

Issue Brief

Public Health and the Built Environment

How Architects Can Design for Better Public Health

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Issue

Recent research has suggested a link between a poorly designed built environment—which can increase traffic congestion and air and water pollution, reduce opportunities for everyday physical activity like walking or bicycling, and shrink green space in urban areas—and the rapid rise of chronic diseases in the United States, such as asthma, obesity, diabetes, and depression. Although more study is necessary to establish a definite link, there are other important reasons to encourage physical activity, reduce air pollution, and preserve the natural environment. Architects can make a significant contribution to improving public health through their design of buildings and communities.

Details

Researchers estimate that smog from traffic congestion can cause more than 6 million asthma attacks, 159,000 emergency-room visits for asthma attacks, and 53,000 asthma-related hospitalizations in a single year. Streets designed for cars rather than for pedestrians, low-density patterns of development, safety fears, and lack of bike paths and walkways discourage people from walking or biking to run errands, go to school, or commute to work. Paving large parking lots not only encourages people to drive and intimidates pedestrians but also creates impermeable surfaces that send stormwater runoff directly into waterways, causing flooding and increased concentrations of pollutants. Psychologists have found that just looking at natural environments, such as a park visible from an office window, restores people's mental, social, and creative functioning. Being in nature, as well as engaging in physical activity, helps reduce depression and boosts social capital.

AIA Action

Architects can design buildings and communities that address public health concerns and promote a livable communities agenda—mixed-use, compact, pedestrian- and bicycle-friendly development; green-space preservation; public spaces that increase a sense of community; brownfields clean-up and redevelopment—while using the benefits to individual and community health as yet another reason to support good design. After all, the local community must bear the medical costs and lost productivity incurred by pedestrian fatalities and chronic diseases that may well be caused or worsened by physical inactivity and pollution. An upfront investment in good design could save money—and lives—in the long run.

Quick Facts

- An estimated 300,000 premature deaths in the U.S. in 1990 were due to chronic diseases caused or escalated by physical inactivity. Medical costs of inactivity are estimated to be \$76 billion annually.
- Americans make fewer than 6% of their trips on foot, but pedestrians account for 13% of traffic fatalities, primarily because of street design that makes walking dangerous. Children, seniors, and ethnic minorities are most at risk.
- Only about half of children aged 12–21 engage in regular, vigorous physical activity. Meanwhile, childhood obesity rates have more than doubled since the early 1970s.
- During the 1996 Olympic Games in Atlanta, city officials reduced vehicle traffic by as much as 22.5%. Ozone concentrations dropped from peak levels by 27.9%, and asthma-related medical emergencies decreased by 41.6%.

Resources

- Centers for Disease Control and Prevention, Active Community Environments Initiative: www.cdc.gov/nccdphp/dnpa/aces.htm
- Robert Wood Johnson Foundation, Active Living by Design: www.activelivingbydesign.org
- National Association of County and City Public Health Officials: www.naccho.org
- "Health and Smart Growth," Funders' Network for Smart Growth and Livable Communities: www.fundersnetwork.org/usr_doc/Health_and_Smart_Growth.pdf
- "Creating a Healthy Environment: The Impact of the Built Environment on Public Health," by Richard J. Jackson, MD, MPH, and Chris Kochitzky, MSP: www.sprawlwatch.org/health.pdf
- "Giving 'Delight' Its Scientific Due," by John P. Eberhard, FAIA, *AIArchitect* www.aia.org/aiaarchitect/thisweek02/tw0726/0726tw3research.htm
- "Green Is Good for You," by Rebecca A. Clay, *Monitor on Psychology*: www.apa.org/onitor/apr01/greengood.html

