



Breastfeeding and Pharmacy

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“**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.”


Warm Chain for Breastfeeding The Lancet, 1994 [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(94\)90482-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(94)90482-0/fulltext)

Exclusive breastfeeding

Breastmilk is the best form of nutrition for infants and exclusive breastfeeding is recommended for the first six months (26 weeks) of an infant's life. Thereafter breastfeeding should continue for as long as the mother and baby wish, while gradually introducing a more varied diet (DH)

- › www.nhs.uk/conditions/pregnancy-and-baby/benefits-breastfeeding/





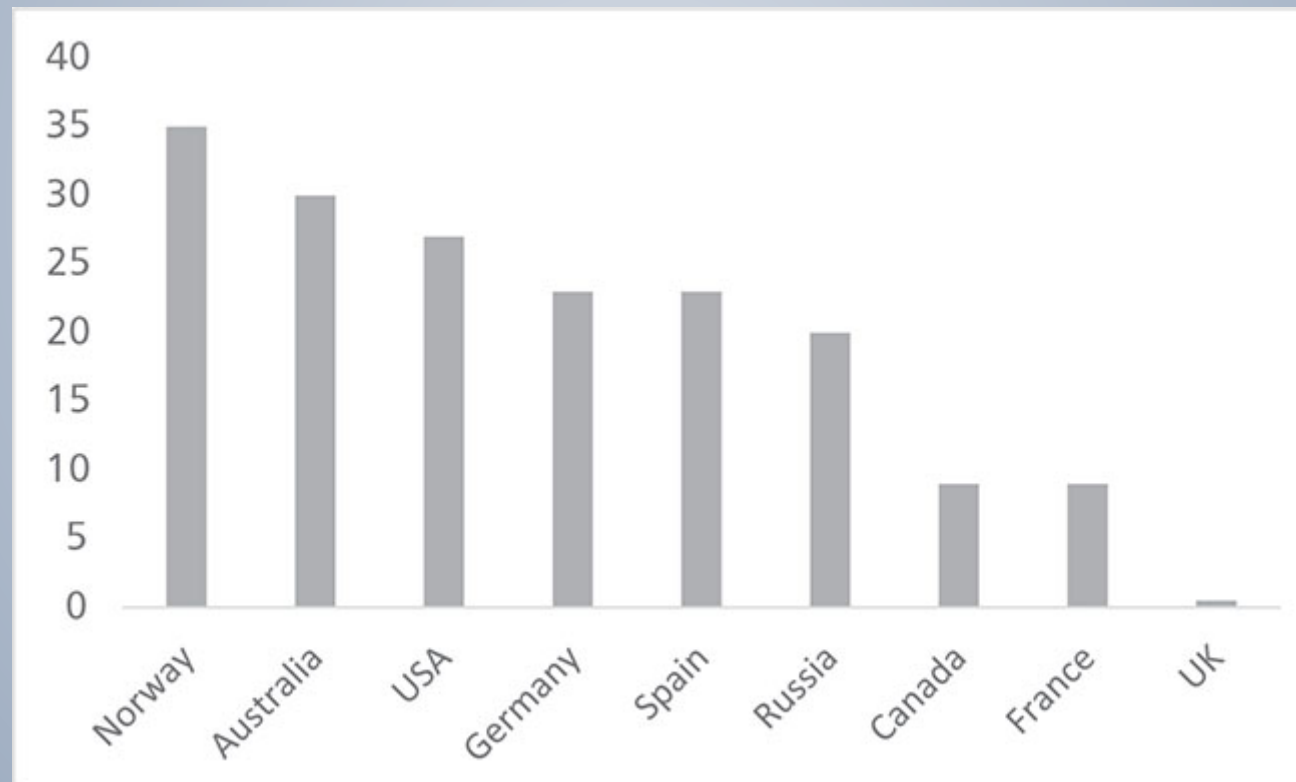
Rollins. Why invest, and what it will take to improve breastfeeding practices?

“Without commitment and active investment by governments, donors, and civil society, the promotion, protection, and support for breastfeeding will remain inadequate and the outcome will be major losses and costs that will be borne by generations to come.”

www.thelancet.com/series/breastfeeding

Lancet Series Breastfeeding 2016

› www.thelancet.com/series/breastfeeding





Hansen K Breastfeeding: a smart investment in people and in economies (Lancet 2016)

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

For while “breast is best” for lifelong health, it is also excellent economics.

Breastfeeding is a child's first inoculation against death, disease, and poverty, but also their most enduring investment in physical, cognitive, and social capacity.

Potential savings

Breastfed babies have 15% fewer GP consultations during the first 6 months of life than formula-fed babies

Reduction in common childhood illnesses and long-term health problems means:

- Improved public health
- Money saved for the NHS
- Happier mums and babies



NICE Maternal and Child Nutrition PH11 2008

Looking to address disparity in breastfeeding rates amongst lower socio-economic groups

- Reduction in obesity in childhood - linked with lack of breastfeeding / higher in formula fed infants
- Prescribing recommendation



Prescribing Recommendation 15

- › Ensure health professionals and pharmacists who prescribe or dispense drugs to a breastfeeding mother consult supplementary sources (for example, the [Drugs and Lactation Database](#) [LactMed] or seek guidance from the [Specialist Pharmacy Service](#)).
- › Health professionals should discuss the benefits and risks associated with the prescribed medication and encourage the mother to continue breastfeeding, if reasonable to do so. In most cases, it should be possible to identify a suitable medication which is safe to take during breastfeeding by analysing pharmacokinetic and study data. 'British national formulary' should only be used as a guide as it does not contain quantitative data on which to base individual decisions.
- › Health professionals should recognise that there may be adverse health consequences for both mother and baby if the mother does not breastfeed. They should also recognise that it may not be easy for the mother to stop breastfeeding abruptly – and that it is difficult to reverse.
- › www.nice.org.uk/guidance/ph11/chapter/4-Recommendations#prescribing



Obesity Risk of formula feeding

How many more calories does an artificially fed baby consume than a breastfed baby within the first 8 months of life?

Artificially-fed infants consume 30,000 more calories than breastfed infants by 8 months of age.

That's about 120
chocolate bars!

Riordan et al, *Breastfeeding & Human Lactation*, Jones and Bartlett
1999



Birth – 12 months

Across each of the social class categories, breast feeding significantly reduces gastrointestinal, ear and respiratory illness

Breast fed children from lower socioeconomic groups had better outcomes than formula fed children from more affluent families

So a baby born in the poorest family will have better health if breastfed than a baby in the most privileged family who is exclusively fed with artificial milk

Stewart Forsyth - Dundee Infant feeding Cohort study

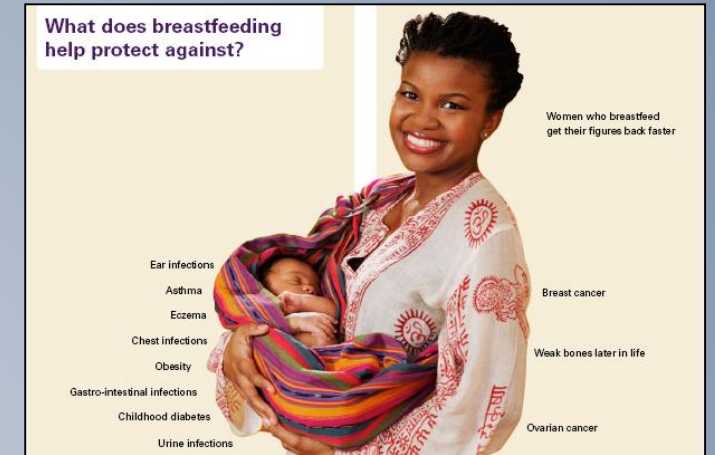
www.researchgate.net/publication/13779989 Wilson AC Forsyth JS Greene SA Irvine L Hau C Howie PW Relation of infant diet to childhood health seven year follow up of cohort of children in Dundee Infant Feeding Study BMJ 316 21-25

Why do we advocate breastfeeding?

Hodinott et al (Clinical Review Breast feeding BMJ 2008;336:881-887)

Breastfed babies have fewer:

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



So by definition artificially fed babies have higher rates . Breastfeeding is the biological norm, formula milk is an intervention.

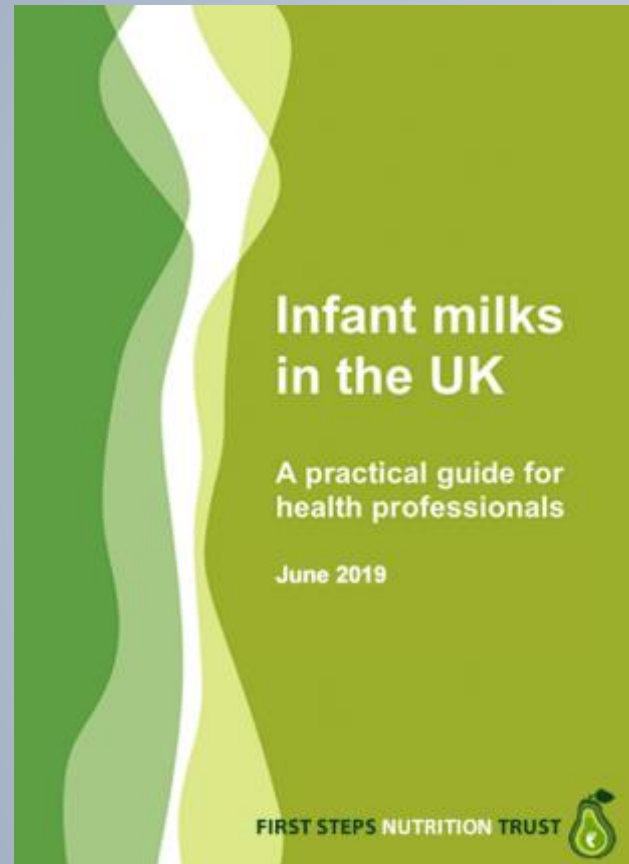
What about mothers?

Mothers who breastfeed have lower rates of:

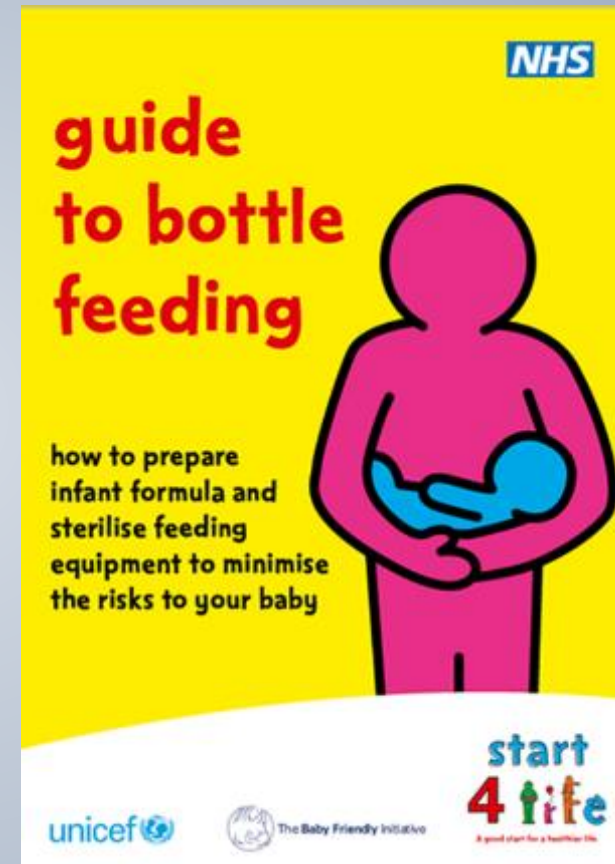
Hodinott et al (Clinical Review Breast feeding BMJ 2008;336:881-887)

- › 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

First Steps Nutrition – evidence based information about artificial formula and preparation



www.firststepsnutrition.org/



www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2008/02/start4life_guide_to_bottle_feeding.pdf



Cost savings from breastfeeding to NHS

for just five illnesses (breast cancer in the mother and gastroenteritis, respiratory infections, middle ear infections and necrotising enterocolitis in the baby),

moderate increases in breastfeeding would translate into cost savings for the NHS of **£40 million** and tens of thousands of fewer hospital admissions and GP consultations.

www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2012/11/Preventing_disease_saving_resources_policy_doc.pdf



If half of those mothers who currently do not breastfeed were to do so for up to 18 months of their lifetime (across all babies), there would be:

- › 865 fewer cases of breast cancer with cost savings to the NHS of over £21m.
- › Let alone impact on families of diagnosis, treatment and sadly deaths



If 45% of babies were exclusively breastfed for four months, and if 75% of babies in neonatal units were breastfed at discharge, each year there would be:

- › 3,285 fewer babies hospitalised with gastroenteritis and 10,637 fewer GP consultations, saving more than **£3.6 m**
- › 5,916 fewer babies hospitalised with respiratory illness, and 22,248 fewer GP consultations, saving around **£6.7m**
- › 21,045 fewer ear infection GP visits, saving **£750,000**
- › 361 fewer cases of the potentially fatal disease NEC, saving more than **£6 million**

www.unicef.org.uk/Documents/Baby_Friendly/Research/Preventing_disease_saving_resources_policy_doc.pdf?epslanguage=en

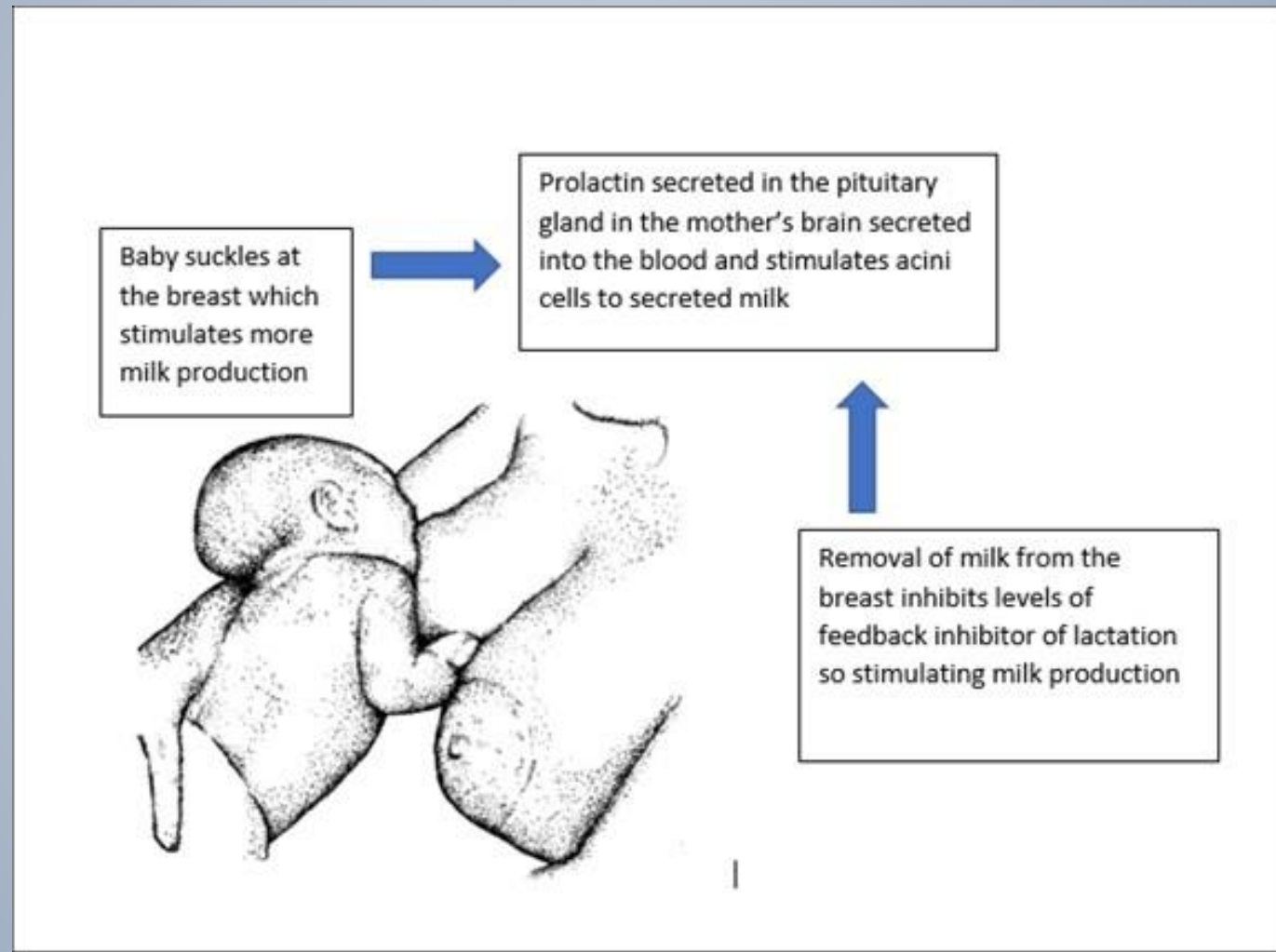


How does breastfeeding work?

Hormones involved;

- › **Prolactin** which is responsible for the ongoing synthesis of breastmilk
- › **Oxytocin** which is responsible for the ejection of the milk from the breast
- › **Feedback Inhibitor of Lactation (FIL)** which governs the volume of milk produced. If it accumulates it reduces milk supply

As professionals we need to understand how breastfeeding works





Why mothers give up breastfeeding?

- › Insufficient milk (signpost to support)
- › Pain (signpost to support)
- › Problems with feeding (signpost to support)
 - Took too long
 - Baby wouldn't suck

All of the above relate to less than perfect positioning and attachment and effective removal of milk

- › Illness of mother or baby

When not to breastfeed?



- › A few metabolic diseases
 - eg Galactosaemia, Maple syrup urine disease, Phenylketonuria, Primary (congenital) Lactose intolerance
- › Mother being HIV positive
- › Certain drugs - gold, iodides, ergot preparations, anti-cancer therapy
- › Mother's wishes



Surely formula is good enough?

- › Breastmilk is the biological norm
- › We don't know that that "just" one bottle wont hurt? www.health-e-learning.com/articles/JustOneBottle.pdf
- › We are seeing more and more reasons to justify **exclusive** breastfeeding to **6 months** and continued beyond with appropriate weaning foods
- › BUT formula is essential if the baby isn't producing wet and dirty nappies or dehydrating. Formula saves lives too and some mums struggle to achieve full milk supply and/or access appropriate support
- › AND some mums just don't want to breastfeed and that is their right



Association of Maternal Lactation With Diabetes and Hypertension 2019

- › **Findings** This meta-analysis of 6 studies including more than 200 000 participants found that breastfeeding was associated with a relative risk reduction of 30% for diabetes and 13% for hypertension in the mothers studied.
- › **Meaning** These findings suggest that breastfeeding is associated with long-term cardiovascular health benefits for women.

JAMA Netw Open. 2019;2(10):e1913401.



Why should pharmacists promote breastfeeding?



The health promotion role of pharmacists should be foremost amongst all our activities

Breastfeeding has health advantages

Mums can access our support and signposting without making an appointment





How can pharmacists promote breastfeeding?

- › Pre-conceptual counselling about medication www.medicinesinpregnancy.org/Medicine--pregnancy/ especially if they have a chronic condition e.g. epilepsy, depression. IBD
- › Information on folic acid
- › Being available to talk to mothers about health
- › Knowing patients / customers
- › Signposting for breastfeeding support locally and to national helplines (www.nationalbreastfeedinghelpline.org.uk/. www.nct.org.uk/baby-toddler/feeding/early-days/breastfeeding-support-nct)
- › Knowledge that breastmilk is all baby needs until 6 months of age but also support of mothers need to introduce formula – not company sponsored material
- › Signposting to evidence based sources on formula (including specialised formula and weaning onto solids)

How do Pharmacists know if a mother is breastfeeding?

- Knowledge of patients?
- Ask mothers with babies with them?
- Ask mothers with children with them?
- Wait for the mother to tell them?
- Ask all women of child bearing age?



Shift of emphasis when prescribing for breastfeeding mothers?

Rather than ask;

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

We should ask;

- › can a mother who is breastfeeding be given this drug? Use specialist sources not just BNF or SPC or PIL





Adverse drug reactions in breastfed infants: less than imagined

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

- › 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

Anderson PO et al *Clinical Paed* 2003;42:325-340.

Why does breastfeeding and pharmacy not mix

- › Concerned about using drug outside of licence application?
- › Lack of readily available information?
- › Embarrassment? Breastfeeding is too personal?
- › Lack of time to look up drug safety?
- › Lack of knowledge of importance of breastfeeding?
- › Fear of litigation





Sources of information on drugs in breastmilk

- › UKDILAS
- › Hale TW Medications and Mothers milk – available as book or online subscription
- › LactMed <https://www.ncbi.nlm.nih.gov/books/NBK501922/> free online access
- › Jones W Breastfeeding and Medication
- › Brown A and Jones W (ed) A guide to supporting breastfeeding for the medical professional
- › <http://breastfeeding-and-medication.co.uk/>
- › www.breastfeedingnetwork.org.uk/drugs-factsheets/

Promote

Protect

Support

Breastfeeding

Good attachment - working together!

Change the conversation!

