



Galactogogues – Medications and herbs to increase milk supply

Disclaimer: Before taking a galactogogue you should seek lactation support from a skilled practitioner such as an International Board-Certified Lactation Consultant. Advice should be sought from your medical practitioner (GP) and a medical herbalist regarding prescribing and the safety of a galactogogue considering any health conditions you have or medications you are taking.

Some of the products mentioned here are likely to carry the warning 'not to be used when breastfeeding' or similar. This warning is going to appear on almost every medication and herbal preparation because very few of these products have a license for use in breastfeeding. This is not because they are unsafe or ineffective. We usually have lots of research and data from long term use which demonstrates safety and efficacy in breastfeeding. But no manufacturer of existing medications or herbal supplements is going to invest the millions of pounds it would take to get a license for us in breastfeeding when it is such a small part of the market and these products can be manufactured by multiple companies. There simply would be no profit in it. It is also unethical to give a drug to a breastfeeding mother without having full knowledge of its safety. This information will be limited before a drug is marketed, hence the warnings on and/or inside the product packaging.

For more information see this resource from Breastfeeding Network <https://www.breastfeedingnetwork.org.uk/dibm-pil/>

Before considering taking a galactogogue it is vital that parents and babies have a thorough feeding assessment with an International Board-Certified Lactation Consultant or someone with equivalent knowledge and experience.

In the UK we are a formula feeding culture with most babies being fully or partially formula fed. The feeding and sleep behaviour of babies fed on formula by bottle is quite different from a baby that is being breast or chest fed and sometimes, normal newborn feeding and sleep behaviours are perceived to indicate a problem with milk supply. A thorough feeding assessment by someone skilled in lactation will establish if there is a genuine issue with supply and what the cause of this may be. In most cases supply issues relate to poor management in the early days with parents given limited information and support, the early introduction of formula top ups (sometimes unnecessarily) and failure to protect the milk supply with expressing whilst issues with latching, sucking and milk transfer are resolved.

There is a small percentage of mothers/birthing parents who will struggle to produce enough milk for their babies. This may be related to birth complications and interventions and in these cases the delay in milk production is often temporary and supply will catch up quickly with the right support. For example, anaemia due to blood loss at birth may be corrected via a blood transfusion or the administration of iron. However, sometimes there are pre-existing issues such as Polycystic Ovary Syndrome (PCOS), Diabetes, and Thyroid conditions which can interfere with milk production. Provided any Thyroid problems and Diabetes are monitored and well controlled, these should not cause too much of an issue. With PCOS some people report low supply, some average supply, and



some oversupply. More is explained about this here <https://breastfeeding.support/polycystic-ovary-syndrome-breastfeeding/>

Occasionally mothers report that they did not develop breast tissue at puberty and/or did not experience breast changes in pregnancy. These signs can be markers for low supply due to a condition known as Mammary Hypoplasia or Insufficient Glandular Tissue (IGT). Put simply, this means that the milk factory has not developed to its full capacity, so the ability to make enough milk for baby is compromised. More information on this can be found here <https://kellymom.com/bf/got-milk/supply-worries/insufficient-glandular-tissue/>

It is not unusual for mothers to give up breastfeeding before they wanted to due to difficulties and lack of timely and skilled support. I often get approached by mothers in this situation who wish to return to breastfeeding and are seeking support with relactation and galactagogues are often useful in this situation. More information on relactation here <https://abm.me.uk/breastfeeding-information/relactation/>

It is possible to induce lactation without giving birth. Parents may choose to do this if they are adopting a baby or in the case of female couples to support their partner with breastfeeding, for example. Further information can here <https://www.lli.org/breastfeeding-without-giving-birth-2/>

Transgender parents may face specific challenges where galactagogues may be helpful in establishing a milk supply for their baby.

Working with an IBCLC means you can explore your unique situation and formulate a plan to address your specific needs. That plan is likely to include strategies such as expressing and supplementing using a lactation aid to boost breast stimulation. Part of that plan may also be to look at taking a Galactagogue.

Galactagogues can be divided into two groups – Pharmaceutical (medications) or Herbal.

Pharmaceutical

The two commonly used medications are Domperidone and Metoclopramide. Both work by blocking the dopamine receptors on the lactotrophic cells in the pituitary gland which produce the hormone prolactin. This allows prolactin levels to rise. Prolactin is responsible for milk production so higher levels of prolactin should lead to an increase in milk production.

A systematic review by Bazzano et al (2018) of both pharmaceutical and herbal galactagogues looked at 10 randomised, blinded, placebo-controlled trials on **Domperidone** and **Metoclopramide**. (See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5158159/>).



Effectiveness

Two of the four studies on Domperidone looked at its use with preterm babies, one study looked at women who gave birth via caesarean section and the fourth study looked at women who had a history of lactation failure with previous babies and first-time mothers who were experiencing it currently. Doses of 10mg 3-4 times a day were given. All reported significantly higher milk volumes in those in the treatment group compared to those given placebo with increases documented at between 4-14 days.

Six studies looked at Metoclopramide 10mg 3 times a day given for 7-15 days depending on the study. One of the six studies looking at Metoclopramide found that first time mothers of healthy babies given it for 8 days post-partum had significantly higher milk production. However, in two of the studies which looked at preterm babies there was no significant difference in milk volumes between the metoclopramide group and the placebo group. In a study of term babies with slow weight gain there was no significant difference in weight gain. In mothers who birthed by section and intended to breastfeed the use of Metoclopramide for one week after birth made no difference to the establishment of breastfeeding with all mothers in the study being successful. Furthermore, it did not make any difference to outcomes in terms of weight gain or relactation in a group of mothers experiencing lactation failure either.

Based on this review, Domperidone would seem to be the preferred choice in terms of effectiveness.

Safety

In terms of safety in the Bazzano et al (2018) review none of the studies they looked at reported significant side effects from Domperidone or Metoclopramide. However, whilst both medications have the potential to cause cardiac arrhythmias, there have been concerns regarding this in relation to Domperidone. The information from Breastfeeding Network below discusses this issue in detail:

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

As a result of these concerns Domperidone was withdrawn from over-the-counter sales and guidance to doctors on prescribing in lactation has been to give the lowest dose of 10mg 3 times a day for short periods of a week and then any further prescriptions at a reducing dose.

Prior to the reports of adverse cardiac outcomes I supported mothers on higher doses (up to 30mg 3 times a day) and for prolonged periods of 6-8 weeks (and in one case the mother took the higher dose for many months) and there was certainly anecdotal reports that some women need these higher doses for longer periods of time which is something some doctors, including Canadian Paediatrician Jack Newman still support. See <https://ibconline.ca/domperidone/>

We need to be cautious as the studies suggest effectiveness at lower doses, in short courses and prescribing of Domperidone to increase milk supply is outside of its licensed use. It is therefore at the discretion of the prescriber as the manufacturer will not provide indemnity for any adverse outcomes in this situation. Furthermore, there have been recent reports in the national and



international press about mothers suffering depression and suicidal thoughts when stopping Domperidone, particularly if they have been on higher doses and stop suddenly. Domperidone must always be withdrawn gradually by dropping one dose at a time.

Whilst there has not been the same level of concern about the use of Metoclopramide, and this is often recommended as an alternative to Domperidone, it does have side effects affecting the central nervous system including depression and tremors.

More information on Metoclopramide from Breastfeeding Network here

<https://www.breastfeedingnetwork.org.uk/wp-content/dibm/Galactogogues.pdf#:~:text=Galactagogues%20are%20substances%20th>

Herbal Galactogogues

Moringa

Moringa Oleifera (Malunggay) is a plant that is native to India and other tropical and sub-tropical countries. Most of the plant is edible and it is an important food source in some countries. Mothers can simply eat the leaves as a vegetable. In the UK it is more common for ground up leaves to be used, either as a powder or in capsule form, to help boost breastmilk supply. The powder does not taste good and is difficult to disguise in food and drink, so the capsules are more acceptable

Five small randomised controlled trials (RCTs) have been conducted looking at the impact of Moringa on milk supply, compared to placebo. Three found a significant increase in milk volumes at day 4,5 and 7. Moringa is believed to increase prolactin levels and boost mammary tissue. Prolactin is the hormone which controls milk supply. Higher levels result in increased milk production. Two of the trials found that the women experienced increased serum prolactin levels. Two trials also reported an increase in infant weight gain because of the mothers taking Moringa. The systematic review and meta-analysis of these 5 RCTs by Jacelie et al (2013) concluded 'Overall, evidence from five small RCTs unanimously concluded that Moringa produces an increase in breast milk volume compared to placebo'.

https://www.academia.edu/23468140/Moringa_oleifera_Malunggay_as_a_Galactagogue_for_Breastfeeding_Mothers_A_Systematic_Review_and_Meta_Analysis_of_Randomized_Controlled_Trials

The website webmd.com reports that Moringa preparations made from the leaf are safe for use in breastfeeding for up to 4 months. Products made from seed or bark should not be used. If you have an underactive thyroid Moringa may worsen this so should be avoided. No adverse side effects were reported in the RCTs and none are listed on webmd.com

<https://www.webmd.com/vitamins/ai/ingredientmono-1242/moringa>.

The strength of evidence for the use of Moringa in lactation is similar to that for Domperidone, but Moringa carries less known risk. There are no known drug interactions but if you are taking other medications this is a consideration and should be discussed with your GP or other healthcare provider and/or a medical herbalist. Based on animal studies where this herb was given in high doses there is a theoretical risk of mild interactions with diabetic medications, levothyroxine and anti-



coagulants (including blood thinning injections given post-partum). Parents should follow the dosage instructions on the product they purchase but a typical capsule dosage for lactation is one capsule 4-6 times a day and each capsule is usually around 500-600mg.

Fenugreek (seed)

This is the most used herbal galactagogue in the UK and in other countries too. It has traditionally been used by mothers in India who chew the seeds, then soak them and make them into teas. In the UK it is usually taken as a capsule or tincture, but the tincture is strong in flavour.

Studies have shown that mothers taking Fenugreek pumped more milk and had babies who gained more weight, but the increases were modest according to Marasco & West (2020). Two studies reviewed by Bazzano et al (2018) looked at healthy, full-term babies. One found no significant difference in milk production between a group of mothers taking Fenugreek seed capsules 600mg 3 times a day from day two after birth and the group given a placebo. The other study found that mothers given Fenugreek tea were able to pump more milk in a 15-minute session than the others given placebo tea. But of course, this does not tell us much about overall supply.

Fenugreek can be taken at doses of 3-6g per day. Typically, mothers I have supported have taken 2 x 600mg capsules three times a day (3.6g a day). Doses higher than this have tended to provoke gastric symptoms such as abdominal pain, gas, and diarrhoea.

If you have asthma and other allergies Fenugreek should be avoided as it can produce an allergic reaction. It may also lower blood sugars so should not be taken if you have Type 1 diabetes without medical supervision. Like Moringa it should be avoided if you have an underactive Thyroid. It should not be used in pregnancy. It can be taken in conjunction with some other herbs such as Blessed Thistle to enhance its effects. Jack Newman advocates this. See <https://ibconline.ca/information-sheets/herbal-remedies-for-milk-supply/>. It can also be used with Domperidone. Blessed Thistle should be avoided if you have a history of gastric ulcers or stomach inflammation.

There are anecdotal reports of Fenugreek lowering milk supply and this seems to be linked to the parent having an underactive thyroid according to Marasco & West (2020).

Goat's Rue (Galega Officinalis)

When I did a literature search on this herb, I could not find any studies looking at its use in breastfeeding. The Drugs and Lactation Database (LactMed) provides a summary of older studies which have various limitations and produced mixed results. See <https://www.ncbi.nlm.nih.gov/books/NBK501817/>

However, it is a popular herbal galactagogue in Europe and is thought to stimulate growth of breast tissue. It is in the same family as Fenugreek and shares its blood sugar lowering properties. It seems to be particularly helpful in mothers who have insulin resistance, PCOS or mammary hypoplasia (insufficient glandular tissue) and these are the situations I will suggest it.



When I have discussed the use of Goat's Rue with a local medical herbalist, she has been comfortable with its use in terms of drug interactions and side effects. The website [webmd.com](http://www.webmd.com) suggests that it may affect blood clotting and make bleeding disorders worse. It also warns against taking it with diabetic medications due to the fact it lowers blood sugars. See <https://www.webmd.com/vitamins/ai/ingredientmono-160/goats-rue>

The Motherlove brand of Goats Rue suggest a dosage of 1 capsule 4-6 times per day with each capsule containing 525mg of Goats Rue.

Shatavari (Asparagus Racemosus)

Shatavari is believed to support prolactin and oxytocin and increase mammary tissue.

A randomised control trial demonstrated that this herbal supplement raises prolactin and the infants of the mothers in the study who were given Shatavari showed increased rate of weight gain compared to the control group. The study by Gupta & Shaw (2011) can be found here <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3869575/>

The suggested dosage is 2000mg (2g) a day. It can be bought as a capsule. Shatavari interacts with diuretics and Lithium so should not be taken with these medications. It is a gastric irritant and should be used with caution if you have celiac disease, inflammatory bowel disease or cholestasis.

Fennel

Fennel tea is traditionally used to support lactation in many countries, including Austria. A review of human and animal studies by Ahmadi, et al (2020) concluded that it raises prolactin levels and increases milk production. This review can be read here https://ijp.mums.ac.ir/article_15053_e0defd621cdefb9a7aae1aa141fcd48e.pdf

The suggested dose is 1000mg (1g) twice a day as capsules. Fennel may interact with some antibiotics, the contraceptive pill, Tamoxifen, and blood thinners such as heparin injections (Clexane and Dalteparin). It may also affect blood clotting so should be avoided if you have a bleeding disorder. Information on potential cautions and interactions can be found here https://www.rxlist.com/consumer_fennel/drugs-condition.htm

Other herbal galactagogues

Other herbal galactagogues include Vervain, Jivanti, Ixbut, Dill seed, Coriander, Cumin, Cotton Seed, Chasteberry, Caraway Seed, Borage, Black Seed, Black Cohosh, Ashwagandha, Aniseed, Lemon Balm, Milk Thistle, Marshmallow Root, Nettle, Red Clover, Red Raspberry and Alfalfa.

It is advisable to consult a medical herbalist, especially if you have health conditions, have a complex history or are taking medications and they will be able to recommend the herb or combination of herbs to best meet your needs.



Things to consider when taking herbs

Teas are usually not strong enough to provide a significant effect. Capsules and tinctures usually work better, but tinctures can be unpleasant to taste.

Herbs produced in Asia may be contaminated with heavy metals. The quality of herbal products varies so choose a reputable brand from a UK, European or US supplier and check the expiry date. Herbs for increasing milk supply can be purchased in the form of a blend of different herbs. There are many online retailers where herbal supplements can be purchased.

Like medications, some of the herb you take is likely to transfer into your milk. As with most medications it is likely to be in tiny amounts (2-3% of the dose you are taking) so it is not likely to have any adverse impact on your baby. **It is important to tell your healthcare provider and your baby's healthcare provider that you are taking a herbal galactagogue and seek expert advice from a medical herbalist.** Follow the instructions on the packaging of your herb as the absorption of the herb may be impaired if taken with food.

With both herbal and pharmacological galactagogues the advice is to wean off them slowly by gradually reducing the dose to avoid a dip in supply. It may also be helpful to rotate herbal galactagogues as over time your body may become used to them, reducing their effect.

Medical herbalist based in Cambridge: <http://www.cambridgeherbalist.org.uk/>

Foods that may support milk production

I am often asked about foods that may help increase milk supply. Certain foods have traditionally been eaten to support lactation but there is little research on this. Lisa Marasco and Diana West (2020) list these foods:

- Whole grains, beans, and yeast
- Quinoa
- Oats
- Barley
- Hops
- Brewer's yeast
- Nuts and Seeds
- Dark green leaves
- Dandelion leaves
- Green Papaya



Bibliography

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