

# ONTARIO BIRTH STUDY ANNUAL NEWSLETTER



## Study Progress

Total number of pregnancies  
in the OBS:



**4370**

Total number of children in  
OBS Kids:

**1989**



Total number of research  
publications:



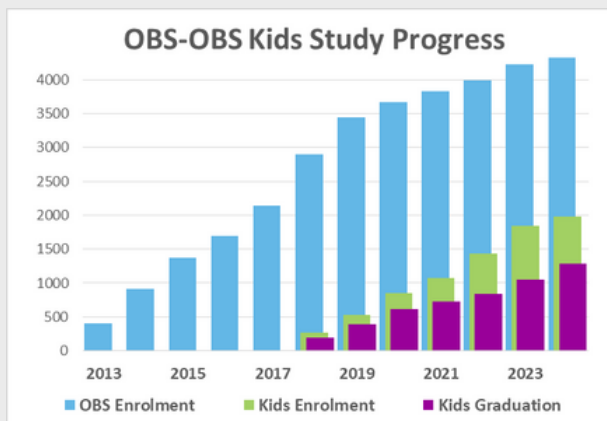
**26**

Total number of children who  
have graduated from the OBS:

**1294**



Congratulations to the children  
who have graduated! Thank you  
for all your time and support!



## Overview

The Ontario Birth Study had an incredible year in 2024, and we want to express our sincere gratitude to all participants. Your commitment and contributions are helping us advance ongoing research to support maternal and infant health. As we reflect on the progress made this year, we are excited to share some updates and answers to some of the questions you've had, such as how your blood samples are being used in our research. In this issue, we're also thrilled to introduce you to some of our team members in our "Meet a Researcher" feature. Thank you for being an essential part of this journey – we couldn't do it without you!

# THANK YOU!



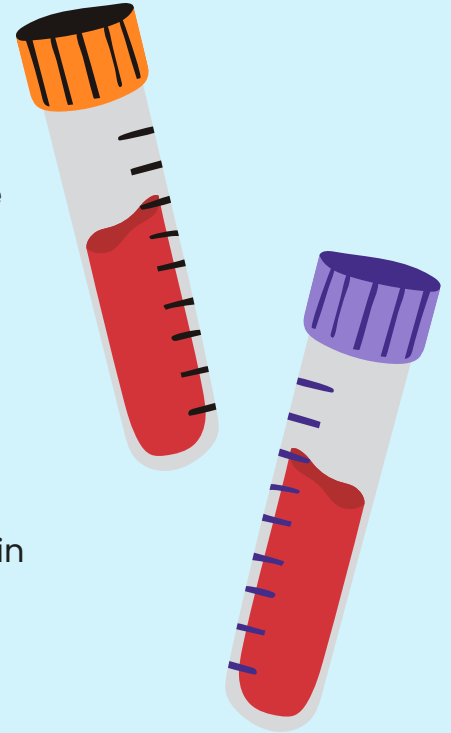
## How Samples are Used

The OBS collects maternal blood, infant blood through blood spot cards, and children saliva samples in OBS Kids. The blood collected by the OBS is a very valuable resource for researchers giving them objective insight into how pregnancies are progressing.

### Maternal Blood

When you generously provide your blood to the OBS, you might notice that we use two tubes. When these tubes are sent to be processed and stored, they are treated a bit differently. One tube is spun to generate serum. The second tube is used to separate white blood cells, a crucial part of the body's immune system (and which can be used to isolate RNA and DNA), as well as plasma. These samples are kept at very low temperature and even those collected in 2013 are still used in new research today!

The goals of different researchers are broad. Many researchers are looking for potential biological markers, where levels of certain molecules (e.g., proteins and lipids) in the blood during early pregnancy might give doctors a chance to diagnose preeclampsia or other pregnancy complications sooner.



### Infant Blood Spot Card



When we give you the delivery kit, you'll notice there's a postpartum envelope with an infant blood spot card inside. This blood is collected at the same time as the newborn health screening with the same heel prick. Once the card is collected, it is frozen until researchers request it for analysis.

Many factors can be extracted from the dried blood spot including DNA and lipids. These can then be used to understand how the fetal environment influences development. In addition, results from the infant blood spot cards can be linked to data collected by the OBS Kids team. This may help in finding markers that can predict future child neurodevelopmental outcomes. Identifying children at risk of developing a poor outcome sooner would help doctors provide early care and support.

Thanks to your generous help, the OBS has been able to support research into earlier detection of pregnancy complications and improving early childhood development. Your blood goes a long way!

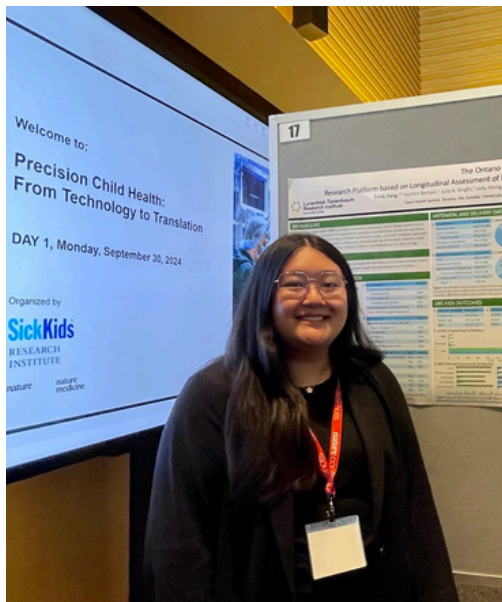
## Meet an OBS Researcher

### Kate Finegold

Kate Finegold is a second-year doctoral student in the School and Clinical Child Psychology program at the University of Toronto/OISE, supervised by Dr. Mark Wade. Kate holds an MA and a master's degree in education from Harvard University. Before beginning her doctoral studies, Kate worked as a special education teacher in Memphis, Tennessee. As an educator, Kate experienced first-hand how many students, especially those from equity-deserving groups, do not have access to high quality, evidence-based mental health resources. These experiences motivated her to pursue a graduate degree in clinical child psychology. Of particular interest, Kate hopes her research will reveal environmental and biological factors that improve resilience following adverse events.



The OBS has been pivotal to Kate's research, as both her MA thesis and dissertation use data generously provided by OBS participants. Her research, recently published in [JAMA Network Open](#), explored the association between COVID-19 pandemic experience and preschool-aged children's cognitive and emotional development. Results from the study showed that, compared to children assessed before the pandemic, children assessed during the pandemic showed higher skills in certain domains of development, such as problem solving, but lower in others, namely social skills. Since participants enrolled in the OBS before, during, and after the COVID-19 pandemic, your contributions are uniquely valuable in answering important questions about how families and young children were impacted by the pandemic. This research, made possible by your time and support, will hopefully inform health care providers, educators, and policy makers in Canada as they support families and children following the pandemic and plan for the future.



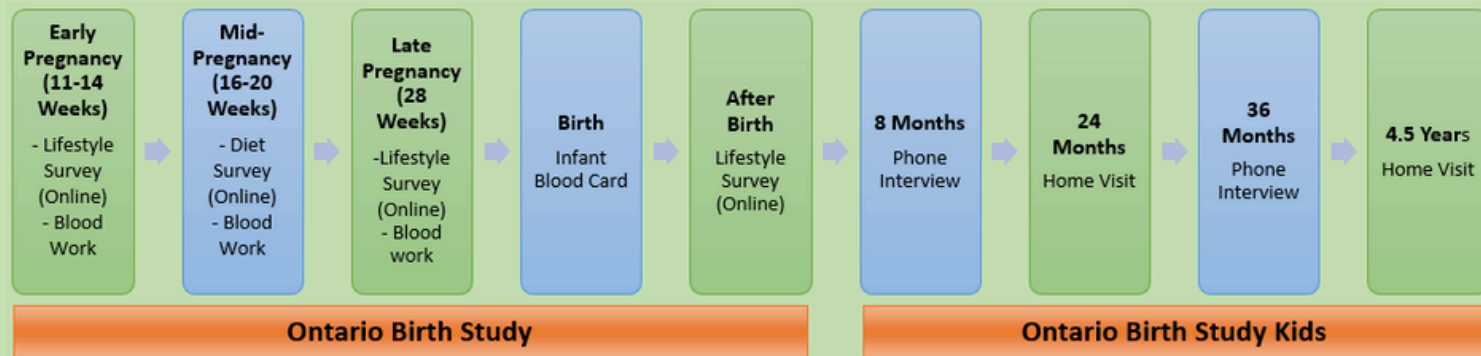
### Emily Dang

Emily is a research assistant and co-op student from the University of Waterloo, supporting the OBS team. She is currently pursuing a bachelor's degree in public health with a specialization in health research.

In September, Emily presented a poster on behalf of the OBS team at the Precision Child Health: From Technology to Translation Nature conference at SickKids in Toronto. The conference brought together experts from various fields of precision medicine to discuss the latest advancements and their applications in diverse pediatric settings to benefit child health.

## Where you are in the OBS

The OBS is a long-term research project investigating pregnancy and child health outcomes. As shown below, the OBS continues into OBS Kids to provide the team with information about what influences child development, particularly during pregnancy and the neonatal period. At each follow-up, caregivers and their children participate in various research activities.

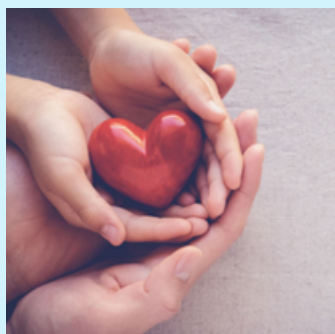


## Kindness Activities

February 9–15, 2025 is Random Acts of Kindness Week! To celebrate, here are some activities to help teach your child all about kindness. You can introduce your young child to the elements of kindness using the colouring pages. **[Click here for Colouring Pages](#)**

If your child is looking for a challenge, explore kindness through the activity booklet filled with activities and prompts to have them thinking about kindness.

**[Click here for the Activity Booklet](#)**



## Family Resources

The OBS aims to provide families with resources to ensure well-being and positive health outcomes. Below is a link to a list of family resources in the Greater Toronto Area for caregivers and their children. Please contact the OBS team if you have questions or want further information about specific support programs or services.

**[Click here for Family Resources](#)**

## Contact Us

If you have any questions about OBS research or would like to provide feedback, please get in touch with us at:

**OBS Research Team**

416-586-4800 x 6036

**OBS Kids Research Team**

416-586-4800 x 8119



**OBS Website**

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