# Diabetes and Antenatal Milk Expressing: the DAME trial

Should women with diabetes in pregnancy express some of their own breast milk late in pregnancy so that they can give it to their own baby after the birth if needed?

In this study we wanted to find out if it was good idea to advise women with diabetes in pregnancy to express breast milk before birth.

What we found was that for women with diabetes in pregnancy who were otherwise low risk, suggesting they express breast milk from 36 weeks of pregnancy caused no signs of harm to mother or baby, and their babies were more likely to have only breast milk (and no infant formula) while in hospital.

## WHAT WAS THE DAME TRIAL ABOUT?

Babies of women with diabetes in pregnancy are more likely than other babies to have a low blood sugar (hypoglycaemia) and to be given infant formula while they are in hospital. Because of this, some hospitals or maternity care providers have been advising women with diabetes in pregnancy to express some breast milk (colostrum) late in pregnancy so that they can give it to their baby after the birth, if needed, rather than infant formula.

We were not sure if advising women to express in pregnancy was a good idea, so we did a study to explore this. The study was funded by the Australian National Health and Medical Research Council, and led by a research team from Judith Lumley Centre at La Trobe University, and included researchers from elsewhere too. Women were recruited to the study from Mercy Hospital for Women, the Royal Women's Hospital, Monash Medical Centre, Geelong Hospital, and Frankston Hospital.

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## WHO PARTICIPATED IN THE TRIAL?

Between 2011 and 2015, there were 635 women who participated in the study (which we called DAME). To be eligible to be part of the DAME study, women had to be English speaking, have diabetes in pregnancy, and be at low risk of complications in pregnancy. Half the women were allocated randomly (by chance) to expressing breast milk during late pregnancy (antenatally), and the other half were allocated to have the usual care (that is, not expressing breast milk during pregnancy). Women in the expressing group were shown how to express breast milk twice a day from 36 weeks of pregnancy until their baby's birth. Any milk that was expressed by women was stored at their home then brought to the hospital to be used to feed their baby if needed, in addition to breastfeeding.

After birth, all of the women were telephoned at 2 weeks and 12 weeks, asking them about their baby's feeding and about their own experiences of antenatal expressing. Information was also collected from the hospital records.

## WHAT DID THE DAME TRIAL FIND?

- Women with diabetes in pregnancy who were taught hand expressing after 36 weeks did not give birth any earlier than women who did not express during pregnancy
- The amount of milk women expressed in total over the whole time varied greatly – about one quarter of the women expressed less than 1 mL, and overall, about half of the women got 5 mLs or less. There were a few women who expressed quite large volumes, such as 200-400 mLs.
- Babies of women with diabetes in pregnancy who were taught expressing
    - were no more likely to need admission to the special or intensive care nursery; and
    - were more likely to receive only breast milk in the first 24 hours after birth and during their hospital stay.

## STUDY CONCLUSIONS

We found that there is no harm in advising women with diabetes in pregnancy who have a low risk pregnancy to express breast milk from 36 weeks of pregnancy.

We are continuing to analyse the results of the study, and will have more information about when women's milk came in, and feeding outcomes at 2 and 12 weeks. We have also interviewed some of the women who expressed to discuss their experiences.

The full research paper has been published in the Lancet and is available to view at www.latrobe.edu.au/jlc/research/breastfeeding/dame

## FINALLY – WE WANT TO THANK ALL THE WOMEN WHO PARTICIPATED IN THE DAME STUDY DURING A VERY BUSY PERIOD IN THEIR LIVES.

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