

Signs of aging may be linked to undetected blocked brain blood vessels

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Many common signs of aging, such as shaking hands, stooped posture and walking slower, may be due to tiny blocked vessels in the brain that can't be detected by current technology.

In a study reported in *Stroke: Journal of the American Heart Association*, researchers from Rush University Medical Center, Chicago, examined brain [autopsies](#) of older people and found:

- Microscopic lesions or infarcts — too small to be detected using brain imaging — were in 30 percent of the brains of people who had no diagnosed brain disease or stroke.
- Those who had the most trouble walking had multiple brain lesions.
- Two-thirds of the people had at least one blood vessel abnormality, suggesting a possible link between the blocked vessels and the familiar signs of aging.

"This is very surprising," said Dr. Aron S. Buchman, lead author of the study and associate professor of neurological sciences at Rush. "The public health implications are significant because we are not identifying the 30 percent who have undiagnosed small vessel disease that is not picked up by current technology. We need additional tools in order to identify this population."

In 1994, the researchers began conducting annual exams of 1,100 older

nuns and priests for signs of aging. The participants also donated their brains for examination after death. This study provides results on the first 418 [brain](#) autopsies (61 percent women, average 88 years old at death).

Although Parkinson's disease occurs in only 5 percent of older people, at least half of people 85 and older have mild symptoms associated with the disease.

Before the study, researchers believed that something more common, such as microscopic blocked vessels, might be causing the physical decline. The study's autopsies found the small lesions could only be seen under a microscope after participants died. The lesions couldn't be detected by current scans.

During the annual exams of the nuns and priests, researchers used the motor skills portion of a Parkinson's disease survey to assess their physical abilities. Researchers observed and rated the participants':

- Balance
- Ability to maintain posture
- Walking speed
- Ability to get in and out of chairs
- Ability to make turns when walking
- Sense of dizziness

"Often the mild motor symptoms are considered an expected part of aging," said Buchman, who is also a member of the Rush Alzheimer's Disease Center. "We should not accept this as normal aging. We should try to fix it and understand it. If there is an underlying cause, we can intervene and perhaps lessen the impact."

Provided by Rush University Medical Center

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