

Say Hello to Summer!

Hello All ! It seems that we have sprung right past spring and into summer and every year spent with our CHILD families flies by quicker and quicker. When doing CHILD research, it is important to have data from as many families as possible so we can give you the most accurate and complete information available. We are well on our way towards revisiting everyone at 5 years and we continue to discover things. Your participation all the way to 5 years has been really important to our research. This season's newsletter presents many exciting articles using CHILD data from across the country!

As you know, we are always interested in hearing what our CHILD families are up to. If you have any questions or concerns about the study, or just want to share an interesting story with us, feel free to send us an email, give us a call or connect with us on social media. Even for those of you who have completed all the visits, we are always happy to hear what's happening in your lives. We love keeping in contact and we will continue to reach out to you through social media and our newsletters.



Left: Oliver & Flex, Middle: Reid, Top: Katie, Bottom: Maya

Have you shared a photo of your CHILD yet?
Feel free to mail or email us one !

**Saturday
Appointments are
Available!**

Call to save your spot!

Important Numbers

- * **1000** One Year Visits have been completed!
- * **962** Three Year Visits have been completed!
- * **582** Five Year Visits have been completed!

In This Issue

- Say hello to summer.....1
- Gut bacteria and asthma.....2
- Artificial sweeteners and BMI.....3
- Future CHILD research.....4
- Learning development and fruit consumption.....4
- Peanut allergy research.....5
- Antibiotics and breastfeeding.....6

Gut Bacteria in the First 100 Days of Life and Risk of Childhood Asthma

A new study has come out by Dr. Stuart Turvey and other CHILD researchers in the prestigious Science Translational Medicine journal looking at the effect of gut bacteria changes on development of asthma. Gut bacteria from stool samples from 319 CHILD study children were analyzed. Babies that were at risk for asthma had differences in the bacteria in the first 100 days of life. Certain types of bacteria were lower in children who wheezed.

The researchers then used this information to study the effect of the different bacteria in a mouse model of asthma and allergy. Mice were either given gut bacteria samples from children at risk for asthma or gut bacteria samples from “healthy” children. Airway inflammation, which is a signal for asthma, was much lower in mice who had the “healthy” gut bacteria; bacteria that was missing in the children at risk for asthma. These results show that these bacteria, which were missing from children at risk for asthma, may be important in the development of asthma.

The results of this study suggest that the first 100 days of life are a critical window in which changes in gut microbiota may be linked to asthma and allergies. Check out the article here: <http://stm.sciencemag.org/content/7/307/307ra152>



Members of our team wearing pink on *Pink Shirt Day*, an anti-bullying initiative to show support for those who have been victims of bullying. Kindness is one size fits all!!

Hooray! The AllerGen NCE CHILD Study video placed 1st in the IHDCYH Talks Video Competition. This informational video introduces the process and potential outcomes of all the efforts and contributions of the CHILD Study. Thank you to everyone who voted!! You can check out the video using this link:



<https://www.youtube.com/watch?v=2PRmugtizws>



Left to Right: Lily, Hayley, Alaeo

Diet Soft Drinks During Pregnancy and Infant BMI: CHILD Study Data

To find out if consumption of artificial sweeteners by mothers during pregnancy had any affect on childhood obesity, 3033 mother– child pairs from the CHILD study were analyzed. Mothers filled out a survey during pregnancy that asked them to track how often they were drinking artificially-sweetened beverages. According to Body Mass Index (BMI) guidelines, 5.1% of 1 year olds were overweight, and 29.5% of mothers drank artificially-sweetened beverages during pregnancy. Of these mothers, 5.1% drank artificially-sweetened beverages daily.

Daily consumption (compared with no consumption) was associated with an increase in child BMI score and twice the risk of the child being overweight at 1 year. The children’s BMIs were not effected at birth (only at 1 year) suggesting that the artificial sweeteners only had an impact on growth following

birth but not on growth while the child was still in the womb. The effects were not influenced by the mother’s BMI, the quality of diet, or other obesity risk factors, such as shorter time breastfeeding or introducing solid foods earlier in life.

This study received a lot of attention in the media. Feel free to click on the links below and read more:

[TIME Magazine](#)

[VOGUE](#)

[CTV News](#)

[Global News](#)

[The Toronto Star](#)

We had a ton of fun planting flowers and making the University of Manitoba look beautiful during this year’s Campus Beautification Day.



Devoted to Childhood Health

WAVE magazine has written an article featuring a new research initiative called the Developmental Origins of Chronic Disease Network (DEVOTION) which is dedicated to the study of chronic childhood diseases, such as asthma and Type 2 diabetes. DEVOTION plans to bring together the research of as many as 26 scientists dedicated to

these diseases. The CHILD study is focused on this area of childhood health and we are very excited to be a part of this initiative! A picture of our nurse, Doug Houlbrook, was featured in the WAVE article along with CHILD participant Hailey.



Members of our CHILD team volunteered at this years **Teddy Bear Picnic**. Some of you may have seen us in the Allergy section!

Future CHILD Research

The Canadian Institute of Health Research has awarded nearly 6 million dollars in research grants to 3 different research teams working with the CHILD study. The funded projects will examine how genes and the environment affect lung health and chronic lung disease, look into ways of predicting and preventing asthma, and study how exposure to the environment during pregnancy may be related to childhood obesity.

Fruit in Pregnancy and Infant Development

In a study looking at the impact of fruit consumption on learning and memory, learning development data from 688 1 year old CHILD subjects was assessed. Each daily serving of fruit eaten by the mothers of these children was associated with a 2.38 point increase in the child's 1 year learning development. A food nutrient in fruit called lycopene was found to be the most strongly related to learning development with higher levels of lycopene relating to higher 1 year learning development. The researchers also used fruit flies to test their findings. The fruit flies that had diets of fruit juice while pregnant produced offspring with 30% higher learning performance scores compared to the offspring of flies who did not have the fruit juice. This suggests that pregnancy is an important time to impact the learning development of children. It is still unclear whether eating fruit during pregnancy will have this benefit later in life. To view the article follow this link: <http://www.sciencedirect.com/science/article/pii/S235239641630161X>



Researchers at the University of Manitoba are looking for volunteers for a research study examining health in Manitoba.

We are looking at the interaction between diet, physical activity, sleep and their association with chronic diseases.

PARTICIPANTS NEEDED!

If you are between 30-46 YEARS OF AGE, you may be able to join our study.

For detailed information please contact us:

TMPLRtrial@umanitoba.ca

t: 204 480.1042 / 204 298.5483

www.TMPLR.ca

 **@TMPLRp**

Dr. Peter Jones & Dr. Meghan Azad
Program Directors

Henry Hoops to Help

CHILD staff member, **Henry Huang**, played in University of Manitoba's annual fundraising basketball game. U of M staff competed against students to raise money for *Basketballs for Inner-city Kids* and *Swish*, charities that give inner-city youth the opportunity to shoot some hoops.



Is Your Child Allergic to Peanuts?

Dr. Elinor Simons continues to enroll CHILD participants to undergo masked challenges to peanut if they have had a positive skin test to peanut at a CHILD visit and have not tried peanut or have not had a recent reaction. This study will help to confirm a peanut allergy or allow a child who is not allergic to start eating peanut. Four children have completed their challenges and more are being enrolled. Thank you to the families who have participated or expressed interest in this study!

Have you had a change of address or phone number recently? Update your information with Ingrid at 204 -789-3475 and iloewen@chrim.ca

Contact Us!

CHILD Study
Manitoba
John Buhler Research
Centre
505-715 McDermot
Avenue
Winnipeg, Manitoba
R3E 3P4

CHILD Manitoba
Research Coordinator:
Rishma Chooniedass

Phone:
204-789-3978
Fax: 204-789-3986
E-mail:
rchooniedass@chrim.ca



www.canadianchildstudy.ca/

Follow us on:

Facebook:



[www.facebook.com/
child.studywinnipeg](http://www.facebook.com/child.studywinnipeg)

Twitter:



[www.twitter.com/
CHILDStudyMB](http://www.twitter.com/CHILDStudyMB)

Do Antibiotics during Pregnancy Affect the Infant Gut Bacteria?

A recent article by Dr. Meghan Azad and others looks at the effect of antibiotics given to mothers through an IV during labour, delivery, and shortly after birth (intrapartum antibiotics) on bacteria in babies' tummies (gut microbiota). The study used data from 198 CHILD study participants. 21% of mothers received intrapartum antibiotics for Group B Streptococcus or pre-labour rupture of membranes and 23% were given the antibiotics for caesarean section. The gut microbiota of babies were affected by intrapartum antibiotics in both C sections and vaginal deliveries.

At 3 months, different gut microbiota communities were seen in babies from mothers who received intrapartum antibiotics for any reason compared with babies of mothers who did not receive antibiotics. Interestingly, breastfeeding seemed to minimize the effects of the intrapartum antibiotics. Some of the differences in gut microbiota communities were still seen at 1 year in babies delivered by emergency C section especially among babies that were not breastfed.

The long-term health outcomes of these gut microbiota are still not known but the results of this study show that breastfeeding after emergency C sections can help

babies have gut microbiota that are similar to babies born vaginally by mothers who did not receive intrapartum antibiotics. Follow the link to read more: <http://onlinelibrary.wiley.com/doi/10.1111/1471-0528.13601/abstract>

Last summer, CHILD was extremely fortunate to have the help of **Deborah Chan**, a nursing student at U of M. She worked with Dr. Meghan Azad exploring intrapartum antibiotics and breastfeeding. She found that mothers who received Intrapartum antibiotics were less likely to exclusively breast-feed in the hospital. She did not see an effect at 3 months and beyond. Deborah is so thankful to all the families participating in the CHILD study because they allow research like this to be done. We are so excited to have Deborah back this year to help us out some more!



Left: Jireh, Right: Isabel