

The link between urban design and childhood obesity

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Credit: Institut national de la recherche scientifique

Children who live in more walkable neighbourhoods have a smaller waist measurement and a lower BMI (body mass index). Those are the findings of a Montreal research team led by INRS professor Tracie A. Barnett. According to the results of the study published in *Preventive Medicine* by Adrian Ghenadenik (lead author) with Professor Barnett (senior contributing author), urban design is a factor in the development of childhood obesity.

The study suggests that infrastructure designed to encourage walking can help reduce [childhood obesity](#). Pedestrian-friendly amenities, such as pedestrian crossing lights, wider sidewalks, and signs to help pedestrians cross the road, are thought to have a greater impact in high-density neighbourhoods. Such features can also encourage children to ride bicycles, play outside, and engage in similar activities, all of which help them burn off energy.

There is one unexpected outcome: In their research, the authors found that BMIs were lower in neighbourhoods with a convenience store. These results demonstrate the importance of fine-tuning the analysis, particularly by taking into account the type of food sold in fast-food outlets and convenience stores. A study on the food environment in Saskatoon published in 2016¹ showed that children with access to high-quality food at low prices, at any type of grocery store located within 800 m of their home, had a lower risk of being overweight. This could also be the case in Montreal.

The research team analyzed and compared data collected two years apart among children in Montreal with a family history of [obesity](#) and who lived at the same address for the duration of the follow-up.

Other ongoing studies are documenting the transformations residential neighbourhoods have undergone in the last ten years to assess how much these transformations have affected the risk of obesity.

More information: A.E. Ghenadenik et al, Neighbourhoods and obesity: A prospective study of characteristics of the built environment and their association with adiposity outcomes in children in Montreal, Canada, *Preventive Medicine* (2018). [DOI: 10.1016/j.ypmed.2018.02.018](https://doi.org/10.1016/j.ypmed.2018.02.018)

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