

Healthy Lifestyles and the Risk of Alzheimer's Disease and Related Dementias among Low-Income Black and White Americans

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Objectives: While the importance of healthy lifestyles for preventing Alzheimer's disease and related dementias (ADRD) has been recognized, epidemiologic evidence remains limited from non-White or low-income populations who bear disproportionate burdens of ADRD. We examined the associations of major lifestyle factors, individually and together, with incident ADRD in a prospective cohort of primarily low-income Black and White Americans.

Methods: In the Southern Community Cohort Study, incident ADRD were identified using claims data among participants enrolled in Medicare for at least 12 consecutive months after age 65. Five lifestyle factors: tobacco smoking, alcohol consumption, leisure-time physical activity (LTPA), sleep hours, and diet quality, were each scored 0 (unhealthy), 1 (intermediate), or 2 (healthy) based on health guidelines. A composite lifestyle score was created by summing all scores. Cox regression was used to estimate hazard ratios (HRs) and

95% CIs, treating death as a competing risk and adjusting for potential confounders.

Results: Of 17,209 participants, 1,694 incident ADRD were identified during a median 4-year follow-up in claims data; the mean age at ADRD diagnosis was 74.0 years. Healthy lifestyles were individually associated with 11%–25% reduced risk of ADRD: multivariable-adjusted HR (95% CI) was 0.87 (0.76–0.99) for never vs. current smoking, 0.81 (0.72–0.92) for low-to-moderate vs. no alcohol consumption, 0.89 (0.77–1.03) for ≥ 150 minutes of moderate or ≥ 75 minutes of vigorous LTPA per week vs. none, 0.75 (0.64–0.87) for 7–9 hours vs. >9 hours of sleep, and 0.85 (0.75–0.96) for the highest vs. lowest tertiles of Healthy Eating Index. The composite lifestyle score showed a dose-response association with up to 36% reduced risk of ADRD: HRs (95% CIs) across quartiles were 1 (ref), 0.88 (0.77–0.99), 0.79 (0.70–0.90), and 0.64 (0.55–0.74); p -trend < 0.001 . The beneficial associations were observed regardless of participants' sociodemographics (e.g., race/ethnicity, education, and income) and health conditions (e.g., history of cardiometabolic diseases and depression).

Conclusions: Our findings support the importance of healthy lifestyles for ADRD prevention among socioeconomically disadvantaged Americans to reduce the growing burden and disparities posed by ADRD.

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