



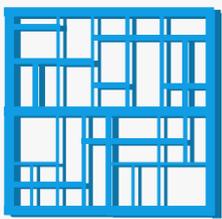
Changes in Street Layout and Physical Activity after Residential Relocation

Land use patterns, urban design features, and transportation systems can influence physical activity.¹



Few longitudinal residential relocation studies have estimated the associations between changes in street connectivity after relocation and changes in physical activity, while none have used Space Syntax Theory.

Space Syntax Theory links street integration with land use and destinations and may provide information on neighbourhood walking patterns.²



A recent longitudinal study* investigated the difference in physical activity between non-movers and those relocating neighbourhood.

Compared to non-movers, those who moved to neighbourhoods with more integrated street layouts experienced increases in certain physical activities:

27.3 min/week more leisure walking



45.7 min/week more moderate intensity physical activity + leisure walking



54.4 min/week more moderate-to-vigorous-intensity physical activity + leisure walking



Associations between changes in street layout score and changes in physical activity were also estimated.

Among movers, a one unit increase in street integration



7.5 min/week increase in leisure walking



Urban design policies that improve neighbourhood street integration may support increases in physical activity at the population level.

*For more information: McCormack, GR, Koohsari, MJ, Vena, JE, Koichiro, O, Tomoki, N, Chapman, J, Martinson, R & Matsalla, G. A longitudinal residential relocation study of changes in street layout and physical activity. *Scientific Reports*. 2021; 11(1): 7691-7691. <https://doi.org/10.1038/s41598-021-86778-y>

References:
1) Farkas, B, Wagner, DJ, Nettel-Aguirre, A, Friedenreich, C, & McCormack, GR. Evidence synthesis - A systematized literature review on the associations between neighbourhood built characteristics and walking among Canadian adults. *Health Promotion and Chronic Disease Prevention in Canada*. 2019; 39(1): 1-14. <https://doi.org/10.24095/hpcdp.39.1.01>
2) Koohsari, MJ, Owen, N, Cerin, E, Giles-Corti, B, & Sugiyama, T. Walkability and walking for transport: characterizing the built environment using space syntax. *The International Journal of Behavioral Nutrition and Physical Activity*. 2016;13(1): 21-121. <https://doi.org/10.1186/s12966-016-0448-9>

