

# Even frail, older adults could benefit from intensive blood pressure reduction

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Adults with hypertension who are age 75 years and older, including those who are frail and with poor overall health, could benefit from lowering their blood pressure below current medical guidelines. The multi-

institutional investigation was published online in *The Journal of the American Medical Association (JAMA)* and presented at the American Geriatrics Society Annual Scientific Meeting on May 19.

"The reason I'm excited about this is the implications for public health," says study co-author Mark Supiano, M.D., chief of geriatrics at University of Utah Health Care and Director of the VA Salt Lake City Geriatric Research, Education, and Clinical Center. "There are 5.8 million people age 75 and older who could potentially benefit. It's a large number and we need to pay attention to it." The number refers to that of older Americans who meet the same criteria as SPRINT participants, including having high blood pressure, no diabetes, and no history of stroke.

The new findings address questions brought to the fore by a large, randomized clinical trial called SPRINT (Systolic Blood Pressure Intervention Trial) that concluded last year. Using medication to lower [systolic blood pressure](#) to 120 mmHg, less than the currently recommended 140 to 150 mmHg, significantly reduced risk for [heart disease](#) and death. But the question remained whether older patients, who are particularly susceptible to side effects, could tolerate the intensive treatment. Of particular concern was dizziness or fainting that could lead to falls, a leading cause of death and disability in this age group.

Detailed analysis of SPRINT participants age 75 and older now shows that the major benefits of lowering blood pressure carry over to this age group, including the medically fragile. Intensive blood pressure lowering resulted in 33 percent fewer cases of cardiovascular events (3.85 vs. 2.59 percent) and 32 percent fewer deaths (2.63 vs. 1.78 percent). Grouping the study population by frailty status showed that while the most frail patients have higher rates of heart disease and death, these rates were similarly lowered by tighter blood pressure control (3.9 vs. 5.8 percent

for heart disease and 2.95 vs. 4.28 for death).

Further, intensive blood pressure treatment did not significantly increase risk for injurious falls and other serious side effects among the frail group.

Fitness levels of 2636 older SPRINT participants were categorized in two ways. Frailty status was determined by a 37-item index that gauges quality of life measures, including number of chronic conditions and mental acuity. Participants were also categorized by walking speed, with slow gait as an independent indicator of poor health. Results were similar when comparing the least fit groups from both types of measurements.

"This subgroup analysis of the SPRINT trial is significant because many physicians and patients have been concerned about blood pressure being too low in the elderly," says Alfred Cheung, M.D., chief of nephrology & hypertension at University of Utah Health Care, and member of the SPRINT Research Group. "These results are reassuring and could very well change current medical practice by lowering the blood pressure goal even in people over 75 years old." It remains to be determined whether national medical guidelines will change their recommendations.

Despite the fact that nursing home residents were not included in the trial, researchers determined that 31 percent of the study population was considered frail, echoing the proportion found among the general elderly population who live in the community. "I've been asked by geriatricians whether results from the trial applies to the population they treat," says Supiano. "We've shown that, indeed, the study participants were a good representation of patients we see in the clinic."

Overall, intensive blood pressure management was predicted to be more effective among all participants age 75 and older than among those ages 50-74. In the older group tighter blood control over three years is

expected to prevent one incidence of heart disease for every 27 who were given treatment, and one death for every 41 treated. "It's not surprising because older adults are at greater risk so you need to treat fewer numbers to recognize that benefit," says Supiano. Compared to 30 percent of all adults, 75 percent of those age 75 and older have [high blood pressure](#).

Cheung adds that while results so far are impressive, it is not yet clear whether lower [blood pressure](#) affects cognitive functions such as thinking and memory. Studies investigating the longer-term impacts of treatment are being planned.

**More information:** "Intensive vs Standard Blood Pressure Control and Cardiovascular Disease Outcomes in Adults Aged >75 Years A Randomized Clinical Trial" *JAMA*, May 19, 2016.

Provided by University of Utah Health Sciences

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