

Living in Food Deserts in the U.S. Is Associated With Shorter Life Expectancy

American Cancer Society research also shows ways to make healthy food accessible and help improve diet quality and population health.

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A new study by researchers at the [American Cancer Society](#) (ACS) shows both income and healthy food accessibility are associated with greater life expectancy at birth by more than two years on average for some adults in the United States. Shorter life expectancy was found in low-income areas and in food deserts, defined as census tracts with limited accessibility to healthy foods based on the distance to the nearest supermarket, supercenter, or large grocery store and access to a vehicle. The results were published today in the [Journal of Urban Health](#).

“These results provide further evidence that a healthy diet is important for living a healthier and longer life,” said [Dr. Daniel Wiese](#), Senior Scientist, Cancer Disparity Research at the American Cancer Society and co-lead author of the study. “Limited healthy food accessibility is a potential contributor to poor diet and has been associated with adverse health outcomes, including obesity and diabetes.”

For the study, researchers gathered the most recent data on life expectancy at birth by analyzing 67,138 census tracts in the contiguous U.S during 2012–2015 from the Centers for Disease Control and Prevention. To measure healthy food accessibility, scientists used the 2015 Food Research Atlas Index from the U.S. Department of Agriculture (USDA) on income/poverty level and distance-based geographic access to healthy food for each census tract. Low-income census tracts were defined as tracts with a poverty rate greater than 20% or a median household income less than 80% of the state-wide/metropolitan area-wide median household income. Low-access census tracts (both urban and rural) were defined as tracts where ≥ 100 households were more than half a mile away from the nearest supermarket and had no access to a vehicle; or ≥ 500 people or $\geq 33\%$ of the population lived more than 20 miles from the nearest supermarket, regardless of vehicle availability. The researchers then defined four categories of census tracts with (1) high-income and high healthy food accessibility (high-income/high-access), (2) high-income and low healthy food accessibility (high-income/low-access), (3) low-income and high healthy food accessibility (low-income/high-access), and (4) low income and low healthy food accessibility (low-

income/low-access).

Census tracts with low healthy food accessibility were predominantly concentrated in the Southeast and West, where an excessive number of tracts with lower life expectancy were located as well. Study results showed both income and healthy food accessibility were associated with life expectancy at birth, as indicated by shorter life expectancy in low-income census tracts when comparing tracts with similar healthy food accessibility level, and in low-access tracts when comparing tracts with similar income level. The average life expectancy at birth was higher in high-income/high-access (80.2 years) than in high-income/low-access (79.4 years), low-income/high-access (77.2 years), and low-income/low-access (75.5 years) census tracts. In models adjusted for all sociodemographic covariates, compared to high-income/high-access census tracts, life expectancy at birth was lowest in low-income/low-access tracts (– 2.29 years; 95%), followed by low-income/high-access (– 1.44 years; 95%), and high-income/low-access (– 0.33 years; 95%) tracts.

“Effective interventions to increase healthy food accessibility may help improve diet quality and population health. These may include initiatives establishing new healthy food retailers (e.g., farmers markets, grocery stores, bodegas, and mobile retailers), as well as upgrading the quality, diversity, and quantity of healthier foods at current stores,” said [Dr. Farhad Islami](#), Senior Scientific Director, Cancer Disparity Research at the American Cancer Society and senior author of the research. “Supporting public transportation systems that may improve geographic access to stores offering healthy foods may also be beneficial to individuals with limited income.”

The authors add more research is needed to examine the association of individual-level income and healthy food accessibility with life expectancy and to examine some other factors that may influence accessibility to healthy foods, such as shopping behavior (e.g., willingness to travel longer distances to purchase healthy foods) and availability of reliable and efficient public transportation.

Other ACS authors participating in this study include [Jason Massey](#), [Marjorie McCullough](#), and [Dr. Ahmedin Jemal](#).

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