

# Keeping children safe: Rethinking design

October 5 2009

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Injury is the leading cause of death for children over the age of 1 in industrialized countries and improving the safety of the manmade (built) environment will benefit children's health, according to an article in *CMAJ (Canadian Medical Association Journal)*.

Injury accounts for about 40% of childhood deaths in industrialized countries and is even higher in developing countries. It often involves failure to negotiate a manmade environment. Death rates from injury in affluent countries is 15.3 per 100,000 boys and 10 per 100,000 for girls among children 14 and younger. In developing countries, the rates are 50.5 per 100,000 boys and 43.5 per 100,000 girls.

In 2002, 371,000 boys and 289,000 girls worldwide died of injury, with more than 180,000 - mostly pedestrians - killed by traffic.

In addition to causing injury and death, unsafe environments are barriers to physical activity that is important to life long health. Changes such as speed control, traffic light phasing, fencing spaces and enhancing pedestrian visibility can reduce injuries by 50 to 75% in specific locations and 25% in wider areas. By making traffic safer for children, it increases the likelihood they will walk to school and can derive health benefits from physical activity. In fact, 50% of Canadian children never walk to school compared with only 17% who do most of the time.

"By giving priority to automotive over pedestrian transportation we have allowed road traffic to become the leading cause of death among our children," writes Dr. Andrew Howard of the University of Toronto and

The Hospital for Sick Children (SickKids). "North American children are increasingly sedentary," and urban sprawl is linked to higher rates of traffic injury and obesity.

Other ways to modify the built environment include appropriate playground equipment that minimizes injuries while encouraging activity. Falls from climbing equipment are 5 times more likely to result in severe fractures than falls from a standing height. Evidence shows that playgrounds that did not comply with standards from the Canadian Standards Association (CSA) had twice the rate of injury of compliant playgrounds, although these standards are voluntary without regulatory authority for most Canadian playgrounds.

Fencing around pools to limit deaths from drowning and modification of homes and apartments to prevent falls from windows are other examples of changes to physical surroundings that can save children's lives.

"Our built environment influences our children's levels of activity, their physical health and their risk for [injury](#)," writes Dr. Howard. "Intelligent planning, particularly with consideration for urban design and traffic engineering to emphasize safe walking and cycling, has enormous potential to improve the health and safety of [children](#) now and across the lifespan."

More information: <http://www.cmaj.ca/press/cmaj080162.pdf>

Source: [Canadian Medical Association Journal](#) ([news](#) : [web](#))

Citation: Keeping children safe: Rethinking design (2009, October 5) retrieved 24 April 2024 from <https://medicalxpress.com/news/2009-10-children-safe-rethinking.html>

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