

Vigorous exercise may preserve cognition in high-risk patients with hypertension

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Richard Kazibwe, M.D., assistant professor of internal medicine at Wake Forest University School of Medicine. Credit: Wake Forest University School of Medicine

People with high blood pressure have a higher risk of cognitive

impairment, including dementia, but a new study from researchers at Wake Forest University School of Medicine suggests that engaging in vigorous physical activity more than once a week can lower that risk.

The findings appear in *Alzheimer's & Dementia*.

"We know that [physical exercise](#) offers many benefits, including lowering blood pressure, improving heart health and potentially delaying [cognitive decline](#)," said Richard Kazibwe, M.D., assistant professor of internal medicine at Wake Forest University School of Medicine and lead author of the study. "However, the amount and the intensity of exercise needed to preserve cognition is unknown."

In 2015, published findings from the landmark Systolic Blood Pressure Intervention Trial (SPRINT) showed that intensive blood pressure management reduced [cardiovascular disease](#) and lowered the risk of death.

SPRINT began in the fall of 2009 and included more than 9,300 participants with hypertension ages 50 and older, recruited from about 100 medical centers and clinical practices throughout the United States. Participants were randomly assigned to a systolic blood pressure goal of either less than 120 mm Hg (intensive treatment) or less than 140 mm Hg (standard treatment). The National Institutes of Health (NIH) stopped the blood pressure intervention earlier than originally planned to quickly disseminate the significant preliminary results, resulting in a new set of guidelines for controlling blood pressure.

In 2019, results of the ancillary SPRINT MIND trial, led by Wake Forest University School of Medicine, showed that intensive control of blood pressure in older people significantly reduced the risk of developing mild cognitive impairment, a precursor of early dementia.

In a secondary analysis of the SPRINT MIND study, Kazibwe and team examined the effect of self-reported sessions of vigorous physical activity (at least once a week) on the risk of mild cognitive impairment and dementia.

People who engaged in one or more sessions of vigorous physical activity per week had lower rates of [mild cognitive impairment](#) and [dementia](#).

Kazibwe said that nearly 60% of study participants reported vigorous physical activity at least once a week, even among those aged 75 and up.

"It is welcome news that a higher number of older adults are engaging in physical exercise. This also suggests that older adults who recognize the importance of exercise may be more inclined to exercise at higher intensity," Kazibwe said.

However, the research team found the protective impact of vigorous exercise was more pronounced for those under 75.

"While this study provides evidence that vigorous exercise may preserve cognitive function in high-risk patients with hypertension, more research is needed to include device-based physical activity measurements and more diverse participant populations," Kazibwe said.

More information: Effect of vigorous-intensity physical activity on incident cognitive impairment in high-risk hypertension, *Alzheimer's & Dementia* (2024). [DOI: 10.1002/alz.13887](https://doi.org/10.1002/alz.13887)

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