

How do controllable risk factors for dementia vary by race, ethnicity?

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Approximately 23% of people diagnosed in their 60s and later with Alzheimer's disease or another related dementia have cases that can be

explained by controllable risk factors such as high blood pressure, diabetes, physical inactivity, and too little or too much sleep, and that percentage varies depending on race and ethnicity, according to a new study published in *Neurology*.

When including APOE ϵ 4, a gene variant associated with the strongest genetic risk for late-age Alzheimer's disease, the study found about a third of cases could be explained by these known risk factors altogether.

"There is no cure for Alzheimer's disease, so preventing or delaying this disease and other related forms of dementia by reducing controllable risk factors is an urgent public health priority," said study author Unhee Lim, Ph.D., of the University of Hawaii at Manoa in Honolulu. "Our study found not only does the percentage of cases linked to controllable risk factors vary by race and ethnicity, so do the most prevalent risk factors for each group."

The study involved 91,881 participants of the larger Multiethnic Cohort Study with an average age of 59 who did not have dementia at the start of the study. Of participants, 34% were Japanese American, 28% were white, 19% were Latino, 12% were Black and 7% were Native Hawaiian.

Participants completed questionnaires about disease history and medications. They were asked about [physical inactivity](#), defined as less than 30 minutes of moderate or vigorous activity per day, 12 years or less of education, and sleeping an average of less than five hours or more than nine hours a day.

Participants also completed a food questionnaire to determine if they had a low-quality diet, such as a diet high in saturated fat. Researchers used the residential addresses of each participant to determine the socioeconomic conditions of their neighborhoods, including income,

employment and housing quality.

After an average follow-up period of nine years, 16,507 people were diagnosed with Alzheimer's disease or related dementia at age 60 or older. Lim noted that disproportionately higher percentages were Black, 24%, or Native Hawaiian, 14%.

"The disparity for Black people has been reported by previous studies," Lim said. "However, our study also discovered a disparity for Native Hawaiians, who we analyzed separately from Asian Americans. Native Hawaiians are often grouped with Asian Americans in research. However, studies have consistently shown Asian Americans have the lowest risk for Alzheimer's disease and related dementia."

Researchers then determined what percentage of cases could be attributed to known risk factors including the gene variant APOE ϵ 4 as well as 12 risk factors that can be controlled or changed: low physical activity; less education; low socioeconomic status; a history of [high blood pressure](#), heart [disease](#), stroke or diabetes; not being married as a proxy for low social contact; current smoking; too short or too long sleep; obesity; and low-quality diet.

Researchers found 31% of all cases could be attributed to these known risk factors.

Looking only at controllable risk factors, researchers found the percentage of cases was similar among all female participants at 23% and all male participants at 24%.

However, when looking across racial and [ethnic groups](#), the percentages varied. Researchers found controllable risk factors accounted for 33% of cases among Latinos, 29% among Native Hawaiians, 28% among Black people, 22% among white people and 14% of cases among Japanese

Americans.

Researchers also examined top risk factors. Among [female participants](#), low socioeconomic status accounted for 4% of cases followed by less education at 3%. Among male participants, the top risk factors were less education at 4% of cases followed by low socioeconomic status at 3%.

Top risk factors varied by race and ethnicity. For Latinos, diabetes was the top risk factor, accounting for 7% of cases. Among Black, Native Hawaiian and [white people](#), low socioeconomic status was the top risk factor accounting for 6%, 5% and 4% of cases, respectively. For Japanese Americans, physical inactivity led risk factors at 4%.

"Our findings confirm that less education, [low socioeconomic status](#), and other risk factors in middle age account for substantial but varying proportions of dementia cases later in life across racial and ethnic populations," said Lim. "Our findings call out the need for tailored interventions for various racial and ethnic groups, specific to more prevalent risk factors. Our findings also highlight the importance of discovering other risk factors in racial and ethnic groups whose cases are not as well explained by known risk factors."

A limitation of the study was that there was not enough data to examine additional [risk factors](#) such as hearing impairment, depression, a history of traumatic brain injury or exposure to air pollution.

More information: *Neurology* (2024).

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