

THE CANADIAN HEALTHY INFANT LONGITUDINAL DEVELOPMENT (CHILD) STUDY

How 3,500 Canadian children are helping us find ways to prevent asthma, allergies, obesity and other chronic diseases



A novel platform—unique in the world—to predict, prevent and treat disease.

The CHILD Study is a globally leading birth cohort study that is following 3,500 Canadian children and their families from pre-birth to school age and beyond.

- an unprecedented pool of **early-life human genetics, epigenetics and microbiome data**: 600,000 biological samples and 500,000 questionnaire responses spanning genetics, epigenetics, environmental exposures, stress, nutrition and lifestyle
- CHILD is answering questions about the origins of chronic diseases and identifying early life “critical windows” that will build healthier futures
 - an extraordinary opportunity to study **children’s health** and the development of asthma, allergies, obesity, diabetes, and cardiovascular diseases over the life course
 - **maternal-child health** impact areas focus on conditions linked to high morbidity such as neurodevelopment and mental health

Mobilizing knowledge from CHILD	
Peer-reviewed publications	25
Abstracts (national and international)	150
Media stories featuring the CHILD Study	675

CHILD Study Platform Investors	
AllerGen	\$13,270,000
CIHR	\$21,469,199
Federal (other)	\$2,871,875
Provincial	\$1,558,730
Industry	\$442,000
TOTAL since 2005	\$39,611,804

A pan-Canadian effort with a global reputation.

- a **national effort** involving four provinces (British Columbia, Alberta, Manitoba, Ontario), 30 Canadian researchers/scientists, plus 45 research trainees at 11 universities and hospitals
- positioning Canadians as **global leaders** in the Developmental Origins of Health and Disease (DOHaD)
- a **critical platform** integral to other scientific studies and new diagnostics and treatments
 - **41 research grants** valued at more than **\$39M** have been/are dependent on the CHILD Study’s expertise, samples and data
 - related **patent filings** at The University of British Columbia and the University of Alberta are contributing to the **commercialization of novel therapies** emerging from CHILD research

Breakthrough scientific findings generating worldwide attention:



100 Days!

4 gut bacteria protect children against asthma
first 100 days are critical



Science Translational Medicine
BBC, Fox News, Washington Post



air pollution increases risk of allergies by one year of age



Environmental Health Perspectives
CBC, Vancouver Sun, Toronto Sun



fruit consumption in pregnancy boosts babies' cognitive development



EBioMedicine
CTV News, Global News



sweetener intake in pregnancy may increase babies' risk of obesity



JAMA Pediatrics
LA Times, TIME, CBS



gut bacteria at 3 months
sensitization to milk, egg, peanut at 12 months



EDITOR'S CHOICE

Clinical & Experimental Allergy
CTV, Toronto Star



antibiotics during labour depletes babies' microbes
breastfeeding modifies effects at 12 months



BJOG: An International Journal of Obstetrics and Gynaecology
Macleans



environmental exposures assessed for over 3,200 Canadian babies



Jrnl of Exposure Science and Environmental Epidemiology



cesarean deliveries and formula feeding alter microbiome

Bruce Squires award:
"relevance to clinical practice"



Can. Medical Association Jnl
TIME, New York Times, Globe & Mail

Why continue to build on CIHR's investment in the CHILD Study?

By 2018, the CHILD Study will inform decisions on:

- healthy homes and communities
- relationship between prenatal and infant nutrition on infant food allergy
- role of viruses and genetics on lung health
- links between immune development and infant microbiome, host genetics, allergies, eczema, prenatal psychosocial and demographic factors
- impact of food, allergen and mould exposures on wheeze, dermatitis and asthma
- impact of phthalate exposure in early life on the development of allergic disease
- role of sleep on obesity and neurodevelopment
- link between psychosocial factors and asthma outcomes

Award-winning CHILD Study video

- 4,000 views in 88 countries

