

Higher wealth linked to lower stroke risk from age 50 to 64

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Higher wealth is linked with a lower risk of stroke in Americans between the ages of 50 and 64, but does not predict strokes in those over age 65, researchers reported in *Stroke: Journal of the American Heart Association*.

“We confirmed that lower wealth, education and income are associated with increased stroke up to age 65, and wealth is the strongest predictor of stroke among the factors we looked at,” said Mauricio Avendano, Ph.D., co-author of the study. “After age 65, the association of education, income and wealth with stroke are very weak, and wealth did not clearly predict stroke.”

This is the first study assessing the age patterns of wealth, income and education disparities in stroke incidence in a national sample of older Americans. It’s also the first study reporting that wealth status predicts stroke incidence independently of income and education, said Avendano, a research fellow in public health at the Erasmus Medical Center in Rotterdam, The Netherlands.

New and recurrent strokes strike about 780,000 U.S. residents annually; about 27 percent of strokes occur before age 65, according to American Heart Association statistics.

While previous studies have associated lower socioeconomic status with higher stroke risk, little data exists on the link between socioeconomic status and stroke risk in the elderly. Previous research also relied on

incomplete information about financial resources.

In this study, Avendano and co-author M. Maria Glymour, Sc.D., differentiated between income (the annual earnings of all household members) and wealth (the total of all financial and housing assets - such as inherited money- minus the liabilities).

“Wealth more comprehensively reflects both lifelong earnings and intergenerational transfers, and increases access to medical care and other material and psychosocial resources,” Avendano said.

The researchers analyzed data from 19,445 participants in the ongoing University of Michigan Health and Retirement Study (HRS), which surveys Americans age 50 and older every two years. The participants were stroke-free when they entered the study in 1992, 1993 or 1998. During an average of 8.5 years, 1,542 people in the study suffered a stroke.

Researchers divided all participants’ wealth levels into six categories, and compared them to those in the 75th -89th percentile. The 75-89th percentile group represents those in the highest wealth or income groups but excludes possible outliers among the very rich – or the ultra rich.

Researchers found that the 10 percent with the lowest wealth had three times the stroke risk at age 50 to 64, compared with those in the 75-89th percentile. However, at age 65 and older, stroke risk was not significantly different between the two wealth groups for men or women.

“We expected wealth to be a strong predictor of stroke in the elderly,” Avendano said. “We were surprised to see that it was not associated with stroke beyond age 65.”

The authors noted that many U.S. residents reach age 50 with few financial assets.

“Lack of material resources themselves, and particularly wealth, appear to strongly influence people’s chances to have a first stroke,” Avendano said. “From a public health perspective, this would mean that diminishing the large wealth gap at age 50-64 also could help diminish the large disparities in stroke. However, diminishing wealth inequality requires transforming structural policies beyond the healthcare system that aim to redistribute income and wealth to benefit the most disadvantaged members of society.”

Among the study’s other findings:

-- Lower wealth, income and education in those age 50-74 were associated with a higher prevalence of high blood pressure, smoking, low physical activity, excessive weight, diabetes and heart disease – all risk factors for stroke.

-- Although higher education predicted a lower stroke risk among 50 – 64-year-olds, the risk was not significant after the researchers adjusted for income and wealth.

-- Education was not associated with lower stroke risk after age 65.

Avendano and Glymour said selective survival may explain the lack of association in those over age 65: Individuals with low wealth die earlier than their richer counterparts; those who survive into old age are a selection of the healthiest.

“Thus, selective survival could artificially weaken the association between wealth and stroke,” Avendano said. “We expected this selection effect to be less marked for wealth than for income and education, but

our results suggest all socioeconomic status indicators may be susceptible to the effect.”

Authors noted possible limitations to the study: self-reported stroke data may be inaccurate; risks factors of some patients may be misreported; and the direct effects of income, wealth and education may have been underestimated because the authors simultaneously adjusted for them.

“Further research is needed to understand why the effect of wealth, income and education on stroke is less clear beyond age 65 and the role of selective survival,” Avendano said.

Source: American Heart Association

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