

Medical News & Perspectives

As Walking Movement Grows, Neighborhood Walkability Gains Attention

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David Sabgir, MD, first started encouraging his patients to walk when he was a medical student in the mid-'90s. But by 2004, it was clear to the cardiologist that his longstanding advice wasn't working. "[It] took me 9 years to realize it was ineffective for me to just tell or even beg them [to walk]," he said.

Patients would agree to start walking regularly, but when they came back to his Columbus, Ohio, office 6 months later for their follow-ups, they admitted that they hadn't stuck with it. Frustrated and grasping at straws, he asked some patients if they would join him and his family for a walk in a local park. A few months later, in April 2005, roughly 100 patients and community members showed up for his first stroll. He called it Walk with a Doc. "It was evident early on that we had stumbled onto something big that could affect millions of lives," he said. "We knew we had to make it replicable across the country and beyond."

The idea caught on, and today there are almost 250 Walk with a Doc chapters around the country, with roughly 3000 physicians and other health professionals and more than 200 000 community members participating in regular group walks. "We look at it almost like a bonfire on a beach that has continued to grow," said Sabgir, who today sees heart patients at Mount Carmel St Ann's Hospital outside Columbus.

Many of the group's doctors and community members are starting to advocate for "walkability" improvements in their neighborhoods, Sabgir said. In doing so, and in keeping up their regular walking practice, they're becoming part of a larger movement around walking and walkability that's gaining momentum around the nation.

"Walking organizations across the country are working in their communities to try and do such things as improve or fix sidewalks, [and] have better crosswalks, slower speeds, and longer crosswalk signals," said Kate Kraft, PhD, national coalition director of pedestrian advocacy



group America Walks. "They're working to create a safe environment for walking and greater walkability."

Evidence Piles Up

Physicians and public health officials are desperate to get the population moving. About 1 in 3 deaths in the United States are caused by cardiovascular disease (<http://bit.ly/1RjPjGf>). And the most recent analysis of National Health and Nutrition Examination Survey data from 2013-2014 estimates that 35% of men in the United States, and 40.4% of women, are obese (Flegal KM et al. *JAMA*. 2016;315[21]:2284-2291). Increasingly, walking is seen as a way that most people can meet federal recommendations for adults to get at least 150 minutes of moderate-intensity aerobic physical activity every week to improve cardiovascular health, prevent weight gain, and achieve many other health benefits (<http://1.usa.gov/1rUxEcG>). "Often the simplest answer is the one that's going to work best, and we believe that's the case with walking," Sabgir said.

Yet if walking is so easy, why is it so hard for doctors to get their patients to do it? The built environment and neighborhood walkability—defined by features such as mixed land use, intersection density, and population density—is emerging as an important factor.

"Overwhelmingly, a majority of studies show that [in] neighborhoods designed to be more walkable, the people living there have higher rates of walking and active transportation," which also includes biking and taking public transportation, said Gillian Booth, MD, MSc, associate professor in the department of medicine and the Institute of Health Policy, Management and Evaluation at the University of Toronto.

In a cross-sectional epidemiological investigation in 14 cities worldwide, people who lived in the most active-friendly neighborhoods, defined by walkability and access to public transportation and parks, walked 68 to 89 minutes more every week than those in the least active-friendly neighborhoods. (Sallis JF et al. *Lancet*. doi:10.1016/S0140-6736(15)01284-2 [published online April 1, 2016]).

The best evidence so far that neighborhood walkability actually improves health comes from obesity research, said James Sallis, PhD, distinguished professor of family medicine and public health at the University of California, San Diego. "There's much less evidence about other health outcomes because they just haven't been studied very much," added Sallis, who is also the director of the Active Living Research program at the university.

In a recent Canadian study based on the country's large health surveys, Booth and her colleagues found that more walkable neighborhoods were associated with lower prevalence of overweight and obesity and decreased incidence of diabetes between 2001 and 2012 (Creatore MI et al. *JAMA*. 2016; 315[20]:2211-2220).

Sallis, who was not involved in the study, noted that strong associations of walkability and improved diabetes rates were the same in low-, middle-, and high-income subgroups. "This is very good news that better neighborhood design may be helpful across the board, regardless of socioeconomic status," he said.

However, causality wasn't clear-cut. As the authors of an editorial published with the

study pointed out, Booth's investigation looked at how the population-level health of neighborhoods—not individuals—changed over time, which could have been affected by healthier or less healthy people moving in or out rather than by walkability (Rundle AG et al. *JAMA*. 2016;315[20]:2175-2177).

Studies proving that walkability directly improves health are challenging, although not impossible, to design, Sallis said. "It's very difficult to assign people to move [to different] neighborhoods or to randomly assign neighborhoods to receive improvements in walkability," he explained.

A few studies have followed up people who chose to move to more walkable neighborhoods. For example, a longitudinal study using data from Canada's National Population Health Survey found that men who moved to highly walkable neighborhoods decreased their body mass index (BMI) over the course of 12 years, while men who moved to less walkable neighborhoods had an increased BMI (Wasfi RA et al. *Am J Public Health*. 2016;106[5]:934-940).

Sallis said that even without direct evidence of causality, "the correlational evidence is really piling up." He added that "the risk of improving walkability appears very low, whereas the benefits could be very substantial."

Compelling evidence for the health benefits of walkability may come from communities that already are making changes. In 2007, Oklahoma City Mayor Mick Cornett announced a goal for the 600 000 people of his city to collectively lose 1 million pounds. With \$777 million from a new 1-cent sales tax, plus tax increment financing, the city funded active living improvements such as a more walkable downtown, a 70-acre downtown park, and hundreds of miles of sidewalks and trails. The city met Cornett's goal, losing a million pounds altogether, by 2012.

"Creating a more walkable city and nudging people toward healthier and more

active lifestyles dramatically improved our community's overall health and quality of life," Cornett said in an emailed statement.

Agency Support

In September 2015, the US Department of Health and Human Services threw its support behind the walkability movement with the release of "Step It Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities." The initiative's purpose is "to increase walking across the United States by calling for improved access to safe and convenient places to walk and wheelchair roll and by creating a culture that supports these activities for people of all ages and abilities." (<http://1.usa.gov/1U2Ywxm>)

One product of the call to action is the National Physical Activity Plan Alliance's forthcoming Walking and Walkability Report Card, funded by the Centers for Disease Control and Prevention (CDC). Expected to be released in early 2017, the report card will measure walking on a national level and will evaluate "where our communities stand in terms of providing the resources, infrastructure, and programs needed to support walking for transportation, recreation, and exercise," Alliance chair Russell Pate, PhD, professor of exercise science at the Arnold School of Public Health at the University of South Carolina, said in an emailed statement.

Support for walking and walkability is going beyond health agencies, and collaborations are flourishing between "health researchers and planners, transportation professionals, park and recreation folks, geographers—disciplines that had almost never collaborated before," Sallis said. In fact, the US Department of Transportation (USDOT) is a major funding source for local infrastructure improvements related to pedestrian safety, a critical component of walkability, Kraft said. Last year, the USDOT, the CDC, and the

American Public Health Association teamed up to release an online Transportation and Health Tool (<http://1.usa.gov/1qxc51E>) to provide access to data on the health effects of transportation systems. Importantly, traveling by foot was included.

"Local planners and public health professionals can use the data to help them appropriately allocate transportation resources," Kraft said. If decision makers target walkability improvements in areas with the highest rates of obesity, type 2 diabetes, and other chronic conditions, the tool may turn out to be an important resource for decreasing health disparities—a way to make sure the walking revolution reaches the people who need it the most.

Such cross-collaborations will undoubtedly be needed to overcome barriers to improving health through walkability. For example, to create enduring population-wide change, city planners and officials will need to prevent displacement of current residents, which can follow walkable developments and gentrification, Kraft said.

"I have not seen the perfect answers to this, but it certainly includes affordable housing policies," Sallis said. Mixed-income housing is being incorporated into walkable developments around the country but "not at the scale as the gentrification that's going on," he added.

Cities must also address crime that may deter walking. Although this is no small obstacle, strategies currently being implemented in some cities, such as adding streetlights and police foot patrols, may reduce crime against pedestrians, Kraft said. Converting single-use areas to mixed-use, a core component of walkable neighborhoods, itself lowers crime by putting more eyes on the street, she added.

"Walkability is one factor, but you have to deal with some of these other social challenges as well," Booth said. "If you live in a neighborhood that's not safe to walk, you're not going to do so." ■