



ACTIVE LIVING RESEARCH

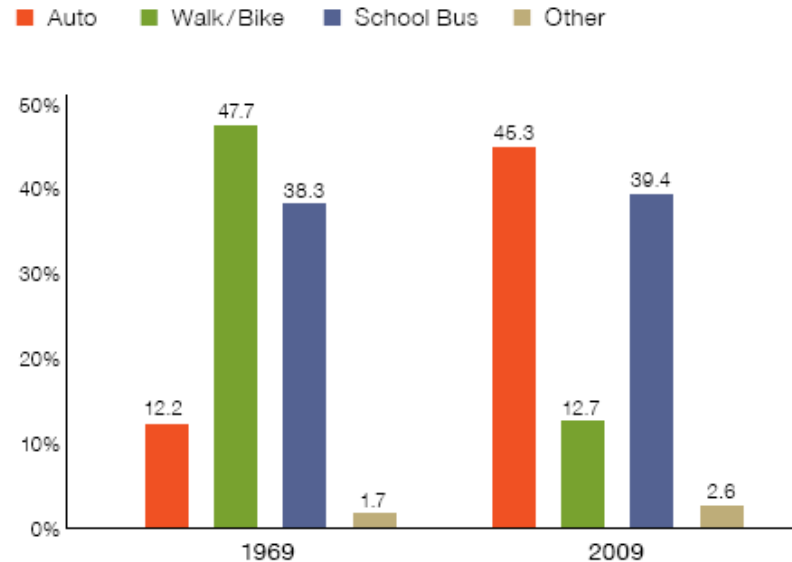
Promoting activity-friendly communities.

Impact of Safe Routes to School Programs on Walking and Biking

Introduction

- Today just **13%** of children walk or bike to school compared to **48%** who did so in 1969.
- Among children who lived within a **quarter-mile** of school, still only **56%** walked or biked.

FIGURE 1 Comparison of School Travel Modes, K-8th Grade, 1969-2009¹



Methodology

- Based on four aspects of the SRTS Program:
 - Impact of SRTS on children's health
 - Impact of SRTS on walking and biking rates
 - Improved safety following implementation of SRTS
 - Economics of implementing SRTS programs

Key Research Result #1

Actively commuting to and from school could improve mental and physical health.

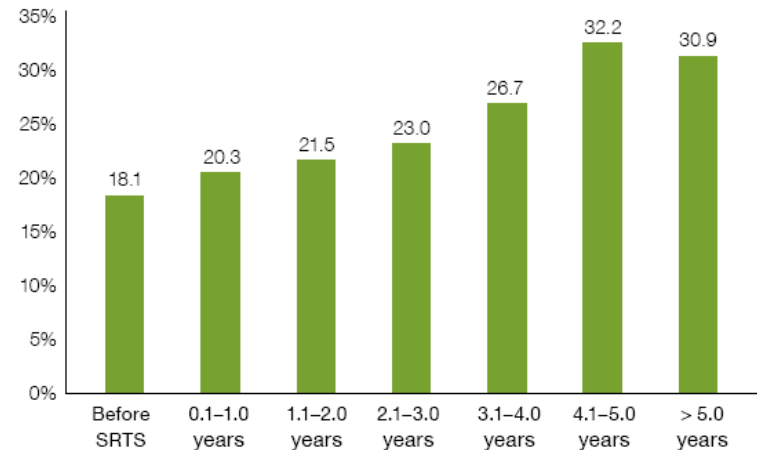
- Walking or biking to school provides an average of 16 of the recommended 60 minutes of daily physical activity for children and adolescents
- A study of 1,700 students from five cities in Spain found that adolescent girls who walked or biked to school were more likely to do better on a standardized test measuring their verbal, numeric and overall cognitive skills.

Key Research Result #2

SRTS has increased the number of students who walk or bike to and from school.

- A study of **801 schools** in DC, FL, OR, and TX found that **SRTS increased the proportion of students walking and biking to school**, and that these **effects built over time**.
- The effect was significant even after adjusting for factors such as school location and demographics, and the study included comparisons to schools that did not participate in the program.

FIGURE 2 Average Rates of Walking and Bicycling to School by Length of Participation in Safe Routes to School Program¹⁶

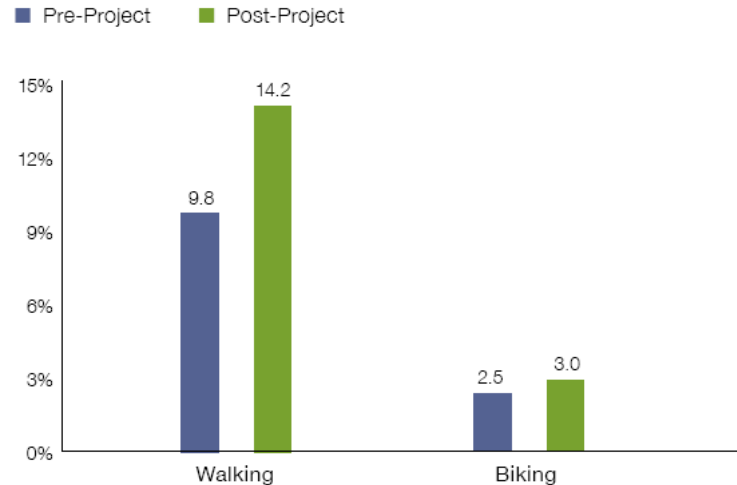


Key Research Result #2

SRTS has increased the number of students who walk or bike to and from school.

- A study on the impact of SRTS in FL, MS, WA, and WI showed that the **walking rate increased from 9.8 percent to 14.2 percent after implementation of SRTS** at the 55 schools studied.
- The **biking rate increased from 2.5 percent to 3 percent** at the 50 schools with available data.

FIGURE 3 Percentage of Students Walking and Biking to School, Before and After SRTS Projects in Five States¹⁷



Key Research Result #3

Unsafe routes make it harder for students to walk or bike to and from school. SRTS has made it safer for students to walk or bike to or from school.

- A New York City study analyzed child pedestrian injuries during school travel hours from 2001 to 2010 and found a **44 percent reduction in injury rates in areas that received SRTS interventions**, compared with no change in similar areas that did not have SRTS interventions.
- In Toronto, researchers found that increased rates of walking and biking did not increase child pedestrian injury rates.

Key Research Result #4

SRTS can lower health care and transportation costs for school districts and families.

- American school districts currently spend **\$100 million to \$500 million annually** to bus children for just one or two miles due to hazardous conditions.
- In New York City, the total cost of implementing SRTS was just over \$10 million, but it produced **estimated cost reductions of \$221 million** by reducing costs associated with injury, lifelong disability, and death.

Conclusions

- Implementation of SRTS programs is associated with **more children walking and biking safely** to and from school in a cost-effective manner.
- Each additional year of SRTS participation leads to more students walking and biking.
- While evaluations of SRTS are limited and based on selected states and cities, the **evidence from multiple large studies supports continued implementation** of such programs.

Policy Implications

- In addition to federal funding, there is a **need for local communities to integrate their own SRTS programs into ongoing planning processes** and **prioritize infrastructure investments** that make it easier and safer for children to walk or bike to and from school.
- Communities can take action through:
 - Subdivision regulations that require sidewalks
 - Education facility plans that ensure access to school by foot and bicycle
 - School wellness policies that include Safe Routes to School
 - Capital improvement plans that prioritize engineering improvements near schools
- Action and investments in low-income communities are also strategies to reduce disparities and benefit adult and youth residents.

Future Research Needs

- Assess the state of knowledge on SRTS effectiveness through periodic review articles every 3 to 5 years.
- Conduct a randomized trial of SRTS and explore whether more comprehensive programs (e.g., sidewalks, crossing guards, and education) are more effective than single component programs (e.g., sidewalks only).
- Studies identifying **SRTS strategies that are effective in specific target populations and locations**; studies that show **broad-based reductions in injuries** associated with implementation of SRTS; and **rigorous cost-effectiveness analyses** would also be helpful for policymakers and advocates.
- Investigate how early exposure to regular walking and biking affects individuals over several years.



Link to Research Review:

<http://activelivingresearch.org/impact-safe-routes-school-programs-walking-and-biking>