

TEST | APrON Newsletter Fall 2022

APrON study <apron@ucalgary.ca>

Fri 2022-10-07 1:51 PM

To: APrON Study <apron@ucalgary.ca>

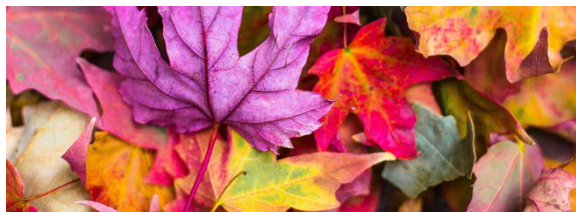
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Newsletter

Fall 2022

WHAT'S NEW WITH APrON?



Autumn Greetings

The APrON study team hopes that you had a great summer and that the return to school is going well. With the beginning of autumn upon us, we hope that you and your family will have an enjoyable Thanksgiving together. We would like to take this opportunity to express our gratitude for the time commitment that you and your family have committed and for participating in the APrON study.

APrON Data Collection Update

We are currently finalizing the 13-year questionnaire data collection as part of the ABCD study. This wave of data collection will begin in late 2022, soon after the earliest born APrON child/youth participant turns 13. We will send out more information about the 13-year data collection this fall, when mothers and children/youth will be invited to complete the 13-year questionnaires.

The maternal, paternal, and child five year questionnaires are currently being cleaned by the APrON data team, along with the five year and eight year ABCD questionnaires. The ABCD questionnaire extended the scope of topics studied by the five year APrON child questionnaire to examine the impact of mothers' nutrient intake on their mental health and on their children's development and mental health.

We're wondering if you would be able to please keep our participant e-mail list up to date by contacting the APrON study team (apron@ucalgary.ca) if your e-mail address will change. This will be important in order to receive future questionnaires, as most participants are now receiving them by e-mail.

COVID-19 Pandemic: Impact on Maternal and Child Health



We would also like to thank all mothers and children who have completed the COVID-19 questionnaires. This data that we are gathering will be essential for understanding the impact of the COVID-19 pandemic upon the lives of APrON participants. We look forward to disseminating the study results in the near future.

Update: COVID-19 Mothers Questionnaire

All mothers who are currently participating in the APrON study have been invited to participate in the APrON COVID-19 Impact study, which is investigating the impact of the pandemic on work life, activities of daily living, finances, coping, and maternal and child physical and mental health outcomes. This study is also examining factors that contribute to risk and resilience during the COVID-19 pandemic and will identify pre-pandemic factors that predict functioning over time.

Mothers completed the first wave of the COVID-19 Impact Survey from May - September 2020. This data was analyzed for the following report which examines the experiences of Albertan families with young children during the COVID-19 pandemic:

http://allourfamiliesstudy.com/wp-content/uploads/2020/12/AOF-APrON-COVID-19-Full-Report_30-Nov-2020.pdf

Mothers were then surveyed again at 6 months follow-up, from February - April 2021, regardless of whether they completed the first survey. The 12 month follow-up survey occurred from May - August 2021. The fourth and final follow-up survey occurred from April - September 2022. The data from these follow-up surveys is currently being cleaned, in preparation for subsequent analysis.

Update: COVID-19 Child/Youth Questionnaire

Essentially, we are interested in understanding how COVID-19 has impacted children and youth's mental health, well-being, and coping. We are interested in understanding their feelings about going back to school, worries, and feelings of sadness or isolation, but also how they might be thriving or coping during these stressful/uncertain times. It is anticipated that the APrON COVID-19 child/youth study will assist with developing strategies to improve maternal, child, and family health during COVID-19.

The first COVID-19 child/youth questionnaire was completed by participants from October - December 2020. From

February - May 2021 and May - August 2021, the 6 month and 12 month follow-up surveys were completed by child/youth participants. The fourth and final follow-up survey occurred from April - September 2022. The data from these surveys is currently being cleaned, in preparation for subsequent analysis.

Please refer to the following APrON study website link for important COVID-19 resources:

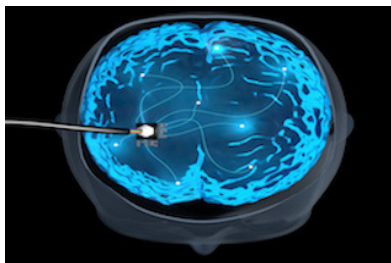
<https://apronstudy.ca/covid-19-resources/>



Join APrON's Participant Advisory Committee

The APrON team is always looking for participants to join our advisory committee meetings and we want you to be a part of it! Share your ideas on how we can keep participants, like you, engaged and interested in our research. We want to hear from you. If you would like to learn more about this exciting opportunity, please contact us by email at apron@ucalgary.ca.

RESULTS



Study Title: Age-Related Functional Brain Changes in Young Children

Brain maturation during the preschool period (2-6 years) is understudied and typical functional brain development is not well explained. Understanding brain development during the preschool years is critical in order to map human brain maturation, and also inform proper identification of and interventions for brain disorders. The aim of this study was to identify age-related changes in brain function in healthy preschool children using functional magnetic resonance imaging (fMRI). We examined 77 fMRI scans from a total of 44 healthy children aged 2.5-5.8 years. The data collected was used to investigate functional connectivity, which measures how brain regions communicate with one another. We were interested in looking at connectivity both between neighbouring brain regions (local connectivity) and across the brain (global connectivity).

The results of this work show age-related changes in functional connectivity both at the local and global levels. Local connectivity increased with age in brain regions involved in self-regulation and attention control. Increased connections in local brain areas and across the brain were seen in a region responsible for self-reference and theory of mind. In addition, an area associated with language function had decreased local connectivity and increased global connectivity

with age. This suggests a shift to a more global arrangement, and is likely related to language development. Finally, the parietal and temporal regions showed a shift from global connectivity to local connectivity, which may be connected to development of memory, facial recognition and other cognitive functions. Evidently, the preschool years represent a period of important functional brain development and continuing to investigate questions surrounding maturation during this time is imperative.

Reference: Long, X., Benischek, A., Dewey, D., & Lebel, C. (2017). Age-related functional brain changes in young children. *Neuroimage*, 155, 322-330.

Study Title: Plasma 3-Epi-25-Hydroxycholecalciferol Can Alter the Assessment of Vitamin D Status Using the Current Reference Ranges for Pregnant Women and their Newborns

Vitamin D is important for the overall health of humans. A lack of vitamin D in pregnant women can cause difficulties during pregnancy. The total amount of vitamin D, or the vitamin D status, is made up of different forms. Each type of form shows some of the positive impacts that vitamin D has on the body. Some forms are more active than others. When looking at the vitamin D status, we need to count the one who have more active role in the body. This study wanted to look at the amount of each form of vitamin D found in pregnant women. One vitamin D form, called 3-epi-25(OH)D₃, was found to be needed in higher amounts for it to work well. It was also seen that 5 % of pregnant women and 7 % of newborns were wrongly told they had enough vitamin D because of this form. The amount of 3-epi-25(OH)D₃ increased with the amount of vitamin D supplements taken. Doctors should help pregnant women pick out the right amount and type of vitamin D supplement. Also, it is important that the vitamin D status of pregnant women is measured in the right way to make sure they have sufficient amounts of it.

Reference: Aghajafari, F., Field, C.J., Rabi, D., Kaplan, B.J., Maggioro, J.A. (2018). 3-Epi-25-Hydroxycholecalciferol can alter the assessment of vitamin D status using the current reference ranges for pregnant women and their newborns. *Journal of Clinical Endocrinology and Metabolism*, 108(1), 1-10.

To request APrON publications please contact us at apron@ucalgary.ca

Click here to view all of the APrON publications to date, or by following the link below:

https://scholar.google.ca/scholar?hl=en&as_sdt=0%2C5&q=apron+study+team&btnG=

Summaries of APrON articles can be viewed at the following link:

<https://apronstudy.ca/journal-articles/>

Send Us Your Feedback!

If you have any comments or questions about the APrON Newsletter, we want to hear them! We would also like to hear your ideas for future newsletters. Please contact us at apron@ucalgary.ca. We truly value your feedback!

Help Keep Our Files Up-To-Date

Staying in touch with our participants is a key part of our work. When we lose touch with people we lose our ability to answer important health questions. If you have moved, changed your phone number or have a new email address, please take a moment to let us know of these changes. Keep in mind that we can send you surveys and keep you up-to-date with the APrON Leaflet no matter where you live, even if you are outside of Alberta or Canada.



apronstudy.ca

Questions? Email us at apron@ucalgary.ca

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APrON Calgary

The Owerko Centre 3rd Floor
Child Development Centre
University of Calgary
355-3820 24 Avenue NW
Calgary, AB
T3B 2X9
Phone: (403) 441-8471

APrON Edmonton

4-126 Li Ka Shing Centre for Research
University of Alberta
11203-87 Avenue NW
Edmonton, AB
T6G 2H5
Phone: (403) 441-8471

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