

Where you live can greatly affect your heart and brain health

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Liz Harris won't let anything stop her from walking. Three mornings a week, she descends three flights of stairs and heads to Anacostia Park. It's a 10-minute walk just to get there. If none of her friends are

available, she walks alone. But they worry about her when she does.

"The community is known for crime, and you don't feel comfortable walking alone," said Harris, 72, who lives in southeastern Washington, D.C.'s Ward 8. But that's not her only concern. Unleashed dogs in the park make her wary. The streets along the way are uneven and in disrepair. Heavy traffic can contribute to poor air quality.

"For the most part, the neighborhood is just not conducive to getting exercise, especially for women," she said.

Still, Harris walks because crime isn't all her neighborhood is known for. It also has some of the district's highest rates of obesity, heart disease and cognitive decline, according to DC Health Matters Collaborative, a coalition of hospitals and community health centers.

A [2018 report](#) by the Metropolitan Washington Council of Governments spotlights other neighborhood disparities: higher infant deaths, child poverty, unemployment, older housing and longer work commutes.

"We're always at the lowest indicators," said Mustafa Abdul-Salaam, a longtime community activist who also lives in Ward 8. "We die 15 years earlier than Ward 3 (in northwest Washington). That says it all."

There is a wealth of research underscoring how the conditions in which people live, work, learn and play affect their health, particularly the heart—and therefore the brain. A basic element of these so-called social determinants of health is the neighborhood, with factors such as housing security; access to healthy foods, transportation and health care; opportunities for physical activity; and exposure to pollutants and noise. Lack of public safety, social disorganization and exposure to high levels of violent crime also have been associated with increases in [stroke risk](#), which can potentially cause cognitive decline.

"All of those factors coming together increase a person's vulnerability to [cardiovascular disease](#), especially in poorer [neighborhoods](#)," said Mustafa Hussein, an assistant professor at the Joseph J. Zilber School of Public Health at the University of Wisconsin-Milwaukee.

Hussein led a [2017 study](#) published in the *American Journal of Epidemiology* that found people with [low socioeconomic status](#) were 60% more at risk of having a heart attack or stroke as those with high socioeconomic status, with at least one-third of the extra risk attributable to neighborhood conditions.

Other [research in the journal Stroke suggests](#) people living with three or more of these social determinants are nearly 2.5 times more likely to have a stroke. A [2020 report](#) in the journal *Circulation: Cardiovascular Quality and Outcomes* concluded just living in aging public housing raises [heart disease](#) risk. In its 2019 [prevention guidelines](#), jointly issued with the American College of Cardiology, the American Heart Association said these social inequities are "strong" determinants of risk and can have as big an impact on cardiovascular health as medications and lifestyle changes.

Abdul-Salaam sees those impacts firsthand. Ward 8 has a lot of natural beauty and green space—important factors for keeping a neighborhood healthy, he said. But it lacks access to healthy and affordable groceries and shoulders a heavy burden of commercial and commuter traffic that makes streets less amenable to walking while creating more noise and pollution.

It's one of the scenarios organizations like the National Complete Streets Coalition is trying to address. The group is working to transform roads and design new ones across the country to make it easier and safer to walk, bike, use assistive devices such as walkers and access public transportation. The solutions include sidewalks, bike lanes or wider

shoulders, bus lanes and more comfortable and accessible transportation stops. A 2020 AHA policy statement said such campaigns were vital to promote "increased physical activity regardless of age, income, racial/ethnic background, ability, or disability."

The work hits home especially in neighborhoods that historically haven't seen the same economic and infrastructure investment as others.

To date, 35 state governments and the District of Columbia have adopted Complete Street policies. In Washington, this has led to improvements, some in Ward 8, such as raised crosswalks and dedicated bike paths. But community members say much more is needed to help the area thrive.

Abdul-Salaam is helping to lead and facilitate a planning process in Ward 8 to connect residents with government, business and health leaders to collaborate on solutions for southeast Washington, D.C. He is recruiting and training community members to map the neighborhood's assets and deficits, using a GPS-enabled app. "Then we can identify what we need to add or remove."

Involving residents is an important—and often overlooked—step in neighborhood revitalization, said Dr. Tiffany Powell-Wiley, chief of the Social Determinants of Obesity and Cardiovascular Risk laboratory at the National Heart, Lung, and Blood Institute. Too often, decisions in under-resourced communities are made without input from the people who live there, resulting in low-income residents being pushed out when neighborhood upgrades make it more appealing to outsiders—and more expensive.

"There needs to be an element of racial equity in the work that's happening," she said. "If a new policy is coming into place around community development, we need to ensure that different racial and

ethnic populations are benefiting equally."

That doesn't mean people also can't take individual steps, said Powell-Wiley. She works with [community members](#) like Harris to design and carry out research on culturally appropriate ways to increase physical activity and improve heart health among Black women living in areas with fewer resources.

"There are ways to use the resources you do have," she said, particularly if women form social networks to support each other. "It's safer to walk as a group, for example."

But strategies to reduce heart and brain health risks—such as promoting lifestyle change—can't fully benefit people in communities with insufficient resources until underlying structural challenges are addressed, Hussein said.

"The whole idea of lifestyle choices as something everyone can tap into is misleading, when in fact that choice is constrained by what is available to people," he said. "This is where policy solutions or investments into these neighborhoods to make up for historical disinvestment becomes so important."

More information: Mario Sims et al, Importance of Housing and Cardiovascular Health and Well-Being: A Scientific Statement From the American Heart Association, *Circulation: Cardiovascular Quality and Outcomes* (2020). [DOI: 10.1161/HCQ.0000000000000089](https://doi.org/10.1161/HCQ.0000000000000089)

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