



MIS BAIR study update

February 2020

We are excited to finally be sending you this update on the MIS BAIR study!

As you know, MIS BAIR is working to understand if giving babies the **BCG vaccine helps prevent infection and allergies.**

MIS BAIR parts one and two

MIS BAIR Part one followed babies from birth to 12 months. MIS BAIR Part two continued following this same cohort from 1 to 5 years of age.

Our researchers, clinicians, PhD students and statisticians have been busily reviewing and analysing your all-important questionnaire responses and samples. Although we are not quite ready to report on whether BCG helps prevent infection and allergies, we have had other important research published, which you can read about here.

Where we're at

The MIS BAIR study part one commenced recruitment in August 2013 and continued over 3 years until September 2016. We have a similar ratio of female to male participants and 21 sets of twins. In August 2018 our first MIS BAIR kids turned 5 years old and completed their 5-year allergy assessments.

We know how busy life can get with little people, so we are very appreciative to each and every one of our MIS BAIR families for your continued time and support.



Recruitment facts

We recruited nearly 1300 participants to MIS BAIR Part 1 (including 21 sets of twins)

More than 1000 participants followed through to MIS BAIR Part 2

Most popular names in the study

Amelia / Charlotte
Oliver / Isaac



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Cytokine research publication

Dr Bridget Freyne has published some of the first research to come out of the MIS BAIR study part one. Her research is summarised below.

As part of the MIS BAIR study, we investigated if BCG vaccination could influence how a newborn's immune system works. We wanted to know if the BCG vaccine could improve a baby's immune system. In particular, their ability to respond to pathogens such as viruses, bacteria and parasites.

When babies were vaccinated with the BCG vaccine, their immune response was different compared with BCG-unvaccinated babies. The immune cells from the blood samples of BCG-vaccinated babies responded differently to bacteria and other pathogens compared to BCG-unvaccinated babies from the MIS BAIR study.

Interestingly, babies whose mothers had previously been vaccinated with BCG had a different immune response compared to babies whose mothers were not BCG-vaccinated.

Our findings support the idea that the BCG vaccination can modify the newborn's immune response.

To read the full version of Bridget's paper click on link below:

Neonatal BCG Vaccination Influences Cytokine Responses to Toll-like Receptor Ligands and Heterologous Antigens

<https://doi.org/10.1093/infdis/jiy069>

Our team



Profile: Dr Bridget Freyne

Bridget is a much-valued member of the MIS BAIR team. Hailing from Ireland, Bridget started working as a doctor at The Royal Children's Hospital in 2013. Many of you may have spoken with Bridget when seeking advice from the Paediatric Advice Line.

She is very close to completing her PhD in understanding immune response to BCG. She couldn't have done this without the input and support of the MIS BAIR families.

She is currently working as a paediatric doctor and researcher in Malawi at the Queen Elizabeth Central Hospital.



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MIS BAIR 5-year allergy assessment visit

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Just prior to your child turning 5-years old we will invite you to attend the MIS BAIR 5-year allergy assessment visit at The Royal Children's hospital (parking paid). These assessments are very similar to the 1-year visit, involving a skin prick test to a group of common allergens, listed below.



Food allergens: peanut, cashew, raw egg white, cow's milk, sesame, hazelnut, shellfish, walnut (new).

Environmental allergens: cat, dog, rye grass, mould, house dust mite

Cardio Assessments

At the 5-year allergy assessment visit we may ask if your child would like to be involved in additional assessments looking at the structure and function of the blood vessels to assess cardiovascular health. These are optional non-invasive tests. We will explain them to you in more detail before the assessment.

Overseas & Interstate participants

If your children are 5-years old and living interstate or overseas, please contact us if you plan to be back in Melbourne at any point. We will try and work with your schedule. We ask that you continue to complete the surveys as this information is incredibly important even if you don't complete the 5-year assessment.

6-monthly questionnaires

Thank you for completing the 6-monthly surveys!

Back in 2017 we simplified the 6-monthly MIS BAIR questionnaires, so they had fewer questions. What you will have noticed is the mid-year surveys are short and the surveys that fall on birthdays are longer.

We appreciate the time you take to complete these surveys. Your feedback is very helpful.

One of the more common pieces of feedback we receive relates to the difficulty you have remembering illnesses in the 6-month period. Particularly through winter months when it can feel like the kids are constantly sick!

Some ideas for keeping track of your child's illness include:

- record child's illness/medications in your paper diary. Mark illnesses with a highlighter making it easier to find when looking back on previous six months.
- record child's illness/medication in your phone calendar
- record child's illness/medication in a Notes app on your mobile phone
- send yourself an email when your child is sick - using the same 'Subject' name making it easy to search back through emails.



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Recipe Ideas

Allergy friendly recipe idea: free from wheat, egg, nuts, sesame, dairy and soy.

Always check ingredient lists as formulations can change from time to time.

Overnight apple & Cinnamon berry oats

- 1 cup rice milk with added calcium - e.g. Vitasoy rice milk
- 1 cup oats
- 1 teaspoon cinnamon and chia seeds (optional)
- 1 apple finely sliced
- Honey or a syrup of your choice to taste

Throw everything in a bowl and mix well. Dish out into individual portions and let sit overnight.

To top - chopped frozen raspberries or mix and match your favourite fresh or dried fruit combos, coconut flakes or even finely chopped bits of allergy free chocolate.

Big batches can be kept in the fridge for a few days.



Thank you!

Thank you for the time and commitment you give to our research.

We hope you enjoyed a lovely break over the Christmas and new year period.

Good luck to all our MIS BAIR kids starting kinder and school in 2020.