

Lack of fresh food choices linked to signs of early heart disease

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A lack of access to nearby stores selling fresh food may increase residents' risk of developing the signs of early heart disease, according to new research in the American Heart Association's journal *Circulation*.

"The lack of [healthy food](#) stores may help explain why people in these neighborhoods have more heart disease," said Jeffrey Wing, Ph.D., M.P.H., co-lead author and assistant professor in the Department of Public Health at Grand Valley State University, Grand Rapids, Michigan. "The thought is that greater access to healthier foods may have promoted healthier diets and, in turn, less coronary plaque formation."

Past studies found that limited [fresh food](#) choices and/or numerous fast food restaurants in poorer neighborhoods were linked to unhealthy diets. Residents in these neighborhoods have a greater likelihood of early atherosclerosis (a disease that hardens arteries and underlies many types of heart disease), but no studies have examined which factors might cause this.

In this study, researchers explored how the limited availability of recreational facilities, healthy food stores, neighborhood walkability, and social environments may contribute to the early stages of atherosclerosis in 5,950 adults enrolled in the Multi-Ethnic Study of Atherosclerosis (MESA) over a 12 year follow-up period.

Coronary artery calcium can be measured by a CT scan to detect the amount of atherosclerosis in a person's arteries. All participants underwent a CT scan at the start of the study. Of MESA participants studied, 86 percent had [coronary artery calcium](#) readings at three different times, with an average of 3.5 years between measurements.

After researchers excluded other features in these communities, including recreational centers, the

data suggested that decreased access to heart-healthy food stores is the common thread in more rapid progression of [coronary atherosclerosis](#) in middle-aged and older individuals.

"We found that healthy food stores within one mile of their home was the only significant factor that reduced or slowed the progression of calcium buildup in coronary arteries," said Ella August, Ph.D., co-lead author who initiated the study and clinical assistant professor of epidemiology at the University of Michigan in Ann Arbor. "Our results point to a need for greater awareness of the potential health threat posed by the scarcity of healthy grocery options in certain neighborhoods."

Researchers said future studies should examine the impact of specific interventions, such as promoting the location of healthy food stores and how neighborhood characteristics may interact with individual risk factors and genetic predispositions.

MESA is an ongoing study sponsored by the National Heart and Lung Institute of the National Institutes of Health. It has provided data for more than 1,000 published papers on a range of health issues in addition to [heart disease](#).

The American Heart Association recommends following a heart-healthy diet high in fruits, vegetables, whole grains, legumes, beans, nuts, low-fat dairy, skinless poultry and fish. It encourages eating foods low in saturated and trans fats and sodium, and limiting added sugars and red meats.

Provided by American Heart Association

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