**Are mode and distance of commuting to school associated with higher cardiorespiratory fitness in Slovenian schoolchildren?**

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*Introduction.* One of the most noticeable changes in young people’s lifestyles is the decrease in their physical activity (PA) (Ekelund et al., 2011). Active commuting to school can help achieve daily recommendations for PA (Cooper et al., 2005). Nevertheless, it is unclear whether active commuting has the potential to improve children's health. This study examined the association of commuting mode and distance with cardiorespiratory fitness (CRF) in children.

*Methods.* We conducted a cross‐sectional study involving 713 Slovenian schoolchildren aged 12 to 15 years, using valid data on commuting, home address, CRF, and weekly PA as inclusion criteria. Commuting modes were self-reported and four commuting groups were formed (car, public, wheels and walk group), while CRF was determined with a 20-m shuttle run test. Distance from home to school was calculated using the Geographic Information System, while PA/inactivity patterns were assessed using the SHAPES questionnaire. The effects of commuting mode and distance, controlling for age, gender and amount of total PA, were evaluated using general two linear models for commuting to/from school.

*Results.* The main effect of commuting group on CRF and its interaction with distance were significant in the direction from school to home (P = 0.013 and P = 0.028, respectively), but not in the opposite direction. Predicted differences in CRF between commuting groups were moderate and generally higher for males than females. When comparing commuting group median distance from home to school, males driven by car had a predicted CRF about 4 ml/min/kg lower than those who walked (P = 0.01) or used wheels for commuting (e.g., bicycle, skateboard).

*Discussion.* Commuting distance had a small effect on CRF, except in the car group, where children living near school had a significantly lower CRF than those living farther away. Parents who drive their children to/from school while living within walking or cycling distance appear to be the most promising target group for active commuting interventions. Schools and communities should be encouraged to provide safe routes to school, slower traffic in the school district, and bicycle or other wheeled equipment storage at school.

Cooper, A. R., Andersen, L. B., Wedderkopp, N., Page, A. S., & Froberg, K. (2005). Physical activity levels of children who walk, cycle, or are driven to school. *American Journal of Preventive Medicine, 29*(3), 179–184.

Ekelund, U., Tomkinson, G., & Armstrong, N. (2011). What proportion of youth are physically active? Measurement issues, levels and recent time trends. *British Journal of Sports Medicine, 45*(11), 859–865.

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