

A study of 11,000 twins shows how to make America walkable again

New research shows what happens when cities add sidewalks and take other pedestrian-friendly steps.



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Matt Simon
Senior Staff Writer

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For a century now, the United States has prioritized the automobile over the pedestrian. Major cities slice up their neighborhoods with thick highways and some suburbs don't even bother installing sidewalks. Even in deep-blue San Francisco, a battle broke out this year over whether to close a coastal highway to cars permanently.

It might seem obvious that making a neighborhood more friendly to pedestrians encourages people to walk more, improving public health and reducing greenhouse gas emissions from driving. But it's surprisingly tricky to demonstrate that with data, since other factors influence how much a person walks, like their socioeconomic status. Cities need such data to prioritize which neighborhoods to make more walkable, and then public health

officials need still more research to confirm the benefits of any interventions.

To that end, a new study in the American Journal of Epidemiology used 11,000 twins to show that whenever a neighborhood becomes 1 percent more walkable — by, for instance, adding sidewalks to make it easier for people to get from parks to restaurants and other businesses on foot — residents walk 0.42 percent more minutes a week. So if a city boosts an area’s walkability by about 50 percent, an average resident might theoretically walk about 20 more minutes a week, according to the study. That’s important, the researchers write, “because even small increases in physical activity at the population level can contribute to improvements in public health.” (You can find the walkability score of your neighborhood here. The service is separate from the study.)

Experts have long encouraged people to walk for their health. But by targeting walkability overall, cities can bake that encouragement into the landscape itself. “Individual behavior change just isn’t doing it. We’ve kind of done that to death, in my opinion,” said Glen E. Duncan, the lead author of the paper and a professor of nutrition and exercise physiology at Washington State University. “We just tell people to eat your fruits and vegetables and get more exercise, without really thinking about the larger structural problems that hinder people from eating better and getting more activity.”

A key component of the study was a database of twins, which allowed the researchers to look at pairs of similar people living in different neighborhoods. The researchers could investigate the objective measurements of walkability in the twins' neighborhoods — such as plenty of destinations readily accessible by sidewalks — to determine if the built environment influenced their activity. They found that the twins who lived in more walkable neighborhoods reported walking more weekly minutes than their siblings. Now policymakers can use this information to make their cities more walkable, Duncan said. “That could be a really good thing for public health.”

The study could help city governments looking to take climate action, too. Cities are prime candidates for “multisolving” techniques, interventions that solve multiple problems at once. New sidewalks or zoning laws to get more businesses within walking distance for residents don't just make it easier to get around on foot. “Every trip taken on foot instead of by a fossil fuel-powered car reduces greenhouse gas emissions,” said Elizabeth Sawin, the director of the Washington, D.C.-based nonprofit Multisolving Institute, who wasn't involved in the new research. “Walkability also helps connect people with the neighbors and local businesses, and increases a sense of connection and economic vitality.”

With more people opting to walk instead of drive, fewer cars on the road would improve local air quality and put fewer pedestrians and cyclists in danger of getting run over by cars: Every day in the U.S., an average of 20 people are killed by motor vehicles. But it's not necessary to close off roads to cars to make a place more

walkable; a city government simply needs to improve the existing infrastructure to make people feel safer walking and cycling. That might be particularly welcome in underserved neighborhoods. “I think it is going to make a world of a difference for many people — marginalized groups in particular,” said Bunmi Akinnusotu, director of city innovation at the Washington, D.C.-based nonprofit Aspen Institute, who wasn’t involved in the research.

Cities can change more readily than you might think. San Francisco voters ended up closing that coastal highway in the November election, clearing the way for it to become a two-mile-long park for pedestrians and bicyclists. And ever since the lifting of COVID restrictions, cities across the U.S. have been experimenting with slow streets and other ways to improve pedestrian safety and human health. “If we really want to move the needle on public health,” Duncan said, “we need to be thinking about things that we can change that impact a large percentage of the population.”
