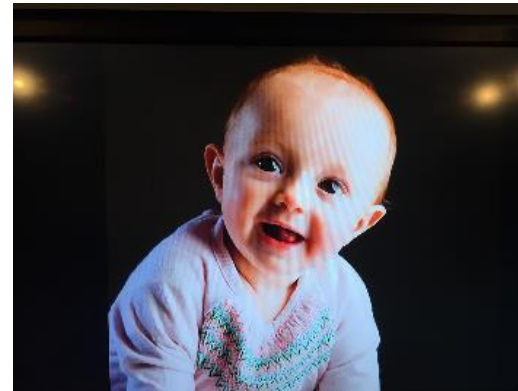


Breastfeeding for Pharmacists



Dr Wendy Jones MBE

Author of “Breastfeeding and Medication”,

Pharmacist

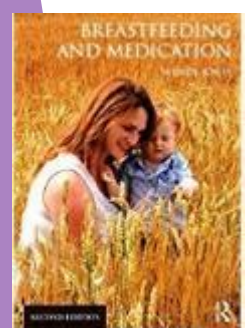
Registered Breastfeeding Supporter BfN

Welcome

The purpose of this course is to enable you and your staff to support breastfeeding as part of your normal everyday working practice. It focusses on breastfeeding as a health promotion priority.



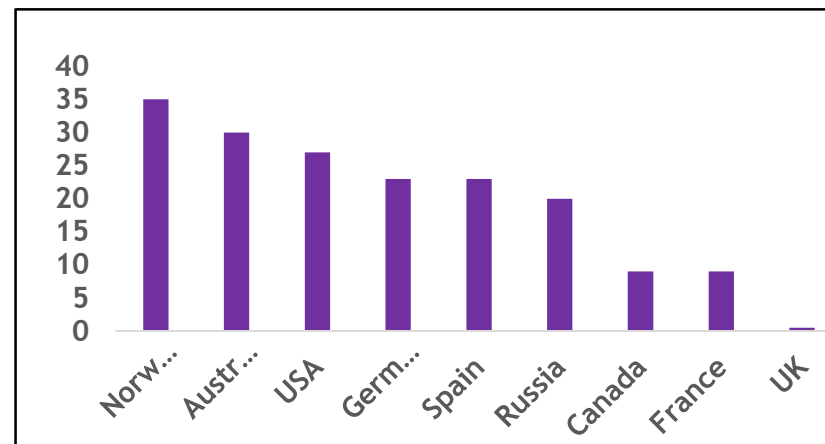
The course should take no more than 30 minutes to complete.



Breastfeeding in the UK

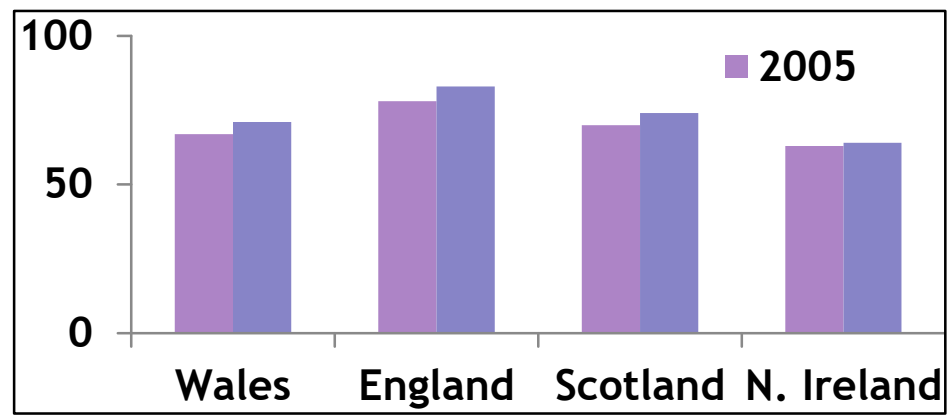
Although we know that breastfeeding offers the best start for all babies, the percentage of babies in the UK who are receiving any breastmilk at 12 months is the lowest in the world (Rollins 2016). My aim is to help you to support mothers who have chosen to breastfeed, and to do so as long as they choose.

Pharmacists and their staff are in an ideal place to support mothers with information on breastfeeding and medication and breastfeeding



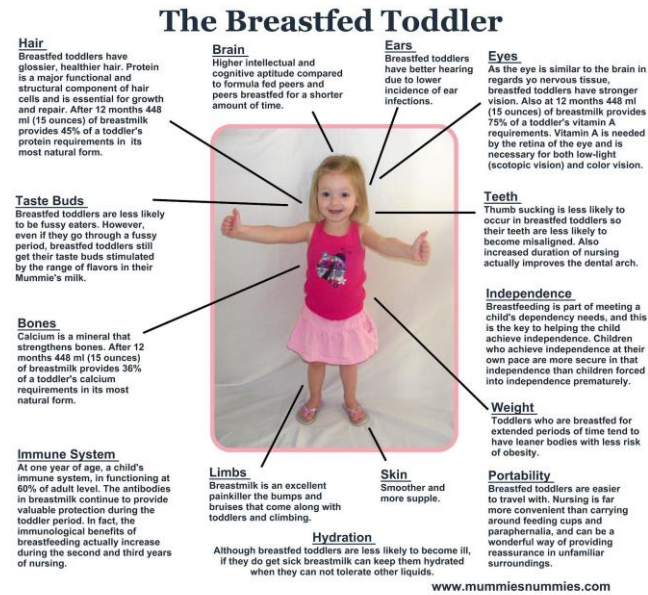
Initial incidence of breastfeeding

The proportion of women initiating breastfeeding has increased since the very low levels of the 1970s but this is no longer measured nationally by the 5 year Infant Feeding studies from which this data was taken so current rates are unclear. It is believed that around 80% of all new mothers put their baby to the breast at least once. It varies slightly by country and by areas of the country.

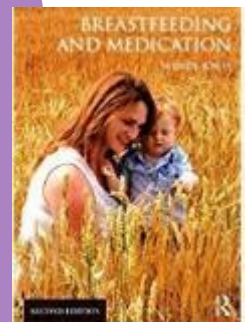
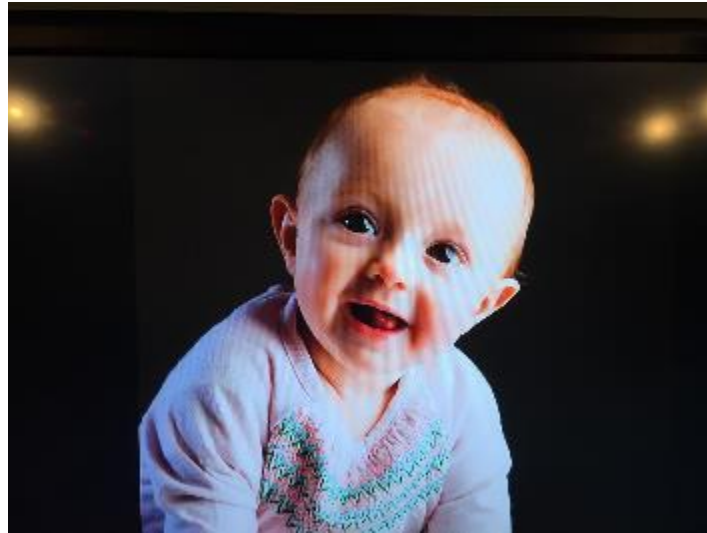


Duration of breastfeeding

- ▶ National and international guidelines recommend that babies are exclusively breastfed (no other liquids other than medicines) for 6 months before the introduction of appropriate weaning foods
- ▶ Breastfeeding can continue alongside weaning foods to 2 years and beyond as the mother chooses
- ▶ Breastmilk continues to provide nutrition and antibodies to the breastfed baby, toddler and child



Introduction to Breastfeeding

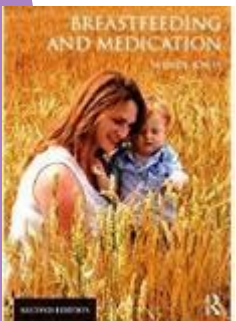


Why should we promote breastfeeding?

Breastfeeding is now perhaps amongst the most important health promotion messages with benefits for the health of mother and child.

Human milk has not only nutritional but also immunological advantages that infant formula can never hope to replicate

Infant formula has sustained life for many thousands of babies whose mothers either couldn't or chose not to breastfeed. However, it is difficult to suggest that breastfeeding is anything other than the biological norm.



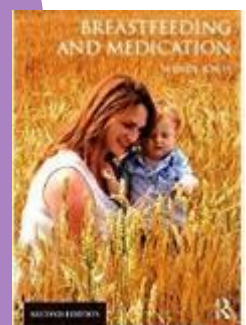
Breastfeeding importance

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....it would become an immediate public health imperative.

Lancet 1994

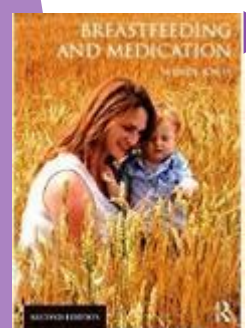
If breastfeeding did not already exist, someone who invented it today would deserve a dual Nobel Prize in medicine and economics

Lancet 2016



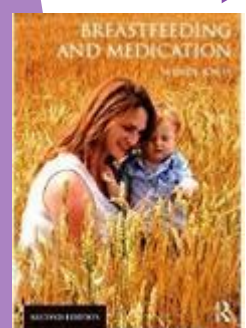
The magic of living breastmilk (1)

- ▶ Breastmilk has less iron (lacto-ferrin facilitates transfer). Bacteria thrive on free iron in the gut. So breastfed babies get fewer infections.
- ▶ Bifidus factor lowers the pH of breastmilk so it is less conducive to bacterial growth which also helps to prevent infections particularly gastric infections
- ▶ Oligosaccharides line the wall of the gut to protect it from attachment of pathogens. Extra levels line the bladder to reduce risk of UTI
- ▶ Secretory IgA also provides a protective coating for the gut so that foreign proteins cannot pass to the baby causing sensitisation e.g. cow's milk protein allergy



The magic of living breastmilk (2)

- ▶ Breastmilk contains white cells and lysozyme to destroy bacteria
- ▶ Epidermal growth factor in breastmilk promotes gut maturation
- ▶ Anti-inflammatory molecules moderate the response to pathogens so fewer auto-immune responses and lower incidence of auto immune diseases such as inflammatory bowel disease
- ▶ Breastmilk intake is controlled by the baby so the risk of obesity is lower
- ▶ Breastmilk is different at every feed, every day - it adapts to the baby's needs



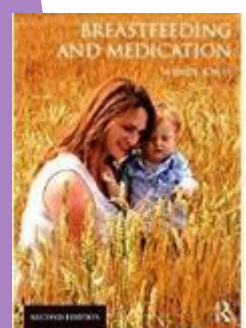
Groups who would be less likely to breastfeed

Every piece of research that has been undertaken has shown that mothers are less likely to breastfeed if they:

- ▶ leave school before the age of 18,
- ▶ come from lower socio-economic backgrounds
- ▶ are younger when they give birth to their first baby
- ▶ come from families and social groups for whom breastfeeding hasn't been the norm.
- ▶ were not breastfed themselves as babies



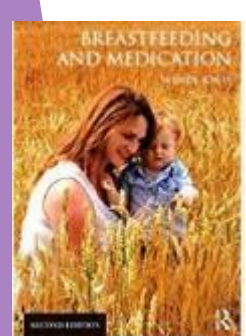
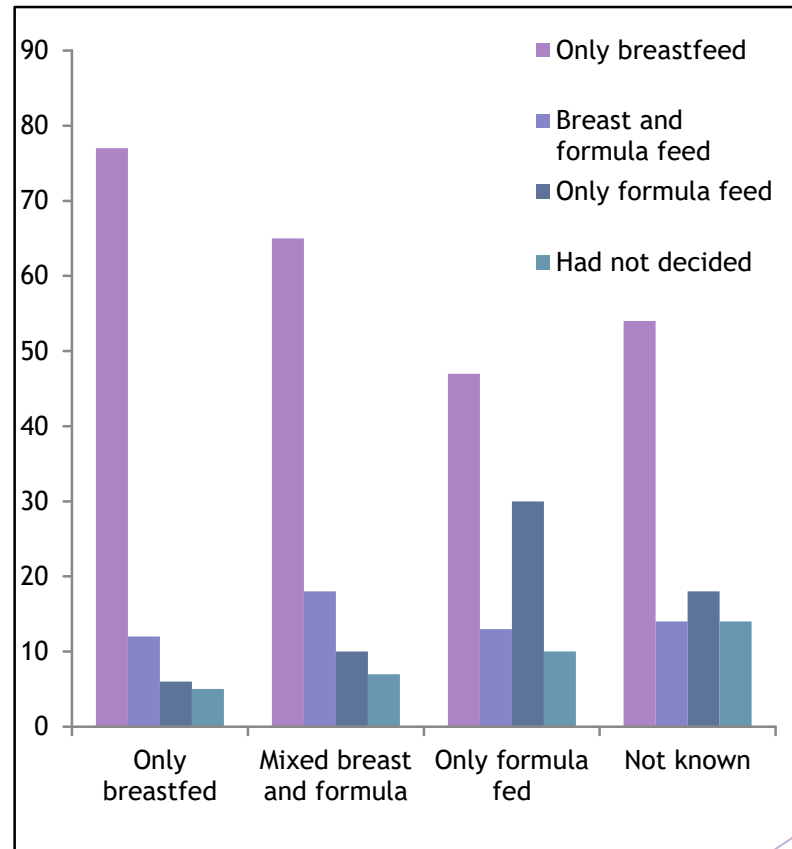
This is the group who often have greater health needs. Peer support breastfeeding groups are often set up to provide support from local mothers who have breastfed themselves and have undergone additional training to support others.



Influences on breastfeeding

How mother was fed as a baby

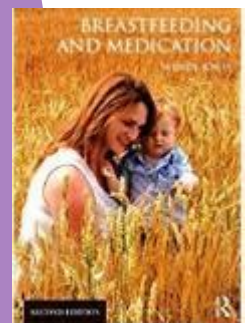
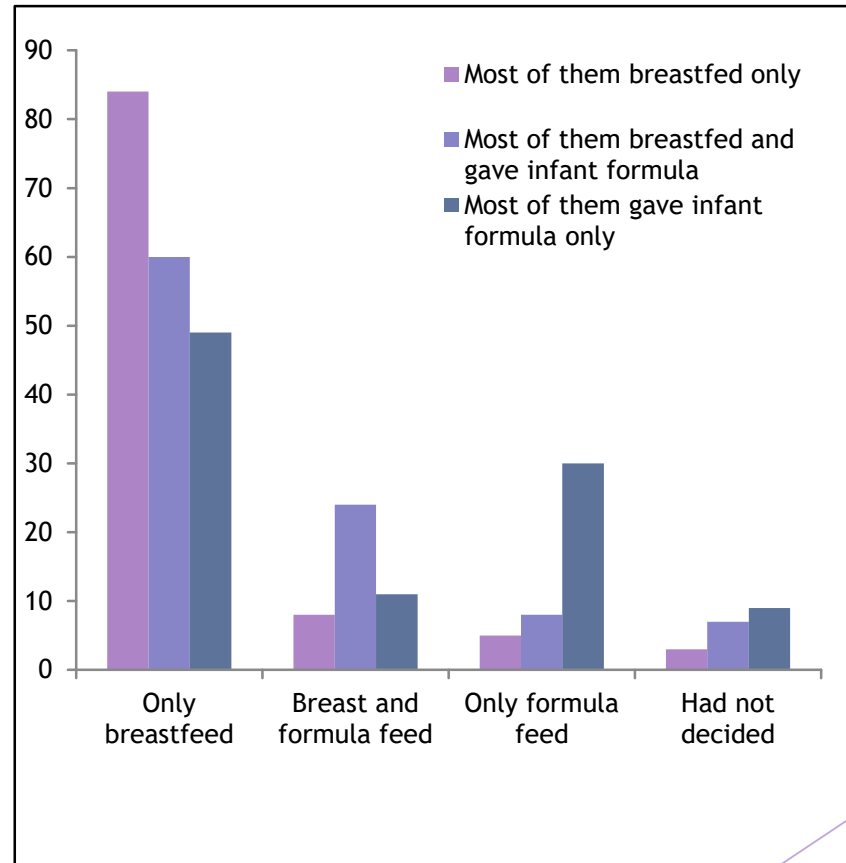
How the mother was fed as a baby influences how likely she is to breastfeed. Mothers who were exclusively breastfed themselves were more likely to plan to breastfeed themselves (77%). However 47% of women who were only formula fed planned to breastfeed their own babies



Influences on breastfeeding

How mother's friends have fed their babies

How friends of the mother fed their babies influences the way they intend to feed their own babies. Of those whose friends breastfed 84% planned to breastfeed whilst only 49% of those whose friends formula fed planned to breastfeed their own babies.

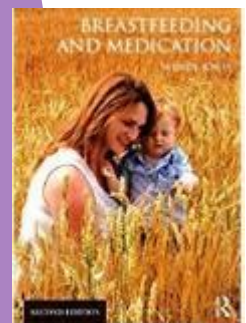


Because of the living immunological content of breastmilk breastfeeding helps to protect BABIES against:

- ear infections
- GI infections
- chest infections
- UTI
- Type 1 diabetes
- eczema
- obesity
- atopic diseases
- risk of SIDS

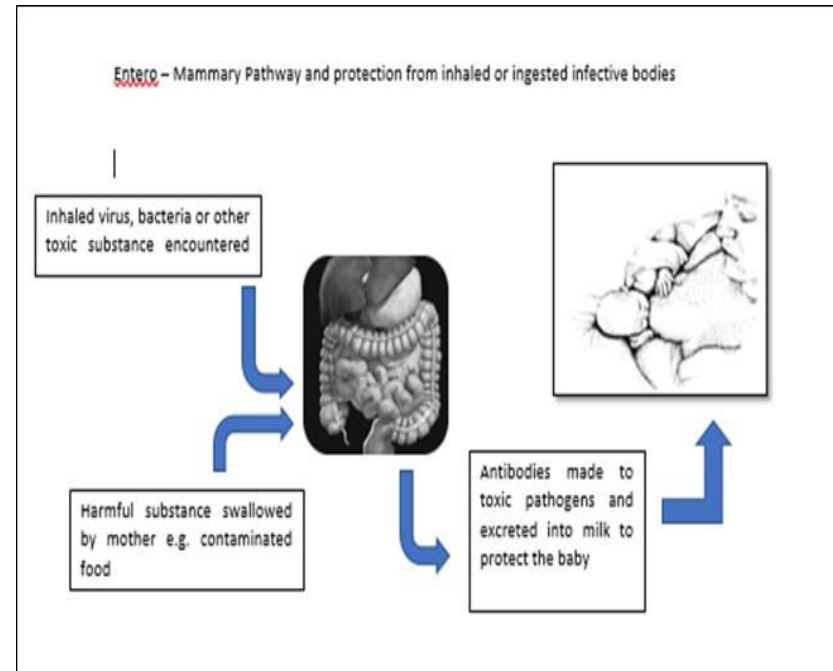
The mother rapidly produces antibodies to infections she and baby meet in order to protect the baby

(Hodinott 2008)

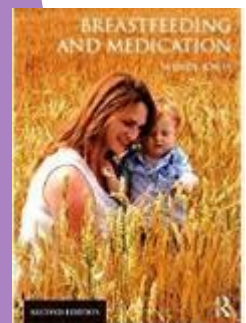


Instant protection from infection

One of the wonders of breastmilk is the rapid transfer of antibodies to the baby via breastmilk. If a mother encounters an infective organism inhaled from the environment or ingested from food, she will produce antibodies to it before the next breastfeed. This accounts for many of the lowered incidences of infections in breastfed babies



Reproduced from
Breastfeeding and
Medication



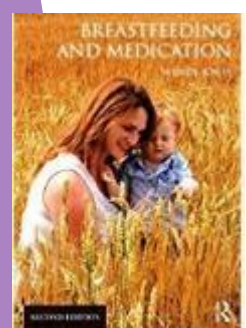
Breastfeeding helps to protect **MOTHERS** against:

- ovarian cancer
- breast cancer

It also:

- increases likelihood of mothers returning to their pre-pregnancy weight
- delays resumption of the menstrual cycle with consequential lower loss of iron

(Hodinott 2008)



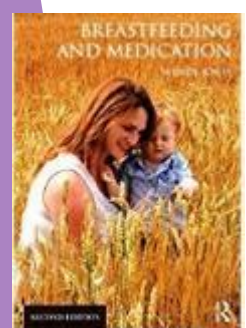
Risks of making up formula milk

In the 2010 Infant Formula Survey

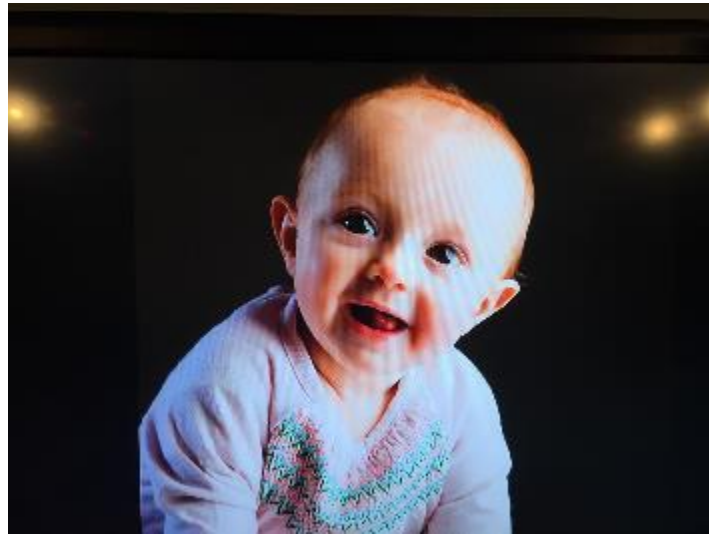
only 49% of all mothers who had prepared powdered infant formula in the last seven days had followed all three recommendations for making up feeds;

- only making one feed at a time,
- making feeds within 30 minutes of the water boiling
- adding the water to the bottle before the powder.

In 2005 only 13% followed all three recommendations! This increases the risk of gastro-intestinal infections as powdered formula milk is itself not sterile, containing *E. Sakazaki* and *Salmonella* (First Steps Nutrition 2013)



How breastfeeding works



Hormonal control of breastfeeding: Prolactin

Prolactin is responsible for the synthesis of breastmilk.

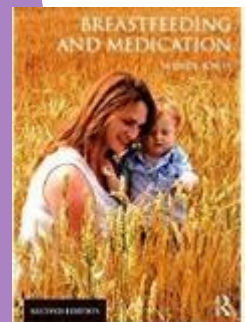
Levels are higher overnight. Restricting night feeds (or offering bottles overnight) can reduce supply.

The more often a baby feeds (or the mother expresses) the higher her prolactin levels and the more milk she will make. (Jones 2018)

Medication and Prolactin

Pseudoephedrine, phenylpropanolamine, and oestrogen lower prolactin levels (Aljazaf 2003). Some people notice that the contraceptive pill and depo injection lowers supply too (Jones2018)

Domperidone and metoclopramide can increase prolactin levels hence their use as galactogogues (drugs to increase milk supply)



The Prolactin Reflex

Baby suckles at the breast which stimulates more milk production



Prolactin secreted in the pituitary gland in the mother's brain secreted into the blood and stimulates acini cells to secrete milk



Removal of milk from the breast inhibits levels of feedback inhibitor of lactation so stimulating milk production

Reproduced from Breastfeeding and Medication



Hormonal control of breastfeeding :

Oxytocin

Oxytocin is released as the baby feeds.

It is responsible for the ejection of the milk from the breast.

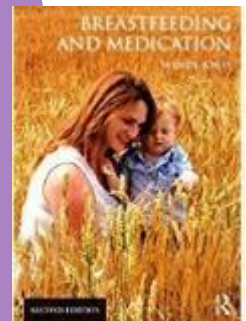
It also causes the uterus to contract and return to pre-pregnancy size.

Sometimes stress slows the release of oxytocin temporarily but relaxation - just deep breathing or relaxing music, helps

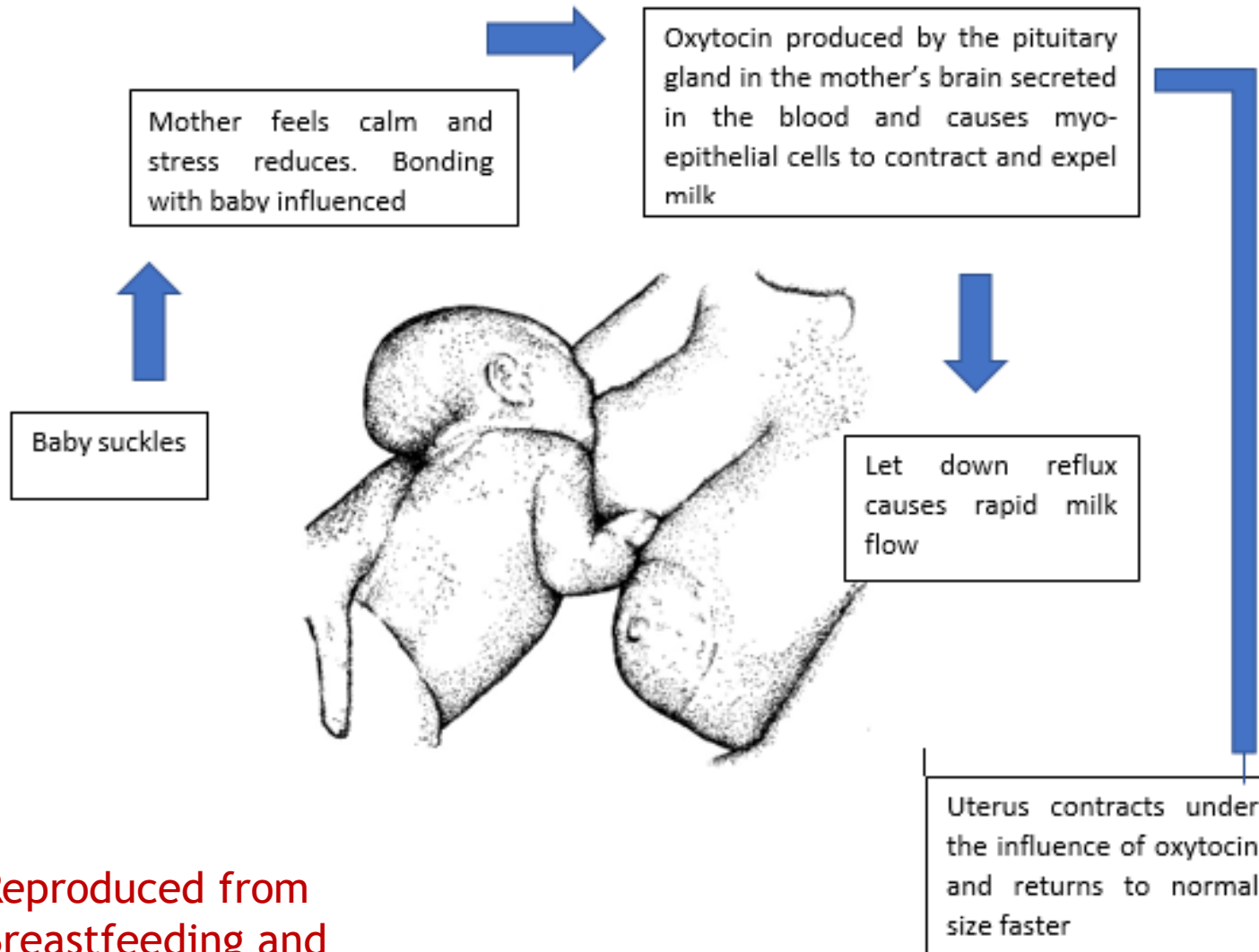
Medication and Oxytocin

This contraction of the uterus can be felt as period type pains (after pains) during breastfeeds.

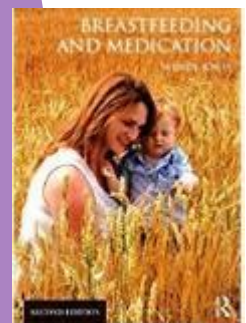
Some mothers may need regular simple painkillers to relieve the pain in the immediate post partum period; Paracetamol and ibuprofen are both suitable to be taken regularly



The Oxytocin Reflex



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Breastfeeding and
Medication



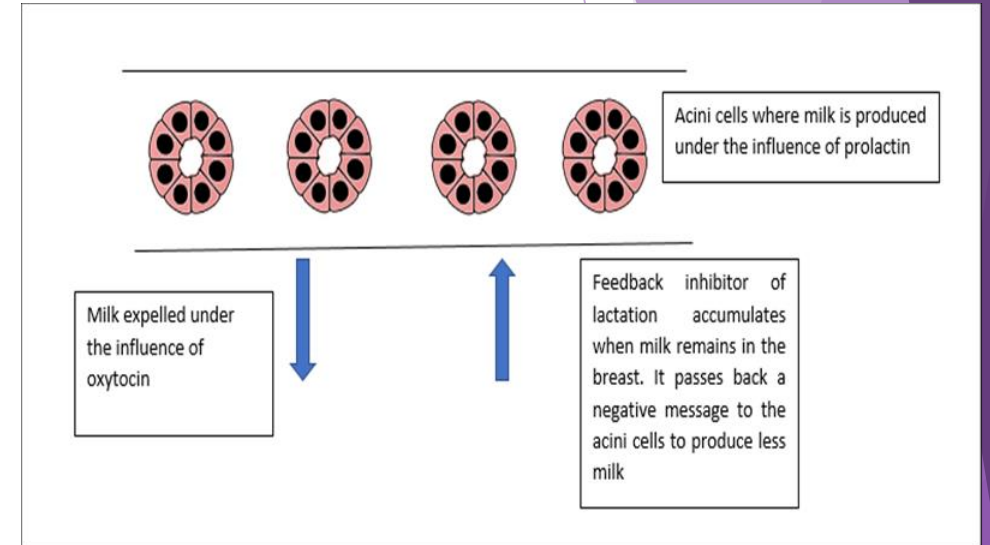
Feedback Inhibitor of Lactation

Continued milk production depends on the removal of the milk from the breast.

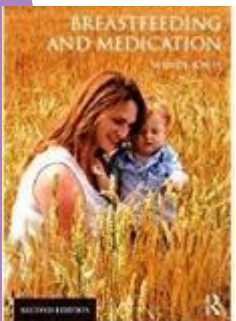
Feedback inhibitor of lactation (FIL) inhibits milk synthesis by a negative feedback mechanism.

Accumulation of milk in the breast results in decreased production.

Poor attachment and drainage will result in lower milk supply due to accumulation of FIL



Reproduced from Breastfeeding and Medication



What are the problems breastfeeding mothers may have?



Engorgement

Symptoms of engorgement are swollen, hot and sore breasts in the first few days after delivery as the milk “comes in” due to increased blood flow to the breasts. It can happen later if feeds are missed.

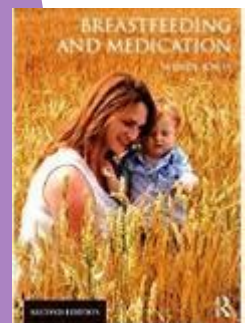
Refer mother for breastfeeding help ideally to a local group or the national breastfeeding helpline.

Frequent, effective breastfeeding will remove symptoms.



Medication and Engorgement

- ▶ Simple analgesics such as paracetamol or ibuprofen are helpful.
- ▶ If a mother chooses not to breastfeed the symptoms of engorgement will decrease over a few days as FIL reduces supply.
- ▶ Routine use of medication to dry up milk supply should be avoided



Treating sore nipples

<https://tinyurl.com/y4me7to5>



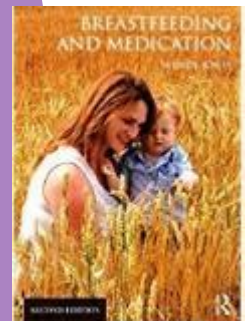
Ineffective attachment causes damage to the nipples

Refer mother for breastfeeding help urgently either locally or via the National Breastfeeding Helpline

- Sore nipples are not an inevitable part of breastfeeding
- Sadly 29% of women give up breastfeeding in the first 2 weeks after birth with sore nipples

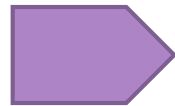
<https://tinyurl.com/y4me7to5>

- There is no independent evidence that any creams PREVENT nipple damage
- If the crack appears infected refer to GP for topical antibiotics
- Moist wound healing may be utilised to heal cracks by preventing scab formation and deepening of the wound. Apply a small amount of cream into the crack but not to the whole nipple leaving it soggy. Simple products like white soft paraffin are effective and expensive brands are unnecessary



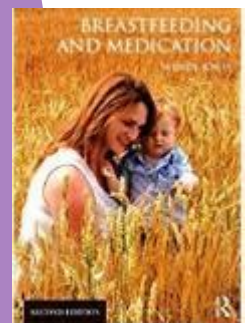
The consequences of ineffective attachment

- Pain and damage to nipples
 - ▶ Soreness
 - ▶ Cracks
 - Breastmilk not removed effectively
 - ▶ Stasis of milk
 - ▶ Engorgement
 - ▶ Mastitis
 - Breast milk production declines
- ▶ Poor milk supply
 - Baby unsatisfied,
 - Baby wants to feed often
 - Baby frustrated,
 - Baby refuses to suckle
 - Baby fails to gain weight
 - Frustrated mother and baby

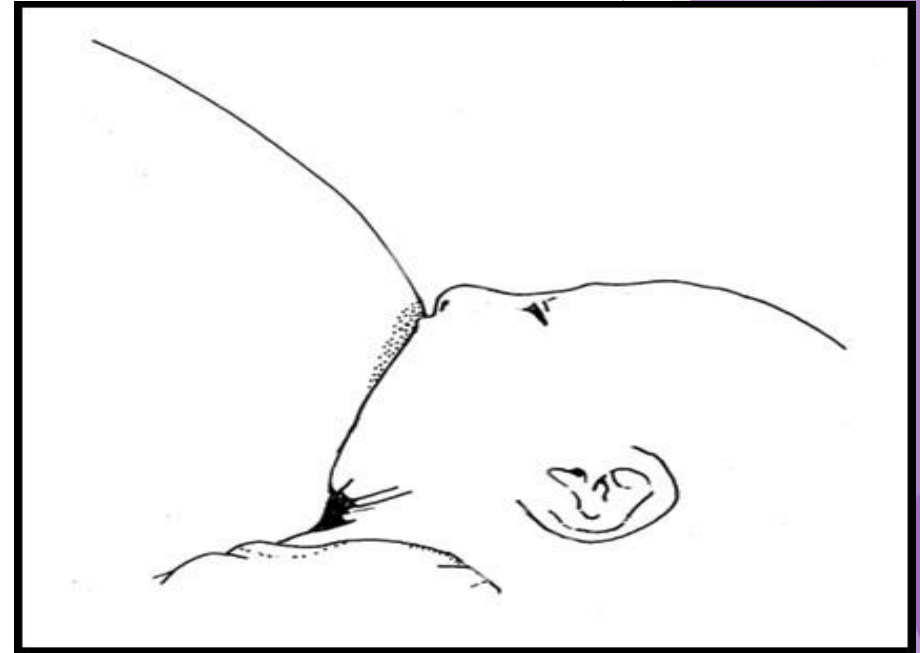


Breastfeeding ceases prematurely

It is essential to deal with painful breastfeeding rapidly



Good attachment



Breastmilk Insufficiency



- ▶ Apparent lack of milk is the most common reason cited by women stopping breastfeeding before they had intended. 41% of mothers who give up in the first 2 weeks after delivery cite it as a reason for stopping.
- ▶ Ongoing milk production is stimulated by removal of the milk from the breast (and therefore low levels of FIL) and ongoing stimulation of prolactin due to suckling.
- ▶ If the baby is not effectively attached he/she will be unable to extract all of the milk produced by the breast leaving the baby unsatisfied.
- ▶ If the baby is producing frequent wet nappies and soft yellow bowel motions it is unlikely that the mother has breastmilk insufficiency. She needs encouragement but also expert support to assess her concerns as they should never be ignored .

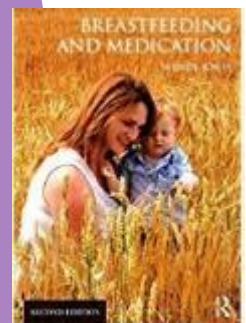


Treating low milk supply

<https://tinyurl.com/yxtlxu4l>

Refer mother for breastfeeding help locally or to the National Breastfeeding Helpline

- Prompt mum to feed frequently
- Refer baby urgently if it is clinically dehydrated -or if no wet nappies, not passed a bowel motion as expected for age
- Encourage mother that at least 98% of mothers can produce enough milk with good support and information. Feeding frequently is not a sign that she isn't producing enough milk - feeding "frenzies" are common and happen at intervals

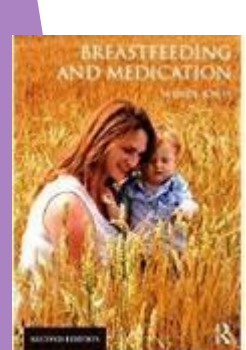


Mastitis

Mastitis is usually an inflammation of the breast where milk has leaked out into the breast tissue. The body treats it as a foreign protein - hence the redness, swelling and heat locally as well as raised temperature and aches. Symptoms may improve with frequent drainage of the breast and does not require antibiotics first line.

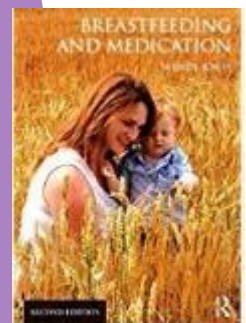
Pharmacists should; **Refer mother for breastfeeding help urgently**

- Suggest that the mother feeds frequently from the affected breast - a maximum interval of 1-2 hours between feeds or additional expressing
- Recommend that she massages across the area gently during feeds (an electric toothbrush seems to be useful adding gentle vibration)
- Signpost to the Breastfeeding Network leaflet on mastitis
- If she becomes clinically unwell she needs urgent medical advice
- There are cases where mastitis leads to sepsis so be alert for symptoms (www.nhs.uk/conditions/sepsis/)



Mastitis treatment <https://tinyurl.com/hjhmhsr>

- Mothers may benefit from ibuprofen 400mg three times a day to reduce inflammation, pain and fever (Inch 1995)
- The mother may need antibiotics if symptoms do not improve after 24 hours of frequent, effective breastfeeding or dramatically deteriorate in the next 12 hours. Antibiotics are compatible with breastfeeding <https://tinyurl.com/y8rojdcg>
- It is important that mothers do not suddenly stop breastfeeding during mastitis as this can make symptoms worse and lead to increased risk of abscess formation.
- Inflammation often leads to depression so the mother may feel tearful or depressed. This does pass usually as symptoms improve



Thrush on the breast <https://tinyurl.com/ybkf66lo>

Symptoms

- ▶ Pain in both breasts after a prolonged period of pain free breastfeeding
- ▶ Pain after every feed
- ▶ No shaping of nipple after feeds
- ▶ No colour change in nipple after feed
- ▶ No tongue tie diagnosis
- ▶ Positive swabs of mother's nipples and baby's mouth

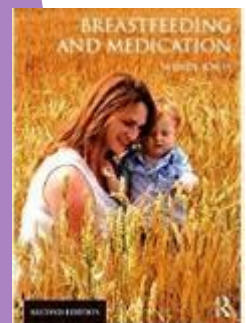
If discussed with pharmacy team **Refer mother for breastfeeding help locally or via the National Breastfeeding Helpline**

Treatment

- ▶ miconazole cream applied sparingly to the nipples after feeds
- ▶ Miconazole oral gel first line treatment for the baby (unlicensed <4m) applied gently a small amount at a time four times a day
- ▶ Nystatin suspension and clotrimazole cream are less effective

If topical treatment has not been effective and thrush is confirmed by swabs fluconazole 200-400mg as stat dose and 100-200mg a day may be prescribed (outside of license application)

Thrush is frequently incorrectly diagnosed particularly in babies under 6 weeks



Use of miconazole oral gel in babies

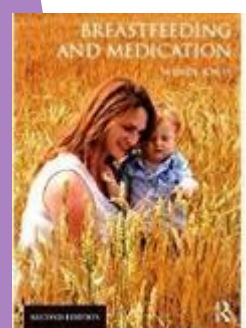
<4months <https://tinyurl.com/y2ds3f2a>

The most effective oral antifungal is miconazole oral gel 24mg/ml applied to all the surfaces of the baby's mouth four times a day (Hoppe 1997). The gel should be applied gently, a small amount at a time to prevent choking.

The SPC recommends that it is not used in infants under 4 months and only with care below the age of 6 months or in babies born prematurely .

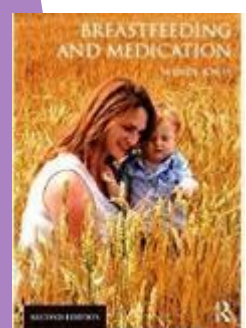
The caution originates from a report documenting a 17 day old baby (born at 36 weeks gestation) who choked when exposed to miconazole oral gel applied to her mother's nipples before and after feeds on the advice of a pharmacist. The baby suddenly stopped breathing, became cyanotic and lost consciousness. The mother scooped out the visible miconazole gel and the baby recovered within a few moments. The doctor who was called could find no abnormalities and the baby recovered without further problem.

The risk appears to be in response to the method of application of the gel and its viscosity rather than to the active ingredient (De Vries TW 2006)



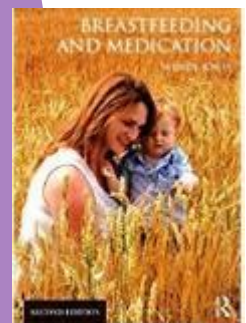
How can supporting a breastfeeding staff member help your business?

- Breastfed babies are healthier so you are less likely to have to deal with employee absence due to child illness.
- Increases employee loyalty with a higher rate of return to work following maternity leave.
- Less need for new staff recruitment and training costs.
- Attractive benefit to offer employees.
- All you need is allow breastfeeding breaks, a room to express and somewhere to store expressed breastmilk in the fridge



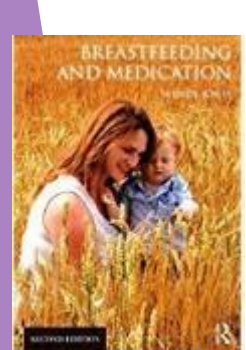
Conclusions

- ▶ Breastfeeding has benefits for the mother and baby. It also has benefits for the health economy due to lack of admissions and GP appointments
- ▶ Simple support for breastfeeding can be offered by staff and pharmacists
- ▶ However you fed your baby (if you had one), breastfeeding is a health promotion issue and should not be ignored.
- ▶ Signpost mothers to local breastfeeding support groups and to the National Breastfeeding Helpline



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