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.
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.
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 States](image-url)
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: