

# Transportation and Health

## *Walking and Bicycling Improves Your Health*

Communities that make it safe and easy to get around by walking, bicycling, and taking transit can generate a number of health benefits, such as reduced obesity; reduced cases of asthma/heart disease/cancer; increased safety, and improved access to schools, parks, and recreation and community facilities. Benefits include:

**Improved overall health.** Lack of physical activity is a key contributor to the obesity epidemic, which leads to other diseases and increases healthcare costs.<sup>1</sup> Walking or bicycling as part of your daily travel is as effective as structured workouts for improving your health.<sup>2</sup> Long commutes may also increase drivers' stress levels.<sup>3</sup>

**Reduced emissions and improved air quality.** In 2005, vehicular emissions nationwide were associated with 3,000 premature deaths and a social cost of \$24 billion.<sup>4</sup> Motor vehicle occupants tend to be exposed to more air pollutants than those travelers who walk, cycle or take a train. Driving less is an easy way to reduce emissions of pollutants such as benzene, toluene, xylenes, and nitrogen oxide (NO<sub>2</sub>).<sup>5</sup>

**Reduced injuries and fatalities.** In 2009, there were more than 4,700 bicyclist and pedestrian fatalities and 108,000 injuries in the U.S.<sup>6</sup> More bicycle and pedestrian facilities can make walking and bicycling safer and encouraging more people to do so, especially when supported by education, enforcement and outreach. A bicycle safety study showed that high biking cities with more bicycling averaged 2.5 fatalities per year per 100,000 residents compared to almost 9 deaths per 100,000 for low biking cities.<sup>7</sup> More people walking and bicycling may help drivers attend to other road users and increase safety.<sup>8</sup>

**Communities that work for all ages.** 42 percent of the U.S. population is under 18 or over 65.<sup>9</sup> Children and older adults that do not drive, as well as low-income populations may be disproportionately affected by lack of transit, walking and bicycling facilities. Multimodal transportation improvements make it easier for people of all ages and abilities to get around and can provide seamless access to schools, parks, and recreation and community facilities.



*Walking for some of your daily activities can improve your health and reduce pollution (Dan Burden).*

<sup>1</sup> Based on 2008 dollars and population. Finkelstein, EA, Trogon, JG, Cohen, JW, and Dietz, W. (2009) Annual medical spending attributable to obesity: Payer- and service-specific estimates. *Health Affairs* 28(5): w822-w831

<sup>2</sup> Dunn, A., et al. 1999. Comparison of lifestyle and structured interventions to increase physical activity and cardiovascular fitness: a randomized trial. *Journal of the American Medical Association*, 281: 327-34.

<sup>3</sup> Frumkin, Howard (2002). "Urban Sprawl and Public Health" *Public Health Reports*, Association of Schools of Public Health.

<sup>4</sup> Levy, J. I., Buonocore, J. J., von Stackelberg, K. (2010) "The Public Health Costs of Traffic Congestion: A Health Risk Assessment" (Boston: Harvard Center for Risk Analysis, Harvard School of Public Health).

<sup>5</sup> US EPA, (2001), "Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality". <http://www.epa.gov/smartgrowth/pdf/built.pdf>

<sup>6</sup> National Highway Traffic Safety Administration (2010) "Traffic Safety Facts 2009" (Washington, DC: U.S. Department of Transportation).

<sup>7</sup> Marshall, W.E., Garrick, N.W. (2011). Evidence of Why Bike-Friendly Cities are Safer for All Road Users. *Environmental Practice*. 13 (1): 16-27.

<sup>8</sup> Woodcock, J., et al. (2009) Public health benefits of strategies to reduce greenhouse-gas emissions: urban land transport. *Lancet* 374: 1930-43.

<sup>9</sup> 2005-2009 American Community Survey 5-Year Estimates, U.S. Census Bureau.

Creating more livable communities through transportation choices



## Success Stories

**Free program gets seniors walking in Kirkland, WA.** The “Kirkland Steppers Walk Program,” for adults aged 50 and older, offers twice-weekly walks for seniors starting at a local community center.<sup>10</sup> Kirkland was the first city in the State to adopt a Complete Streets ordinance and has recently completed an Active Transportation Plan to expand and improve the bicycle and pedestrian network.<sup>11</sup>

**Increasing “active living” through biking and walking programs.** With a 20 percent poverty rate and long winters, Jackson, MI faces significant challenges in promoting healthy, active lifestyles. The Walkable Communities Task Force promotes biking and walking through a variety of strategies. The City’s first Smart Commute Day had 165 participants, 85 percent of whom were first-time smart commuters. The City installed 12 new crosswalks at an elementary school, installed bike racks, and performed other outreach to increase active transportation.<sup>12</sup>



*Intersection design in Kirkland, WA makes it easier for everyone to cross the street (HB Rue).*



## Available Resources

American Public Health Association, [www.apha.org/](http://www.apha.org/)

Active Living Research, [www.activelivingresearch.org](http://www.activelivingresearch.org)

Centers for Disease Control and Prevention, Healthy Community Design, [www.cdc.gov/healthyplaces/](http://www.cdc.gov/healthyplaces/)

American Association for Retired Persons, Livable Communities, [www.aarp.org/home-garden/livable-communities/](http://www.aarp.org/home-garden/livable-communities/)

<sup>10</sup> “City of Kirkland: Walkable Community Profile,” [www.kirklandwa.gov/Assets/CMO/CMO+PDFs/AL+Walkability.pdf](http://www.kirklandwa.gov/Assets/CMO/CMO+PDFs/AL+Walkability.pdf).

<sup>11</sup> City of Kirkland, “More People, More Places, More Often: An Active Transportation Plan,” March 2009, [www.kirklandwa.gov/Assets/Public+Works/Public+Works+PDFs/Transportation/ATP+Final+Plan.pdf](http://www.kirklandwa.gov/Assets/Public+Works/Public+Works+PDFs/Transportation/ATP+Final+Plan.pdf).

<sup>12</sup> “Jackson, MI: Active Living by Design,” Active Living by Design, [www.activelivingbydesign.org/communities/profiles/jackson-mi](http://www.activelivingbydesign.org/communities/profiles/jackson-mi).

Federal Highway Administration: [www.fhwa.dot.gov/livability](http://www.fhwa.dot.gov/livability)  
Partnership for Sustainable Communities: [www.sustainablecommunities.gov/](http://www.sustainablecommunities.gov/)

