Medical Center and Case Western Reserve University School of Medicine. Credit: University Hospitals Case Medical Center

Jackson T. Wright Jr., MD, PhD, and researchers from University Hospitals Case Medical Center presented new results from the Systolic Blood Pressure Intervention Trial (SPRINT) showing that in patients at high risk for cardiovascular events, targeting a systolic blood pressure of less than 120 mm Hg resulted in lower rates of fatal and non-fatal major events or death compared to targeting systolic blood pressure to the usually recommended target of less than 140 mm Hg.

The findings presented today at the American Heart Association (AHA) Scientific Sessions in Orlando and published in the *New England Journal of Medicine (NEJM)* add to the preliminary results from SPRINT announced two months ago. These findings demonstrated intensive management of high blood pressure, below a commonly recommended blood pressure target, significantly reduces rates of cardiovascular disease, and lowers risk of death in a group of adults 50 years and older with [high blood pressure](#).

The SPRINT study, a landmark clinical trial sponsored by the National Institutes of Health, has evaluated the benefits of maintaining a new target for [systolic blood pressure](#), the top number in a [blood pressure reading](#), among a group of patients 50 years and older at increased risk for heart disease or who have kidney disease. University Hospitals Case Medical Center/Case Western Reserve University School of Medicine coordinated one of the five Clinical Center Networks (CCNs) across the country selected to conduct the trial that has recruited more than 9,300 participants.

This blood pressure intervention portion of the trial was stopped 3.26 years into a planned 5-year term as a result of the finding of a 25 percent reduction in the primary cardiovascular outcome and 27 percent reduction of all-cause mortality in those randomized to the lower 120 mm blood pressure target. Specifically, a 38 percent reduction in heart failure and 43 percent reduction in death from heart-related events was found and reported in *NEJM*.

"What is so groundbreaking about the findings from SPRINT is that we are beginning to determine the most appropriate targets for systolic blood pressure to reduce cardiovascular morbidity and death, especially in a diverse population of older patients without diabetes," said Dr. Wright, lead author and co-principal investigator on the SPRINT trial. Dr. Wright is Director of the Clinical Hypertension Program at UH Case Medical Center and Professor of Medicine at Case Western Reserve School of Medicine and first author on the article.

The study reported about 1-2 percent higher rates of adverse events such as hypotension, syncope, electrolyte abnormalities and acute kidney injury/failures in the group of patients treated to the lower systolic blood pressure target. As a continuation of these findings, SPRINT researchers are proceeding to examine how the lower systolic [blood pressure](#) target may impact the incidence of dementia and long-term kidney disease.

In order to achieve the 120 mm target, the findings also noted that an average of one additional medication was required for the lower target with no difference in tolerability even in patients over age 75.

"I cannot predict whether the information presented today will alter the guidelines," said Dr. Wright. "I can however assure that it will certainly create a discussion on the merits of treating hypertensive patients to much [lower blood pressure](#) targets than previously recommended."

Provided by University Hospitals Case Medical Center

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