

## Appendix 5: Information for mothers on Gestational diabetes and infant feeding



### [Appendix 5: Information for mothers on Gestational diabetes and infant feeding](#)

The benefits of breast feeding include short and long term benefits to both mother and baby. The benefits of breast feeding for all babies include protection of the infant against infections and necrotising enterocolitis, improved mother baby bonding, improved intelligence, improved lifetime achievements and improved earning potential. Babies who are not breastfed have an increased risk of childhood obesity and subsequent associated health issues and type 1 diabetes. Benefits extending to the mothers include reduced chance of breast cancer, ovarian cancer and lifetime risk of type 2 diabetes (OR 0.65, 95% CI 0.49 to 0.86).

There are additional benefits which are highly relevant to mothers with diabetes mellitus. Mothers with diabetes should be positively encouraged and supported to breast feed.

#### Benefits to the infant

- Earlier stabilisation of blood glucose
- A reduction in the rate of obesity or overweight in childhood, adolescence and adulthood OR 0.74 (0.7 to 0.78)
- A reduction in the risk of type 2 diabetes in childhood or adolescence OR 0.74 (0.7 to 0.78)
- A reduction in the risk of type 1 diabetes in childhood and adolescence OR 0.7 (0.56 to 0.87)

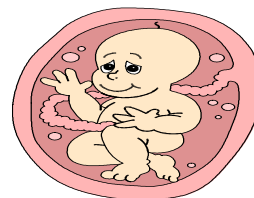
#### Benefits to the woman with diabetes

- Women with gestational diabetes are generally at increased risk of developing type 2 diabetes – 12 % of these women develop Type 2 diabetes within 2 years of pregnancy. Those women with gestational diabetes who breast feed their infants reduce this risk by about 50% compared with those who formula feed their babies. Those mothers who breast feed more exclusively or for longer experience the greatest benefits.

It is advisable for women with gestational diabetes mellitus and a planned delivery to be shown and supported to hand express breast milk starting at least 2 weeks prior to delivery. The colostrum / milk can then be frozen and stored ready to give the newborn baby within 1 hour of birth. Human milk induces normoglycaemia in the newborn infant better than formula feeding.

Useful information leaflets for mothers with diabetes mellitus are available (see appendix). These benefits of breast feeding should be discussed with the mother early on in pregnancy and reinforced at frequent intervals. This may be done in the specialist clinic or in the community. All healthcare professionals should support this in line with *Making Every Contact Count*.

**Mum...What is  
Colostrum?**



**From around 16 weeks of pregnancy a mother's body starts preparing colostrum ready for her baby**



Colostrum is nature's perfect first baby food  
The ideal "first gift" for a new baby!

**Why is colostrum important?**

A baby is very vulnerable in the first few hours and days outside of the protective environment of mum's womb. Colostrum contains "antibodies" and many other important protective factors which protect your baby at this time. Colostrum is rich in protein and tailor-made for your newborn baby's first few days.

**There is no other way your baby can receive this kind of protection.  
Formula does not contain these protective factors**

**How much colostrum does baby need?**

A newborn baby's tummy is very small- just the size of a small marble and so a baby usually requires very small feeds in the first few days.



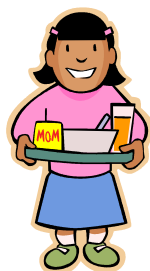
Your amazing body knows that your new baby's tummy only needs a small amount of food. Just a teaspoon or two (5-10ml) of precious colostrum provides all the goodness and protection your baby needs, packed into a perfect volume.

Imagine how stretched baby's small tummy would become if filled with 30-60 ml of formula milk at these first feeds!

**Baby's first few days outside of the safety of mum's womb**

Babies need a gradual and gentle introduction to life outside of the womb. The small volume of colostrum increases gradually day by day and this allows your baby's kidneys to adapt to the change from being fed by the umbilical cord.

**Colostrum: Baby's truly amazing first food – only delivered by mum!**



**Changes on the 3<sup>rd</sup> day**

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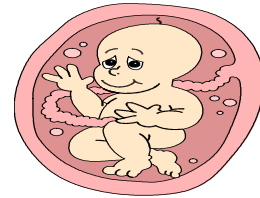
Around the 3<sup>rd</sup> day after the birth, milk flow increases and your breasts may feel much fuller but this soon settles down. From then on a mother's milk is continually changing to meet her growing baby's needs; this is completely different to formula milk which of course never changes.

**COLOSTRUM** - A baby's first precious gift from mum

All wrapped up in a mother's love!



**Mam...Beth ydy  
colostrwm?**



**O tuag wythnos 16 y bechiogrwydd, mae corff y fam yn dechrau paratoi colostrwm yn barod i'w babi.**

Colostrwm yw bwyd cyntaf perffaith natur i fabi ac mae'n "anrheg gyntaf" delfrydol i fabi newydd!

### **Pam bod colostrwm yn bwysig?**

Mae babi'n fregus iawn yn yr oriau a dyddiau cyntaf y tu allan i amgylchedd amddiffynnol groth y fam. Mae colostrwm yn cynnwys "gwrthgyrff" a llawer o ffactorau amddiffynnol pwysig eraill sy'n amddiffyn eich babi ar yr adeg yma.

Mae colostrwm yn cynnwys llawer o brotein ac mae wedi'i wneud yn arbennig i'ch babi newydd-anedig yn ystod ei ddyddiau cyntaf.

**Does dim un ffordd arall y gall eich babi gael y math hwn o amddiffyniad.  
Nid yw llaeth powdr yn cynnwys y ffactorau amddiffynnol hyn.**

### **Faint o golostrwm sydd ar y babi ei angen?**

Mae bol babi newydd-anedig yn fach iawn - yr un faint â marblen fach felly bydd ar y babi angen ychydig bach o fwyd ar y tro yn ystod y dyddiau cyntaf.



Mae eich corff anhygoel yn gwybod mai dim ond ychydig iawn o fwyd mae ar fol eich babi newydd ei angen ar y tro. Mae dim ond llond llwy de neu ddwy (5-10mls) o golostrwm gwerthfawr yn rhoi'r holl faeth ac amddiffyniad y mae ar eich babi ei angen

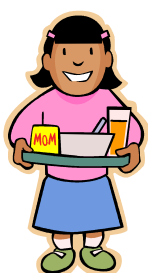
Dychmygwch faint fyddai'r bol bach hwn yn cael ei ymestyn petai'n cael ei lenwi â 30-60 mls o laeth powdr yn yr ychydig droeon cyntaf hyn.

### **Dyddiau cyntaf y babi y tu allan i ddiogelwch groth mam**

Mae ar fabanod angen eu cyflwyno'n raddol ac yn dyner i fywyd y tu allan i'r groth.

Mae'r ychydig o golostrwm yn cynyddu'n raddol bob dydd ac mae hyn yn rhoi cyfle i arennau eich babi addasu i'r newid o gael ei fwydo drwy'r llinyn bogail.

**Colostrwm: Bwyd cyntaf anhygoel y babi - dim ond gan mam!**



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### Newidiadau ar y 3<sup>ydd</sup> diwrnod

O gwmpas y 3<sup>ydd</sup> diwrnod ar ôl yr enedigaeth, byddwch yn dechrau cynhyrchu llaeth a bydd eich bronau'n teimlo llawer llawnach, ond bydd hyn yn gwella cyn bo hir. O'r adeg honno bydd llaeth mam yn newid yn gyson i fodloni anghenion ei babi sy'n tyfu; mae hyn yn hollol wahanol i laeth powdr oherwydd nid yw hwnnw byth yn newid, wrth gwrs.

**COLOSTRWM** - Anrheg gyntaf gwerthfawr babi gan ei fam.  
Wedi'i lapio'n dynn yng nghariad mam!



**What you should know from 34 weeks of pregnancy  
Preparing for feeding your baby - before the birth.**

**What is colostrum?**

Colostrum is the very rich milk a mother produces during pregnancy and in the first few days after the birth. Colostrum is an excellent source of food and energy and also has very important protective factors that strengthen our baby's gut and help prevent infections.

**Why express colostrum before the birth?**

Some babies may have problems with low blood sugar levels in the first few days after birth.

This problem is more common if baby has to be delivered early or if mum is diabetic. Other babies may have particular physical problems (e.g. cleft lip/palate) that may prevent them from breast feeding straight away

**A baby in these situations may require extra feeds.  
The very best food for all babies is their mothers' milk.**

- Babies born early or with particular problems that prevent them from breast feeding may be particularly vulnerable to certain illnesses and infections. Mother's milk will help protect them from these as well as keep their sugar levels steady.
- For the baby of a diabetic mum it is important that they have their mother's milk not just to keep their sugar levels steady but research has shown us that mother's milk will reduce the risk of the baby subsequently developing diabetes in childhood.

Many maternity hospitals now encourage pregnant diabetic women or mothers where feeding problems are anticipated to hand express small but precious amounts of their colostrum before baby is born so that this can be given to the baby instead of formula if baby needs extra feeds in those early hours after the birth.

**Learning a new skill - practice makes perfect!**

Expressing milk by hand may take a little practice in order for you to become confident. Many mothers have found it beneficial to learn this skill towards the end of pregnancy so that:

- ✓ Mum can store her colostrum so that it can be given to her baby for any extra feeds that are necessary
- ✓ Mum will feel more confident with hand expressing after the birth and thus be able to provide more of her own milk for her baby.

**What to do next?**

If you would like to know more about hand expressing for your baby before the birth, please tell your community midwife or the ante-natal clinic midwife. They will arrange an appointment for when you are about



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34 weeks pregnant. At this appointment you will be taught how to hand express and given information about storing your milk at home, bringing it into hospital and its use after your baby has been born.



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### Godro colostrwm i'ch babi cyn iddo gael ei eni

#### Beth ydy colostrwm?

Colostrwm ydy'r llaeth maethlon iawn y mae mam yn ei gynhyrchu yn ystod beichiogrwydd ac yn y dyddiau cyntaf ar ôl yr enedigaeth. Mae colostrwm yn ffynhonnell ardderchog o fwyd ac egni ac mae ganddo hefyd ffactorau amddiffynnol sy'n cryfhau coluddion eich babi ac yn helpu i atal haint.



#### Pam godro colostrwm cyn i'r babi gael ei eni?

Mae'n bosibl y bydd rhai babanod yn cael problemau gyda lefelau siwgr isel yn y gwaed yn y dyddiau cyntaf ar ôl cael eu geni. Mae'r broblem hon yn fwy cyffredin os bydd y babi'n gorfod cael ei eni'n gynnar neu os ydy'r fam yn ddiabetig. Mae'n bosibl y bydd gan fabanod eraill broblemau corfforol penodol (e.e. gwefus/taflod hollt) fydd yn eu hatal rhag bwydo'n syth

Mae'n bosibl y bydd babi yn y sefyllfa yma angen ei fwydo'n amlach. Y bwyd gorau un i bob babi ydy llaeth ei fam

- Mae'n bosibl y bydd babanod sy'n cael eu geni'n gynnar neu gyda phroblemau penodol yn fwy tebygol o gael rhai mathau o salwch, a bydd llaeth y fam yn helpu i'w hamddiffyn rhag y rhain yn ogystal â chadw eu lefelau siwgr yn gyson
- Mae'n bwysig bod babanod mamau diabetig yn cael llaeth eu mam, nid yn unig i gadw lefelau eu siwgr yn gyson, ond mae ymchwil wedi dangos bod llaeth mam (ac osgoi cyflwyno cynnyrch llaeth buwch yn gynnar) yn gallu lleihau risg y babi o ddatblygu diabetes yn ystod ei blentyndod.

Mae llawer o ysbytai mamolaeth bellach yn annog merched diabetig sy'n feichiog neu famau sydd i fod i roi genedigaeth yn gynnar neu pan fo problemau bwydo yn cael eu rhagweld, i odro ychydig o golostrwm gwerthfawr â llaw cyn i'r babi gael ei eni er mwyn gallu ei roi i'r babi yn hytrach na fformiwla os bydd ar y babi angen ei fwydo'n amlach yn ystod yr oriau'n syth ar ol cael ei eni.

#### Dysgu'r sgil newydd - fe ddaw gydag arfer!

Mae godro llaeth â llaw yn sgil y bydd gofyn i chi ei hymarfer cyn y byddwch yn hyderus efallai. Mae llawer o famau yn elwa o ddyysgu'r sgil tuag at ddiwedd eu beichiogrwydd oherwydd:

- ✓ Mae mam yn gallu storio ei colostrwm er mwyn iddo gael ei roi i'w babi os bydd angen ei fwydo'n aml
- ✓ 2) Bydd mam yn teimlo'n fwy hyderus i odro â llaw ar ôl yr enedigaeth ac felly'n gallu rhoi mwy o'i llaeth i'r babi

#### Beth i'w wneud nesaf?

Os hoffech chi wybod mwy am odro colostrwm â llaw i'ch babi cyn iddo gael ei eni, Dywedwch wrth eich bydwaig cymuned neu'r fydwaig yn y clinig cyn geni.



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Bydd yn trefnu apwyntiad i chi pan fyddwch o gwmpas ar wythnos 34 eich beichiogrwydd.

Yn yr apwyntiad, cewch ddysgu sut i odro â llaw, a chewch wybodaeth am storio eich llaeth gartref, dod â'r llaeth i'r ysbyty a'i ddefnyddio ar ôl i'ch babi gael ei eni.



### What you can do at 36 weeks of pregnancy



### Hand expressing colostrum for your baby before the birth

- Hand expressing milk simply means squeezing milk out of your breast.
- Your midwife can teach you how to do this, ask for additional written guidance.
- YouTube has useful clips about this.

### When and how often can I express?

- ✓ You can start to hand express colostrum at about 36-37 weeks of your pregnancy.
- ✓ Start by expressing for about 3-5 minutes each time about 3 times each day.
- ✓ As you become more confident you can increase the time spent hand expressing to 5-10 minutes about 3 times a day.

### How to express your breast-milk

1. Stimulating the flow of colostrum by showering or having a bath before expressing; alternatively you can use warm cloths and gentle massage to prepare your breast.

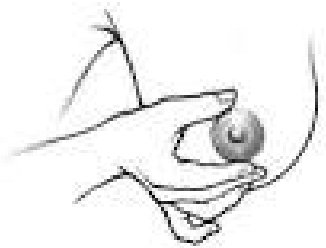
2. Wash your hands before hand expressing .

3. Cup your breast with your hand in a 'C' shape with 4 fingers under the breast and the thumb at the top. Your thumb and finger need to be about 3-4c the nipple

4 Using your thumb and index finger gently squeeze this area – be gentle, gentle, this shouldn't hurt.

5. Release the pressure and then repeat again and again, building up a rhythm.

- Avoid sliding your fingers over the skin.
- Now express from the other breast in the same way.



### How much breast-milk will I get?

Colostrum is very concentrated and thick. Initially you may see just a small glisten of liquid on your nipple, after a day or two this may become a drop, followed by a drip forming as your colostrum

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flows more easily. If you do not see any sign of any milk, try moving your fingers slightly towards the nipple or further away, find the spot that works best for you.

**Note:** *You may find that when you express you feel your womb going hard and relaxing – this is called ‘Braxton Hicks’ contractions. Don’t worry about these, unless they begin to feel like period type cramps or mild labour contractions. This is rare, but if this happens, you should stop expressing and rest. If they don’t stop and you think you might be in labour, you should telephone the Delivery Suite for further advice.*

### **Where to store your expressed colostrum**

- You will need to collect the milk in clean containers such as a sterile pot or syringe. Your midwife can provide you with a pot (for collection) and a selection of small syringes with “bungs” for the tips that you can use to store the milk in.
- All of the colostrum you collect in a 24 hour period can be combined in one sterile container and stored in the freezer at minus 18°C.
- The container needs to be labelled with your name and the date you expressed the milk
- You can store your milk in the fridge at a temperature of about 4°C for up to 48 hours; after which time you should place it in its container in a clean zip-lock bag and place it in your freezer at a temperature of minus -18° C.

### **Going in to have your baby 😊**

- ❖ Don’t forget to bring any breast-milk you have expressed with you when you come into hospital to have your baby. Depending on how much you managed to collect you may only want to bring a small amount to begin with, your partner/family could bring more once the baby has been delivered.
- ❖ On admission to hospital let the midwife know you have the milk with you and she will arrange for it to be stored in a designated fridge on the maternity ward or on the neonatal unit. Ensure that the midwife caring for you during your admission and delivery is aware that you have collected your milk antenatally should it be needed for your baby.



### Godro colostrwm â llaw i'ch babi cyn iddo gael ei eni

#### Pryd alla i o odro, a pha mor aml?

Gallwch ddechrau godro colostrwm â llaw pan fyddwch tuag wythnos 36 eich beichiogrwydd. Dechreuwch drwy odro am 3-5 munud bob tro tua 3 gwaith y dydd. Wrth i chi ddod yn fwy hyderus, gallwch dreulio 5-10 munud yn godro â llaw tua 3 gwaith y dydd.

#### Sut i odro eich llaeth

Yn syml, mae godro â llaw yn golygu gwasgu llaeth o'ch bron. Bydd eich bydwraig yn eich dysgu sut i wneud hyn.

1. Mae'n gallu helpu i gael cawod neu fath cyn godro â llaw; neu gallwch ddefnyddio cadachau cynnes a thylino'n ysgafn cyn godro er mwyn symbylu'r llif o golostrwm
2. Cwpanwch eich bron gyda'ch llaw mewn siâp 'C',  
4 bys o dan y fron a'r bawd uwch ei phen.  
Dylai eich bawd a'ch bys fod tua 4cm o fôn y deth



3. Gyda'ch bawd a'ch mynegfys, gwasgwch y darn hwn yn ysgafn - ni ddylai hyn frifo
4. Gollyngwch y pwysau ac yna ail adrodd eto ac eto, gan fynd i rythm. Peidiwch â llithro eich bysedd dros y croen. Gan fod y llaeth cyntaf (colostrwm) yn ddwys iawn, mae'n drwchus a bydd yn dod allan o'ch bron *fesul diferyn*
5. Os na fyddwch yn gweld unrhyw ddiferion o laeth, ceisiwch symud eich bysedd ychydig tuag at y deth neu ymhellach i ffwrdd, i ddarganfod yr union le sy'n gweithio orau i chi
6. Pan fydd y llif yn arafu, symudwch eich bysedd o amgylch y fron, (fel symud o amgylch y rhifau ar y cloc), fel eich bod wedi godro'r llaeth o amgylch y fron i gyd. Rwan, gwnewch yr un fath gyda'r fron arall

**Sylwer:** Mae'n bosibl y byddwch yn sylwi y bydd eich groth yn mynd yn galed ac yna'n ymlacio wrth i chi odro - gelwir hyn yn gyfngiadau 'Braxton Hicks'. Peidiwch â phoeni am y rhain, oni bai eu bod yn dechrau teimlo fel poenau mislif neu gyfngiadau esgor ysgafn. Mae hyn yn beth prin, ond os bydd yn digwydd, dylech roi'r gorau i odro, a gorffwyso. Os nad ydynt yn cilio, ac os ydych yn meddwl y gallech fod yn cael poenau esgor, dylech ffonio'r ward geni i gael mwy o gyngor.

#### Ble i storio fy llaeth

- Bydd arnoch angen casglu'r llaeth mewn cynhwysydd glân fel galipot neu chwistrell di-haint. Bydd eich bydwraig yn rhoi galipot i chi (i gasglu'r llaeth) a chwistrellau bach a "chorcyn" ar eu blaenau i chi storio'r llaeth ynddynt.
- Gallwch gadw'r holl golostrwm rydych yn ei gasglu mewn cyfnod o 24 awr mewn un cynhwysydd di-haint a'i gadw mewn rhewgell ar minws 18°C.
- Bydd angen rhoi label ar y chwistrell gyda'ch enw a dyddiad godro'r llaeth.

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- Gallwch storio llaeth yn yr oergell ar dymheredd o tua 4°C am hyd at 48 awr; wedi hynny, dylech ei roi yn ei gynhwysydd mewn bag 'zip-lock' glân a'i roi yn y rhewgell ar dymheredd o minws 18°C.

### **Faint o laeth fydda i'n ei gael o'r fron?**

- ✓ Bydd hyn yn amrywio o un fam i'r llall, mae unrhyw beth o ychydig ddiferion i lond llwy de yn arferol. Mae'r llaeth cyntaf yn ddwys iawn o ran maeth ac mae'n helpu eich babi ymladd haint. Mae'r ychydig bach o laeth a gewch yn berffaith i'ch babi newydd.
- ✓ Peidiwch ag anghofio dod ag unrhyw laeth rydych wedi'i odro gyda chi pan fyddwch yn dod i'r ysbyty i gael eich babi. Yn dibynnu ar faint rydych wedi'i gasglu, mae'n bosibl na fyddwch eisiau dod â dim ond ychydig i ddechrau, gall eich partner/teulu ddod â mwy pan fydd y babi wedi'i eni.
- Wrth gael eich derbyn, dywedwch wrth eich bydwaig eich bod wedi dod â'r llaeth a bydd hi'n trefnu iddo gael ei gadw mewn oergell benodol ar y ward famolaeth neu'r uned i'r newydd-anedig. Gwnewch yn siwr bod y fydwaig sy'n gofalu amdanoch yn gwybod eich bod wedi casglu eich llaeth cyn geni rhag ofn y bydd ei angen ar eich babi.