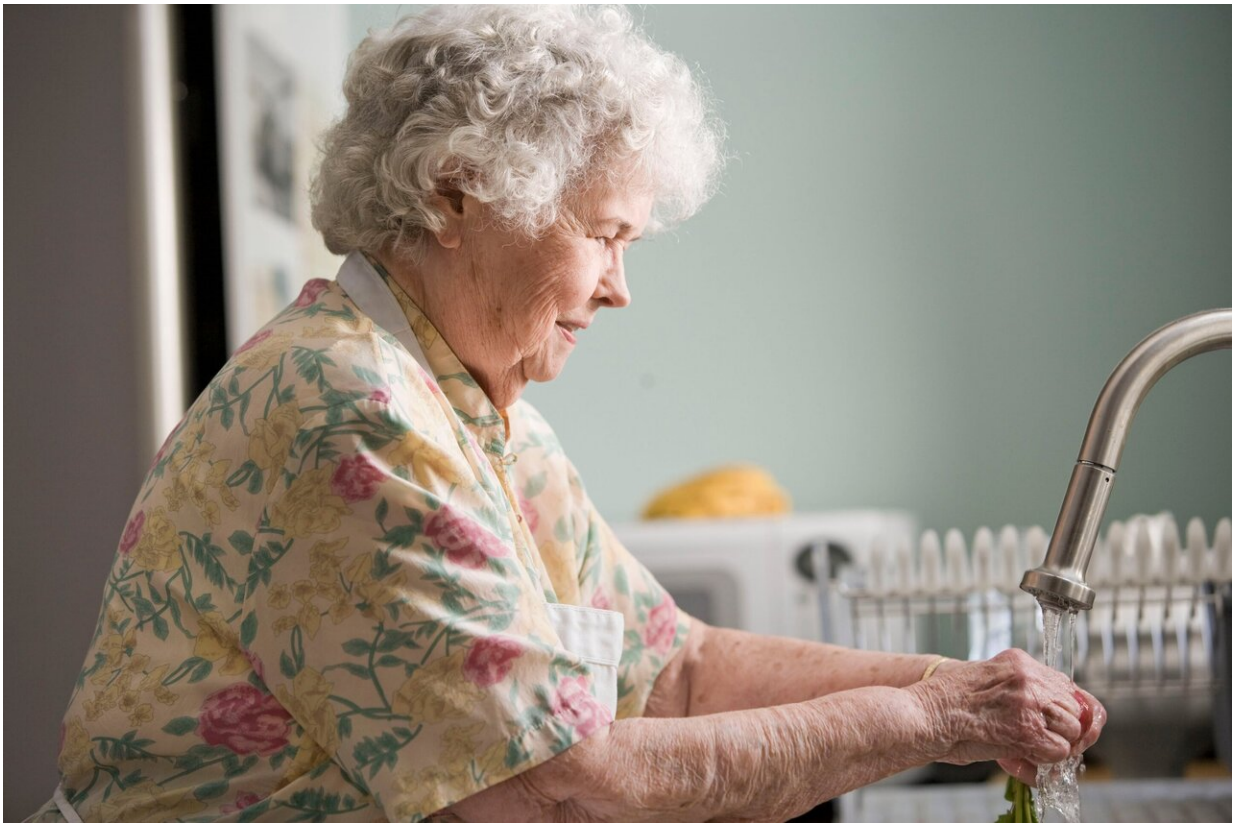


Does the risk of stroke from common risk factors change as people age?

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High blood pressure and diabetes are known risk factors for stroke, but now a new study shows that the amount of risk may decrease as people age. The study is published in the January 18, 2023, online issue of

Neurology.

"High blood pressure and [diabetes](#) are two important risk factors for stroke that can be managed by medication, decreasing a person's risk," said study author George Howard, DrPH, of the University of Alabama at Birmingham School of Public Health. "Our findings show that their association with [stroke risk](#) may be substantially less at older ages, yet other risk factors do not change with age. These differences in risk factors imply that determining whether a person is at high risk for stroke may differ depending on their age."

The study involved 28,235 people who had never had a stroke. Of this group, 41% were Black and 59% were white. Participants were followed for an average of 11 years.

At the start of the study, participants were interviewed and given physical exams to assess risk factors. Risk factors included [high blood pressure](#), diabetes, smoking, [atrial fibrillation](#), [heart disease](#) and left [ventricular hypertrophy](#) which is the thickening of the heart's left ventricle. Because of the well-known higher stroke risk in Black people, race was also considered as part of the assessed risk factors, Howard added.

Researchers followed up with participants every six months, confirming strokes by reviewing medical records.

During the study, there were 1,405 strokes over 276,074 person-years. Person-years represent both the number of people in the study and the amount of time each person spends in the study.

Participants were divided into three [age groups](#), which were then compared. The age ranges for those groups varied slightly depending on the data being analyzed by researchers. In general, the younger group

included participants ages 45-69, the middle group included people in their late 60s to 70s, and the older group included people 74 and older.

Researchers found that people with diabetes in the younger age group were approximately twice as likely to have a stroke as people of similar age who did not have diabetes, while people with diabetes in the older age group had an approximately 30% higher risk of having a stroke than people of similar older age who did not have diabetes.

Researchers also found that people with high blood pressure in the younger age group had an 80% higher risk of having stroke than people of similar age without high blood pressure while that risk went down to 50% for people with high blood pressure in the older age group compared to people of similar age without high blood pressure.

In addition, when researchers examined race as a risk factor, they found a higher stroke risk for Black participants in the younger age group compared to white participants in that group. The race difference decreased in the older age group. For stroke risk factors such as smoking, atrial fibrillation and left ventricular hypertrophy, researchers did not find an age-related change in risk.

"It is important to note that our results do not suggest that treatment of high blood pressure and diabetes becomes unimportant in older age," said Howard. "Such treatments are still very important for a person's health. But it also may be wise for doctors to focus on managing risk factors such as atrial fibrillation, smoking and left ventricular hypertrophy as people age."

Howard also noted that even where the impact of risk factors decreases with age, the total number of people with strokes at older ages may still be larger since overall risk of stroke increases with age. For example, in the younger age group for high blood pressure, researchers estimate that

about 2.0% of people with normal blood pressure had a stroke, compared to 3.6% of people with high blood pressure. In the older age group, about 6.2% of people with normal blood pressure had a [stroke](#), compared to 9.3% of people with high blood pressure.

A limitation of the research was that participants' [risk factors](#) were assessed only once at the start of the study, and it's possible they may have changed over time.

More information: George Howard et al, Age-Related Differences in the Role of Risk Factors for Ischemic Stroke, *Neurology* (2023). DOI: 10.1212/WNL.0000000000206837 , [dx.doi.org/10.1212/WNL.0000000000206837](https://doi.org/10.1212/WNL.0000000000206837)

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