School Traffic Safety in the City of Toronto



What makes a safe pedestrian environment in the City of Toronto for children?

- » Built environment
- » Speed humps
- » Changes to the built environment
- » Fewer road crossings
- » Drivers following the rules of the road
- » Designated car drop-off areas

Our studies have found:

- » Presence of school crossing guards was related to 14% more walking to school.
- » Collision rates within elementary school attendance boundaries varied greatly.
- » Most child pedestrian collisions occurred outside of school travel times (62%). Most collisions that occurred during school travel times occurred in locations without crossing guards (86%).
- » The installation of speed humps was associated with a 45% decrease in collision rates in children.
- » Each dangerous driving behaviour during school drop-off period were associated with 45% times greater risk of collisions.
- » Poor driving behaviours are observed less at schools with:
 - » less traffic congestion
 - » designated car drop off areas
 - » school crossing guards
- » Schools with greater social disadvantage had higher collision rates.
- » 67% of children were observed walking to school but this varied greatly between schools (28-98%).
- » Parents are concerned with traffic environment safety throughout the route to school and not just at the school site.

Implications:

» Researchers, school boards and cities need to continue to work together to ensure a safe environment around schools and beyond so that children can walk safely to school.

Key messages:

Walking to school

is not related to child pedestrian collisions if the built environment is safe





We are interested in:

Evidence-based interventions related to both reducing pedestrian collisions AND increasing active school transportation.

High quality evaluation of interventions.







Contacts:

Dr. Linda Rothman

Post Doctoral Fellow | Faculty of Health-School of Kinesiology & Health Science York University, Norman Bethune College 416-736-2100 ext. 77211 | lrothman@yorku.ca / linda.rothman@sickkids.ca

Dr. Alison Macpherson

Professor | Faculty of Health-School of Kinesiology & Health Science York University, Norman Bethune College 416-736-2100 ext. 77216 | alison3@yorku.ca

Dr. Andrew Howard

Orthopaedic Surgeon, Senior Scientist | Child Health Evaluative Sciences Hospital for Sick Children 416-813-6430 | andrew.howard@sickkids.ca

Dr. Ron Buliung

Professor, Geography | University of Toronto Mississauga ron.buliung@utoronto.ca

Research articles:

- 1. Rothman L, Macarthur C, To T, Buliung R, Howard A. Motor vehicle-pedestrian collisions and walking to school: the role of the built environment. *Pediatrics* 2014;33 (5): 776-784. http://pediatrics.aappublications.org/content/pediatrics/133/5/776.full.pdf
- Rothman L, To T, Buliung R, Macarthur C, Howard A. Influence of social and built environment features on children's walking to school: an observational study. Prev. Med., 2014;60:10-15. http://ac.els-cdn.com/S0091743513004593/1-s2.0-S0091743513004593main.pdf? tid=fb22ac2c-d9c5-11e5-8162-00000aab0f02&acdnat=1456188185 2fb6c8c7442d0ebd87585694b8c7d7fd
- 3. Rothman L, Perry D, Buliung R, Macarthur C, To T, Macpherson A, Larsen K, Howard A. Do school crossing guards make crossing roads safer? An analysis of 27,827 pedestrian collisions. *BMC Public Health*, 2015, 15:732. https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-015-2065-y
- 4. Rothman L, Macpherson A, Buliung R, To T, Macarthur C, Larsen K, Howard, A. Installation of speed humps and pedestrian-motor vehicle collisions in Toronto, Canada: a quasi-experimental study. *BMC Public Health*, 2015, 15:774. https://bmcpublichealth.biomed-central.com/articles/10.1186/s12889-015-2116-4
- 5. Rothman L, Buliung R, To T, Macarthur C, Macpherson A, Howard A. Association between parent perception of traffic danger, walking to school and the built environment, *J of Transport and Health*, 2015;2(3): 327-335.
- 6. Rothman L, Buliung R, Macarthur C, To Teresa, Howard A. Walking and child pedestrian injury: a systematic review of built environment correlates of safe walking. *Inj Prev* 2014;20:41-49.
- 7. Rothman L, Howard A, Buliung R, Macarthur C, Macpherson A. Dangerous car drop-off behaviours and child pedestrian-motor vehicle collisions: an observational study. *Traffic Inj Prev*, 2016, DOI: 10.1080/15389588.2015. 1116041