



**To:** Transport Planners

**From:** Adrian Davis

**Date:** 11/2018

**Subject:** School Travel Toolbox: No 13 Effectiveness of active school transport interventions

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*Top line:* Interventions may increase active travel to school among children; however, there was substantial variations across studies and quality of evidence remains low.

Consistent evidence shows that children and adolescents who engage in active school transport (AST) are more physically active than those who travel by motorized vehicles. Cycling to and from school can also increase cardiovascular fitness and is associated with a better cardiometabolic health profile. At the population level, replacing motorised travel by AST could reduce exhaust and greenhouse gas emissions. Additional benefits include positive emotions during the school trip, better way-finding skills & superior school grades. Despite these benefits, the prevalence of AST has decreased markedly during recent decades in many countries. To address this issue, many interventions have been implemented. Perhaps the most well known is the Safe Routes to School (SRTS) programme which has received over one billion dollars in funding from the US government. Analyses has concluded that New York City's SRTS program led to a 33-44% reduction in injuries among school-aged children and the programme was cost-effective even when disregarding any potential benefits related to increased physical activity and decreased congestion and pollution. In other locations, school travel plans (STP) have been implemented to address key barriers to AST at the local level, but often with limited funding. Moreover, walking school buses where children walk together on a set route with adult supervision have been implemented in many locations to address parental safety concerns.

Active school transport (AST) is a promising strategy to increase children's physical activity. A systematic review published in 2011 found large variation in the effectiveness of interventions in increasing AST and highlighted several limitations of previous research.<sup>1</sup> Two large SRTS interventions found that interventions including both educational activities and infrastructure changes resulted in greater increases in AST than interventions using only one of these strategies. These results are consistent with social-ecological models that posit that behavior is determined by multiple levels of influence including individual, interpersonal, community, policy and built environment factors.

A more recent systematic review highlights the diversity of interventions that have been implemented to promote AST in the last few years, and shows that travel behavior change varied markedly between interventions.<sup>2</sup> Many interventions show significant increases in AST, but caution is required in interpretation given the low quality of evidence. This underscores a need for interventions using stronger study designs. The study findings have implications for researchers and practitioners. First, it may take time for interventions to have an effect on children's travel behaviors. Therefore, follow-ups of at least 2 years should be conducted when possible to minimize the risk of temporary changes. Second, while many authors indicated that implementation of interventions varied markedly across schools, it is unclear how this variation may influence effectiveness.

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<sup>1</sup> Chillón, P., Evenson, K., Vaughn, A., Ward, D. 2011. A systematic review of interventions for promoting active transportation to school. *International Journal of Behaviour, Nutrition and Physical Activity*, 8(10).

<sup>2</sup> Larouche, R., Mammen, G., Rowe, D., Faulkner, G. 2018. Effectiveness of active school transport interventions: a systematic review and update, *BMC Public Health*, 18: 206.