

# A healthy heart may help delay or prevent dementia

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New study shows targeting arterial stiffening earlier in a person's lifespan could provide cognitive benefits in older age and may help to delay the onset of dementia.

Researchers at the University of Oxford and University College London investigated 542 [older adults](#) who received two measurements of aortic

stiffness, at 64 years old and 68 years old. Subsequent cognitive tests and brain [magnetic resonance](#) imaging (MRI) scans assessed the size, connections and blood supply of different brain regions.

The body's largest artery (the aorta) gets stiffer with age, and the study found that faster aortic stiffening in mid-life to [older age](#) was linked to markers of poorer brain health, for example:

- Lower brain blood supply
- Reduced structural connectivity between different brain regions
- Worse memory

Medical interventions and changes of lifestyle made earlier in the lifespan could help to slow down arterial stiffening. In an aging society where we expect a near tripling in the number of people living with dementia by 2050, identifying ways to prevent or delay its onset could have significant societal and economic impact.

Dr. Sana Suri, Alzheimer's Society Research Fellow at the Department of Psychiatry, University of Oxford, said, "Our study links heart health with brain health, and gives us insights into the potential of reducing aortic stiffening to help maintain brain health in older ages. Reduced connectivity between different brain regions is an early marker of neurodegenerative diseases such as Alzheimer's disease, and preventing these changes by reducing or slowing down the stiffening of our body's large blood vessels may be one way to maintain [brain](#) health and memory as we grow older."

**More information:** Sana Suri et al. Associations between arterial stiffening and brain structure, perfusion, and cognition in the Whitehall II Imaging Sub-study: A retrospective cohort study, *PLOS Medicine* (2020). [DOI: 10.1371/journal.pmed.1003467](https://doi.org/10.1371/journal.pmed.1003467)

Provided by University of Oxford

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