



WHAT IS SAFE ROUTES TO SCHOOL?

Background and Statistics

Safe Routes to School (SRTS) is a national and international movement to create safe, convenient, and fun opportunities for children to bicycle and walk to and from schools. The program has been designed to reverse the decline in children walking and bicycling to schools. Safe Routes to School can also play a critical role in reversing the alarming nationwide trend toward childhood obesity and inactivity.

In 1969, approximately 50% of children walked or bicycled to school, with approximately 87% of children living within one mile of school walking or bicycling. Today, fewer than 15% of schoolchildren walk or bicycle to school. As a result, kids today are less active, less independent, and less healthy. As much as 10 to 14% of morning traffic can be generated by parents driving their children to schools, and traffic-related crashes are the top cause of death and major injury for children in the U.S. ages 1 to 17.

Concerned by the long-term health and traffic consequences of this trend, in 2005, the U.S. Congress approved \$612 million in funding for five years of state implementation of SRTS programs in all 50 states and the District of Columbia. Communities are using this funding to construct new bike lanes, pathways, and sidewalks, as well as to launch Safe Routes to School education, promotion and enforcement campaigns in K-8 schools.

Safe Routes to School programs are built on collaborative partnerships among many stakeholders that include educators, parents, students, elected officials, engineers, city planners, business and community leaders, health officials, and bicycle and pedestrian advocates. The most successful SRTS programs incorporate the five E's—evaluation, education, encouragement, engineering, and enforcement. The goal of Safe Routes to School is to get more children bicycling and walking to schools safely every day.

Helpful Statistics on Safe Routes to School

Traffic Congestion: Neighborhoods are becoming increasingly clogged by traffic. By boosting the number of children walking and bicycling, Safe Routes to School projects reduce traffic congestion.

- Within the span of one generation, the percentage of children walking or bicycling to school has dropped precipitously, from approximately 50% in 1969¹ to just 13% in 2009.²
- While distance to school is the most commonly reported barrier to walking and bicycling³, private vehicles still account for half of school trips between 1/4 and 1/2 mile⁴—a distance easily covered on foot or bike.
- In 2009, American families drove 30 billion miles and made 6.5 billion vehicle trips to take their children to and from schools, representing 10-14 percent of traffic on the road during the morning commute.⁵
- A California study showed that schools that received infrastructure improvements through the Safe Routes to School program yielded walking and bicycling increases in the range of 20 to 200 percent.⁶

Safety: Safe Routes to School projects focus on infrastructure improvements, student traffic education, and driver enforcement that improve safety for children, many of whom already walk or bicycle in unsafe conditions.

- Pedestrians are more than twice as likely to be struck by a vehicle in locations without sidewalks.⁷
- In 2009, approximately 23,000 children ages 5-15 were injured and more than 250 were killed while walking or bicycling in the United States.⁸
- From 2000-2006, 30% of traffic deaths for children ages 5-15 occurred while walking or bicycling.⁹
- The medical costs for treating children's bicycle and pedestrian fatalities cost \$839 million in 2005 and another \$2.2 billion in lifetime lost wage costs.¹⁰
- A safety analysis by the California Department of Transportation estimated that the safety benefit of the SRTS was up to a 49 percent decrease in the childhood bicycle and pedestrian collision rates.¹¹

Health and Obesity: Children today are simply not getting enough physical activity, contributing to growing rates of obesity and obesity-related health problems, such as diabetes. Safe Routes to School projects make it safer for more children to walk and bicycle to school, which will help address this obesity crisis among children by creating increases in physical activity.

- Over the past 40 years, rates of obesity have soared among children of all ages in the United States, and approximately 25 million children and adolescents—more than 33%—are now overweight or obese or at risk of becoming so.¹²
- Kids are less active today, and 23% of children get no free time physical activity at all.¹³
- The prevalence of obesity is so great that today’s generation of children may be the first in over 200 years to live less healthy and have a shorter lifespan than their parents.¹⁴
- Today, approximately one-quarter of health care costs in the United States are attributable to obesity,¹⁵ and health care costs just for childhood obesity are estimated at approximately \$14 billion per year.¹⁶
- People living in auto-oriented suburbs drive more, walk less, and are more obese than people living in walkable communities. For each hour of driving per day, obesity increases 6 percent, but walking for transportation reduces the risk of obesity.¹⁷
- Walking one mile to and from school each day is two-thirds of the recommended sixty minutes of physical activity a day. Children who walk to school have higher levels of physical activity throughout the day.^{18 19}

Environment: Safe Routes to School projects increase the number of children walking and bicycling to school, which also cuts down on the number of cars. As cars emit pollutants for each mile traveled, reducing traffic can improve the quality of air that children breathe in and around their schools.

- Children exposed to traffic pollution are more likely to have asthma, permanent lung deficits, and a higher risk of heart and lung problems as adults.²⁰
- Over the last 25 years, among children ages 5 to 14, there has been a 74 percent increase in asthma cases.²¹ In addition, 14 million days of school are missed every year due to asthma.²²
- One-third of schools in “air pollution danger zones.”²³
- Schools that are designed so children can walk and bicycle have measurably better air quality.²⁴
- A 5% increase in a neighborhood’s “walkability” reduces vehicle miles traveled by 6%.²⁵
- Returning to 1969 levels of walking and bicycling to school²⁶ would save 3.2 billion vehicle miles, 1.5 million tons of carbon dioxide and 89,000 tons of other pollutants²⁷—equal to keeping more than 250,000 cars off the road for a year.

Bus Transportation Costs: Schools often make cutbacks in bus routes to save money—meaning that more children will be walking and bicycling in potentially unsafe conditions, or more parents will drive their children, which increases traffic congestion and air quality concerns.

- Approximately 55% of children are bused, and we spend \$21.5 billion nationally each year on school bus transportation, an average of \$854 per child transported per year.²⁸
- Eliminating one bus route, based on average per-pupil expenditure and average number of pupils per bus, would save a school district approximately \$45,000 per year.²⁹
- Nationwide, approximately 22 percent of school districts made busing reductions during the 2010-2011 school year due to fuel price increases.³⁰

About the Safe Routes to School National Partnership

Launched in August 2005, the Safe Routes to School National Partnership is a fast-growing network of hundreds of organizations, government agencies and groups working to set goals, share best practices, secure funding, and provide educational materials to agencies that implement Safe Routes to School programs. The Safe Routes to School National Partnership’s mission is to serve a diverse national community of organizations that advocates for safe bicycling and walking to and from schools throughout the United States. www.saferoutespartnership.org

End Notes

- ¹ Transportation Characteristics of School Children, Report no. 4. Washington, DC: Nationwide personal Transportation Study, federal Highway Administration, July 1972.
- ² McDonald, Noreen, Austin Brown, Lauren Marchetti, and Margo Pedroso. "U.S. School Travel 2009: An Assessment of Trends." *American Journal of Preventive Medicine* (August 2011) (In press).
- ³ U.S. Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report September 30, 2005, "Barriers to Children Walking to or from School, United States 2004." Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm.
- ⁴ Federal Highway Administration, National Household Travel Survey 2001; NHTS Brief on Travel to School, January 2008.
- ⁵ McDonald, Noreen, Austin Brown, Lauren Marchetti, and Margo Pedroso. "U.S. School Travel 2009: An Assessment of Trends." *American Journal of Preventive Medicine* (August 2011) (In press).
- ⁶ Marla R. Orenstein, Nicolas Gutierrez, Thomas M. Rice, Jill F. Cooper, and David R. Ragland, "Safe Routes to School Safety and Mobility Analysis" (April 1, 2007). *UC Berkeley Traffic Safety Center*. Paper UCB-TSC-RR-2007-1. <http://repositories.cdlib.org/its/tsc/UCB-TSC-RR-2007-1>
- ⁷ R. Knoblauch, B. Tustin, S. Smith, and M. Pietrucha. "Investigation of Exposure-Based Pedestrian Accident Areas: Crosswalks, Sidewalks, Local Streets, and Major Arterials." Washington DC: US Dept of Transportation; 1987.
- ⁸ "Pedestrians: 2009 Data" and "Bicyclists and Other Cyclists: 2009 Data" Washington, DC: National Highway Traffic Safety Administration, 2009. Available at <http://www-nrd.nhtsa.dot.gov/Pubs/811394.pdf> and <http://www-nrd.nhtsa.dot.gov/pubs/811386.pdf>.
- ⁹ Borse, N, et al., *CDC Childhood Injury Report. Patterns of Unintentional Injuries among 0-19 Year Olds in the United States, 2000-2006*, December 2008. Available at <http://www.cdc.gov/SafeChild/images/CDC-ChildhoodInjury.pdf>
- ¹⁰ WISQARS (Web-based Injury Statistics Query and Reporting System). 2005 Cost of Injury Reports. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Office of Statistics and Programming. Database queried for injuries and fatalities to child pedestrians and bicyclists ages 5 to 14, accessed June 2, 2011, <http://wisqars.cdc.gov:8080/costT/>.
- ¹¹ Marla Orenstein, Nicolas Gutierrez, Thomas Rice, Jill Cooper, and David Ragland, "Safe Routes to School Safety and Mobility Analysis" (April 1, 2007). *UC Berkeley Traffic Safety Center*. Paper UCB-TSC-RR-2007-1. <http://repositories.cdlib.org/its/tsc/UCB-TSC-RR-2007-1>
- ¹² Ogden, C.L. et al., "Prevalence of Overweight and Obesity in the United States, 1999-2004." *Journal of the American Medical Association*, 295, no. 13 (2006). Available at <http://jama.ama-assn.org/cgi/content/full/295/13/1549#JOC60036T2>.
- ¹³ "Physical activity levels among children aged 9-13 years—United States, 2002." *Morbidity and Mortality Weekly Report* 2003; 52[33]:785-8.
- ¹⁴ S. Jay Olshansky, Ph.D., Douglas J. Passaro, M.D., Ronald C. Hershov, M.D., Jennifer Layden, M.P.H., Bruce A. Carnes, Ph.D., Jacob Brody, M.D., Leonard Hayflick, Ph.D., Robert N. Butler, M.D., David B. Allison, Ph.D., and David S. Ludwig, M.D., Ph.D., "A Potential Decline in Life Expectancy in the United States in the 21st Century," *New England Journal of Medicine*: Volume 352: 1138-1145, March 17, 2005.
- ¹⁵ Trasande L and S Chatterjee. "The impact of obesity on health service utilization and costs in childhood." *Obesity* 17 (2009): 1749-54.
- ¹⁶ Marder, William and Stella Chang. "Childhood Obesity: Costs, Treatment Patterns, Disparities in Care and Prevalent Medical Conditions. New York: Thomson Medstat Research Brief, 2006. Accessed June 3, 2011, www.medstat.com/pdfs/childhood_obesity.pdf.
- ¹⁷ Frank LD, Andresen MA, Schmid TL. "Obesity relationships with community design, physical activity, and time spent in cars." *American Journal of Preventative Medicine* 2004; 27: 87-96.
- ¹⁸ Alexander et al., The broader impact of walking to school among adolescents. *BMJonline*.
- ¹⁹ Cooper et al., Commuting to school: Are children who walk more physically active? *Amer Journal of Preventative Medicine* 2003; 25 (4)
- ²⁰ Gauderman, W. J., E. Avol, F. Lurmann, N. Kuenzli, F. Gilliland, J. Peters and R. McConnell, "Childhood Asthma and Exposure to Traffic and Nitrogen Dioxide," *Epidemiology*, Volume 16, No. 6, November 2005. AND Gauderman, W.J., H. Vora, R. McConnell, K. Berhane, F. Gilliland, D. Thomas, F. Lurmann, E. Avol, N. Kunzli, M. Jerrett, and J. Peters, "Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study," *The Lancet*, Volume 368, February 2007.
- ²¹ Centers for Disease Control and Prevention. Surveillance for Asthma—United States, 1960-1995: CDC Surveillance Summaries, April 24, 1998. *MMWR Morbidity and Mortality Weekly Report*, Vol. 47 (SS-1), 1998, pp. 1-27.
- ²² Centers for Disease Control and Prevention. Healthy Youth! Health Topics: Asthma. Available at <http://www.cdc.gov/HealthyYouth/asthma/index.htm>.
- ²³ Appatova, A. S., Ryan, P., LeMasters, G., Grinshpun, S. "Proximal exposure of public schools and students to major roadways: a nationwide US survey," *Journal of Environmental Planning and Management*, Volume 51, Issue 5, 2008.
- ²⁴ US EPA. Travel and Environmental Implications of School Siting, October 2003. Available at www.smartgrowth.umd.edu/pdf/SchoolLocationReport.pdf.
- ²⁵ Lawrence D. Frank, James F. Sallis, et al. "Many Pathways from Land Use to Health" *Journal of the American Planning Association*, Volume 72, Issue 1, Winter 2006.
- ²⁶ McDonald, N. "Active Transportation to School: Trends among U.S. Schoolchildren, 1969-2001," *American Journal of Preventive Medicine*, Volume 32, Number 6, June 2007.
- ²⁷ "Emission Facts: Average Annual Emissions and Fuel Consumption for Passenger Cars and Light Trucks," U.S Environmental Protection Agency. Available at <http://www.epa.gov/otaq/consumer/f00013.htm>.
- ²⁸ Digest of Education Statistics, 2010. Tables 184, 186 and 187. Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2011.
- ²⁹ Digest of Education Statistics, 2010. Table 184. U.S. Department of Education, National Center for Education Statistics, 2011 AND "School Bus Safety Overview." *School Transportation News*, http://www.stnonline.com/stn/data_statistics/safetyoverview/index.htm
- ³⁰ Babcock, Stephane. "STN Fuel Survey: Schools feeling pinch from rise in prices." *STN Online*, March 14, 2011. Accessed June 1, 2011, <http://www.stnonline.com/home/top-stories/3218-stn-fuel-survey-schools-feeling-pinch-from-rise-in-prices>.