

# Backgrounder

## Allergy and Asthma Study

The **Canadian Healthy Infant Longitudinal Development (CHILD) Study** is a national initiative to study the development of asthma and other environmentally triggered allergic diseases in 5,000 Canadian infants from pre-birth through early childhood to the age of five years.

### HAMILTON

The Canadian Healthy Infant Longitudinal Development study's national administrative centre is located at the **Firestone Institute for Respiratory Health** (St. Joseph's Healthcare Hamilton) in Hamilton, Ontario, in partnership with **McMaster University**. This centre is responsible for coordinating the protocols and processes used by investigators and research sites across the country.

**5,000 pregnant women** will be recruited at regional centres, at the following sites:

### TORONTO

The CHILD Study's local administrative centre is located at **The Hospital for Sick Children (SickKids)**. Mothers will be recruited at **Mount Sinai Hospital** in Toronto with follow-up at SickKids. The CHILD study also has local investigators across the city at University of Toronto and affiliated sites.

### WINNIPEG

The CHILD Study's local administrative centre is located at the **University of Manitoba** in partnership with **The Manitoba Institute of Child Health**, a division of The Children's Hospital Foundation. Mothers will be recruited at **St. Boniface General Hospital** and **Winnipeg Health Sciences Centre**.

### EDMONTON

The CHILD Study's local administrative centre is located at the **University of Alberta** in partnership with the **Stollery Children's Hospital**. Mothers will be recruited at **Grey Nuns Community Hospital**, **Misericordia Community Hospital**, **Royal Alexandra Hospital** and **Sturgeon Community Hospital**.

### VANCOUVER

The CHILD Study's local administrative centre is located at the Child & Family Research Institute, **University of British Columbia**. Mothers will be recruited at **BC Women's Hospital & Health Centre** with follow-up at **BC Children's Hospital**. The CHILD study also has BC-based investigators at **St. Paul's Hospital**, **University of British Columbia** and **Simon Fraser University**.

For more information, please go to [www.canadianchildstudy.ca](http://www.canadianchildstudy.ca)

## **Impact of asthma and allergic disease**

- Allergic disease is increasing in epidemic proportions worldwide, and has become the most prevalent of all chronic conditions in the developed world.
- In 1993, \$12 billion was spent on asthma in Canada. (*LCDC, Health Canada. Economic burden of illness in Canada, 1993. Ottawa, 1997. Catalogue No H21-136/1993E*)
- In 1998, respiratory diseases were the leading cause of short-term disability (24.8%), at a cost of \$2.4 billion. (*LCDC, Health Canada. Economic burden of illness in Canada, 1993. Ottawa, 1997. Catalogue No H21-136/1993E*)
- Reported asthma rates have increased four-fold over the past 20 years.

## **The Goal of the Study**

To determine the role of environmental factors and their interactions with genetic and personal factors in the development of allergy and asthma in children.

## **What will the CHILD Study look at?**

- Pre-natal and early post-natal environmental exposures and their role in the development of allergy and asthma.
- The effect that viral infections play in the development of asthma/allergy.
- The effects of chronic family stress on the development of asthma and allergy in the early years of life.
- The role played by genetics in the development of allergy and asthma.
- The role of diet in early life in relation to the development of allergy and asthma
- Early life lung development and growth.
- The role that maternal smoking plays in the development of asthma and allergy.
- Understanding why there is a gender gap: Boys are more likely to suffer from asthma as children, but girls are more likely to develop asthma as they enter their teens and into adulthood.
- The role that breast feeding plays in the development of, or protection from, asthma/allergy.
- The role that socioeconomic status plays in development of allergy/asthma.

## How will results from the CHILD Study affect Canadians?

- Provide groundbreaking data on early life development of asthma to support diagnosis, treatment and management of asthma.
- Provide data on indoor air pollution that will inform public health and building regulations.
- Improved disease management/quality of life for Canadians with asthma/allergic disease.
- Build an evidence base that will inform legislative and regulatory decision-makers in support of health care and environment policy, regulation and programming.
- CHILD is a longitudinal study that can be built upon and expanded to answer a range of other health-environment related research questions.

## Recruitment highlights

- Moms-to-be will be recruited in early to mid pregnancy.
- Children and their families will be followed for the first five years of their lives.
- In addition to clinical assessments and questionnaires, CHILD study representatives will take dust samples from the home as part of the environmental component of the study.

## CHILD Study Funding

### Current Partners

AllerGen NCE Inc.	\$6 million
Canadian Institutes of Health Research	\$6 million
Canada Mortgage and Housing Corporation	\$ 250,000
Childhood Asthma Foundation	\$ 250,000
Health Canada	Advisory
Environment Canada	Air quality data

To fully realize the potential of the CHILD Study, AllerGen and CHILD representatives are seeking additional partners to contribute an additional \$36 million over six years. (cash and in-kind support).

## About AllerGen

AllerGen NCE Inc. is a network of more than 150 investigators, 190 trainees and technicians and over 140 partners conducting leading-edge research in allergic and related immune disease. Research experts in allergy, immunology, genetics and genomics, epidemiology, toxicology, biochemistry, biotherapeutics, environmental sciences, psychosocial health, occupational and workplace health, public policy, economics, ethics, business and commerce are united in basic and applied research directed towards solving complex problems surrounding allergic disease. By studying the causes and progression of allergic disease in collaboration with partners from the private, public and academic sectors, AllerGen research will contribute to strategies to ease the suffering of those already afflicted, and potentially prevent children from developing this chronic disease.

For more information about AllerGen and its research, please go to [www.allergen-nce.ca](http://www.allergen-nce.ca)

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