



Newsletter

Spring 2022

### WHAT'S NEW WITH APrON?



We would like to wish all of our APrON mothers a Happy Mother's Day! We hope that you enjoy celebrating and spending time with your family.

### COVID-19 Pandemic: Impact on Maternal and Child Health



#### 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. The electronic COVID-19 Impact Survey was sent out in May 2020, with mothers completing this survey from May - September 2020. Mothers who responded to the first survey were resurveyed at 6 months follow-up, from February - April 2021. Mothers who completed the 6 months follow-up survey were then re-surveyed at 12 months follow-up, from May - August 2021. In early May 2022, mothers were invited to complete wave 4 of the COVID-19 Impact Survey.

#### 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 electronic COVID-19 child/youth questionnaire was sent out in October 2020, with children completing this survey from October - December 2020. Children who responded to the first survey were then resurveyed at 6 months follow-up, from April - May 2021. Children who completed the 6 months follow-up survey were then re-surveyed at 12 months follow-up, from October - December 2021. In mid-April 2022, children were invited to complete wave 4 of the COVID-19 Impact Survey.

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

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

## APrON Data Collection Update

We are currently preparing the 13-year questionnaire data collection as part of the ABCD study. This wave of data collection will begin in September 2022, when the earliest born APrON child/youth participant turns 13. We will send out more information about the 13-year data collection this summer.

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](mailto: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.



## 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](mailto:apron@ucalgary.ca).

## RESULTS

### Study Title: Prenatal and postnatal maternal anxiety and amygdala structure and function in young children



During and after pregnancy, it is common for mothers to feel anxious. Children born to mothers with high anxiety are more likely to have behaviour problems. These behaviour problems might be related to brain differences in the amygdala, which is a brain area involved in emotion. We investigated how mothers' anxiety during and after pregnancy was related to brain function in their children. Mothers with anxiety during pregnancy had children with less functional communication between the amygdala and parietal brain regions. After pregnancy, mothers with anxiety had children with larger amygdalas. These changes in brain function and structure are similar to what is seen in children and adults with anxiety and depression. Therefore, identifying and treating prenatal anxiety will likely help promote healthy outcomes for both mothers and their children.

Reference: Donnici, C., Long, X., Dewey, D., Letourneau, N., Landman, B., Huo, Y., & Lebel, C. (2021). Prenatal and postnatal maternal anxiety and amygdala structure and function in young children. *Scientific Reports*, 11, 1-12.

### Study Title: Use of Micronutrient Supplements Among Pregnant Women in Alberta: Results from the APrON Cohort

The fetus is affected by the nutrients that the mother eats when pregnant. Too much or little of one nutrient can have unhealthy impacts during pregnancy. In Canada, Natural Health Products (NHPs) are vitamin and mineral supplements that can be taken with food to have enough nutrients. Some nutrients that are important to think of are folic acid, iron, vitamin D, and calcium. This study wanted to see if pregnant women using supplements took the suggested amounts. Most women used multiuse supplements instead of single ones. Later in pregnancy, most women switched to single supplements for iron. The recommended amount of iron was also less commonly taken. About 20% women took more folic acid than needed. Women mainly took the recommended amounts of vitamin D and calcium supplements. Food with lots of calcium is important to eat to have enough calcium during pregnancy. This means that doctors should tell pregnant women about why and which supplements are important to take. Doctors should also tell women about the amount of supplements they should take and the side effects of taking too little or too much.

**Reference:** Gomez, G.F., Field, C.J., Olstad, D.L., Loehr, S., Ramage, S., McCargar, L.J., & APrON Study Team (2015). Use of micronutrient supplements among pregnant women in Alberta: Results from the Alberta Pregnancy Outcomes and Nutrition (APrON) cohort. *Maternal & Child Nutrition*, 11, 497-510.

To request the above or any other APrON publication please contact us at [apron@ucalgary.ca](mailto:apron@ucalgary.ca)

[Click here](#) to view all of the APrON publications to date.

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### 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](mailto: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](mailto:apron@ucalgary.ca)

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