

EXPRESSING BREAST MILK ANTENATALLY

SETTING	UHBW Maternity services in hospital and community settings
FOR STAFF	Maternity staff and Obstetricians advising women in the antenatal period
PATIENTS	Pregnant women

GUIDANCE

1. Background

- 1.1. Mothers start to produce breast milk, in the form of colostrum, in pregnancy. Gestation varies but is often as early as 12 weeks.
- 1.2. Mothers can notice leaking of colostrum in the second and third trimester, but not leaking does not indicate the absence of colostrum.
- 1.3. Colostrum is the optimum source of nutrition for the newborn as it is antibody rich, has high bioavailability, increases gut peristalsis, and the passage of meconium. Colostrum also aids in the activation of early protective immunological responses in the infants gut.
- 1.4. Colostrum is important for all newborns, whether they then go on to continue breastfeeding or not.
- 1.5. Antenatal expression and potential storage of colostrum prior to delivery can help to ensure the first food a baby receives is colostrum, if breastfeeding is not possible, chosen, or appropriate.
- 1.6. After the birth, Mothers can give any colostrum obtained antenatally to their baby, and will also be more confident in the skill of hand expressing, should they choose to, having practiced it in pregnancy.
- 1.7. Some breastfed babies are more likely to require milk in addition to, or instead of breastfeeds, for example if they are at particular risk of neonatal hypoglycaemia. Antenatal expression can decrease or eliminate the requirement for supplementation with artificial milk in the newborn period, and so consequently the risks associated with not exclusively breastfeeding, particularly for babies of diabetic mothers.
- 1.8. Babies of mothers who carry out antenatal expression are more likely to be exclusively breastfed when leaving hospital.

2. Rationale

In addition to clinical benefits as outlined above, evidence consistently shows that women who undertake antenatal expression of colostrum see it as a positive step for the following reasons:

2.1 To collect and store colostrum

Evidence confirms a significantly reduced requirement for artificial milk supplementation in breastfed babies whose mothers have practiced antenatal expression. Mothers identify the subsequent psychological benefits associated with this, namely the achievement of successfully being able to exclusively breastfeed in the short and longer term.

Some mothers who do not wish to breastfeed prefer to give their baby expressed

colostrum. They are more likely to go on to try breastfeeding, and/or continue to give their baby expressed breastmilk if they have given their baby colostrum.

2.2 As a form of preparation for breastfeeding

Women report an increased confidence and readiness for breastfeeding, a better understanding of breast anatomy and function, and frequently voice the benefit of learning the technique in advance of potentially needing to carry out hand expressing postnatally.

3. Patient groups

3.1 Suitable for almost all pregnant women

It is safe, appropriate and beneficial for almost all pregnant women, both with 'low risk' or 'high risk' pregnancies, to undertake antenatal expression of colostrum. This includes women who plan to breastfeed, but also women who are unsure, or anticipate formula feeding.

Importantly, in accordance with the Trust Infant Feeding Policy, and UNICEF Baby Friendly UK Standards, pregnant women should not be asked about their planned mode of feeding, and instead be given information about the value of breastfeeding (especially if diabetic), to include antenatal expression of colostrum if appropriate, and encouraged to decide how they wish to feed only once they meet their baby.

3.2 Concerns regarding safety

Antenatal expression of colostrum has long been a widely recommended practice for the reasons stated. Historical concerns regarding the risk of premature labour due to stimulation caused by the release of oxytocin during antenatal expressing are not supported by the evidence, and are theoretical.

It should be remembered that it is normal and not uncommon for women to continue to breastfeed older infants and/or children throughout subsequent pregnancies with no higher reported rate of onset of early labour.

When it is likely that the pregnancy will go to term it is appropriate to encourage hand expressing from 36 weeks gestation, but as previously stated, there is no evidence to support concerns regarding antenatal expressing at earlier gestation, and women should therefore not be discouraged from doing so.

3.3 Precautions

In cases where there is anticipated severe fetal compromise, or where any uterine stimulation would cause risk to the pregnancy, the practice of antenatal expressing of colostrum should be carefully considered with the mother before commencing, and discussed with an obstetric consultant.

This may include in pregnancies where there is:

- A high risk of placental bleeding and/or abruption (e.g. placenta praevia)
- A high risk of preterm labour (e.g. confirmed or previous prelabour preterm rupture of membranes, current threatened or previous preterm birth <35w)

Refer to the appropriate UHBW Clinical Guidelines (see related documents) for definitions.

3.4 Induction of labour

Women undergoing induction of labour should be encouraged to commence antenatal expressing and storage of colostrum during the induction process, or to continue to do so if they have already started prior to admission.

Ward staff should provide guidance on technique, and syringes to store any colostrum obtained, to all women admitted for induction of labour, in accordance with sections 3.1, 3.2, 3.3, and 3.5.

It should be noted that nipple stimulation may assist with cervical ripening, but there is no significant relationship between nipple stimulation and inducing labour.

3.5 **Strongly recommended** for certain groups

Some babies will be at increased risk of requiring supplementation feeds in addition to, or instead of breastfeeds after birth. Women known to be expecting babies who will have this increased risk should be **particularly encouraged** to hand express their breastmilk in the antenatal period to reduce the need for neonatal supplementation with formula milk.

An increased risk of supplementation may be anticipated, and antenatal expressing strongly recommended to a pregnant woman when there is:

- Expected or planned separation of mother and baby after birth (e.g. for maternal or neonatal surgery)
- An increased probability of problems exclusively breastfeeding, such as:
 - Suspected or confirmed maternal insufficient glandular tissue (IGT)
 - Potential anatomical barriers to breastfeeding (e.g. breast surgery, neonatal cleft palate)
 - Possible reasons for inadequate / absent breast development during pregnancy, or disruption to the onset of lactation (e.g. donor / IVF pregnancy, hormonal or endocrine disorders)
- An increased risk of **neonatal hypoglycaemia**, such as:
 - Anticipated low birth weight due to intrauterine growth restriction
 - Possible low birth weight due to multiple pregnancy
 - Maternal diabetes
 - Use of maternal beta-blockers prior to birth
 - Anticipated or planned preterm birth for fetal or maternal reasons (e.g. diagnosis of pre-eclampsia)

Refer to UHBW Clinical Guideline Identification and Management of Neonatal Hypoglycaemia (see related documents).

4. Technique

- 4.1 A written patient information leaflet 'Expressing colostrum in pregnancy' is available, which should be provided and discussed with the pregnant woman (see related documents, and available on the DMS).

In addition to being given the above leaflet, during discussions regarding antenatal expression of breastmilk, pregnant women should be shown the technique of hand expressing by an adequately trained member of maternity staff, and/or signposted to the educational video available via the UK Baby Friendly Website:

<https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/breastfeeding-resources/hand-expression-video/> according to individual preference and as appropriate clinically.

- 4.2 A pregnant woman who undertakes antenatal expression of colostrum should be reassured that it may take several attempts to obtain any colostrum, and that if/when she does, it is likely to be very low in volume (less than 1ml), but that the practice is still valuable and worthwhile. She can carry out the practice as often as she wishes, but the standard recommendation is 1-3 times a day for 10-20 minutes.
- 4.3 During the discussion pregnant women should also be reassured that there is only evidence that antenatal expressing is beneficial for future breastfeeding, not detrimental. It will not affect her milk supply adversely, and she will not run out of colostrum. If she expresses an intention to breastfeed, the responsive nature of breastfeeding, and the principle of supply and demand should be explained, and that any colostrum given to her baby is in addition to the breastfeeds or colostrum her baby will receive naturally after birth, through early and responsive breastfeeding.

5. Storage

- 5.1 Any colostrum harvested should be expressed into a sterile container (e.g. syringe), labelled as 'Colostrum' with the mother's name and the date expressed, and stored frozen until required.
- 5.2 Mothers may be provided with syringes initially from hospital or community stock and/or be advised that should they wish to collect and store colostrum on a longer term basis that sterile syringes or other suitable containers are available cheaply at pharmacies and online.
- 5.3 Please refer to the UHBristol Standard Operating Procedure 'Expressed breast milk, handing storage and administration' for further guidance on labelling, storage, and use. (See related documents, and available on the DMS.)

RELATED DOCUMENTS

[Diabetes in Pregnancy Gestational](#). UHBW Clinical Guideline (2021)
[Pre-existing type 1 and 2 Diabetes in Pregnancy](#). UHBW Clinical Guideline (2019)
[Expressed Breast Milk \(EBM\): Handling Storage and Administration, including administration of wrong EBM](#). UHBW Standard Operating Procedure (2022)
[Expressing colostrum in pregnancy](#). UHBW Patient Information Leaflet (2022)
[Giving Patient Information in the Antenatal and Postnatal Period](#) UHBristol Clinical Guideline (2021)
[Identification and Management of Neonatal Hypoglycaemia](#). UHBW Clinical

Guideline (2020)
[Infant Feeding Policy](#). UHBristol Policy (2021)
[Management of women at high risk of preterm labour](#). UHBW Clinical
Guideline (2022)
[Placenta Praevia](#). UHBristol Clinical Guideline (2019)

SAFETY

See section 3.2: Safety, and section 3.3: Precautions.

QUERIES

Contact the Infant Feeding Specialist Midwives Ext 25164 /
InfantFeedingMidwives@UHBristol.nhs.uk
or the Diabetes Specialist midwives Ext 25577 /
[REDACTED]

In addition:

All maternity staff are trained in the skill of teaching hand expressing (as part of UNICEF Baby Friendly UK accreditation) and can be called upon by other staff for assistance supporting women if required.

REFERENCES

- [Cox SG \(2006\) Expressing and storing colostrum antenatally for use in the newborn period. Breastfeeding Review. 14\(3\):16. \[online\]](#)
- [East CE, Dolan WJ, Forster DA. \(2014\) Antenatal breast milk expression by women with diabetes for improving infant outcomes. Cochrane Database of Systematic Reviews 2014, Issue 7. \[online\]](#)
- [Fair, F et al \(2018\) Women's perspectives on antenatal breast expression: a cross-sectional survey. Reproductive Health 15:58 \[online\]](#)
- [Forster et al \(2017\) Advising women with diabetes in pregnancy to express breastmilk in late pregnancy \(Diabetes and Antenatal Milk Expressing \[DAME\]\): a multicenter, unblinded, randomized controlled trial. The Lancet. 389\(10085\): p2204-2213\[online\].](#)
- [Fair et al \(2018\) Womens perspectives on antenatal breast expression: a cross sectional survey. Reproductive Health. 15:58 \[online\].](#)
- [Juntereal NA, Spatz DL. Integrative Review of Antenatal Milk Expression and Mother-Infant Outcomes During the First 2 Weeks After Birth. J Obstet Gynecol Neonatal Nurs. 2021\[online\]](#)
- [La Leche League GB \(2016\) Antenatal Expression of Colostrum \[online\]](#)
- [Lopez-Fernandez et al \(2017\) Breastfeeding during pregnancy: A systematic review. Women Birth. Dec 2017: 30\(6\)e292-e300 \[online\]](#)
- [NICE \(2015\) Diabetes in pregnancy: Management of diabetes and its complications from preconception to the postnatal period. NICE guideline 3. National Collaborating Centre for Women's and Children's Health\[online\]](#)
- [Scott, A. Soltani, H. \(2012\) Antenatal breast expression in women with diabetes: outcomes from a retrospective cohort study. International Breastfeeding Journal. 7:18\[online\].](#)
- [Walters, D, Phan, LTH, & Mathisen, R, \(2019\). The cost of not breastfeeding: global results from a new tool, Health Policy and Planning, doi.org/10.1093/heapol/czz050](#)