

# Environment key to preventing childhood disabilities

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The United States government would get a better bang for its health-care buck in managing the country's most prevalent childhood disabilities if it invested more in eliminating socio-environmental risk factors than in developing medicines.

That's the key conclusion of *Prevention of Disability in Children: Elevating the Role of Environment*, a new paper co-authored by a Simon Fraser University researcher. The paper is in the May issue of the *Future of the Children* journal, which is produced by the Woodrow Wilson School of Public and International Affairs at Princeton University and the Brookings Institution.

"Our conclusions may sound obvious or benign, but they may also be viewed as medical heresy," says Bruce Lanphear, the study's SFU co-author. The health scientist was also involved in studies showing that there is no safe level of lead exposure for children.

"Most of us are convinced that we will solve our health care problems by investing in genetic research, stem cell research and drugs. But, with the exception of vaccines and antibiotics, the best that can be achieved by clinical intervention is enhanced treatment or early detection. It will not prevent disease."

Citing an American economic analysis of [environmental hazards](#), the authors note that the cost of disease from exposure to pollutants linked with asthma, cancer and neurobehavioral disorders in a single year is \$76

billion.

Another study "estimated a total potential net savings from the elimination of lead hazards, of \$118 billion to \$269 billion."

Referencing numerous studies, the authors track how declining infections and rising prenatal and childhood exposure to [environmental toxins](#) is "shifting the burden of illness among children and adults from infectious to [chronic diseases](#)."

Even so-called safe levels of toxins are now linked to chronic diseases.

As examples of rising incidents of childhood disabilities resulting from exposure to a wide range of [environmental contaminants](#), including junk food and tobacco, the authors cite the following:

"...the number of children diagnosed with an activity limitation stemming from a chronic health condition rose from 1.8 per cent in 1960 to 7.3 per cent in 2006, while the prevalence of diagnosed developmental disabilities rose from 12.8 per cent in 1997-99 to 15 per cent in 2006-08."

Toxins, such as airborne pollutants, lead, tobacco, mercury, polychlorinated biphenyls (PCBs), as well as suspected ones, such as organophosphate pesticides and bisphenol A, are combining to increase the incidence of prevalent childhood disabilities.

Asthma, obesity, mental illness and neuro-behavioural problems, such as ADHD and autism, are among these disabilities.

Asked how much this portrait of American childhood disability linked to environmental contamination is representative of Canada, Lanphear says: "The levels of exposures to airborne pollutants, lead, BPA and

other chemicals are comparable or slightly lower in Canada than the U.S.

"Canada's surveillance for these neurodevelopmental disabilities is too insufficient to say anything about their national prevalence or whether the incidence of ADHD and autism is increasing. But the overall pattern for these disabilities is quite similar in Canada."

That being said, the authors recommend using Vancouver, British Columbia as a model for creating healthy cities of the future.

"We have low levels of air pollution for a large city," says Lanphear.

"We also have low smoking rates, few highways that fragment the city, which encourages exercise, low levels of lead and a closed water system with pristine land to collect water. Our government leaders are also strongly committed to making Vancouver the greenest city in the world by 2010. Although there is much to do, it gives me great comfort to raise a family in Vancouver."

Provided by Simon Fraser University

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