Breastfeeding for Professionals

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Breastfeeding and Medication

Why listen to this webinar?

The aim of this presentation is to enable doctors, nurses and pharmacists to promote and support breastfeeding in their everyday working practice using an evidence based approach whilst providing an opportunity for CPD entries.

Continuing Professional Development

None of us can know everything but we can take opportunities to increase our knowledge in areas which are important to families in which we lack experience.

It is impossible to know everything but you should know where to look or who to ask for that expertise

What do we need to know to support breastfeeding?

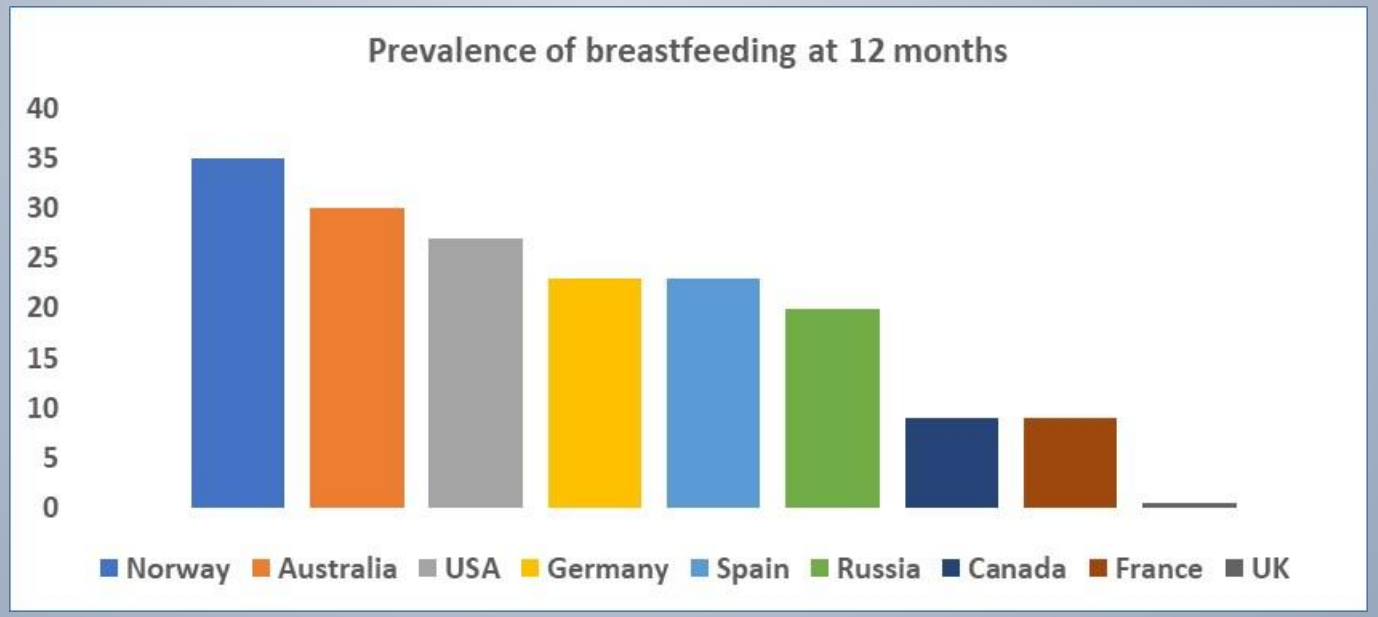
In this presentation I'm going to think about:

- why exclusive breastfeeding is important to the future health of mother and child
- the management of common conditions such as sore nipples, engorgement, mastitis, thrush and poor weight gain
- an understanding of issues pertaining to prescribing for breastfeeding mothers
- Signposting to evidence based information
- the importance of appropriate referral of mothers for expert help with breastfeeding
- how our own attitudes to breastfeeding may affect our consultations

Why should we promote breastfeeding?

Human milk is the most appropriate of all milks for the human neonate because of its nutritional and immunological advantages. Formula, whilst currently used by the majority of women in the UK at some time during the first 6 months, is not the living fluid which breastmilk is nor is it individual for every baby providing protection as well as nutrition. It is an issue of health promotion.

If breastfeeding did not already exist, someone who invented it today would deserve a dual Nobel Prize in medicine and economics Lancet 2016



- Immunisation is preventative medicine par excellence. If a new vaccine became available that could prevent 1 million or more child deaths a year and that was moreover, cheap, safe, administered orally and required no cold chain, it would become an immediate public health imperative. **Breastfeeding** could do all this and more, but it requires its own 'warm chain' of support that is skilled care for mothers to build their confidence and show them what to do, and protect them from harmful practices. The Lancet, 1994

- Imagine that the world had invented a new 'dream product' to feed and immunize everyone born on earth. Imagine also that is was available everywhere required no storage or delivery – and helped mothers to plan their families and reduce the risk of cancer. Then imagine that the world refused to use it. The 'dream product' is human breastmilk and is available to us all at birth and yet we are not using it" Director General of UNICEF

The role of professionals in promoting and supporting breastfeeding

"Women and infants need their professionals to advocate breast feeding, to learn the basic skills, ……to ensure that breastfeeding is protected, and to support their colleagues who are working to promote and protect breast feeding"

Renfrew M and Hall D Enabling women to breast feed -Is a challenge for the health professions· BMJ 2008;337:a1570

Breastfeeding helps protect babies against:

- ear infections
- gastro-intestinal infections
- chest infections
- urine infections
- childhood diabetes
- eczema
- obesity
- atopic diseases
- risk of SIDS

Renfrew M and Hall D Enabling women to breast feed -Is a challenge for the health professions· BMJ 2008;337:a1570

Breastfeeding helps protect mothers against:

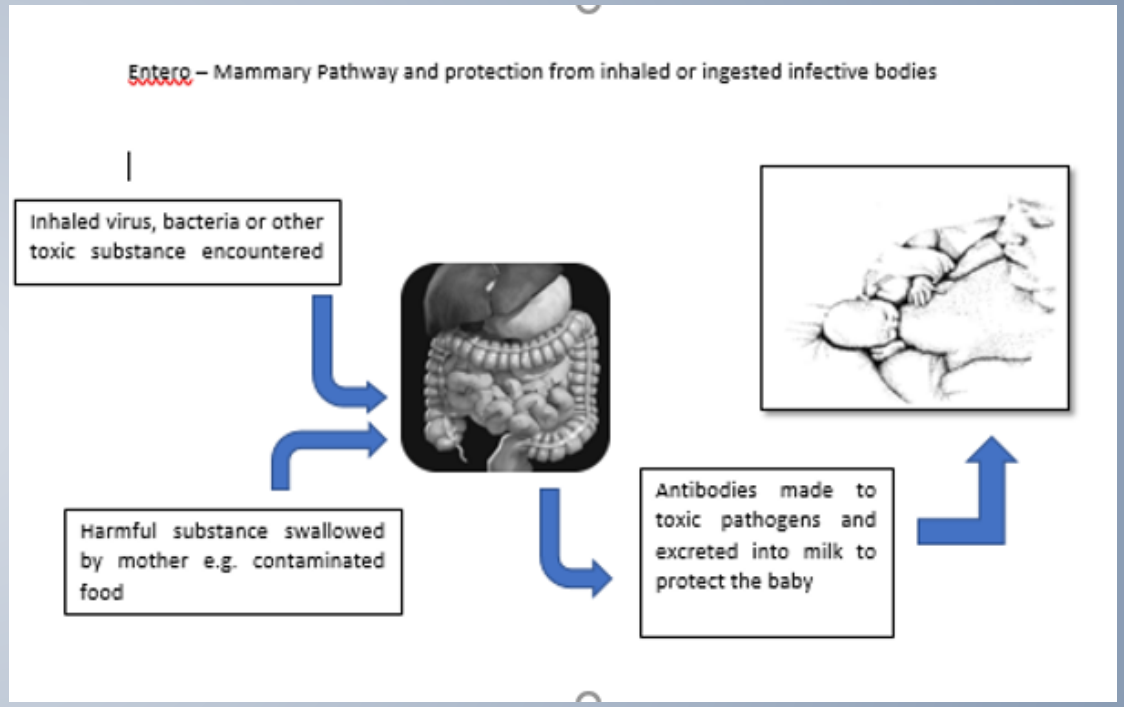
- ovarian cancer
- breast cancer
- increased likelihood of returning to their pre-pregnancy weight
- delayed resumption of the menstrual cycle with consequential lower loss of iron stores
- Lifetime risk of cardiovascular disease

'Breastfeeding is associated with a reduced maternal cardiovascular risk: Systematic review and meta-analysis involving data from eight studies and 1,192,700 parous women' by Lena Tschiderer *et al.* was published in the *Journal of the American Heart Association* on Tuesday 11 January 2022.

If a baby is not breastfed..

- it receives none of the protective effects of the immunological components of breastmilk
- it has increased risk of receiving milk contaminated during preparation and storage.

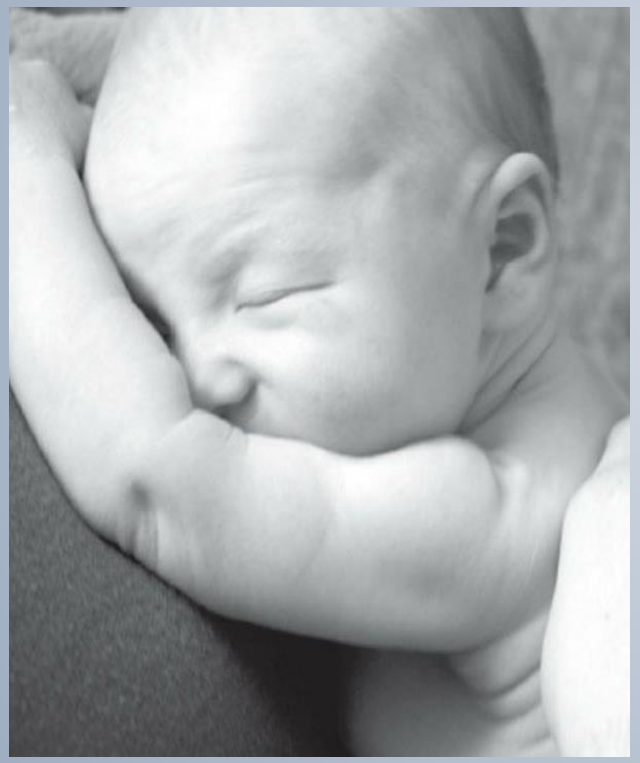
Is it surprising more babies who are bottle-fed suffer from gastro-enteritis and too many end up being admitted ?



Reproduced from Breastfeeding and Medication Jones W

- https://www.unicef.org.uk/wp-content/uploads/sites/2/2012/11/Preventing_disease_saving_resources.pdf

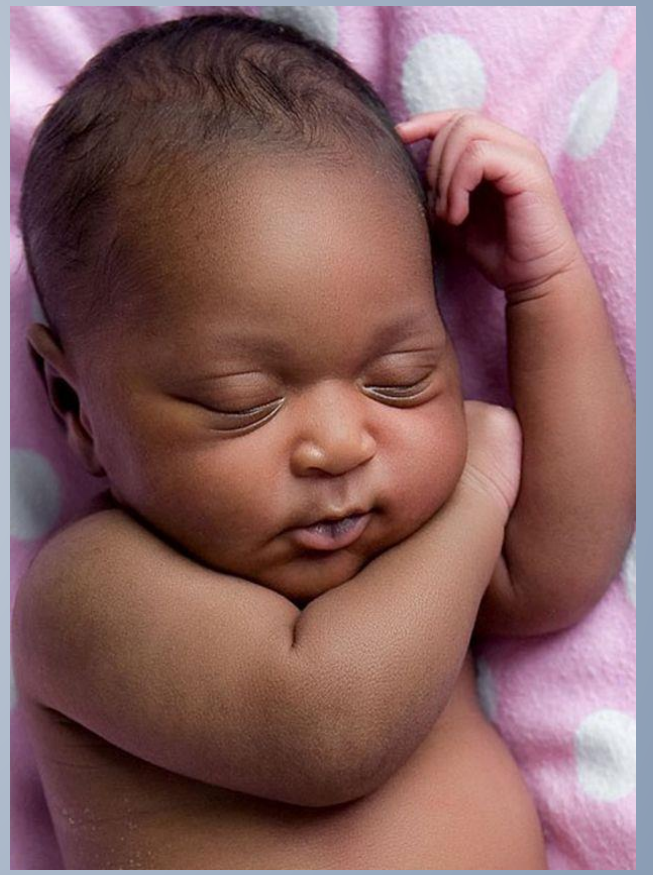
Risk factors for gastro-enteritis if baby is formula fed



- Free iron in the gut (which bacteria thrive on)
- No lacto-ferrin (to mop up free iron)
- No bifidus factor (so increased pH conducive to bacterial growth)
- No oligosaccharides (to inhibit attachment of pathogens)
- No Secretory IgA (protective coating for gut)
- No entero/broncho-mammary pathway (for antibody production)

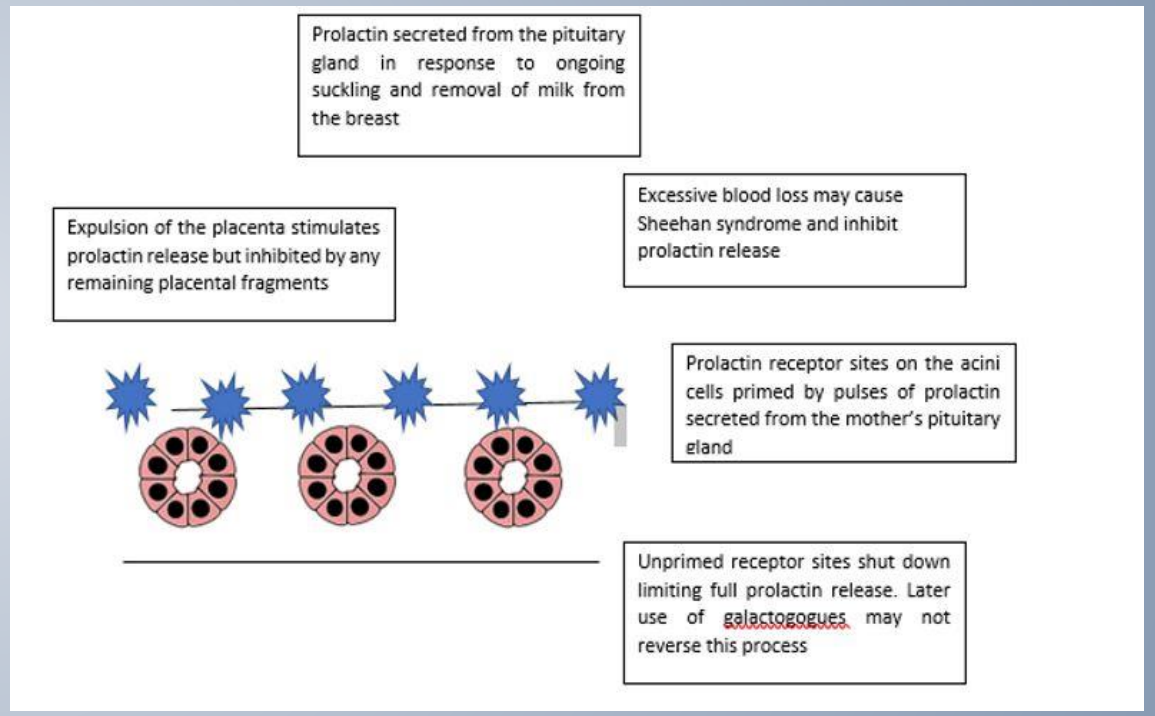
Risk factors for gastro-enteritis if baby is formula fed (2)

- No white cells (to destroy bacteria)
- No lysozyme (to destroy bacteria)
- No epidermal growth factor (for maturation)
- No viral fragments (to stimulate antibody response)
- No anti-inflammatory molecules (to moderate response to pathogens)



How do hormones control breastfeeding?

- **<u>Prolactin</u>** is responsible for the ongoing synthesis of breastmilk
- Prolactin levels may be influenced by medication e.g. domperidone increases whilst Ariprazole lowers it



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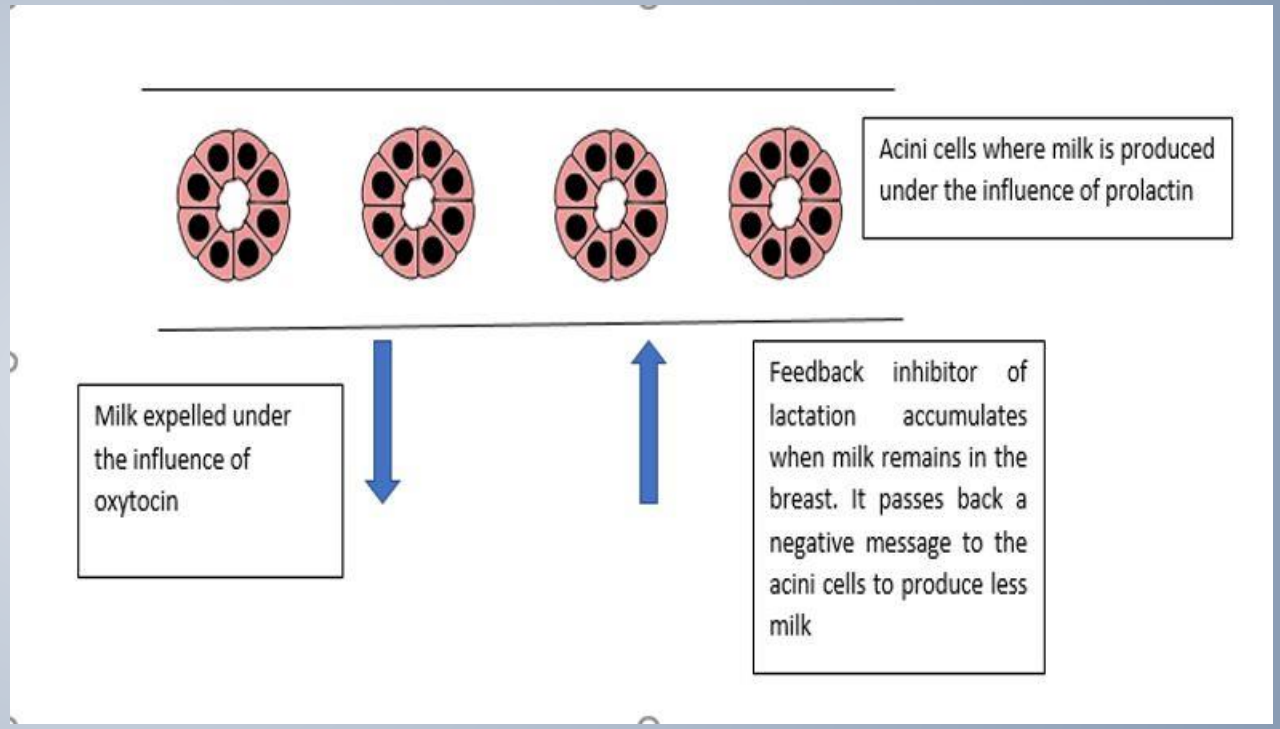
Oxytocin is responsible for the ejection of the milk from the breast

Levels of oxytocin can temporarily be reduced by fear pain, stress and anxiety whilst relaxation and skin to skin increase levels



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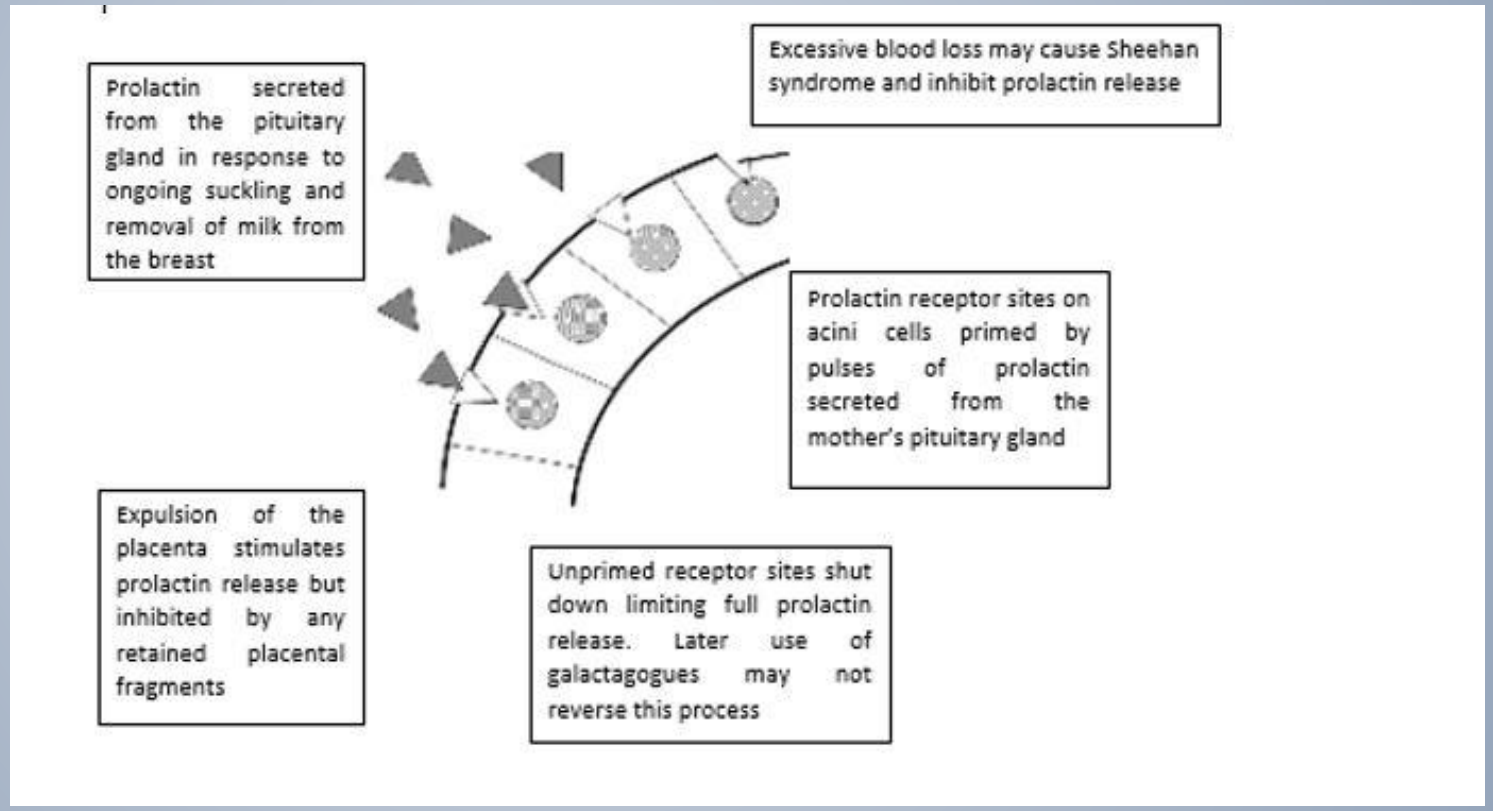
Feedback Inhibitor of Lactation (FIL) governs the volume of milk produced by negative feedback



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What difficulties may a mother who is breastfeeding have?

Engorgement

temporary swollen, hot and sore breasts in the first few days after delivery as the milk “comes in”

- Apply warmth to the breast before feeds
- Feed frequently with good attachment
- Apply cold to the breast after feeds. Cabbage leaves do have research evidence for efficacy
- Paracetamol and ibuprofen if necessary

- Input from someone with breastfeeding expertise as soon as possible essential

Need not happen if baby feeding frequently and effectively

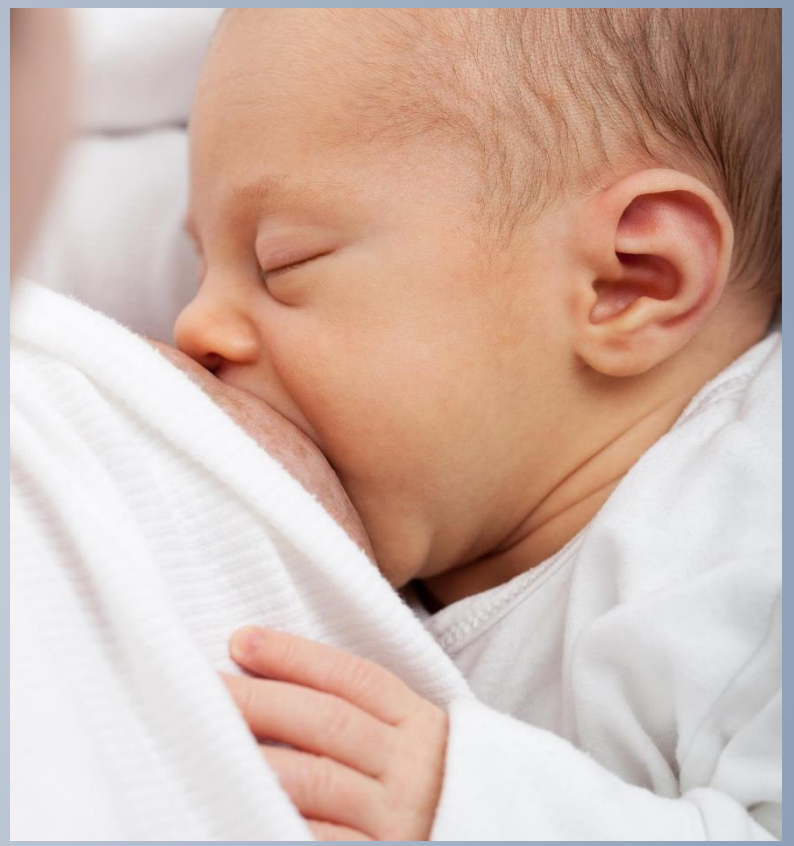
Causes of engorgement

- Frequency of feeds restricted
- Delaying feeds to fit into a “schedule” or because mum dreads the pain of feeding
- Belief that full breasts imply more milk
- But most commonly in early days due to poor attachment and therefore drainage of the breast. Often accompanied by pain on latching and during a feed
- Can occur later if feeds missed or during rapid weaning

Engorgement can and should be avoided rather than accepted as normal

Sore Nipples

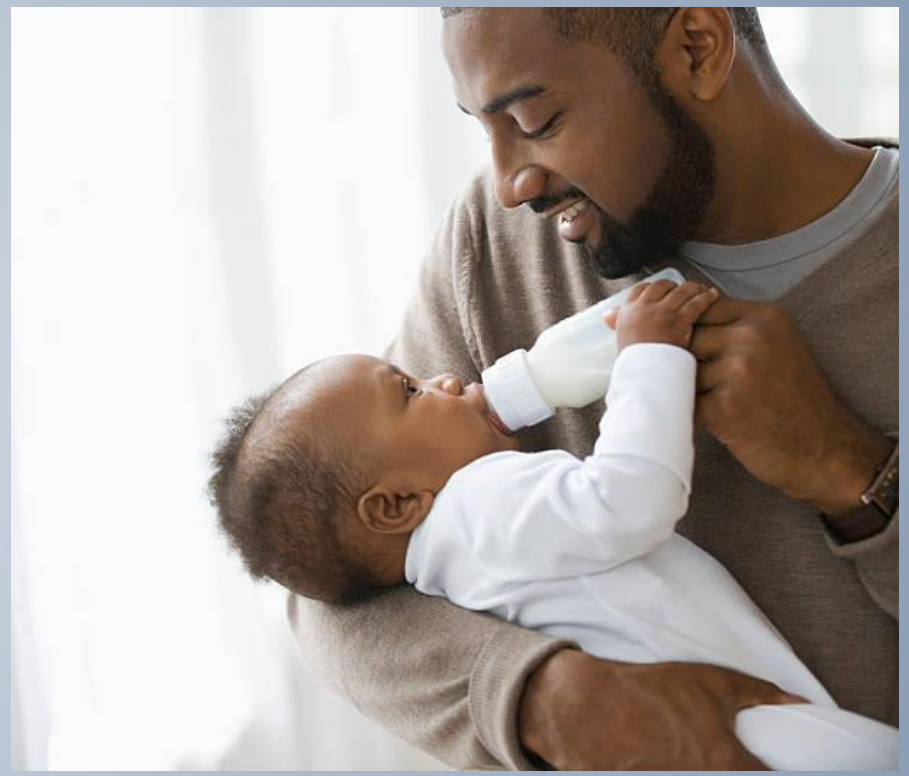
- 32% of women had experienced pain and nipple damage in the first 2 weeks after delivery according to Infant Feeding Survey 2010.
- 70% of mothers reported some breast or nipple pain during lactation
- Sore nipples are NOT an inevitable part of breastfeeding but are mainly due to problems with less than perfect attachment to the breast resulting in damage and poor drainage



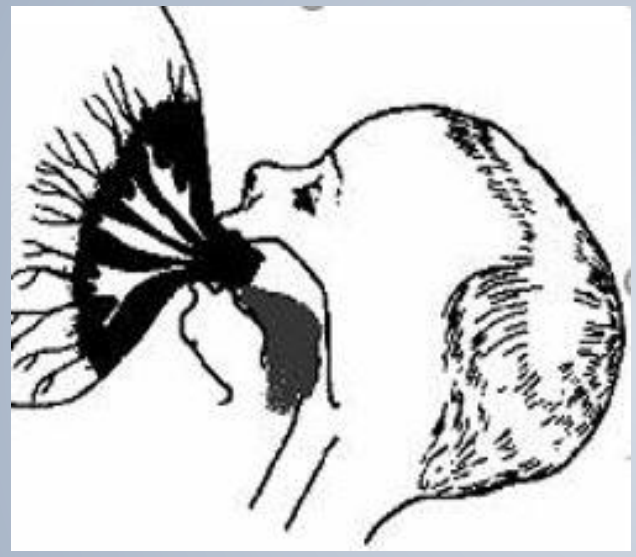
Amir L H, Baeza C, Charlamb J R, Jones W. Identifying the cause of breast and nipple pain during lactation *BMJ* 2021; 374 :n1628

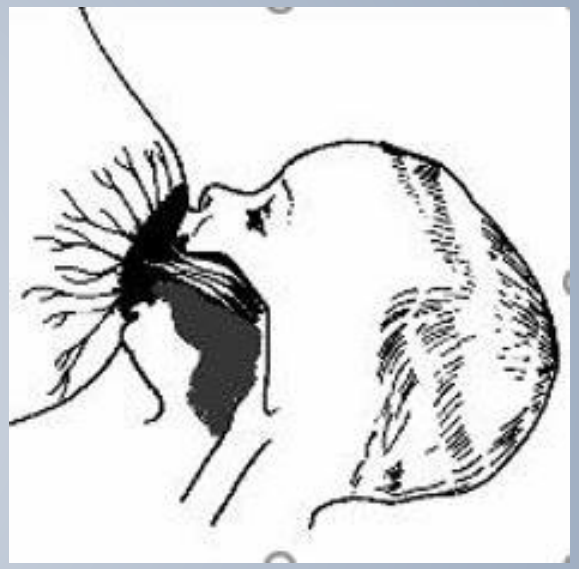
Use of formula milk

- Almost three-quarters of mothers (73%) had given their baby milk other than breastmilk by the age of six weeks according to Infant Feeding Survey 2010.
- This proportion rose to nearly nine in ten (88%) by six months
- But many women have given up breastfeeding before they intended leading to feelings of loss and grief.



Effective and ineffective attachment

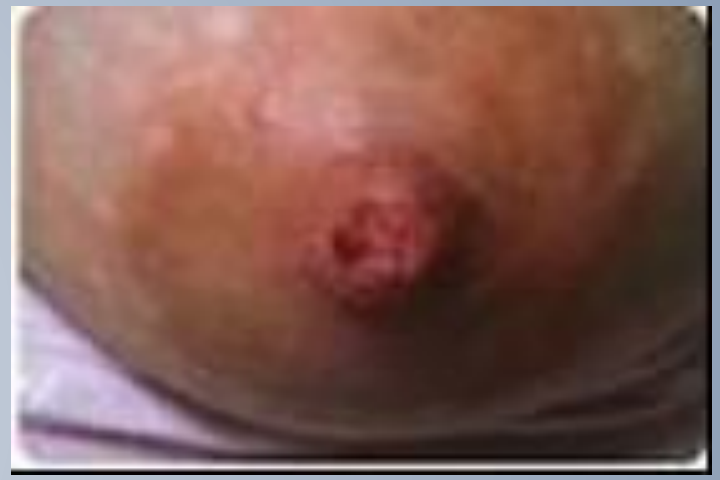




It is important that the baby has a deep latch to achieve pain free, effective breastfeeding. In the left image the baby's gums are over the end of the nipple which causes pain and restricts milk flow. Often when the baby come off the nipple is flat and the tip may be white In the right image the baby's mouth is wider, has an asymmetrical latch with more tissue below than above the nipple. This is pain free and allows effective drainage of the milk.

Treating sore nipples

- Refer mum for expert help with breastfeeding as soon as possible
- Application of moist wound healing to the crack to prevent scab formation https://www.breastfeedingnetwork.org.uk/moist-wound-healing/
- Application of creams to the whole nipple area is not evidence based and leaves the wound too soggy to heal
- If crack looks infected treat with topical antibacterial cream e.g. Fucidic acid cream (not washed off before feeds)



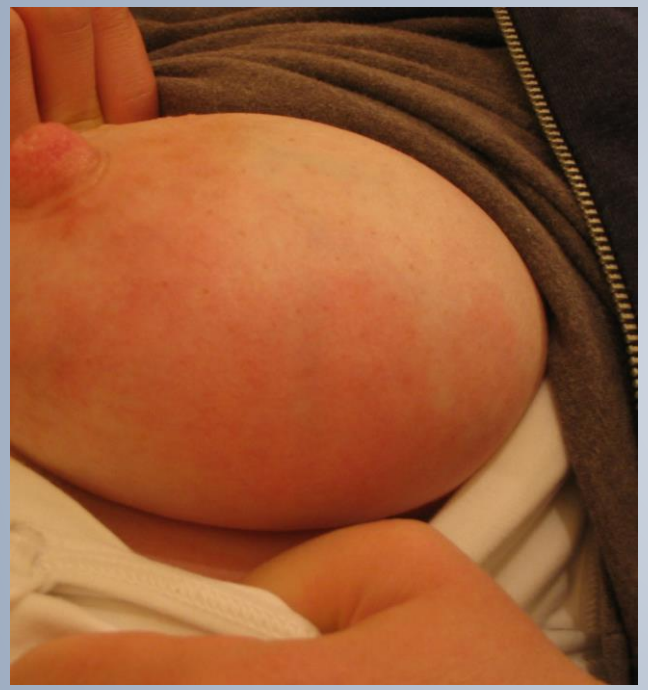
https://cks.nice.org.uk/topics/breastfeeding-problems/diagnosis/diagnosis-of-nipple-pain/

Indicators of good attachment

- Baby's mouth wide open
- Less areola visible underneath the chin than above the nipple
- Chin touching the breast, lower lip rolled down and nose free
- Mother experiences no pain on latch or during the feed
- Audible and visible swallowing of milk
- Sustained rhythmic suck
- Baby's arms and hands relaxed
- Baby has moist mouth indicating it is well hydrated
- Regular soaked/heavy nappies
- Mother's breast softens after feeds
- No change in shape of the nipple after feeds
- Woman feels relaxed and sleepy during and after feeds

https://www.nice.org.uk/guidance/ng194

Treating mastitis



- Refer mum for expert help with breastfeeding as soon as possible
- Prompt mum to feed more frequently
- DO NOT ADVISE mum to stop breastfeeding
  - Mastitis is most frequently an **inflammation** of the breast
  - Most cases are due to insufficient drainage of the breast
- Prescribe anti-inflammatories and consider delayed prescription for antibiotics if clinically indicated
- Prescribe antibiotics only if improved drainage has not reduced symptoms after 12-24 hours or if mother is clinically very unwell.
- Be aware of risk of sepsis with sudden, severe development of symptoms

Thomson et al (1984) Course and treatment of milk stasis, non-infectious inflammation of the breast and infectious mastitis. *Am J Obstet.Gynecol* 149: 5, 492-5

Antibiotic treatment for mastitis

- Flucloxacillin 500mg four times a day
- or
- Amoxicillin 500mg three times a day

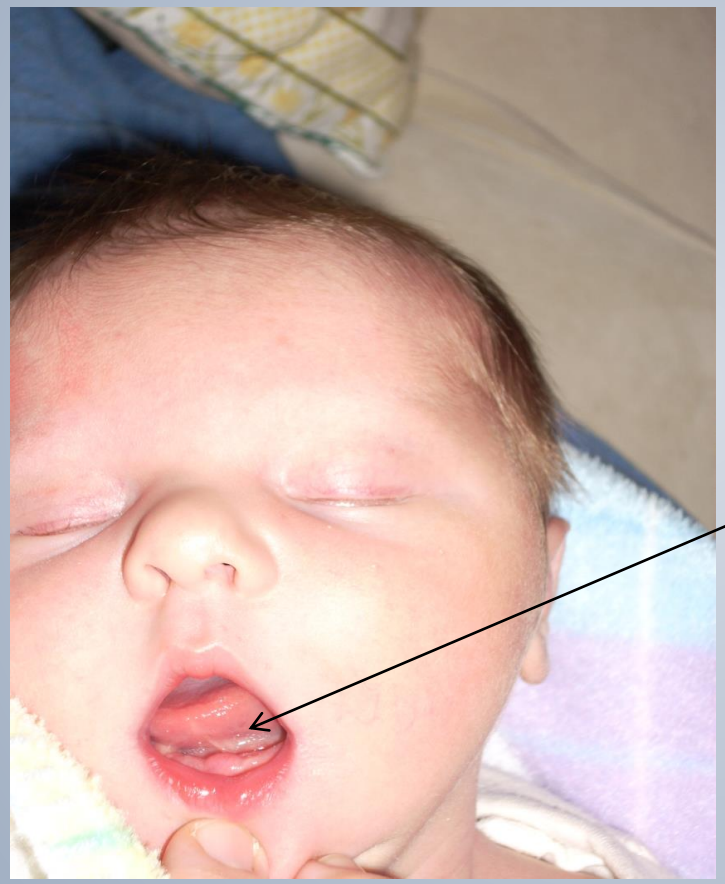
- If the mother is allergic to penicillin;

- Erythromycin 500mg four times a day
- or
- Cephalexin 500mg four times a day

Be aware of signs and symptoms of sepsis

WHO Mastitis, causes and management 2000

Tongue Tie (ankyloglossia)



A short frenulum may restrict the movement of the baby's tongue resulting in ongoing soreness of the mother's nipples. Often seen as a heart shaped tip to the nipple.

Many areas have local expert clinics but the family may choose to seek private support www.tongue-tie.org.uk

https://www.nice.org.uk/guidance/ipg149

Breastmilk insufficiency

- 41% of mothers who give up breastfeeding in the first 2 weeks after delivery cite insufficient milk as a reason for stopping according to the infant feeding survey
- Ongoing milk production is stimulated by removal of the milk from the breast (and therefore low levels of Feedback Inhibitor of Lactation) and ongoing stimulation of prolactin due to suckling
- Ineffective drainage and infrequent feeding lead to increase in FIL and reduced supply
- In consultations you may see babies < 6 weeks producing infrequent stools.
- Refer for breastfeeding support first line as soon as possible rather than prescribing laxatives

https://breastfeeding-and-medication.co.uk/fact-sheet/lack-of-stools-constipation-in-a-breastfed-baby

Treating low milk supply

https://www.breastfeedingnetwork.org.uk/domperidone/

- Refer mum for expert help with breastfeeding as soon as possible
- Prompt mum to feed more frequently
- Refer baby if it is clinically dehydrated
- Consider whether the mother has started any new medication (including progesterone only pill) or any sedating drug, decongestant or aripiprazole?
- If optimising attachment by an expert has not improved supply consider prescribing domperidone to increase prolactin levels. This is unlicensed use of the drug.

Thrush on the lactating breast

Symptoms of Candida on the breast:

- Pain in both breasts after a period of pain free breastfeeding
- Pain after every feed
- Nipples ultra-sensitive to touch

YouTube video on identification and treatment of thrush
https://www.youtube.com/watch?v=mUejMWnwOu0

Treatment of thrush

- Refer mum for expert help with breastfeeding as soon as possible if breastfeeds are painful as this may have been incorrectly diagnosed as thrush

- Treat the mother with antifungal cream(miconazole) applied sparingly to the nipples after feeds. Clotrimazole on nipples reported associated with allergy

- Treat the baby with topical oral antifungal (miconazole first line, unlicensed <4m) four times a day. Nystatin less effective

	miconazole	nystatin
day 5	84.7	21.2
day 8	96.9	37.6
day 12	99	54.1

- https://www.breastfeedingnetwork.org.uk/thrush-detailed/
- https://breastfeeding-and-medication.co.uk/training/candida-thrush-on-the-breast-of-breastfeeding-mother-training-powerpoint

Deep breast thrush

- If symptoms persist and mum describes pain deep in the breast and has had help with optimising attachment so that feeds themselves are painfree, consider prescribing:
  - **Miconazole cream** applied sparingly to nipples after feeds
  - **Miconazole oral gel** applied gently to baby's mouth a small amount at a time four times a day
  - **Fluconazole** 150-300mg stat and 100-200mg daily for 10 days

Vitamins when breastfeeding

The NHS recommends that :

- Breastfeeding mothers should consider taking a vitamin D supplement (containing 10mcg).
- If the baby is only having breast milk (no first infant formula top-ups), they should be given a daily vitamin D supplement of 8.5 to 10mcg as well .

https://www.nhs.uk/start4life/baby/feeding-your-baby/breastfeeding/healthy-diet/vitamins-for-mum-and-baby/

- For mothers with vitamin d deficiency diagnosed see further information https://breastfeeding-and-medication.co.uk/fact-sheet/high-dose-vitamin-d-supplements-and-breastfeeding

Prescribing for breastfeeding women

- Most drugs prescribed during lactation are outside of the product licence
- Outside of licence does not imply contra-indicted, merely that the manufacturers have not been required to take responibility when launching the drug nor to update later
- There are other specialist sources of information on safety
- NICE Maternal and Child Nutrition PH11 2008 Rec. 18
- For further information on pharmacokinetics of drug passage into milk see: https://www.youtube.com/watch?v=tS4wkZ2UNUs&t=5s

NICE Maternal and Child Nutrition PH11(Rec 18)

Ensure health professionals and pharmacists who prescribe or dispense drugs to a breastfeeding mother consult supplementary sources .

- the Drugs and Lactation Database [LactMed] https://www.ncbi.nlm.nih.gov/books/NBK501922/
- the UK Drugs in Lactation Advisory Service https://www.sps.nhs.uk/articles/ukdilas/
- The Breastfeeding Network Drugs in Breastmilk factsheets https://www.breastfeedingnetwork.org.uk/drugs-factsheets/

Drugs which are contraindicated during breastfeeding

- Chemotherapy agents
- Bromocriptine and cabergoline (used to suppress lactation)
- Combined oral contraceptive (<3m post partum and then only if essential)
- Radio active chemicals (not radio opaque dyes as used in MRI and CT scans)
- Drugs containing gold, iodine including iodine dressings
- Amiodarone
- Ergot alkaloids
- Illicit drugs

Drugs to use with caution during breastfeeding

- Lithium
- Aripiprazole
- Combined oral contraceptive
- Pseudoephedrine and phenylpropanolamine (may reduce supply)
- Diuretics particularly loop diuretics
- Immune suppressants
- Medication containing codeine
- Drugs on which there is no known pharmacokinetic data
- Newer drugs with no information on passage into breastmilk
- Centrally acting drugs (may cause drowsiness in the baby and reduce supply)

Before prescribing for a mother who is breastfeeding

- Consider risk to mother of not prescribing
- Consider risk to baby of being exposed to the drug
- Consider alternative drugs which are more compatible
- Protect breastfeeding unless the mother tells you she wants to stop
- Discuss potential side effects with mother

- Milk supply does not turn off like a tap
- Interrupting feeds may lead to mastitis in the mother
- Not all babies will feed from a bottle

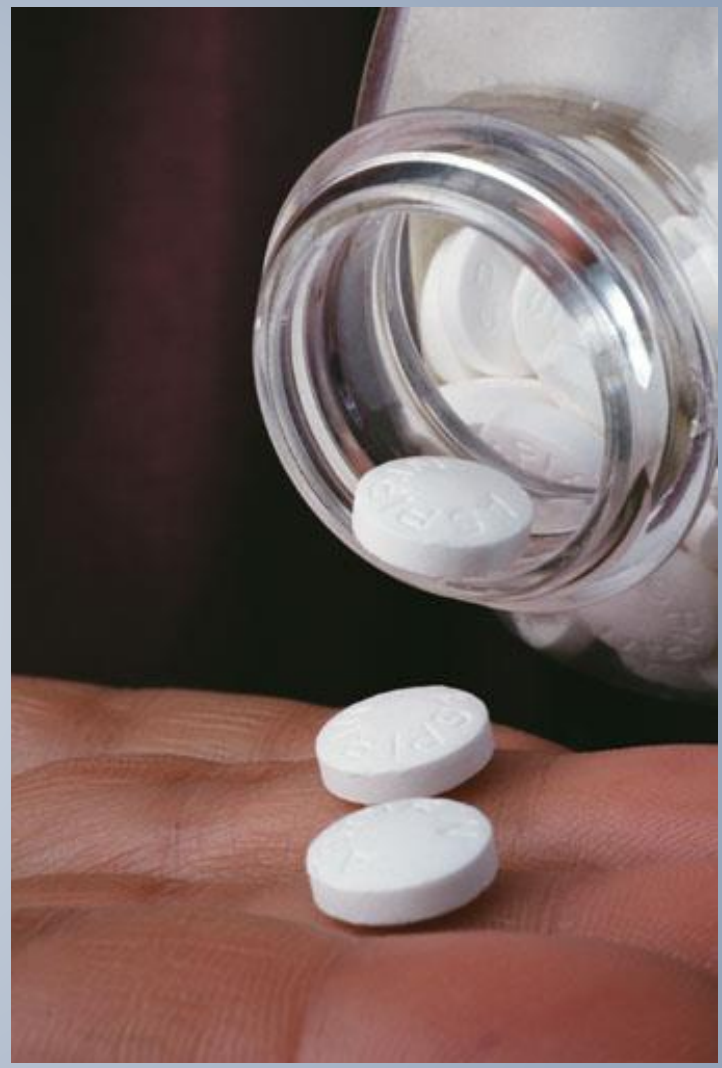
Shift of emphasis?

Rather than ask:

- can a mother who is taking this drug continue to breastfeed?

Can we turn the importance around and ask:

- This mother is breastfeeding, is this drug compatible with her continuing or is there an alternative?



Stop breastfeeding and take this medicine?

Advising a mother to stop breastfeeding to take medication should be the final resort having taken into account the risk of denying the baby the right to continued breastfeeding balanced against the need for any particular drug, given full, quantitative

data

Adverse drug reactions in breastfed infants : less than imagined

Medication shortens duration of breastfeeding because of specific advice or subtle cues by healthcare professionals.

100 possible individual reports of adverse events

- none definite, 53 possible, 47 probable
- 37% cases of adverse events in newborn
- 63% < 1 month
- only 22% in babies > 2 months

But professionals often query the use of medication during lactation where the nursling is older

Does this show that maybe we, as professionals underestimate the health promotion of breastfeeding and that it has benefits to 2 years of age and beyond alongside an appropriate weaning diet?

Maybe our own experiences alter how we feel about breastfeeding?

Anderson PO, Pochop SL, Manoguerra AS. Adverse Drug Reactions in Breastfed Infants: Less Than Imagined. Clinical Pediatrics. 2003;42(4):325-340. doi:10.1177/000992280304200405

Conclusion

- The role of health care professionals should be to promote, protect and support those who choose to breastfeed as part of our role in health promotion
- This is not about pushing mothers to breastfeed if they have chosen not to. Everyone has the right to make their own informed decisions
- Most breastfeeding problems are best solved by someone with expertise in supporting breastfeeding and ensuring good attachment and drainage of the breast. For most of us that involves signposting
- Most maternal conditions can safely be treated during lactation even if the medication is outside of license application.
- **Please use this opportunity to record your own CPD on this topic**

As healthcare professionals we need training on breastfeeding, the safety of drugs in breastmilk and sensitivity to the needs of mothers around infant feeding

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www.facebook.com/breastfeedingandmedication