



A Fact Sheet Describing Health by Design's Priorities

Encourage Land Use Decision-Making that Promotes Public Health

- A high level of mixed land use in a neighborhood predicts more walking: when different types of destinations are nearby, shopping and work for example, people are more likely to walk.¹
- Communities with accessible walking and biking paths promote daily physical activity, which brings better health – the risk of cardiovascular disease, stroke and all-cause mortality is greatly increased by a sedentary lifestyle.^{2,3,4}
- Better neighborhood planning makes a difference for public health – walkable neighborhoods are characterized by high density, high land use mix, high connectivity, good walking infrastructure, pleasing aesthetics and safety.⁵
- People in high walkable neighborhoods report four to five times more walking for utilitarian purposes than those in low walkable neighborhoods.⁶

Reduce Automobile Dependency

- Over 51% of the American population lives in an area where air quality does not meet standards – toxics emitted from cars cause 1,500 cases of cancer in the United States per year.^{7,8}
- The cost of health care due to motor vehicle pollution is estimated to be between \$29 and \$530 billion per year.⁹
- Vehicle accidents cost the country \$200 billion per year due to cost of care, and lost income and productivity – exposure to roadway accidents and injury is linked directly to continued increases in vehicle-miles traveled.^{10,11}
- Urban residents living at 12 units per acre generate approximately 1/3 less emissions than residents living at 3 units per acre, due to automobile travel needed for lower density.¹²

Increase Walking, Biking, and Other Personal Transportation Options

- Recent studies have found that people with access to sidewalks are more likely to walk and meet the Surgeon General's recommendations for physical activity.^{13,14}
- People who report having access to walking/jogging trails are 55% more likely to be physically active.¹⁵
- Lack of adequate transportation resources was the single greatest reason children did not have timely pediatric care.¹⁶

Increase Neighborhood, City, and Regional Connectivity

- On a neighborhood and city scale, connectivity is a key factor of walkability and bikability. Increased walkability and bikeability have a positive impact on public health by increasing one's ability to include walking and biking in usual day-to-day activities, such as traveling to work or school.^{17,18}
- Connectivity of alternative transportation options on the city and regional scales is important, such as light rail and bus connections, which can decrease commute time and air pollution. Reducing commute time and air pollution will have a positive effect on health.¹⁹

Citations

1. Kockelman, K.M. (1997). Travel behavior as function of accessibility, land use mixing, and land use balance: evidence from San Francisco Bay Area. *Transportation Research Record*, 1607, 116-25.
2. National Institute of Health Consensus Development Panel on Physical Activity and Cardiovascular Health. (1996). Physical activity and cardiovascular health. *The Journal of the American Medical Association*, 276(3), 241-246.
3. Wannamethee, S.G., Shaper, A.G., Walker, M., & Ebrahim, S. (1998). Lifestyle and 15-year survival free of heart attack, stroke, and diabetes in middle-aged British men. *Archives of Internal Medicine*, 158(22), 2433-2440.
4. Gorelick, P.B., Sacco, R.L., Smith, D.B., Alberts, M., Mustone-Alexander, L., Rader, D., et al. (1999). Prevention of a first stroke: a review of guidelines and a multidisciplinary consensus statement from the National Stroke Association. *The Journal of the American Medical Association*, 281(12), 1112-1120.
5. Frumkin, H., Frank, L., & Jackson, R. (2004). *Urban Sprawl and Public Health* (pp.100). Washington, DC: Island Press
6. Saelens, B.E., Sallis, J.F., Black, J.B., & Chen, D. (2003). Neighborhood-based differences in physical activity: An environment scale evaluation. *American Journal of Public Health*, 93(9), 1552-1558.
7. American Lung Association. (2006). State of the Air: 2006. Retrieved on April 20, 2007, from <http://lungaction.org/reports/sota06intro.html>
8. The National Safety Council. (2006, March 6). Auto emissions fact sheet: what you can do about car emissions. Retrieved April 27, 2007, from http://www.nsc.org/ehc/mobile/mse_fs.htm
9. U.S. Environmental Protection Agency. (2001). Our built and natural environments: a technical review of the interactions between land use, transportation, and environmental equality. Retrieved April 27, 2007, from www.epa.gov/piedpage/pdf/built.pdf
10. Frumkin, H. (2002). *Urban Sprawl and Public Health*. *Public Health Reports*, 117, 201-217.
11. Smart Growth America. (2002). *Measuring Sprawl and Its Impact*. Retrieved April 27, 2007, from www.smartgrowthamerica.org/sprawlindeX/MeasuringSprawl.pdf
12. Campoli, J., & MacLean, A.S. (2007). *Visualizing Density*. Concord, NH: Lincoln Institute of Land Policy.
13. Eyler, A.A., Brownson, R.C., Bacak, S.J., & Housemann, R.A. (2003). The Epidemiology of Walking for Physical Activity in the United States. *Medicine & Science in Sports & Exercise*, 35(9), 1529-1536.
14. Brownson, R. C., Baker, E. A., Housemann, R. A., Brennan, L. K., & Bacak, S. J. (2001). Environmental and Policy Determinants of Physical Activity in the United States. *American Journal of Public Health*, 91(12), 1995-2003.
15. Eyler, A.A., Brownson, R.C., Bacak, S.J., & Housemann, R.A. (2003). The epidemiology of walking for physical activity in the United States. *Medicine & Science in Sports & Exercise*, 35(9), 1529-1536.
16. The Children's Health Fund. (n.d.). Affordable, accessible transportation. Retrieved April 27, 2007, from <http://www.childrenshealthfund.org/whatwedo/transportation.php>
17. Ewing, R., & Cervero, R. (2001). Travel and the built environment: a synthesis. *Transportation Research Record*, 1780, 87-114.
18. Active Living by Design. (n.d.). *Transportation Fact Sheet*. Retrieved April 18, 2007, from http://www.activelivingbydesign.org/fileadmin/template/documents/factsheets/Transportation_Factsheet.pdf
19. Smart Growth America. (2002). *Measuring Sprawl and Its Impact*. Retrieved April 27, 2007, from www.smartgrowthamerica.org/sprawlindeX/MeasuringSprawl.pdf