

BIONIC

NEWSLETTER

A **B**io**I**ogic drug safety and effectiveness inter**N**ational pharmacoepidemiologic **I**C study in pregnant women with autoimmune disorders or asthma and their children (BIONIC).



NEWSFLASH

BIONIC'S 2nd STEERING COMMITTEE MEETING

- Joined by Co-PI's Dr. Sonia Grandi and Dr. Cristina Longo, all site leads, 2 patient partners, scientific advisory committee and study team
- The meeting focused on discussions for the statistical analysis plan and study timelines



New podcast episode out now, more details on page 4!!

BIONIC OBJECTIVES

In women with AD or asthma, who continue versus discontinue biologic use in pregnancy, compare the risks of:

- 1) Maternal complications in, and worsening of disease during, pregnancy.
- 2) Complications in their infants and children.

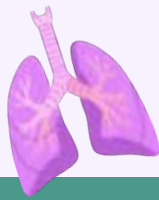
IMPACT-BIONIC Study

- Goal: to incorporate patient perspectives to co-design variable definitions for BIONIC's SAP
- The protocol is currently being developed!

MAY IS ASTHMA AWARENESS MONTH!

What is Asthma?

- Asthma is a chronic inflammatory disease of the airways that affects >4.6 million Canadians (1,2)
- Symptoms: chest tightness, shortness of breath, coughing etc. (1)
- Triggers: allergies (dust mites, pollens, molds, pets) and other irritants (smoke, cold air, stress) (1).



Asthma during Pregnancy



- For 40% of pregnancies, symptoms can worsen, but many improve or stay the same. (3)
- Uncontrolled asthma increases the risk of high blood pressure, preeclampsia, preterm birth, and low birth weight (4)
- Goal: good control to reduce risk of attacks during pregnancy



Tips for managing asthma during pregnancy

Avoid Triggers

Those with respiratory illnesses (4)

Exercise

Improves lung function and supports overall health for mom and baby(4,5)

Medications

Consult your doctor about which medications are safe and would work best for you (3,4)



ASTHMA RESOURCES

Managing asthma symptoms during pregnancy:

Pregnancy and lactation asthma action plan:

Mother To Baby resource page:



Source: The Asthma and Allergy Foundation of America



Source: The Asthma and Allergy Foundation of America



Source: MotherToBaby

Recently published study on pregnancy & asthma (Lee et al, 2025):

- 10.5% of women had an asthma exacerbation during pregnancy
 - Higher rates among those who were obese, smoked, had anxiety or depression, or had prior exacerbations



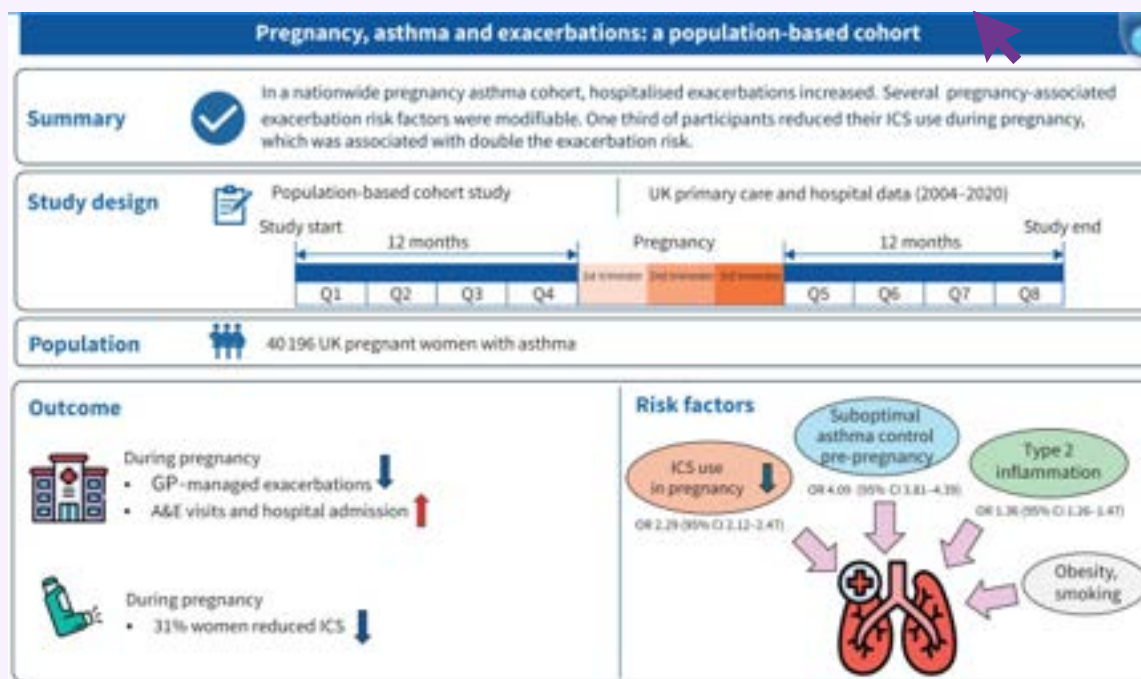
- Total exacerbations declined by 28% during pregnancy

- Hospitalizations increased 30-45% in the 2nd and 3rd trimesters

- Highest risk linked to poor pre-pregnancy control, reduced inhaled steroid use, and greater asthma severity



- Address modifiable pregnancy risk factors (smoking, high BMI), optimize pre-pregnancy control, and counter reduced inhaler use (1/3 of women) through education to reduce medication fears



References:

- (1) Asthma Canada. Understanding Asthma. Retrieved from: (<https://asthma.ca/get-help/understanding-asthma/>).
- (2) Government of Canada. 2018. Asthma in Canada. Retrieved from: (<https://health-infobase.canada.ca/datalab/asthma-blog.html>).
- (3) MyHealth.Alberta.ca. 2025. Asthma during Pregnancy. Retrieved from: (<https://myhealth.alberta.ca/Health/pages/conditions.aspx?hwid=ug2813spec>).
- (4) Asthma and Allergy Foundation of America. 2025. Asthma During Pregnancy. Retrieved from: (<https://aafa.org/asthma/living-with-asthma/asthma-during-pregnancy/>).
- (5) Musakka ER, Ylilauri MPT, Jalanka J, et al. Maternal exercise during pregnancy is associated with reduced risk of asthma in the child: A prospective birth cohort study. Med. 2025;6(2):100514. doi:10.1016/j.medj.2024.09.003
- (6) Lee B, Wong E, Tan T, Rupani H, Bloom CI. Pregnancy, asthma and exacerbations: a population-based cohort. Eur Respir J. 2025;66(6):2501327. Published 2025 Dec 18. doi:10.1183/13993003.01327-2025

Dr. Cristina Longo



Dr. Cristina Longo is the BIONIC co-lead, a scientist at the Azrieli Research Center of the CHU Sainte-Justine Hospital, and assistant professor at the Faculty of Pharmacy at Université de Montréal. She is a CIHR early career research award recipient, FRQ-S Junior 1-funded pediatric pharmacoepidemiologist, and IVADO professor with expertise in causal inference (including target trial emulation), comparative effectiveness, machine learning, and stakeholder engagement. She obtained her PhD in primary care at McGill University in 2018 with a focus on pediatric asthma.

Cristina leads the Target Asthma Lab, which uses a combination of epidemiological and precision medicine studies to identify potential targeted interventions that can optimize asthma outcomes in mothers and their children. She is also a patient living with autoimmune disease, having been diagnosed during her first pregnancy.



Dr. Longo and Dr. Grandi joined one of our patient partners Amber Tresca on her podcast 'About IBD' to discuss all things BIONIC!!

Click to access the podcast episodes: [About IBD \(w/ transcript\)](#), [YouTube](#), [Apple Podcasts](#), [Spotify](#), [Podcast Addict](#), [All other podcast apps](#)

Share Your Thoughts

Let us know what you think of the May BIONIC Newsletter, or tell us what you would like to hear about in the next edition [here](#).



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