

Research About – Child and Youth Health

CIHR

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Through CIHR, the Government of Canada invested approximately **\$80.3 million** in 2007-08 in child and youth health-related research across Canada.



CIHR IRSC

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The Facts

- Canada's infant mortality rate – the number of deaths in children under one year of age per 1,000 live births – was 5.9 in 2005.
- An estimated 202,350 Canadian children aged 14 and under – or 3.7% of that age group – reported having a disability in 2006, up from 3.3% in 2001. Learning disabilities increased during that time, joining chronic conditions as the most common form of child disability.
- Almost 12% of Canadians aged 12-19 have asthma and 1.5% of school-aged children have a peanut allergy.
- Autism spectrum disorder (ASD) is four times more common in boys than in girls and the first signs of the disorder are usually present by three years of age. International studies now indicate that about one in every 150-160 children has autism.

(Sources: Statistics Canada, the Canadian Cancer Society, AllerGen, Health Canada)



Finding Solutions

Breastfed babies ace IQ tests

A CIHR-funded study that tracked 14,000 children for more than six years has concluded that breastfeeding can boost a child's IQ. In this study, led by McGill University's Dr. Michael S. Kramer, a control group of mothers received ordinary maternity and pediatric care while an experimental group was encouraged to exclusively breastfeed their babies for an extended period of time. The mothers were of similar age, health and social-economic status. When teachers and pediatricians assessed cognitive abilities, the breastfed children scored higher.

Delayed vaccination diminishes asthma risk

According to a CIHR-supported study, delaying a child's first vaccination for diphtheria, pertussis, and tetanus (DPT) cuts the risk of developing asthma by 50%. Dr. Anita Kozyrskyj and a team of researchers at the University of Manitoba examined the immunization and health records of Manitoba children from birth through age seven. The province recommends vaccinating children at two, four, six and 18 months. The researchers found that of 11,531 children who received at least four doses of DPT, the risk of developing asthma was reduced by half when the first dose was delayed by more than two months. If the first three doses were delayed, the likelihood of asthma decreased by 60%.

Caffeine used to regulate breathing of premature babies

Premature babies who received caffeine to regulate their breathing had a lower risk of disabilities up to 2 years after birth. Dr. Barbara Schmidt, a CIHR-funded researcher at McMaster University, led an international research team that studied over 2,000 premature babies who received either caffeine or a placebo, and found that those receiving caffeine had better rates of survival and were less likely to develop cerebral palsy and cognitive delay. The results of this study were published in the *New England Journal of Medicine*.

The Researchers

Dr. Éric Dewailly – Growing-up in a changing environment

For a southerner arriving in an Inuit community in Canada's North, one fact stands-out: the number of youth.

Children under 14 make up about 40% of the population in northern communities, double the percentage in Canada's non-Inuit population. The combination of this youthful population and rapid social and environmental change in the North raises major health concerns, says Dr. Éric Dewailly, a professor of social and preventative medicine at Laval University and co-director of the CIHR-funded Nasivvik Centre, Canada's only research network devoted to Inuit health.

He and his colleagues are working with the Makivik Corporation in an initiative that could soon make the Nunavik region in northern Quebec the first in Canada to ban trans fats in foods. These harmful fats are a particular concern in northern communities which rely heavily on off-the-shelf foods.

Inuit youth are the biggest consumers of trans fats, says Dr. Dewailly. A recent study led by Dr. Dewailly's Laval University colleague, postdoctoral researcher Dr. Émilie Council, found that



the youngest adults in 14 Nunavik communities had 50% higher levels of trans fatty acid intake than those older than 65.

The study also compared trans fatty acid levels in Inuit from Nunavik with those from Greenland, where there's already a ban on trans fats in foods. The Nunavik Inuit had trans fatty acid levels three times as high as their northern neighbours.

"The study shows that imported food doesn't have to be junk food," says Dr. Dewailly. Looking towards the long-term health of today's Inuit youth, Dr. Dewailly is leading Canadian participation in the Global Circumpolar Health Cohort Study. Begun in 2004, the study is collecting health data on 10,000 Inuit in 150 communities in Nunavut, the Northwest Territories, Alaska and Greenland. The study will provide critical baseline health information as one of Canada's largest youth segments grows-up.



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