

Engorgement and Breast milk Oversupply

Engorgement or breast milk oversupply occurs when your milk production increases rapidly and the volume of milk in your breast exceeds the capacity to store it. If the milk is not removed, over-distension of the alveoli (cells in your breast) can cause the milk secreting cells to become flattened and drawn out, even rupture. This causes the painful swelling in your breasts.

When this over distension occurs in your breasts, a special protein is released called the 'Feedback Inhibitor of Lactation' (FIL). This protein is released when the breast is not expelling sufficient milk, in order to reduce the milk supply. The greater the engorgement or fullness in the breast, the more milk is reabsorbed, causing the alveoli to collapse and the cessation of milk production. This is the normal process for women wishing to suppress their lactation.

It is important to note that some form of engorgement is normal in the early days as your breasts work out what the correct amount is, that is needed for your baby's individual needs.

Risks of Engorgement:

- Failure to prevent or resolve milk sitting in your breast infrequent or inadequate drainage of the breast you can assist with this by:
- 1. Feeding on one side until the breast is softened adequately before offering the second breast.
- 2. Demand feeding your baby as often as he is interested. Sharing a room with your baby will allow you to pick up on baby's feeding cues more easily.
- Smaller breast size whilst not limiting milk supply, can affect the storage capacity and feeding patterns, you may find that you need to feed a bit more frequently.
- Previous breastfeeding experience because generally, mothers who have previously breastfed experience greater levels of engorgement but will also experience faster resolution.
- Mothers with high rates of milk production (hyper lactation) such as mothers with multiples.
- Limited mother/infant contact in the early days mothers who have skin-to-skin contact and co-sleep (share a room or bed) with infants demonstrate significantly less episodes of engorgement.

What you can do to minimize or prevent engorgement:

- Mothers experience less severe forms of engorgement with early, frequent feeds, demand feeding, unlimited sucking times and correct attachment techniques.
- Breast massage has been shown to significantly reduce the incidence and severity of engorgement.
- Application of cold packs triggers a constriction in the blood vessels which decreasing swelling and increases lymphatic drainage.
- Ultrasound has not generally been shown to be of benefit.
- Many women find that the use of cooled cabbage leaves applied to engorged breasts and changed every couple of hours has a rapid effect reducing edema and increasing milk flow.
- Expressing milk by hand or pump to comfort only (not to empty your breasts) reduces the build-up of the FIL protein which decreases stress on the alveoli, alleviates the interference to lymph and fluid drainage, decreases the risk of mastitis and decreased milk production as well as providing relief to the mother.



Inverted Nipples and Nipple Shields

Is it possible to breastfeed if I have inverted nipples?

First you should establish if you have inverted nipples. To do so, gently pinch the base of the nipple. An inverted nipple will retract inwards when they are pinched where a 'normal' nipple will stick out. Some women have flat nipples which will stick out but not very far and appear somewhat flat.

It is fairly common to have flat nipples but much less common to have completely inverted nipples.

Most women who have inverted nipples are able to breastfeed. Babies, when attached correctly to the breast, attach to the areola (coloured part around the nipple) **not** the nipple itself. If you think that you might have inverted nipples and wish to breastfeed, it is worth making an appointment with a qualified Lactation Consultant to discuss options and have a feed plan developed.

Nipple creams are inadvisable when women have inverted nipples as they will increase the risk of infection and also make the areola more slippery and difficult for the baby to attach properly. Breast Shells, a devise that fits in your bra and gently exerts pressure on the nipple have not been shown to help. Again, the baby is not attaching to the nipple but the areola. Nipple pullers are also of no benefit. Most women with inverted nipples will find that once their baby is breastfeeding well, the baby corrects the inversion itself.





Can I use a Nipple shield?

Nipple shields will help some babies attach to the breasts, that are otherwise unable to. They are used occasionally with women who have flat or inverted nipples and their baby is unable to attach to the breast. Shields are made of a fine, silicone material that sits over the areola and nipple. Anyone considering using a nipple shield should do so with the advice and guidance of a Lactation Consultant as incorrect use will have an impact on your babies feeding as well as your milk supply.



Generally, the belief today is that it is better to breastfeed using a shield than not to breastfeed. Shields can be inconvenient however so should not be used lightly. Mothers have to remember to take the shield out with them (it can be very difficult if you forget), keep them clean and it does interrupt the normal discretion of a breastfeed so can be difficult to use in public. This said, many women do use them for extended periods and do so admirably.

Shield use can have a negative impact on your milk supply (not as much as once when shield were thicker). Supply and let-down depend on stimulation on the nipple and this can be reduced when there is a silicone cover over the nipple. To reduce the likelihood of this, women are encouraged to express their breasts after daytime feeds for five to 10 minutes to help increase their milk supply.

Using a shield may also reduce the volume of milk the baby is able to draw from the breast meaning that their feed times may be of longer duration than a baby feeding directly from the breast. It is important to watch your baby for signs of adequate feeding to ensure that he is feeding properly and seek professional advice if you have any concerns.

The majority of babies will independently wean from using a shield with in the first couple of weeks. Mothers are encouraged to wait until they are happy with their baby's feeds and then try to extract the shield mid-feed and see if the baby will attach to the breast independently. If not, use the shield again for a few feeds or days and try again.







Dietary Advice for Breastfeeding

Are there any foods a breastfeeding woman can't eat?

Generally speaking, you can eat anything you want to *in moderation*. Most mothers eat a varied diet without any problems. Some babies, whose digestive systems are not yet fully mature, may react to certain foods, such as especially spicy or gassy foods which can make them a bit unsettled. If something really makes your baby fussy, avoid it for a couple of weeks. As your baby's digestive system matures, he will handle much more.

Is it OK to drink coffee or caffeine drinks?

Coffee, tea and soft drinks with caffeine should ideally be limited. Caffeine does pass through the breast milk and will make some babies restless and fussy. If you normally need a coffee in the morning to kick start the day, ideally breastfeed your baby first and drink your coffee after the feed. This will minimise the caffeine that is available to baby at the following feed.

Should alcohol be avoid when breastfeeding?

Alcohol in the bloodstream passes into breast milk and reaches concentrations similar to that in the mother's blood. The level of alcohol in breast milk will decrease as the mother metabolises the alcohol in her blood stream. Babies metabolise and excrete alcohol more slowly than adults. It has been reported that even relatively low levels of alcohol intake may reduce the mother's milk supply and possibly cause irritability, poor feeding and sleep disturbances in the infant.

The current Australian guidelines recommend that, for women who are breastfeeding, <u>not</u> drinking alcohol is the safest option.

Women should avoid alcohol in the first month after delivery until breastfeeding is well established.

After that:

- alcohol intake should be limited to no more than two standard drinks a day
- · women should avoid drinking alcohol immediately before breastfeeding
- Women who wish to drink alcohol should consider expressing in advance. It is not necessary to pump and discard breast milk, except for the mother's comfort when she is not feeding for an extended time.





The Unsettled Baby and Breastfeeding

Nothing distresses parents more than a baby who does not feed and settle blissfully off to sleep or worse, cries when offered a breastfeed. Many mothers perceive this as a rejection of themselves and of their inadequacy. This is definitely **not** the case.

Baby's cry to communicate a myriad of needs; not just hunger. The 'unsettled baby' appears to be more of a western phenomenon. Babies are expected to feed and then settle and sleep independently, usually in a cot and/or room of their own. In more traditional societies where babies are swaddled to the mother, unsettled behavior is rarely a problem. An infant's survival depends on his mother being accessible to him for food and protection. Any variance to this will cause a baby to become unsettled. Usually, however this is a developmental stage and most babies do learn to settle independently and become less anxious at being alone.

Feeding causes:

- Babies will commonly fuss or cry at the breast when the mother has a forceful milk ejection reflex (letdown) or breast milk oversupply.
- The reverse of this is can occur where a baby becomes frustrated at the breast when the mother's milk supply is reduced or she has a delayed let down reflex.
- The baby may have completed the feed at the breast and does not want anymore.
- The baby may have been forced onto the breast.

Other possible reasons:

- 'Infantile colic' is commonly described as excessive crying without identifiable need in an otherwise healthy, well fed baby lasting more than 3 hours a day, occurring on more than 3 days per week for 3 consecutive weeks (Weasel's rule of 3's).
- The majority of babies will have an unsettled period at least once in each 24 hour period, frequently lasting one feed cycle and this commonly occurs in the evening and night time hours. This is **normal**.
- Lactose malabsorption in the breastfed infant.

Infantile Colic

Management:

- Have your baby checked by your doctor to exclude illness.
- Low allergen diets for the mother can sometimes assist where a baby may have developed food sensitivity to something you are eating.
- Support measures for parents and baby try and have family or friends help out a bit to give you a break.

Lactose Malabsorption in the breastfed infant

- Differs from 'primary lactase deficiency' that develops in childhood, and is the most common cause of lactose malabsorption and intolerance.
- Onset usually occurs in the first few weeks of life, but may present at a later stage when a mother alters her feeding style.
- Most mothers have a copious breast milk supply.
- Many mothers are offering both breasts at a feed, sometimes with timed feeds at each side rather than feeding one side until the breast 'feels' emptied.











What will I see?

Your baby:

- Usually healthy and gaining weight well
- Baby is frequently distressed with inconsolable crying, often for lengthy periods
- Babies suck at their fist for comfort.
- Draws knees into chest when crying
- Lots and lots of wind+++
- Lots of soaked nappies each day with clear urine
- Frequent, watery, copious, greenish, frothy stools (looks whipped)
- Mothers commonly misinterpret fist sucking as hunger and will reoffer the breast, often the side not just completed.
- You may be mistakenly concerned that you have a low milk supply because of the baby's frequent feeding and unsettled behaviour. This is generally not the case.
- Some mothers are concerned that their baby has a bowel problem 'gastro' because of the unusual poos and their frequency.

Management of this problem:

- The best way to address this is by feeding your baby from one breast over several hours then switching to the other side. This increases fat content in the milk that your baby is drinking and slows down his digestion.
- Continue to feed your baby to his demands and cues.
- Express your breast that you have not fed from for comfort only (not to empty) and apply icepacks for comfort and to prevent engorgement.
- Resolution of your baby's symptoms is usually rapid, within 48 hours though at worst it may be as long as a week.
- A return to two sided feeding may be indicated in time, either for most feeds or possibly evening feeds only (supply being generally lower in the evening).





Iron supplements for the breastfed baby over six months

Does a baby exclusively breastfed beyond six months require iron supplements?

Many babies are exclusively breastfed beyond the typical six months of age where mother's wish to delay the introduction of solid feeds until their baby is showing signs of readiness or interest to feed.

It is worth noting that many babies who are prone to allergies or intolerances are often naturally disinterested in attempting solid foods until around eight to nine months or even later.

Anaemia is uncommon in the breastfed baby. The amount of iron in breast milk may be small, however, it is very well absorbed with 49 per cent absorption as opposed to 10 per cent from cow's milk and four per cent from iron-fortified formula. The high lactose and vitamin C levels in human milk also aid in iron absorption. Also relevant to note, is that breastfed babies do not excrete iron through the bowel, as do babies fed on cow's milk.

The introduction of complimentary foods:

As your baby is first introduced to solid foods, it is important to remember that these are designed to introduce your baby to different textures as breastfed babies are already familiar with a wide variety of flavours transferred through the breast milk.





Reduced Milk Supply

Besides nipple trauma, this would be the most common reason mothers give for introducing artificial baby milk and weaning prematurely. It is imperative that when this situation occurs, you have adequate assistance and support which can come from your doctor or a qualified lactation consultant but also from family and friends.

For lactation to occur successfully a woman needs to have:

- Adequate glandular (breast) tissue that is responsive to hormonal influence.
- Correct balance of hormones to initiate lactation.
- Regular, effective milk removal from the breasts.
- Support.

In the first few days after your baby is born and lactation commences, your breast tissue, in response to the hormonal changes which have occurred with the expulsion of your placenta and the stimulation received from your baby's suckling lays down prolactin receptor sites (special cells that use the hormone prolactin to create milk). The more frequently the baby sucks at and stimulates the breast, the more receptor sites are developed (and vice versa) which respond to the circulating hormone prolactin in the blood stream and establish and control milk supply.

Babies will feed to need (demand feed) or 'cluster' feed (frequent feeds) to ensure this adequate stimulation in the early days when your supply is being established or in response to their 'growth spurts' when additional volume is required.

Some common causes for reduced milk supply include:

- You may have some retained products of conception.
- Hypothyroidism.
- Polycystic ovarian syndrome.
- Subsequent pregnancy.
- Premature birthing.
- Hormonal therapy contraceptives.
- Reduction mammaplasty or breast reduction.
- Ineffective milk removal from the breasts.
- Frequency of milk removal is inadequate.



How to correct low milk supply:

- Correct any attachment problems (you may need to visit a lactation consultant).
- The use of breast compression (gentle squeezing on the breast) during the feed increases available milk for removal.
- Switch feeding or alternating each five minutes or so between your breasts can improve milk flow and thus increase the sucking time at the breast and thus stimulation received.
- Use of a supplemental feeder under guidance of a qualified Lactation Consultant.
- Increasing your breastfeeding frequency. The more frequently and effectively breast milk is removed from the breast, by a well latched baby, the more breast milk each breast will make.
- You may need additional milk removal and may be encouraged to express your breasts after or between feeds to encourage your breasts to make more milk.

Fact: the more frequently milk is extracted from your breast, the more rapidly your breast will produce breast milk. The fuller your breast becomes, the slower the milk is produced.

Medications to increase your milk supply:

Occasionally, after trying the techniques listed above and where your milk supply is still reduced, your doctor or a Lactation consultant may discuss the use of substances called galactagogues (a substance that increases the volume of milk produced by increasing prolactin production) to help your milk supply increase.

There are a couple of forms of galactagogues, medical or herbal, that you might try depending on your situation, the age of your baby and the advice you have received. Fenugreek, a herbal supplement and domperidone (Motilium), a medication, are most commonly used to increase milk supply but you would need to discuss this with your doctor.

It is important to remember, when taking any kind of medication to assist increase your milk supply; the medication alone will be ineffective. It still requires effective and frequent removal of milk from the breast in addition to any medication you have been prescribed.



Biting and Breastfeeding

Biting is a relatively common occurrence and is generally developmental. It is most common between the ages of four to six months and onwards.

Most biting occurs in a playful fashion at the end of a breastfeed. The baby often does not realise what they are doing.

Pay attention to your baby's activity at the breast. If you stop feeding at the first sign of him losing interest and the feed is about to end, you won't give him the opportunity to bite.

If he does bite, immediately remove baby from the breast, firmly and quietly say "no" (try not to yell) and do not then offer any other food (if baby has commenced on solids) or the other breast. Offering food is rewarding him for a behaviour that you don't want him to do. If your baby is breastfeeding only, wait at least 30 minutes before reoffering the breast and then, only if your baby is demanding a feed. In many cases, mothers misinterpret their baby's desire to finish a feed believing that the feed should last a certain length of time. As babies get older, the time spent at the breast becomes much shorter. The average five to six month old may complete a feed within 10 minutes at both breasts.

Biting is seldom a cause for weaning. Babies learn quickly that biting results in separation from the breast and will usually stop within a few days.

Some babies will bite when their gums are swollen and painful with teething. If this is the case, it may help to offer more frequent and shorter breastfeeds.

Babies do not automatically start biting once they have teeth. A correctly latched baby covers his teeth with his tongue when feeding which protects your nipples.





Breastfeeding and Contraceptives

Is it possible to get pregnant whilst breastfeeding?

Yes, you can! It is possible to achieve pregnancy when you are breastfeeding, but it is rare to ovulate before your first menstrual period. Exclusive or complete breastfeeding, which means giving your baby breast milk only (at least six to eight feeds per 24 hours) with **no formula, solids or even a pacifier** will most likely protect you for the first four to five months, sometimes longer. If it is important that you do not fall pregnant, discuss other forms of birth control with your doctor.

Fact: In countries where most women breastfeed and they use no birth control, babies come approximately every two years.

Can oral contraceptives be used with breastfeeding?

Oral contraceptive can be used, and are widely by many mothers who breastfeed, however it is important to discuss this with your doctor as only certain types can be used. The 'minipill' (progesterone only) or progesterone implants are commonly used by many women. These appear to have least effect on maternal milk supply and on baby's growth than other pills but they may effect both. Contact your Doctor if you notice a sudden drop in milk supply soon after commencing on birth control pills. The combined oral contraceptive pill (oestrogen and progesterone) is not compatible with breastfeeding and will interrupt maternal milk supply. Do not resume any pills you might have from prior to pregnancy, discuss options with your doctor.

There are other birth control options. Condoms or diaphragms are excellent choices that will not affect your milk supply or baby's growth.

Mater Mothers' Hospital offers a Natural Fertility Service which includes prevention of pregnancy using both breastfeeding and the symptothermal method as a means to space pregnancies. They are contactable on phone 07 3163 7617 or 07 3163 8437





Breast Refusal

It is normal for babies to be fussy at the breast from time to time and even refuse the breast, however under 12 months of age it is unlikely to be because the baby is choosing to wean from the breast.

Possible causes:

- Adverse events during or immediately following birth, such as a long labour or difficult delivery.
- A normal developmental stage in your baby causing distraction or an increased awareness of his surroundings.
- Adverse oral experience where baby has had something forcefully put in his mouth.
- Ill health of mother or baby such as maternal mastitis or ear infection in the baby.
- Sucking on an artificial nipple such as a teat or nipple shield.
- Milk reasons poor supply, forceful milk ejection reflex or letdown, altered taste of the milk caused by hormonal changes such as pregnancy.
- Fear forceful milk ejection (letdown), maternal reaction to having been bitten.

What to do if your baby refuses to feed at the breast:

- First determine that it is breast refusal, not just a signal of completion of a feed. Many mothers misinterpret the quicker feed times and decreased need for breast milk of an older baby. Many five to six month old babies complete a breastfeed in 10 mins.
- Have your baby checked by his doctor to make sure that he is well.
- If baby refuses more than two feeds, you will need to express to maintain your milk supply and then you can use this milk to feed your baby.
- Avoid forcing the baby to the breast.
- Have lots of skin-to-skin time in bed or in the bath with your baby.
- Minimize environmental distractions, choose a dimly lit room to feed your baby in and play some relaxing music.
- · Attempt breastfeeds when your baby is sleepy or nearly asleep or just on waking.
- Offer your breast instead of a pacifier.
- Be patient and remember this is usually temporary and will pass.

True breast refusal should be assessed and followed up with a lactation consultant and/or your doctor.





Breast Milk – What should it look like?

My breast milk did look like cow's milk but now appears watery. Is this normal??

Your milk is perfect!

Breast milk does not look like the homogenised, pasteurised artificially treated/stored/cooled/warmed/vitamised fluid sold in stores.

It is natural, untreated, live, and full of healthy cells that are living things which nurture and protect our babies from infections as well as providing the perfect nourishment for the brain, neural cells, eyes and all other essential parts of our babies, at the perfect temperature with the perfect combination of vitamins, minerals, fats, carbohydrates and sugars.

The first milk you may have seen is called colostrum. It is the ideal first food for a digestive system that has never digested before. Colostrum contains antibodies against all the infections that you have ever been exposed to and has a laxative effect that clears out the meconium (baby's first poo) and prepares the digestive system for the coming food. It has a very high sodium content which draws fluid back into your baby's cells preventing dehydration. Colostrum can appear anywhere from a sticky clear fluid to deep yellow in colour.

After the colostral phase, your milk transitions, bit by bit becoming more like mature milk and less like colostrum. Your baby now needs more fluid, and the balance of proteins, fats and carbohydrates changes. It is perfect for your baby's requirements at this stage. At this time your milk may appear quite yellow in colour or white and the volume will have increased dramatically. It may even change from yellow to white as the days pass by.

Amazingly, your milk also changes from the beginning to the end of a feed. The first milk (foremilk) is more watery and higher in lactose which satisfies your baby's thirst and provides energy for the breastfeed. As the feed progresses, the fat and protein content rise to satisfy your baby's hunger.

By about the third to forth week, your milk has matured. Hopefully you have no cause to see your milk as your baby is attached to your breast, however for Mums who might be expressing you will notice that your milk changes again from white to a thin, bluish colour, similar to skim milk. Your milk is still perfect for your baby. Mothers expressing and storing milk will also notice that after it has sat a while, it separates with the fat rising to the top and the milk below looking even thinner. Before feeding your baby, shake or swirl the milk to remix it and it will return to its normal appearance.

As your baby gets older, your milk will continue to change so that it meets all the requirements of your baby. This is also the case if your baby becomes unwell. Even a child over a year, still breastfeeding but eating a variety of other foods will benefit from the breast milk 'snacks' full of antibodies.

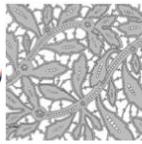
The later 'weaning' milk becomes more like the initial colostrum in appearance.













Colostrum - day one to two post delivery



Colostrum (L) and transitional milk (R)



Milk maturation from (L) to (R) – mature

Exceptional People. Exceptional Care.



Blocked Milk Ducts and Mastitis

Blocked milk ducts is a common condition and usually present as a tender, small lump in the breast. The skin area over the lump may be reddened and warm to touch. It is most common in the early weeks of lactation when your breasts are fuller.

Common causes of blocked milk ducts include:

- Incomplete breast emptying
- poor attachment of your baby at the breast
- Pressure from an ill-fitting bra or clothing

Management of this condition involves:

- Warm compresses applied to the area prior to gentle, firm massage.
- Massage across the affected area directed towards the nipple as your baby suckles or when expressing.
- Massage and hand expressing under a warm shower.

Prevention:

- Remove obvious causes by checking your baby's attachment at the breast and ensuring that you have a well fitting bra and clothing.
- Some mothers have found that the addition of Lecithin to their diet may reduce the incidence of blocked milk ducts. Lecithin is a phospholipid used as a fat emulsifier in the food industry. It is derived from soy beans, egg yolk and sunflower seeds. The dose found most effective is 1200 mg TDS. You will need to discuss this with your doctor or a pharmacist to make sure it is suitable for you to take.

Mastitis:

- Mastitis most commonly occurs in the first two to three weeks after the birth of your baby.
- This inflammatory breast condition is caused by either milk stasis (collecting in your breast and not being drained properly) or infection (commonly from the nipple).

Milk stasis is non-infective, but can progress to an infective state if not appropriately managed. Milk stasis will be caused by conditions such as:

- ✓ engorgement
- ✓ Infrequent or scheduled feeds
- ✓ Poor attachment leading to inefficient milk removal
- ✓ Rapid weaning
- ✓ Missed feeds
- ✓ Blocked duct or nipple pore

Infection – usually caused by a bacteria called *Staphylococcus aureus* and much less commonly by streptococcus organisms.



Other conditions that predispose you to developing mastitis are:

- ✓ Nipple damage
- ✓ Illness of mother or baby
- ✓ Milk oversupply
- ✓ Maternal stress or fatigue
- ✓ Anaemia (low haemoglobin or blood count)

Signs that you might have developed mastitis

- ✓ A tender, hot swollen, wedge shaped area of the breast
- ✓ Fever of 38. 50C or greater, and
- ✓ Chills, flu like aching and systemic illness





Management of this condition

As milk stasis is the most common cause of mastitis, the first line of management should be to ensure that you frequently and effectively remove milk from the affected breast.

- ✓ Ensure your baby is latching and suckling well
- ✓ Massage the affected area during the feed gently!
- ✓ Increase frequency of feeds your baby is taking
- Hand expressing or pumping may be necessary for comfort (not to empty your breast as this will cause you to keep increasing your supply)
- If you are considering weaning, this is not the time to do it! Weaning when you have mastitis will increase the likelihood of you developing a breast abscess.
- ✓ You should try and rest in bed as much as possible
- ✓ Make sure you are getting enough fluids and nutrition
- ✓ Pain relief paracetamol and ibuprofen have been found to help with reducing fever and discomfort.
- Warmth or cold packs as per your preference. Some mothers find relief from immersing breasts in warm water with magnesium sulphate (Epsom salts).
- ✓ Antibiotics if symptoms are mild and present for less than 24 hours, conservative management may resolve the problem without need for antibiotic therapy. If symptoms are unresolved within 12-24 hours, you need to see your doctor as soon as possible for treatment.

Preventative measures to avoid mastitis

- ✓ Ensure your baby is well attached at the breast for effective milk removal and to avoid nipple damage.
- ✓ Learn how to hand express to prevent breast engorgement.
- ✓ Make sure you rest each day and aim to have a mostly healthy diet to support your immune system.
- ✓ Be aware of breast lumps or areas of milk stasis which you should treat with massage, extra feeds, expressing and heat packs.