

THE APRON LEAFLET



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RECRUITMENT KICK-OFF IN CALGARY AND EDMONTON!

IN CALGARY

After successful pilot work in the spring and early summer, the Calgary APrON team's focus has shifted into an official recruitment phase.

The pilot work, which began May 7 and 8 of 2009, was an opportunity to clarify and evaluate procedures, methods, and protocols. It has helped to create a smooth transition for Calgary's official recruitment, which kicked off June 1st. The focal point thus far has been at the Primary Care

Network Clinics in the NW and one maternity clinic in the SW. Future expansion will include other maternity clinics in the south and east, as well as in yoga studios, pre- and post-natal yoga classes, at midwife clinics, and various other community service centres.

Attention will also be directed to events around the City of Calgary, such as the 'Baby Care Fair'.

IN EDMONTON

The Edmonton APrON team began pilot work of a different sort many months

ago. In the fall of 2008, they developed a pilot study to validate one of the most important measuring tools to be used in APrON — the Food Frequency Questionnaire. This measure will be used throughout the study, with every participant, and had to be validated in pregnant women.

APrON participant recruitment began on May 19th. There was media coverage in June and July. The Women & Children's Health Research Institute (WCHRI) has been the primary source of participants.

SPECIAL POINTS OF INTEREST:

- *Fall 2008: a pilot study of some measures began in Edmonton*
- *May 7th and 8th: Pilot work on recruitment procedures began in Calgary*
- *May 19th: Recruitment began in Edmonton*
- *June & July: media coverage in Edmonton!*
- *In the fall: watch for APrON's media launch*
- *Oct. 5th and 6th: APrON team annual retreat*

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ABOUT THE STUDY

APrON (Alberta Pregnancy Outcomes and Nutrition) is a study involving up to 10,000 women from Edmonton and Calgary. It is designed to analyze the relationship between maternal nutrient status during pregnancy and a) maternal mental health and b) child development. We expect that families will be involved with APrON until 2013.

During this time, we will be collecting dietary and health information using questionnaires, as well as from biological samples (blood, urine and saliva). Additionally, we intend to develop a DNA biobank for future genetic analyses.

APrON was developed by a team of expert researchers and clinicians from many disciplines including nutri-

tion, psychology and psychiatry, family medicine, child development, neonatology (health of newborn infants), genetics, epidemiology (health of large populations) and biostatistics.



HISTORY

Mental disorders are becoming a leading contributor to illness and disabilities in the world. So what causes them? APrON researchers are examining an area that has been neglected: the potential role of nutrition on mental health, and child development.

It is often assumed that people living in places like Canada and the U.S. have an abundance of food and that they always obtain sufficient nutrients from their food.

However, for a variety of reasons, inadequate levels of certain nutrients are more common than people realize. Pregnancy is a particularly vulnerable period, because a woman's nutrient needs increase. During this vulnerable period, women may not get enough nutrients to fuel the brain and maintain her own mental health, let alone to foster a completely well baby. Studies on heart disease and diabetes have shown that the

uterine environment can have lasting effects on the health of the baby, long after birth.

Therefore, the goal of APrON is to determine the relationship between women's food intake and nutrient status during pregnancy, on the one hand, with their mental health, pregnancy outcomes, and their child's development on the other.

STUDY OBJECTIVES

The research will look at a cohort of pregnant women and their offspring who can be studied prospectively. The objectives of this study are to:

- Determine the relationship between dietary intake of the key micro-nutrients/dietary measures, energy intake, body weight change, physical activity, and maternal mood and neurodevelop-

ment of her offspring up to 3 years of age.

- Determine the relationship between maternal folate, B12, B6 and homocysteine status, and maternal mood and neurodevelopment of her offspring.
- Determine the relationship between maternal n-3 fatty acid intake and

status, maternal mood and the neurodevelopment of her offspring up to 3 years of age.

- Determine the relationship between maternal thyroid status and neonatal and neurodevelopmental outcomes.



METHODS

There are 3 stages to the study. First, we will attempt to enroll ~20% of expectant mothers who are less than 27 weeks. After recruitment, we will follow up with them and send them pertinent study information and the consent form. Finally, each participant will attend 3 or 4

appointments at the APrON Calgary or APrON Edmonton Center to complete health/lifestyle questionnaires, dietary recalls, body measurements and a collection of biological samples. Following the visits, additional questionnaires can be answered at home up until the child is 3

years of age. At the age of 3, we will complete a cognitive assessment of the child, as well as complete body measurements and collect biological samples. Fathers can participate by answering 2 questionnaires and by providing a DNA sample.

BENEFITS OF BECOMING A PARTICIPANT

- Expectant mothers will be part of an important group of 10,000 women and their families from Edmonton and Calgary.

- APrON will consist of families from many different backgrounds and cultures.

- APrON is supported by 16 investigators who are knowledgeable, talented and extremely qualified in their areas of expertise including: family medicine, child development, psychology, neona-

tology, psychiatry, nutrition, genetics and biostatistics.

- APrON will have lasting, long term outcomes that will potentially affect government policy, education, and public health efforts.

- Family involvement will help establish a DNA biobank for future nutritional genomic studies, permitting geneticists the opportunity to explore the relationship between genotypes and a variety of maternal and child health

outcomes.

- Participants will receive summaries of the study results and information about their own child if they have a developmental assessment at the Alberta Children's Hospital.



OF INTEREST AND NEXT ISSUE

Anticipation is rising over the APrON media launch coming soon, fall 2009, for both Calgary and Edmonton.



In the next edition of The APrON Leaflet, look for:

- a detailed description of the recruitment and initial visits of the first participants in APrON.
- A look at some of APrON's milestones.
- An update on recruitment numbers.

CONTACT US

If you have questions, or you would like something to appear in this newsletter, please contact:

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“APRON WILL HAVE LASTING, LONG TERM OUTCOMES THAT WILL POTENTIALLY AFFECT GOVERNMENT POLICY, EDUCATION, AND PUBLIC HEALTH EFFORTS.”



ALBERTA PREGNANCY OUTCOMES
AND NUTRITION

APRON CALGARY CENTRE
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APRON EDMONTON CENTRE
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AGRICULTURAL, FOOD AND
NUTRITIONAL SCIENCE
CENTRE FOR HEALTH PROMOTION
STUDIES, SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF ALBERTA
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Mission

To recruit a large cohort of pregnant women in Alberta and determine the impact of maternal prenatal nutritional intake and status on the mother's and child's mental health and the child's neurodevelopment.

Vision

To improve the health and long-term potential of mothers and newborn babies in Alberta by identifying the role of nutrition in mental and neurodevelopmental disorders, and long-term neurocognitive function.

HELP US IMPROVE MATERNAL HEALTH
AND CHILD DEVELOPMENT

WE'RE ON THE WEB!

WWW.APRONSTUDY.CA

STUDY TEAM AND PARTNERSHIPS

Investigators:

Bonnie J. Kaplan (**Team Lead**); Catherine J. Field, Deborah Dewey (**Co-Leads**); Rhonda Bell, Anna Farmer, Linda McCargar (**Nutrition**); Donna Manca, Maeve O'Beirne (**Family Medicine**); Nalini Singhal (**Neonatology**); Victor J.M. Pop, Lisa Gagnon (**Psychiatry**); Marja Cantell, Libbe Kooistra' (**Child Development**); Francois Bernier (**Genetics**); Michael Eliazziw, Laksiri A. Goonewardene (**Biostatistics**)

Senior Project Manager:
Dave Johnston

Post Docs and Graduate Students:

Fatheema Begum, Faiqa Fayyaz, Gerry Giesbrecht, Brenda Leung, Stephanie Thomas and Mariel Fajer Gomez

Partners:

The outcome of this study is highly dependent upon our partners' involvement and support. They provide us with the means and resources necessary to conduct this study.

- University of Calgary
- University of Alberta
- Alberta Heritage Foundation of Medical Research

- Institute of Child and Maternal Health
- Alberta Health Services
- Women and Children's Health Research Institute

