



CHILD STUDY

TORONTO LIFE & TIMES

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AUG 2016

To All of Our CHILD Families...

We'd like to extend a big thank you for your generosity and continued commitment to the study! With the 5 year clinic visits underway, this has been another exciting year. We have already completed over 262 5-year visits in Toronto, with many more to be completed over the next year. With every clinic visit and questionnaire that is completed, we learn more about the origins of allergies, asthma, and other chronic diseases.



Pictured: The Toronto CHILD Team (2015)

The CHILD Study has become a national platform for Canadian researchers to explore all of the factors that contribute to the healthy development of children. As the study progresses, we are beginning to see exciting new results - and it's all thanks to you! This issue features some of these research highlights. Take a look to see what we have already accomplished together and what lies ahead for the future.

Haven't Had your 5 Year Visit Yet?

Here's a reminder on what to expect:

- ✓ Clinical Assessment
- ✓ Blood , Urine, Nasal Sample
- ✓ Breathing Tests
- ✓ Allergy Skin Test
- ✓ Measurements



PLUS: A chance to repeat 2 of the breathing tests after 2 puffs from a bronchodilator



Check out the new CHILD Study video, winner of the 2015 Canadian Institute for Health Research (CIHR) Video Competition:

<http://allergen-nce.ca/child-study-video-in-cihr-competition/>

More information about the breathing Tests?

The Toronto Site has a unique role in the CHILD Study. We have the important task of taking a closer look at the lung function of children. During clinic visits, study members have had the opportunity to participate in various breathing tests that help measure lung function. We are using these lung function measures to track healthy lung development and, together with the questionnaire data and samples, identify the root causes of respiratory diseases, like asthma.



CIHR Funds CHILD Researchers

Three CHILD study research teams, led by Dr. Subbarao, Dr. Turvey and Dr. Dolinsky were awarded a total of nearly \$6million over five years. They will explore how early life environmental factors impact long-term health and the development of chronic disease. For more exciting information about these grants visit:

<http://allergen-nce.ca/wp-content/uploads/EGCD.pdf>

Toronto CHILD Study Stats

- 772 Home visits completed
- 699 1 year visits completed
- 655 3 year visits completed
- 262 5 year visits completed so far

National CHILD Study Stats

- 3,221 Active participants
- Over 600,000 samples collected
- Over 500,000 questionnaires done

Are you approaching the 4 year or 5 year questionnaire completion time point?

Please login online to complete them! <https://www.healthdiary.ca/CHILDStudy/ECRF/>

We want to hear from you!

Have you changed any of your contact information? You can update the Toronto CHILD Study team by telephone

416-813-7765

or by email

child.study@sickkids.ca

We are always happy to help with any questions!

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www.canadianchildstudy.ca



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The CHILD Study in the News...

Research from the CHILD Study has been gaining momentum! New findings have received a wide range of media coverage, including MacLean's Magazine, CTV news, CBC Radio, the Toronto Star, and Today's Parent. Take a look at some of these highlights below:



TRUST YOUR GUT!

The microbiome has become a hot topic of research in the past decade. Many studies have been looking at how the bacteria in our gut influence our health, and the CHILD Study is no exception. Analysis of the stool samples collected at the 3 month and 1 year visits have been a great tool for track the development of the gut microbiome (all the bacteria in your gut!) over the first year of life. This past September, the Toronto Star published the article "Canadian study identifies 'critical window' for developing asthma". Dr. Stuart

Turvey, the Vancouver CHILD site leader, discusses how these stool samples reveal that children at highest risk for developing asthma have low levels of four specific bacteria at 3 months of age. This suggests that babies have a critical window for gut microbe changes, and these changes are important to human health and chronic disease. This work was later featured in MacLean's November 2015 Issue. In a follow-up article released in November, Dr. Anita Kozyrskij, senior author with the CHILD Study, discusses another piece of the micro-

biome puzzle. Her research found that receiving antibiotics during delivery changes levels of different gut bacteria in babies. This is thought to have an affect on their immune system.

With the continued contributions of our CHILD participants, this important research will continue! Dr. Turvey's research will be replicated in other studies, and Dr. Kozyrskij's future research is looking at the effect these bacterial changes have on food allergies in early childhood.



EARLY ORIGINS OF ALLERGY AND ASTHMA

In the CHILD Study, we have been following families over time. This has provided us with a wealth of information on how early environmental factors might later effect the risk of allergies and asthma. Dr. Meghan Azad, from the University of Manitoba, is one

of the many researchers trying to understand the early-life origins of health and disease. Her research from the CHILD study was recently showcased at a meeting between former Prime Minister Stephen Harper and Bill Gates to show Canada's strong scientific leadership in maternal, newborn, and child health. Using data collected from the CHILD Study, Dr. Azad's research focuses on how breastfeeding and breast

milk can affect the development of childhood obesity, asthma, allergies, Type 2 diabetes and other conditions. She has found that 'good bacteria' in breast milk protects against asthma in later life. This invaluable information will help shape breastfeeding recommendations and could guide future development of baby formula.

The study of early exposures has extended into allergy research as well. The Vancouver Sun published

an article last March on Dr. Michael Brauer's research. Using CHILD data, he has found evidence that germ-free environments in early life are related to rising allergy rates. He showed that children who had contact with more microorganisms were less likely to be sensitive to food or airborne allergens. He also mentions that children with no food allergies are more likely to have eaten dairy products, eggs, nuts, and grains in the first year of life.

For more updates on CHILD in the News: Check out <http://allergen-nce.ca/category/child-study/>

So What's Next?

With all this research going on, the CHILD Study is really making a difference. Results are in the news, and even more are on the way! The CHILD Study has recently been in collaboration with SYMBIOTA, a sub-study that will use CHILD as a research platform to further our understanding of the infant gut microbiome. CHILD continues its partnership with Environment Canada, and through AllerGen, one of CHILD's funding partners, we are collaborating with Food Allergy Canada and other influential organizations to help translate our research into healthcare practice.

So what's next for the CHILD Study? We want to keep a great thing going by extending the study beyond 5 years of age. Keep a look out for more information inviting you to participate in a future clinic visit, possibly at 8 years of age. We thank you again for your ongoing involvement, and hope you move forward on this journey with us!

