

Active commuting to school and overall physical activity in children over time

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Introduction and Objective: Evidence suggests that healthy behaviors initiated during childhood are likely to be sustained over time. The objective of this study was to determine whether active commuting to and from school (ACS) at baseline predicted 1) continued ACS, and 2) regular physical activity (PA) at follow-up two to five years later.

Methods: Data were drawn from the New Jersey Child Health Study. Two cohorts of households with 3-15 year-olds in four low-income New Jersey cities were randomly sampled and followed for two to five year periods between 2009 and 2017. Children who walked, bicycled, or skateboarded to or from school at least one day/week, as reported by their parent, were classified as active commuters. PA was measured as number of days per week the child engaged in PA for at least 60 minutes (PA60). Children with complete data at both time points were included in this analysis (n=570 for ACS; n=554 for PA60). Logistic regression was used to examine ACS (yes/no) at time 2; negative binomial regression was used to examine PA60 (0-7 days/week) at time 2. Models were adjusted for child age, sex, and race; parent's education and nativity status (native-born vs foreign-born); household poverty level; and change in the transportation-related PA environment around the child's home from time 1 to time 2. The focal predictor in both models was ACS at time 1. The PA60 model also adjusted for frequency of PA60 at time 1. Distance from home to school will be examined as a moderator in these associations.

Results: The mean age of the sample was 9.4 years. Approximately 59% of children were non-Hispanic black, 35% were Hispanic, 4% were non-Hispanic white, and 3% were another race/ethnicity. Half the children were female. Children who engaged in ACS at time 1, compared to children who did not, were 76% more likely to actively commute at time 2 ($p<0.001$). Similarly, time-1 active commuters engaged in PA for at least 60 minutes/day at time 2, on average, 13% more often than did time-1 non-active commuters ($p<0.001$).

Conclusions: Policies that encourage ACS may result in increased PA throughout childhood.

Public health or related research

