Everything YOU need to know to meet your pumping goals.
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I'm an exclusive pumper

BY HAYLEY O'DELL

Sitting here at midnight,
Sleep has filled the air.
The squeak of my dear breast pump
Is all that you can hear.

My milk is dribbling slowly,
Into this bottle I need to fill.
My flange is sitting snugly,
As my pump gives me a pull.

As I look over at my sleeping baby,
My reason for it all.
I get that happy gush of milk,
Stream down like a waterfall.

I place my yield inside the fridge,
Awaiting mornings feed,
When baby wakes for milkies,
I'll need it with a dash of speed.

Pumping isn't easy,
No one ever said that it would be.
But baby's needs come first,
And the best milk comes from me.

So get that "sucker" going,
Our loyal BREAST friend.
Because I'm an exclusive pumper,
Right to the very end.
WHAT IS EXCLUSIVE PUMPING

Exclusive pumping is where a lactating mother removes breastmilk from her breasts in order to feed her baby without ever physically latching baby onto the breast. This would be done as an alternative to formula feeding when breastfeeding directly from the breast is not possible, a mother would use hand expression (marmet technique) or a breastpump to successfully remove milk from the breast.

Exclusive pumping is still considered breastfeeding, as the mother is still feeding the baby, indirectly, from her breast. Expressed milk still contains important nutrients, antibodies and other properties and both mother and child receive the same long term health benefits as breastfeeding directly from the breast. Exclusive pumping is a viable, long term option for providing your baby with the biologically normal infant milk specifically designed to meet their needs.

Mothers body is still able to pick up viruses and bacteria and provide the relevant antibodies needed to be passed through the breastmilk to baby just by sharing the same environment as baby, even a simple kiss on the head or hands of baby can help mothers pick up the necessary information in order to pass over the important immunological properties to baby.

Pumping exclusively takes dedication and commitment, finding a strong support system can help you meet your personal goals.
WHY EXCLUSIVELY PUMP

Most mothers who turn to exclusive pumping, do so out of necessity rather than choice, although a good percentage of mothers who pumped for their first born were more likely to turn to pumping again regardless of circumstance in the future.

A few reasons for exclusive pumping are:

- Premature Birth
- Infant Loss
- Surrogacy
- Cleft palate
- Birth Defects
- Feeding tubes
- Inability to latch
- Severe tongue and lip ties
- Poor milk transfer
- Immature sucking reflex
- Sensory issues / oral aversions
- D-Mer or previous traumatic experience
- Past sexual assault or trauma
- Working away from baby for long periods of time

If done correctly, exclusive pumping can be maintained for long periods of time. Maintaining a strict schedule and starting as soon as possible after birth can ensure you won’t have to supplement with formula provided you don’t suffer with any underlying conditions which would negatively impact breastmilk supply such as insufficient glandular tissue, thyroid issues, pcos or hormonal imbalances, however only a very small percentage (approx. 2% of lactating mothers world wide) suffer from true low / no supply.

If you feel your supply is low, and nothing is helping, speak to your lactation consultant. It could be something as simple as worn spares on your breast pump or incorrect flange size.
BREASTMILK PRODUCTION

The process through which the mammary gland develops the capacity to secrete milk is called lactogenesis.

The woman’s breast is not merely a passive container of milk, it is an organ of active production. When the infant suckles or a breastpump is used, a series of events takes place within the mother’s body that stimulates the mammary gland to produce breastmilk. Even when a mother’s breast feels fully drained, one third of her milk capacity still remains within the ducts.

Stimulation of the nipple and areola sends signals to the mammary gland, which are then relayed to the central nervous system. This cyclical process of milk synthesis and secretion is termed lactation. Factors that are necessary to maintain the milk supply are fairly basic, supply = demand, the more milk that is frequently removed from the breast, the more breastmilk will be produced.

When milk is not removed frequently, an active whey protein called feedback inhibitor to lactation builds up and eventually stops breastmilk production.

It is important to understand how breastmilk production works in order to succeed in reaching your individual breastfeeding goals, a drained breast makes more milk, faster, than a full breast, therefore it is vitally important in maintaining a healthy supply that milk is removed from the breast frequently.
FiL is an active whey protein that builds up in the breast and stops breastmilk production when milk is not removed frequently.

**Increased Breastfeeding**  
**Increased Draining of Breast**  
**Increased Demand**  
**Less FiL**  
**More Milk**

-more time between breastfeeds / pumping sessions, and /or the more supplementation with artificial infant milk, the less draining of the breast, and less demand there is and the more FiL builds up therefore milk production falls.

**Decreased Breastfeeding**  
**Decreased Draining of Breast**  
**Decreased Demand**  
**More FiL**  
**Less Milk**
**Storage Capacity**

Storage capacity is determined by the volume available in the breast at their fullest. All babies can thrive on any storage capacity. The amount of milk needed to slow milk production will be much greater in a woman with a large breast storage capacity, so she can remove her milk fewer times a day without her milk production decreasing, a smaller capacity would mean that you would need to empty the breast more frequently. Breast capacity is NOT dependent on breast cup size.

![Breast Size Has No Impact On Supply](image)

**The Magic Number Theory**

Nancy Mohrbacher, an internationally board certified lactation consultant (IBCLC), developed the theory that a mother could maintain a sufficient supply by finding her magic number based on breast storage capacity. The “magic number” refers to the number of times each day a mother’s breasts need to be emptied of milk to keep her milk production stable. Due to differences in breast storage capacity, some mothers’ “magic number” may be as few as 6-7 or as many as 10-11. But when a mother’s total number of breast drainings dips below her “magic number,” her milk production slows.
Another factor that can affect milk production is the longest stretch between breast drainings. Ideally, to keep milk production stable, do not regularly allow your breasts to become uncomfortably full, as that gives your body the signal to slow milk production. Exclusively pumping mothers are encouraged to pump at least once during the hours of midnight and 5am when the hormone prolactin is naturally at it’s highest levels.

In the first few months it is not recommended to go longer than 4 hours between breast drainings, as baby gets older and has been supplemented with solids after six months a mother can stretch to no more than 8 hours between draining the breast, provided the breasts do not become frequently engorged as this increases the risk of mastitis.

Once your supply is established between 6 to 12 weeks, you will be able to get a grasp of what your magic number is. It is important to establish supply before attempting to drop sessions in order to find your magic number. Be aware of how often your breasts feel full during the day as that will give you an indication of your breast capacity and how often you would need to pump in order to maintain a healthy supply.

Within the first 6 weeks, breastmilk production is primarily hormone driven, and many exclusively pumping mothers find they have a surplus of milk during this period and quickly drop sessions, unfortunately once breastmilk supply establishes itself at around 6 weeks, supply drops because the breasts have not had the opportunity to build its capacity to run solely off of a supply and demand basis.
THE BENEFITS OF BREASTMILK

Breastmilk contains many non-nutritive, bioactive substances that directly benefit the child throughout infancy and well into toddlerhood. Breast milk is not a uniform fluid but a constantly changing composition and no two samples of breast milk are the same, even when taken from the same mother.

Breastfeeding is an interactive process, the infant helps to determine the milk’s composition through signals sent through the infants saliva or shared environment.

The major components of human milk include protein, fat (lipids), and lactose as well as vitamins, certain minerals, hormones, enzymes, growth factors, and many types of protective agents. Breastmilk never loses its nutritional value and is considered the perfect whole food.

Human breastmilk is species specific and many of the substances, vitamins and minerals are bio-available in the perfect amounts to help the infant grow and thrive.

Breastmilk is made up predominantly of water and the first watery milk that is expressed is the thirst quenching milk, followed by a creamier, more fulling milk, both contain vitally important nutritional aspects. Breastmilk fed infants below six months do not need additional water, even in warmer weather.

Recent studies have shown that breastmilk contains living stem cells which help heal and repair within the baby’s body, breastmilk changes daily, even hourly to meet the ever changing needs of your baby, the colostrum, which is the first nutrient dense milk is filled with immunological benefits which boosts and protects newborns, the high fat milk to follow is perfectly designed to support brain growth and the dense toddler milk is packed with both immunological properties as well as nutrition for those super busy snackers.

THE BENEFITS OF BREASTMILK
DO NOT RUN OUT AT SOME ARBITRARY AGE.

BENEFITS IN THE 2ND YEAR INCLUDE

29% of energy requirements
43% of protein requirements
36% of calcium requirements
75% of vitamin A requirements
76% of folate requirements
94% of vit B12 requirements
60% of vit C requirements

Per 448mls of breastmilk
Fats in Breastmilk

Rich in brain-building omega-3s, namely, DHA and AA.
Automatically adjusts to infant’s needs.
Fats increase in the second year.
Rich in cholesterol; nearly completely absorbed.
Contains the fat-digesting enzyme

Cholesterol is the most important nutrient in breastmilk; the absence of cholesterol and DHA may predispose a child to adult heart and CNS diseases.
**Protein In Breastmilk**

Soft, easily digestible whey  
More completely absorbed; higher in the milk of mothers who deliver preterm  
Lactoferrin for intestinal health  
Lysozyme, an antimicrobial  
Rich in brain and bodybuilding protein components  
Rich in growth factors  
Contains sleep-inducing proteins

* Something to note: Infants aren’t allergic to human milk proteins, however they can be allergic to cow milk proteins in breastmilk from mothers diet.

**Carbohydrates In Breastmilk**

Rich in oligosaccharides, which promote intestinal health

* Comments: Lactose is important for brain development.

**Immune Boosters In Breastmilk**

Millions of living white blood cells, in every feeding  
Rich in immunoglobulins

* Breastfeeding can provide active and dynamic prevention from infections of all kinds and shortens the duration of illnesses. Breastmilk can be used to alleviate a range of external health problems such as nappy rash and conjunctivitis.

**Vitamins and Minerals In Breastmilk**

Bio-available so more readily absorbed  
Iron is 50-75% absorbed  
Contains more selenium (an antioxidant) than artificial infant milks

* Breastmilk contains all nutrients, there are no nutrients lacking in human milk. After 6 months, solids will supplement vitamin and mineral intake.

**Enzymes and Hormones In Breastmilk**

Rich in digestive enzymes such as lipase and amylase.  
Rich in many hormones such as thyroid, prolactin and oxytocin.  
Taste varies with mother’s diet, thus helping the child acclimatise to the cultural diet
Digestive enzymes promote intestinal health; hormones contribute to the biochemical balance and wellbeing of the baby.

* THERE ARE 171 CALORIES (714KJ) IN ONE CUP (8oz / 236ml) OF BREASTMILK

*please keep in mind that breastmilk changes continuously, this is a broad based average calorie count*

Total Fat 10.7g
Sat. Fat 4.9g
Cholesterol 34mg
Sodium 41mg
Total Carbs. 16.8g
Dietary Fiber 0g
Sugars 16.8g
Protein 2.5g
Calcium 78.1mg
Potassium 124.4mg

If you wanted to burn those calories?

You could do any of the following:

47 MINUTES OF WALKING
20 MINUTES OF JOGGING
14 MINUTES OF SWIMMING
26 MINUTES OF CYCLING
WHAT DO I NEED TO EXCLUSIVELY PUMP

To exclusively pump you will need a good pump that fits your budget, a great support system, dedication and realistic expectations of the journey you are about to embark on.

There are many kinds of pumps available on the market, and while convenient, a double electric is not the only pump that is suited to exclusive pumping, many moms find single electric, or even manual pumps are perfectly suitable to get the job done.

In order to make the best choice for you, it is important to know the different kinds of breastpumps on the market.

TYPES OF BREASTPUMPS

**Open System**

- No barrier between motor / mechanism and mothers milk

- Manual Pumps
- Small Handheld Electrics
- Some Double Electrics

**Closed System**

- Barrier between motor / mechanism and mothers milk

- Hospital Grade Pumps
- Double Electric Pumps
- Hands Free Pumps

Open system pumps are the more widely available and common types of pumps available on the market and are generally more affordable. All manual pumps are open system and most hand held electrical and small electric pumps are open system. Open system means that there is no barrier between your milk and the pumping mechanism, be it a motor or hand operated manual pump. These types of pumps should never be bought second hand due to contamination from disease, bacteria and mould.

Closed system pumps are generally more expensive, they are usually the types of pumps that are available for hire or in your local NICU unit. There are a few closed system pumps that are very affordable and most of them are available
through medical aid. These pumps have a filter that creates a barrier between your milk and the motor and the open air outside of your milk collection Kit, this protects both your milk from contamination and your motor from damage.

**Manual Pumps**

Manual pumps are usually the most affordable option for mothers. They are all considered open system. Manual pumps are generally considered more work and hard on the hands, however there are some good quality manual pumps that are perfectly suitable for long term pumping that are easy to use and very efficient.

**Hand Expressing**

Hand expression of breast milk is easy after a mother has learned the technique. Mother will need a clean, wide-mouthed jar, bowl, or funnel because it is difficult to aim the streams of milk into a small opening. With practice, some mothers feel that manual expression is easier and less time-consuming than a breast pump.

![Marmet Technique Diagram]

- Position the thumb and first two fingers at the edge of the areola
- Push in towards the chest wall spreading the fingers slightly
- Let the thumb and fingers roll lightly towards the nipple using light compression, avoid squeezing
- Repeat compressions rhythmically rotating the thumb and fingers to make sure you empty all the ducts
CHOOSING A BREASTPUMP AND LOOKING AFTER SPARES

A breastpump can be a big investment for many and it is important to look after your pump in order to get the best use from it. You should always follow the manufacturers instructions on cleaning and storing your pump.

CHANGING SPARES

Spares are the removable bits of your pump which ensure that your pump works efficiently, due to wear and tear, your spares should be changed often. Depending on your pump, you will need to change your diaphragm and duckbill every 3 or so months, if there is any build up or mould in your tubes, you will have to replace those too when needed.
CLEANING YOUR PUMP PARTS

If your baby is premature, ill or has any immunocomprising disorders, it is recommended to wash and sterilize your pump and bottles before each use. If you plan on pumping for donation, you will more than likely be asked to wash and sterilize your pump before each use and given special donation bottles with instructions.

You should wash your pump parts in warm soapy water, rinse well and dry completely before storing, you should sterilize your parts once a week if need be following the manufacturers advice.

STERILIZING

To sterilize you can boil in a pot of water for 20 minutes, keeping a close eye that none of your parts sink to the bottom and melt.

Alternatively you can use an electric sterilizer or microwave steam sterilizer to sterilize your pumping parts and bottles. Be sure to follow instructions to prevent damage.

It is not recommended to use sterilizing solutions as it is said to destroy the good bacteria in the breastmilk and baby’s gut promoting thrush.

Once your baby is eating solids, there is no need to sterilize your pump or bottles unless baby is sick.

BATTERY PACKS AND CAR ADAPTORS

There are many rechargeable battery packs and car adaptors on the market, however some of them could potentially damage your pump and cause you to loose out on your warranty.

It is always best to check with the manufacturer on which adaptors or battery packs they recommend for their pumps.

ADDITIONS

Additions like filters, add ons for flanges like reducers or pumping pals, extras to convert a single pump to a double should all be available from the pump manufacturer depending on your specific pump, it is always a good idea to check with the manufacturer about any additions that are bought outside of the manufacturer.

PROBLEMS WITH YOUR PUMP

Occasionally your pump could loose suction, or start making a funny noise or just stop pumping all together, for most common issues you will find a troubleshooting section in your pumps manual, but if not, do not open the pump
or start taking it apart yourself, rather contact the manufacturer, many of the manufacturers offer services on their pumps at a small cost.

**LOOKING AFTER YOUR PUMP**

Be sure to follow the correct cleaning and storage guidelines given by the manufacturer to prevent any damage to your pump. It’s a good idea to purchase a few spares to have on hand incase of emergency, as well as an extra set or two of flanges and tubes if necessary. Find out from the manufacturer how often they recommend servicing the pump and always buy spares that are sold for that specific pump.

**CHOOSING A BREASTPUMP**

Buying a breastpump can be an expensive and confusing purchase, no two women respond the same to a single pump, and it can be absolutely devastating when you find your pump just is not working as expected, here are a few things to consider when purchasing a breastpump:

- Availability of spares and after sale service.
- Open vs. Closed System.
- Mains or Battery operated (ideally both).
- Noise level.
- Price.

It is not recommended to buy second hand breastpumps, especially second hand open system pumps due to risk of contamination with old milk residue, mould particles, dust, bacteria and even viruses that can be trapped within the mechanism and contaminate your milk, your milk is also exposed to the open air drawn through the pump, so allergens, bacteria, dust, pet dander, pollution, chemicals, second hand smoke and any other nasty bugs lurking in the air can get into your pump system and end up in the milk you feed your baby, and although breastmilk contains immunoglobulin A, there is still a risk, especially when buying second hand from unknown sources.

**EXTRAS**

Apart from a good pump that suits your budget, there are a few other things you may need. Remember to keep two or three sets of spares on hand for just incase.

Storage bags or bottles are a must for freezing milk, simple food grade ziplock bags work just as well and are more affordable than the breastmilk storage bags.
Finding a bottle that fits your pump that baby likes is obviously a bonus. Some pumps come with a wide neck to standard and vice versa converter.

Nipple cream and lubrication, breastpumps can often pull on sensitive skin and cause friction and tears, so lubrication is extremely important, the best is a good quality coconut oil or nipple cream. Try avoiding scented creams or Vaseline as traces of the lubricant can end up in your milk.

Car adapters are available for some breastpumps for on the go pumping and are great for when loadshedding strikes. Extra batteries for if your pump is able to run off battery pack. Make sure to check that these add ons are manufacturer approved and will not violate the warranty.

Hands free pumping bras, they can be pretty pricey, but an old sports bra with strategically cut holes makes for a cheaper option.

Entertainment is a must, especially for the sessions where you are up pumping at night alone, a good book, audio book or a series on the net can help bust that pumping boredom.

A good quality cooler bag, ice bricks and a nursing cover if you are uncomfortable pumping in the car or nursing room uncovered.

**FLANGE SIZE**

Only 45% of the population fit the standard size flange. Flange size is measured on the diameter of the nipple, not breast size. If pumping hurts, you experience pain, rubbing, pinching or tears, it could mean that your flange size is incorrect. The incorrect size can negatively impact supply and cause long term damage to breast and nipple.
When buying a breastpump, it is equally important to consider the flange size and preferably buy from a manufacturer who offers sized flanges, a certified lactation consultant or, if available, a consult with a rep for the manufacturer will be able to help you determine which size is best suited to you.

**NIPPLE DIAMETER**

- 17mm
- 20mm
- 23mm
- 26mm
- 32mm

**RECOMMEND FIT**

- 21mm
- 24mm
- 27mm
- 30mm
- 36mm

**HOW OFTEN SHOULD I PUMP?**

When nursing directly at the breast, a newborn would feed up to 10 to 12 times during a 24 hour period, this is because a baby's stomach is small and breastmilk digests in approximately 90 minutes, this constant frequent feeding helps stimulate the ducts to produce more milk so it is recommended that you aim to pump as often as baby feeds or at the very least 10 times during a 24 hour period for at least the first 6 weeks.

A lactating breast can be thought of more as a factory as opposed to a storage container, as you remove milk, new milk is produced to replace the milk that was removed for the next removal, if you supplement, the missed removal is a signal that demand is low, so less milk is produced. A drained breast will produce milk faster than fuller breast. Your milk supply will be predominantly hormone based during those first few weeks, once your hormone levels drop and milk supply is then solely supply and demand based, your milk supply will be easier to maintain if you have stuck to pumping at least 10 to 12 times a day, thereafter most moms are able drop sessions without losing too much supply.
Dropping sessions can be done two ways: Cold turkey, where you simply stop pumping one of your sessions, however your risk of mastitis is greatly increased, or Blending sessions, where time is shaved in 5 minute increments from the session you wish to drop and added to the next session.

You should try avoid dropping your middle of the night sessions first, the MOTN sessions play a vital role in maintaining a healthy supply as prolactin levels are naturally at their highest between midnight and 5am, the best sessions to drop first are your midday sessions.

**Scheduling**

Schedules are extremely important in building and maintaining breastmilk supply.

Breastmilk supply works on the basic principle of supply and demand, the more frequently you empty the breast, the more milk you will make. It helps to have a set schedule that can be shared with your partner or family members in order for them to best support you.

Establishing a healthy supply is vital for long term pumping success and the schedule can look intimidating, not to mention impossible, many moms who pump end up not pumping often enough and find that in a few weeks their milk supply has dwindled and dried up, it is always helpful to have the support and help from loved ones in the first few weeks and sharing your schedule can help not only you, but your support system, in planning their day to best support you. Planning your schedule is the easy part, sticking to it is another, don’t be hard on yourself if you are not able to always stick to a set schedule.
Be careful of supplementation, falling into the top up trap can be tricky to reverse.
HOW TO PUMP

To start pumping, make sure that you have followed the manufacturers recommendations for cleaning, sterilizing and power supply.

Find a comfortable spot to pump, preferably with a supportive chair near to a power supply and a table.

Your breastpump should ideally be parallel to your breasts or slightly below with decent ventilation to prevent your pump motor from over heating. Some mothers with mobile babies prefer to pump sitting on the floor while interacting with their child, just make sure that your back is supported. There is no need to lean forward to maximize flow.

Allow the pump to run for 2 or 3 cycles before starting to pump if using an electric, make sure the suction strength is set low to start with, attach comfortably and turn the pump on. Massaging the breast in a circular motion from the base of the breast towards the nipple while pumping will help drain the breast more effectively while stimulating ducts that are not able to be stimulated alone by the pump which in turn will help boost supply. If you experience pain or pulling, turn down your suction.

You should aim to pump until flow has stopped and then for a further 5 minutes thereafter to signal the body that more is needed. A lactating breast is never empty, so pump until the flow is no longer streaming and thereafter for a further 5 minutes, some mothers can achieve a second let down during this time.

Make sure that you have everything you need in easy reach for both you and baby, if baby starts to cry during your session, switch off the pump and tend to baby before returning, having baby close has the added benefit of boosting supply.

Pumping should not hurt, if you experience pain, pulling or injury the your pump flange size could be too big or too small, an incorrect flange size can not only hurt and damage your nipple and breast tissue, but can severely impact your ability to let down and achieve a yeild.

Another common reason for pain while pumping is a suction strength that is set too high, always start your session on the lowest setting gradually working up to a strength that is comfortable for you.

if you have checked both your flange size and suction strength but you are still experiencing pain, make sure you are not suffering from an underlying issue such as thrush.
The two most common causes of pain during pumping are

**Suction too high**

A higher suction does not equal a higher yield. Milk is only released during a let down, a suction strength that is too high can cause pain and make your body tense up, this can inhibit your ability to let down. A suction strength that is too high can also cause nipple trauma and damage leading to decreased milk supply due to inability to let down due to pain and discomfort.

If you are suffering from pain during pumping and are sure that there is no visible nipple or tissue damage and your pump flange is correctly fitted, check that suction strength is not too high.

**Poor fit**

Nipples come in all shapes and sizes, and so should your pump flange. Flange size is determined by the diameter of the nipple, not cup size.

An incorrectly fitted flange that is too big or too small can not only negatively impact supply, but damage your nipple and even cause tissue damage. Investing in a good quality pump by a manufacturer who offers sized flanges can ensure that you get the best fit and avoid unnecessary pain while pumping.

Other causes for pain during pumping may include, thrush, infections such as mastitis, nipple trauma or circulatory problems.

If the pain is severe you should consult with your lactation consultant or La Leche League Leader.
HOW TO STORE BREASTMILK

Breastmilk is a remarkable living substance, Immunoglobulin A ensures that freshly expressed breastmilk is more resistant to bacteria growth after 5 minutes of standing in a bottle than when it was just expressed, that being said, breastmilk should still be stored and handled correctly.

*Freshly expressed breastmilk* can be left out at room temperature for up to 6 - 8 hours, provided it is not left in direct sunlight or in exceptionally hot weather. Room temperature is considered 20 degrees Celsius, any higher than that and the time breastmilk can be left out is drastically reduced, it is best to refrigerate as soon as possible on hot days.

*Defrosted breastmilk* can be left out at room temperature for no more than 4 hours.

Breastmilk can be stored in a cooler bag with ice bricks for up to 24 hours.

Breastmilk should be stored at the back of the fridge, never the door, for between 5 - 8 days, if baby has left some milk over from a feed, it can be placed back in the fridge and used for the next feed.

Breastmilk can be stored for up to 3 months in the freezer compartment of a fridge freezer, up to 6 months in a freestanding freezer and up to 12 months in a free standing chest freezer.
Breastmilk is a wonderfully fatty milk, but sometimes the fat deposits stick to side of a cooled bottle or storage bag, but the jury is still out on whether or not it is bad to shake the milk, most moms believe that shaking breastmilk breaks down or harms delicate nutrients and other small organisms, so for now the consensus is to gently swirl the milk under a warm tap to gently unstick the fatty deposits.

**Freezing**

Breastmilk can be frozen directly after pumping, and milk from the same day can all be added together provided they are the same temperature when mixed. It is best to freeze milk in smaller quantities to prevent wastage, it’s also helpful if baby is extra hungry, you can easily defrost a single cube of breastmilk instead of a full bag.

If you encounter a power shortage or your freezer door is accidentally left open for a prolonged period of time, you can refreeze if more than 70% of the bag still consists of ice crystals, if not the defrosted milk can be stored in the fridge and used first. Any left over milk can be used for lotions, soaps, cooking or even milk baths for baby. To prevent melting due to loadshedding or power failure, you can freeze multiple water bottle and roll them in newspaper and line the freezer with them.

**Freezing Options**

There are many breastmilk storage bags, cups and bottle available on the market, but they can be pricey, some moms find using ice trays with lids, ziplock bags and even glass purity or jam jars are great for storage / freezing, just be aware when freezing in glass that liquid expands so leave some breathing room between the milk and the lid and never heat in hot water for risk of the glass shattering, instead thaw at room temperature.

**Heating Breastmilk**

Breastmilk can be warmed under a warm running tap, in a jug of warm water or left at room temperature to warm. Breastmilk should never be heated in a microwave or in a bottle warmer as it damages nutrients and can cause dangerous hot spots in the milk.

Properly stored breastmilk maintains many of it’s beneficial and unique immunological and nutritional benefits, the type of container, storage temperature and air exposure can impact the quality of your stored milk, the most damaging to human breastmilk however is heating above physiological temperatures (34
It is not recommended to ever heat breastmilk in a microwave oven, the rapid heat increase destroys immunological properties and enzymes, it also breaks down nutrients which may impact absorption and may negatively impact your infants gut microbe and weight gain. Bottle warming temperatures are also not ideal, most bottle warmers warm rapidly to up to 88 degrees Celsius, which again impacts benefits and absorption, heating above body temperature also impacts the fat content and enzymes which help aid in digestion.

Human milk is a living substance containing antioxidants, antibacterials, prebiotics, probiotics, immune boosting properties, in addition to proteins, essential fats, hormones and many other uniquely human-coded benefits not found in any alternative milk substitutes. Like any other living tissue, human milk is sensitive to the effects of temperature.

At this point, the best manner of heating breastmilk is to warm smaller amounts under a warm, running tap (not hot), frozen milk should be fully defrosted in a refrigerator before warming. Gently swirling the milk during warming ensures that the milk is warmed without heat spots and the integrity of the milk composition is kept intact.

**HEATING BREASTMILK**

**NEVER HEAT ABOVE BODY TEMPERATURE (34 DEGREES CELSIUS)**

The delicate nutrients and enzymes in breastmilk can be damaged or denatured when breastmilk is heated above body temperature, which directly impacts the absorption of those nutrients.

**NEVER USE A MICROWAVE OR BOTTLE WARMER TO HEAT BREASTMILK**

Microwaves and bottle warmers heat rapidly above body temperature which damages breastmilk. Heating in these manners can also cause dangerous hot spots within the milk.

**HEAT BREASTMILK IN A BOWL OF WARM WATER**

Breastmilk can be fed cold, or at room temperature, however some babies may be more picky and demand warmer milk, warm the milk in a bowl of warm water.
**HIGH LIPOASE**

Lipase is an enzyme present in breastmilk that breaks down fats. In some cases this enzyme can leave your milk smelling off or soapy. Some babies will still happily take breastmilk with high lipase, if not, you can scald your freshly expressed milk to deactivate the enzyme.

Not all mothers will experience high lipase, and unfortunately scalding does not work with breastmilk that has already been frozen so it is best to test for high lipase before freezing large quantities.

*To scald your milk:*

Place your freshly expressed milk in a saucepan and bring to scald (bubbling around the edges, but not boiling).
Remove from heat immediately and let cool or freeze.

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**OXIDATION**

If your milk tastes/smells sour or rancid, rather than soapy, the cause may be chemical oxidation rather than lipase. Mom’s intake of polyunsaturated fats may be involved, or free copper or iron ions in her water.
When this happens, you can try the following:

- Avoid your usual drinking water (either drinking it or having milk come into contact with it).
- Avoid fish-oil and flaxseed supplements, and foods like anchovies that contain rancid fats.
- Increase your antioxidant intake (including beta carotene and vitamin E)

**BOTTLE FEEDING BASICS**

Bottle feeding is something we have all witnessed in society, but bottle feeding breastmilk is best done using paced bottle feeding or respectful bottle feeding. Feeding your baby using paced bottle feeding can reduce choking hazard, gas, over feeding and stomach complaints in breastfed infants. The basic principles of paced feeding are to:

- Feed baby in an upright position
- Bottle should be parallel to the floor and not tipped up.
- Baby should be encouraged to actively suckle for milk.
- The bottle should never be forced into baby’s mouth.
- Baby leads the feed, baby should not be forced to finish the feed.

![Support vs Not Support Bottle Feeding](image-url)
BOTTLE FEEDING BASICS
The Do's and Don'ts of bottle feeding a breastfed baby

DO
Use a slow flow teat.
Breastmilk consistency is thinner than artificial milks, the consistency never changes and neither should the bottle teat.

DON'T
Bottoms Up.
The bottle should always be parallel to the floor, never tipped up, baby should be propped up into the sitting position, never lying down.

DON'T
Force to finish.
Feed smaller amounts and follow baby’s lead, when baby pushes the bottle out, don’t try and force it back in, small, frequent feeds.

DO
Connect.
Use feedings as an opportunity to bond and connect, never leave baby unsupervised with a bottle.

DO
Mix It Up.
Alternate sides that you feed baby to mimic breastfeeding. Never feed baby facing away from you.

DON'T
Swaddle.
Never swaddle baby during feeds. Baby's hands should be free so you can check for signs of stress and so baby can participate in the feeding.
Often moms report baby guzzling down the milk and the crying for more, but more often than not those cries are misconstrued as hunger when they are more likely due to discomfort.

Because breastmilk is much thinner in consistency, a baby left lying down with a bottle is often overwhelmed by the flow from the teat, they are unable to regulate the flow so they gulp the milk down in an attempt to not choke and protect their airway, this gulping of milk can lead to painful tummies, gas and reflux symptoms which leads to crying after a feed, which is why it is so important to always use feeding time as bonding time and hold baby as upright as possible while bottle feeding breastmilk.

Using a number 1, slow flow teat is the only teat you will ever need as breastmilk does not change in consistency like formula.

**HOW MUCH SHOULD BABY DRINK**

Research suggests that a breastfed baby’s intake rapidly increases during the first few weeks and generally stays the same between one and six months, although it does periodically increase during growth spurts, this is normal and generally lasts between a few days up to a week or so. Breastmilk intake is not dependent on weight.

On average a breastfed baby takes in an average of 750mls a day between the ages of one month and six months, but as this in just a general guideline, it can differ vastly between infants, up to 900mls per day is still considered within normal range.

Using this information we can calculate an approximate amount per feeding.
The estimated number of feedings baby typically drinks per day. Divide the baseline average of 750mls by the number of feedings. This gives you an estimation of how much milk baby should get per feeding.

A newborn's stomach is tiny, so they only need roughly between 5 to 10mls of colostrum per feed for the first 3 days.

<table>
<thead>
<tr>
<th>Age</th>
<th>Estimated Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Day Old</td>
<td>Approximately 10mls per feed</td>
</tr>
<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 50mls</td>
</tr>
<tr>
<td>Three Days Old</td>
<td>Approximately 30mls per feed</td>
</tr>
<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 250mls</td>
</tr>
<tr>
<td>One Week Old</td>
<td>Approximately 45mls per feed</td>
</tr>
<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 450mls</td>
</tr>
<tr>
<td>Two Weeks Old</td>
<td>Approximately 60mls per feed</td>
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<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 600mls</td>
</tr>
<tr>
<td>One Month Old</td>
<td>Approximately 90 - 120mls per feed</td>
</tr>
<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 750 - 900mls</td>
</tr>
<tr>
<td>Six Months Old</td>
<td>Approximately 90 - 120mls per feed</td>
</tr>
<tr>
<td></td>
<td>Daily intake per 24 hours - approximately 750 - 900mls</td>
</tr>
</tbody>
</table>

*Between one and six months, a baby's intake does not vary by much due to rate of growth slowing.*
Many new mothers often feel discouraged when their expectations do not align with a realistic yield, they find that eventually, through dedication, perseverance and practice, that they are easily able to feed their baby and still freeze extra milk on a regular basis.

It is extremely important to note that artificial milk does not guarantee a better nights sleep, and a missed opportunity to remove milk from the breast is a missed signal for the breast to produce more, which ultimately ends up with a mother falling into the “top-up trap” and jeopardizing what could have been a healthy supply.

There are some women, who due to medical or other reasons are just unable to meet baby’s needs, and will have to turn to artificial breastmilk substitutes for a few of the feedings throughout the day, but this is estimated to be around only 2% of the worlds population of lactating mothers.

**THE “150ML PER KG PER 24 HOURS” MYTH**

The 150mls x kg x 24 hours calculation is often advised to pumping moms, however this method of calculation is for formula fed infants only and the La Leche League recommendation of an average of 110mls per feed (min being 80mls and max being 150mls) for babies over a month old. Breastfed babies over 4 weeks should consume between 750 and 900mls of breastmilk per day.

This method can inadvertently lead to over or under feeding babies based on their weight, smaller babies can end up being given less milk than they need due to not meeting formula fed infant weights and mothers often get stressed trying to meet unrealistic yields trying to feed their big babies large feeds based on the formula calculation.

When in doubt it is best to contact a La Leche League leader directly for the correct information and calculations.

**LOOKING AFTER YOUR BREASTS**

**EMPTYING THE BREAST**

Properly draining your breasts frequently goes beyond just supply, it also prevents breast infections like mastitis and cuts the likely hood of clogged ducts significantly.
COMMON COMPLAINTS

Mastitis

Mastitis is an infection of the milk ducts in both lactating and non-lactating breasts, it is however more common in lactating breasts. It can be caused by blocked ducts, infection or even allergy.

Symptoms include fever, breast pain, swelling, warmth and flu like chills.

In mild cases mastitis can be treated with pain relievers and frequent drainage of the breast, taking special care to focus on massaging the infected area gently while pumping to help clear the infection.

Alternating between cold and warm compress may help bring down any inflammation and help drain the breast completely. In more severe cases a prescription for antibiotics to help clear the infection may be necessary, in some rare cases, a medical procedure to drain the infection may be recommended.

Despite mainstream advice, milk from a breast inflicted with mastitis or inflamed ducts is safe to feed baby.

If you are worried, or not seeing any improvement, then it is important to see your doctor or lactation consultant immediately.

Thrush

Thrush is a common yeast infection which can infect both mom and baby.

Symptoms include burning or stinging pain, itching, pink or red shiny skin, dry flakey nipples and areola and deep shooting pains before, after or during a pumping session.

Yeast is a normal part of a healthy digestive system but can become overgrown due to increased sugar intake or illness and cause thrush.

A thrush infection can be treated with antifungal creams such as Nystatin or gentian violet, your pump and bottles should be well sterilized by boiling them in a pot of water for 20 minutes after each use. Baby should be treated at the same time as mom regardless of whether or not they are showing signs of infection to avoid reinfection, you should sterilize all toys, dummies and bottles.

Thrush usually clears within a few days of treatment but treatment should...
continue for up to 10 days or until recommended by your physician regardless of whether the symptoms have alleviated or not.

**Strawberry Milk**

As a pumping mom, you are more likely to encounter this phenomenon as mothers who direct feed often do not notice blood in their milk.

Strawberry milk is due to a small tear or damaged duct within the breast which produces blood and turns the milk pink or red. This milk is not harmful for baby but can be a little off putting, often moms choose to mix the strawberry milk with previously pumped milk to dilute the pinkness instead of throwing out a yield. If you encounter strawberry milk frequently, or you pump blood stained milk for more than a few days you should see your medical practioner for further investigation.

**Blocked Ducts**

A blocked duct is an obstruction of a milk duct, usually due to inflammation or a clogged nipple pore, the area may feel hot, tender or slightly red.

Blocked ducts can affect supply as usually milk flow is obstructed. Blocked ducts are usually resolved through applying cold, heat or vibration to the area to work out the obstruction, massage the area during pumping. Making sure you avoid feeling engorged, avoiding tight or underwire bras will help prevent blocked ducts.

No antibiotics are needed to treat a blocked duct, but antiflammatories or pain relievers may be needed.

**Blebs**

Blebs are small water or milk filled blisters on the nipple, they can be painful, but more often than not, they are just a mild annoyance. Do not squeeze or pop the blebs, as this can lead to infection, instead gentle exfoliation and moisturisation throughout the day will ensure it disappears and prevents any further occurrence.

If your bleb does burst, keep moisturized and clean after each pumping session, if infection does occur, treatment should be sought from a lactation consultant or La Leche League leader.

**Tears and Friction Burns**

Pumping can cause small tears in the nipple or friction burn from using an
incorrect flange size, making sure you use the correct flange size can help you avoid both, as well using lubrication to prevent friction and lanolin to soothe painful nipples.

TIPS ON RELIEVING COMMON COMPLAINTS

Nipple Spa

Blebs are very annoying and can cause some discomfort, so a weekly nipple spa using Epsom salts and coconut oil makes for a wonderful natural exfoliant to rid any clogged pores or milk build up, thus preventing any blebs. You can also dangle your nipples in an Epsom salt mixture before your shower, taking special care to gently wipe the nipples clean with a facecloth and always moisturize well with a good quality nipple cream or coconut oil.

Dangle Pumping

Another trick for getting out a clog is to pump while leaning forward, the gravity, along with the suction of the pump and massage will have the clog out quickly.

Vibration

Many moms find that using vibration can help get clogs out relatively quickly, an electric toothbrush, hair clippers, or vibrator all help with shaking the clog free.

Shaking

During a session, unhook from the pump and gentle shake the breast for a few seconds, hook up to the pump and continue pumping while massaging the area where the clog is situated.

Grated Potato Compress

Blocked ducts can be painful and if not treated can lead to mastitis. A blocked duct is usually due to an obstruction of milk flow and that can happen from multiple reasons causing inflammation further obstructing the flow. Using a cold compress helps alleviate the swelling and inflammation, thus opening the ducts to help milk flow freely again.

To make a cold potato compress, take a large potato and peel and grate it. Pack the grated potato between 2 surgical gauze squares and refrigerate. Once cold, apply to the affected area. Alternate between a cold compress and a warm compress, massaging and pumping as often as possible between applications.
PREVENTING COMMON COMPLAINTS

Look after your breasts and treat them with care. This seems to be the most obvious way to prevent common complaints, but is often overlooked. Treating your breasts gently and being proactive in breast health is the first line in defense against many common complaints.

LETHICIN

This is the most common preventative measure exclusive pumpers take to avoid clogs, taking lethicin capsules from a reputable brand will help prevent clogs and also help the breast empty quicker and more effectively. Be aware that for some mothers the capsules can have the opposite effect and not only cause supply to drop, but also cause more clogs more frequently.

*You should always consult with a healthcare professional before taking any supplementation, you should also keep a diary for a few days after starting a new supplent of babys bowel abd behavioural habits for any signs of sensitivity.
ACUPUNCTURE

Many moms swear by acupuncture to help relieve clogs and prevent them from reaccuring. Finding a registered, knowledgeable provider is key.

LASER TREATMENT

Laser treatment can be a great way to treat chronically painful nipples. It is expensive though and providers are hard to come by.

HEAT AND COLD

Heat is used frequently for many common breast complaints, it is however important to understand how heat works to know which situations are best suited for heat, and which situations are best for cold.

Heat causes expansion, which is great for vasospasms, or as an alternate in treating mastitis, blocked ducts and to sooth sore breasts. Cold is preferred for infections and inflammation, specifically as an alternate for mastitis and blocked ducts. Hot and cold work well together when trying to reduce inflammation.

BOOSTING BREASTMILK SUPPLY

There are many supplements, medications and foods that support milk production on the market, but there is nothing as effective than the frequent emptying of the breast, regardless of the amount of galactagogues you take, if you are not removing milk from the breast, the galactagogues will not have the desired effect, at best it will only cause a temporary supply boost or have a placebo effect relieving pressure on mom to produce more milk.

Medications should be treated as a last resort, many times medication is over prescribed without investigating the root cause of perceived or true supply issues, many times low breastmilk supply is due to scheduled feeding, topping up and sleep training or unrealistic perceptions of how much milk baby actually needs using paced feeding. Long periods between pumping sessions for exclusive pumpers or prematurely dropping sessions can be a cause for low supply.

If you are experiencing low supply, it is important to see a certified lactation consultant or La Leche League leader to see if there are any small changes that can be made before seeing your doctor for a script.
No medications, supplements or food based galactagogues will have the desired effect if milk is not frequently being removed from the breast.

Medications

There are two main medications on the market which have the side effect of induced lactation, both can only be obtained through your doctor via script. It is important to understand that these drugs are prescribed off label (not for their intended use) and could potentially cause other undesirable side effects.

Sulpiride

Sulpiride is a schedule 5 anti psychotic for the treatment of functional disorders such as schizophrenia and psychiatric mood disorders, it has a side effect of inducing lactation.

Sulpiride is sold under two names, Eglynol, which is the original and Esperide, which is a generic of Eglynol. Care should be taken when using any medication, especially medications that alter the brain function.

Traces of Sulpiride is passed through maternal milk, but studies have shown no ill effects on infants. One should never stop a drug used for anti psychotic purposes cold turkey, you should speak to your doctor about safe weaning. It has been shown that the use of Sulpiride is not the most effective treatment for post partum depression / anxiety.

Domperidone

Domperidone is an antiemetic used in the treatment of nausea with a side effect of lactation. According to Dr Jack Newman, this is the safer and more effective drug used as a galactagogue. There is said to be a risk for women who suffer from heart conditions. Domperidone is sold as Reglan, Zofran and Motillium, they can all be obtained via script from your doctor and should be taken with care. Trace amounts have been found to pass through maternal milk with no ill effect on the infant.

Homeopathic and Herbal Alternatives

Prolak

Prolak is a homeopathic natural medication specifically designed to aid in milk
production and is available without script over the counter.

There are no known side effects.

Alternatively you can obtain personalised homeopathic remedies from a licenced practioner to aide in breastmilk supply issues.

*Medications definitely have their place in the breastfeeding community and can help a struggling mother feed her baby, however any medication should be taken with caution and kept out of reach of children at all times.*

**Natural Supplements**

There are many, many supplements on the market available in all health stores and pharmacies, choosing the best quality and using them responsibly can help boost supply. Some supplements can cause gas in infants and mothers should be aware of any changes in baby’s health, bowel or behavior.

You should always consult your doctor or lactation consultant before starting any supplements.

- Alfalfa
- Anise Seed
- Blessed Thistle
- Borage
- Brewers Yeast
- Fennel Seed
- Fenugreek
- Flax Seed
- Goats Rue
- Marshmallow Root
- Nettle
- Raspberry Leaf
- Shatavari
- Spirulina

There are also a selection of herb teas specifically designed for lactation, supplements can be bought in pill, powder or tea form.

Due to the recent “Bill 6” being passed, many natural supplements may no longer be available and you will have to rely on your healthcare provider or lactation consultant for a script, alternatively a registered homeopath or midwife would be able to make up personalized homeopathic or herbal remedies that may aid in boosting breastmilk supply along with a well balanced natural diet.
Avoid high doses of parsley and peppermint which can decrease supply, this includes herbs, teas and essential oils.

**Food Based Galactagogues**

There is a wonderful selection of foods which mothers have found can aid in milk production, a well balanced, healthy diet including these foods is recommended.

Foods high in sugar should be avoided where possible as it increases the likelihood of thrush. A lactating mother should drink to thirst and avoid large amounts of caffeine which can cause dehydration.

- Almonds (nuts, milk and flour)
- Apple
- Avocado Pear
- Barley (grass and water)
- Basil
- Beet
- Carrot
- Chamomile
- Coconut (water, flour, oil and nut)
- Dark Beer
- Dark Chocolate
- Dark Green Leafy Vegetables
- Dill
- Garlic
- Ginger
- Green Papaya
- Healthy Oils and Fats (hemp seed, olive and avocado)
- Rolled Oats
- Rooibos

Try to avoid chemically processed foods that may pose health risks in the future. It is best to eat foods as close to their natural state as possible for good health. As with everything, moderation is key.

*These food based galactagogues are anecdotal. As with all galactagogues, they will not have the desired effect if milk is not being frequently removed.*
Power Pumping

Power pumping is where a mother would pump her breasts in a way that mimics a baby cluster feeding, through several short pumping sessions over a period time, once or twice a day.

Power pumping is about stimulation, you may or may not get a great yield from a power pumping session, and you may not see results immediately, but power pumping once or twice a day for 2 or 3 consecutive days will increase your supply more efficiently than any galactagogue or medication.

Results are typically seen 36 to 48 hours after the first session.

**HOW TO POWER PUMP**

**Pump for 20 minutes**

**Rest for 10 minutes**

**Pump for 10 minutes**

**Rest for 10 minutes**

**Pump for 10 minutes**

**Double Pumping:**
(Double Electric Pumping Both Breasts Simultaneously)

- First pump: 20 minutes
- Rest period: 10 minutes
• Pump: 10 minutes
• Rest: 10 minutes
• Pump: 10 minutes
This works out to an hour.

**Single Pumping:**
(Using a Single Electric or Manual Pump)

• First Pump: alternating breasts for 20 minutes (pump until spraying flow stops and switch breasts.
• Rest the breast you ended the first session while you pump the other for 10 minutes.
• Rest the breast you pumped at the last 10 minute session while pumping the other breast for 10 minutes.
Continue for an hour.

A great Power Pumping Hack is to sit down to an hour long (or longer if you wish) program, while watching your program, pump, as soon as an advert comes on, switch off and take a break, resuming and ceasing along with your favorite program or series.

**MASSAGE**

Massage is one of the most important and most effective ways to boost supply. Before and during pumping, cup your hand in a “c” shape and using your fingers gently squeeze and massage the breast from the base towards the nipple, change the position of your hand during the session to stimulate all the ducts.

This helps drain the breast more effectively and a frequently well drained breast produces more milk quicker.

**WARMTH**

Nothing creates that relaxed happy feeling quite like warmth, so a warm wheatie bag, facecloth or hot water bottle will help illicit a let down, especially when you are feeling stressed or tired. Pumping directly after a nice hot shower, or while in the bath usually has a great effect on supply.

**WEARING YOUR BABY WHILE PUMPING**

Although this can seem impossible, quite a few moms have great success with this, wearing a stretchy newborn wrap with baby between the breasts, skin to skin, then hook up your single or double and sway and sing, or just sit and cuddle while your pump and all those happy hormones work to your advantage.
**Electrolyte Rich Sports Drinks**

While this is more controversial due to high sugar content, there are some really yummy alternatives that won’t have the added sugar. Coconut water is a great alternative, as is barley or aloe water. Try stay away from any sports drinks that contain caffeine in them as this can cause the opposite effect.

**Hands On Pumping Technique**

Hands on pumping is one of the most effective ways to increase milk yield while decreasing pumping time.

It can be utilized with single pumping, manual pumping and double pumping, provided you make use of a hands free pumping bra.

Hands on pumping is a massage and compression technique that stimulates the milk ducts that are often not stimulated with pumping alone. Research has proved that hands on technique yields a higher fat content in expressed breastmilk, this can be especially beneficial in the NICU environment.

**How to Use Hands On Pumping Technique**

It is best to start your session by gently massaging the breasts in a circular motion from the base of the breast towards the nipple, this can be accompanied by the use of heat.

If you feel that massaging is pulling on, or hurting the skin, use a small amount of coconut oil, avoid essential oils or chemical based creams as there is a risk of whatever lubricant you use to contaminate your yield. Alternatively, a small amount of breastmilk on the skin can be used as a safer alternative to lubricants.

Attach the pump and rub around the breast at the base, massage the tissue by gently cupping the breast and squeezing toward the nipple, squeeze gently on all sides of the breast including under the breast where ducts can often be neglected taking care not to break the suction.

Using both hands, compress the breast gently between your palms in a pulsating manner.

Pull up on the breast, making sure not to break suction with the pump, massage the breast, especially along the sides and under the breast, once the milk has stopped flowing, hand express the last few drops into the flange and repeat on the other side.
You should never continue massage if you feel pain, this technique is especially effective for mothers who struggle to empty quickly or suffer recurrent blocked ducts.

When using hands on technique, make sure that you are not massaging the tissue too hard, damaged tissue can lead to a variety of issues including strawberry milk and bruising.

**Hands On Pumping Technique**

**Massage your breasts**
Before pumping, massage the breast tissue all along the breast, from the base of the breast to the nipple. While your pump is attached to the breast, gently massage around the breast tissue above the pump, taking care not to break the suction.

**Compress your breasts**
While your pump is attached to the breast, gently compress around the breast tissue around the pump, taking care not to break the suction. If using a hands free bra, use both hands, if not use your free hand to compress in a circular pattern around the breast tissue.

**Squeeze your breasts**
While your pump is attached to the breast, gently squeeze around the breast tissue from above the pump, taking care not to break the suction. Try cupping your free hand into the "C" position with your hand under the breast and your thumb at the base of the breast, gently squeeze down, sliding your hand toward the nipple without breaking the suction of the pump, end off by cupping your hand and gently squeezing the tissue around the breast.
ENTERTAINING YOUR PUMPLING

Pumping is by far not many woman’s favorite thing to do, and it certainly is not one of our pumplings favorite things to do either, especially when mom is attached to a pump every 2 hours and can’t meet certain needs like being held or soothed. It’s especially helpful to have activities planned for older siblings while pumping for a new baby. Keeping baby and any siblings happy and safe during sessions can sometimes seem impossible, these tips should help most of the time, but it is equally important to be realistic in our expectations of young babies and children.

Here is a short list of ideas and solutions compiled with the help of a few veteran pumpers.

NEWBORN STAGE

Newborns thrive with constant contact with their primary caregivers, so often baby will cry during a few of your sessions, if you don’t have help on hand here are a few tips to keeping baby happy while pumping.

*if baby is very distressed, do not ignore their cries! rather unhook from your machine and tend to baby! you can always resume pumping once baby is more content.

- place baby in a car chair or rocker and rock gently with your foot while humming.

- place baby in your lap on a bed or other safe structure where baby cannot fall.

- have baby beside you in a boppy pillow.

- invest in a hands free bra and woven wrap, wear baby while pumping, it will also help with supply.

- feed baby in your lap while pumping.

ALERT BABY STAGE

Baby will be more alert, looking around, wanting the interaction with mom, he / she may not be able to sit unassisted yet so this can be a super tricky stage. Some moms find sitting on the floor and using a hands free bra helps get two things done at once peacefully and happily.
- floor mat with books and toys.
- activity mat with mobile.
- noisy toys, bright textured books.

**ALMOST MOBILE BABY**

Baby can sit and starting to crawl, some moms are comfortable with using a walking ring or jumper during this stage.

- colorful toys and books that can be mouthed and fiddled with.
- rolling a ball to baby.
- baby pool with balls.

**MOBILE BABY**

Baby can crawl, stand up against things.

- if baby is older than six months, small baby led weaning style snacks are great.
- toy cars, make sure they are not small enough to be choking hazards.
- make sure the room is baby proofed and close the door, helps if you are more mobile so using an battery operated pump or manual can help.
- non toxic paints on a large sheet of paper.

**TINY TODDLERS**

This can be an especially trying stage, baby is now walking and more demanding, but here are a few tips and products that are super helpful.

- snack time during pumping.
- close the door and pump in a baby proofed room, let them entertain themselves.
- a pumping bag, this is a bag of toys or activities that is only taken out during pumping sessions, the Busy Buddy Bags are fantastic for entertaining and are
designed to encourage certain aspects of development.
- sensory bins with big beans and toys. (Keep in mind choking hazards)

BIG TODDLERS

Bigger toddlers (3 years on) don’t really need constant entertaining and if given age appropriate toys and activities in a safe environment they can be left to their own devices to play.

If however your toddler or older child is wanting attention, setting up easy, age appropriate tasks, such as tidying up, wiping toys or coloring in can help keep toddlers busy for a short while. When all else fails, having a favorite story on hand can help keep your young child happy.

With all age groups it is as important to meet your child’s emotional needs as it is to provide Breastmilk, if your baby or older child are needing immediate attention or needs met, it is better to stop your pumping session and resume once they have had any emotional or other needs met. Making sure you have everything you may need ahead of time can help make sure you are less stressed during a session, which will help you achieve let down easier.
PUMPING AT WORK

Returning to work is one of the most stressful times for new mothers, particularly for breastfeeding mothers with the added stress of milk supply, pumping time and storage of milk.

THE GOOD CODE OF CONDUCT

The South African Good Code of conduct states that breastfeeding mothers are entitled to two thirty-minute pumping breaks over and above a lunch hour up until the child’s age of six months. Some mothers are forced to return to work due to financial constraints by four months post partum, but many mothers are not emotionally or financially ready to wean or partially wean by six months, but there are options for those mothers to continue to pump well into the child’s first year.

USING LUNCH BREAK

Employers are required to offer employees an hours lunch break, which breastfeeding mothers can use to either have their baby brought to their place of work to nurse, or pump.

SPEAKING TO YOUR EMPLOYER

Chances are your employer is far more uncomfortable with the subject than you are, so taking an informative approach on the benefits of breastfeeding for both you and your baby, including the immunity which can help lessen the need for time being taken to look after sick infants, can help you make a strong case for extending the legally required 6 months a little further. Sticking to facts, such as breastmilk production and how it works, how breastmilk keeps your baby healthy and the financial and health implications of reaching the WHO recommendations is usually sufficient to make your case, try staying away from words like “choice” and “want”, it is your and your baby’s right to breastfeed, not a choice or a want.

PUMPING AT WORK

Not every employer has the space or resources to supply a breastfeeding mother with a private room to pump breastmilk, this often means that moms are left to pump in their cars or the bathroom, this can pose challenges regarding electrical supply and hygiene. Choosing a pump that can specifically meet your needs for pumping in these conditions is important, purchasing a pump that can be operated by battery pack and is a closed system pump, can take some of the worry out of your pumping routine.
SCHEDULING AT WORK

Meetings and deadlines can really put a damper on your schedule to provide milk for your baby, rule of thumb is to split the two sessions before and after your lunch break, giving you 3 half hour sessions a day.

The work day can throw you a few curve balls with last minute meetings, if you have a meeting that is scheduled around the time of your session, pump before, it's better to pump before and empty the breast than to allow yourself to become uncomfortably engorged.

ON THE ROAD

Today pumping moms have so many discreet options that allow you to pump on the go, a double electric and a pumping bra or one of the newer pumps that comfortably fit into your bra give you the freedom to pump on the road, just make sure that your bottles are big enough to prevent spillage and always concentrate on the road.
An extra change of clothes and a cooler bag make pumping on the go a reality for busy working working moms.

STORAGE SOLUTIONS

Most work places have a refrigerator on the premises, just make sure to keep your milk stored in a cooler bag in the fridge, not only does this prevent any tampering or usage of your milk, but keeps your cooler bag cold for the drive home.

WHEN PUMPING IS JUST NOT A REALITY AT WORK

This can be a heartbreaking situation for moms who have their hearts set on providing breastmilk to their babies, but there is still hope.

Your employer cannot dictate how you choose to use your lunch break, which gives you at least one session during the work day.

Pumping before work, and quickly after work, can give you another two sessions in your own free time, adding a power pump session as your last pump of the day can help make sure that baby has enough milk when separated from you.

Remember to make sure that your baby’s caregiver is using paced bottle feeding and that you have a realistic view on how much baby will need for the hours when you are at work. Often unintentional over feeding and an unrealistic goal when it comes can yeild can cause unnecessary stress and heartache.
TIPS FOR PUMPING AT WORK

1. **Have your own storage solution to keep milk cold.**
   A cooler box or bag can keep milk cold for approximately 24 hours provided that you have enough ice bricks, there are also plug in refrigerated cooler boxes that are great for travel or hot summer days in a stuffy office.

2. **Blackout curtains and signs.**
   If you are lucky enough to have your own office, or classroom to pump in, it’s a good idea to make others aware that you are pumping to avoid embarrassing interruptions, black out curtains on any windows and a sign on the door can give you that added privacy.

3. **Your pumping schedule.**
   If your employer or situation (teaching for example) does not allow for regular pumping breaks, making time before work or class starts to pump, during any free time, lunch breaks and again before going home, can give you the extra pumping times to yield that all important milk.

4. **Be up front with your employer and co workers.**
   Letting people know that you will be pumping can help eliminate interruptions, and while not everyone may be supportive, it is your child’s right to receive optimal nutrition.

   Being up front with co workers also makes planning your schedule a lot easier, be honest and open, there is nothing to be ashamed or embarrassed about!

5. **Keep things simple.**
   Keeping your pump in a sealed ziplock in the cooler or fridge between sessions eliminates the need to wash your pump after every session, if baby is currently ill or was premature and under six months, then keeping a second or third set of pump parts that have previously been sterilized and properly stored can eliminate the need to wash and sterilize at work.

6. **Be prepared for anything.**
   Spills happen, so keeping extra clothes, extra breast pads and burp cloths for wiping up any spills can be a life saver.

7. **Use your time wisely.**
   With deadlines, extra work or papers to grade it can be tempting to use your pump breaks or lunch time to work, this is your personal time, so take the break. If you are lucky enough to have your own office or designated pumping area where you can pump AND work, then by all means do it!
8. **Know your rights.**
Breastfeeding mothers have some protection, so use it. The South African Good Code of Conduct stipulates that a breastfeeding mother is entitled to two pumping breaks over and above your lunch break. Your employer has to give you a lunch break by law so even if you over the protected six month mark, you can still use your lunch break to pump.

9. **Keep healthy.**
Make sure you are keeping hydrated and eating during the day, making sure you take adequate water and a few healthy snacks, as well as having a healthy breakfast can help maintain energy and supply.

10. **Relax!**
Easier said than done in the working environment, but it’s important to try relax while pumping or you will be unable to illicit a letdown, listening to music, reading, checking in on Facebook or just looking at pictures of baby can help you relax.

Returning to work can seem daunting and scary, these feelings of anxiety and stress can negatively impact your ability to let down so it’s important to find a way to relax and take care of yourself.

**Tips for achieving a let down**

**Breathing.**
Focusing on your breathing can really help as it shifts your focus from stressful work situations and relaxes your body, thus helping you to achieve a let down.

**Do what you love.**
Listening to music, reading a book or watching a show on your computer can help take your mind off work, as can looking at pictures or videos of your baby, even though time is limited, it’s important to try and use your time to break away from work for those few minutes.
Studies have shown that listening to classical music can actually help your body relax and let down easier.

**Keep cozy.**
Warmth can be extremely relaxing, especially in winter. A hot cup of tea, hot water bottle and a cozy shawl with help you relax and illicit a let down.

**Massage.**
Using hands on technique (page 46) can help empty the breast and stimulate the let down reflex, this is an extremely effective technique for all situations.
Get comfy.
Sitting comfortably seems like an obvious tip, but many moms don’t realize just how much it can help, if you are sitting in a position that puts strain on your back or causes discomfort then your ability to let down may be compromised.

When I pump,
It’s more than just about nutrition and immunity,
it's about so much more...
SUPPLY BOOSTING Recipes

MADE WITH LOVE
LACTATION COOKIE RECIPE

Prep Time: approx. 15 minutes  
Oven Temperature: 180 degrees Celsius  
Cooking time: 10-12 minutes

Ingredients:

* 1 cup flour
* 1/2 teaspoon baking powder
* 1/2 cup of virgin coconut oil or butter
* 3/4 cup brown sugar
* 2 tbsp flaxseed meal
* 1 egg
* 2-3 tbsp of water or milk
* 1 tbsp vanilla essence
* 1-2 tbsp of Brewers yeast
* 1/2 tsp of pink Himalayan salt or regular table salt
* 1 & 1/2 cups of steel cut oats (you can grind the oats to a powder if you prefer)
* you can add in your favorite ingredients such as chocolate chips, cinnamon, berries or nuts.

Method:

In a large mixing bowl, cream butter / oil and sugar, add the egg and vanilla and mix well.

In a separate bowl, combine the flaxseed and water / milk, let it sit for a few minutes before adding to the rest of the ingredients.

Add dry ingredients as well as your extras to your wet mixture, leaving the oats until last. Add in the flaxseed mixture and oats and stir well.

Roll your biscuits using a dessert spoon as a guide for size and place on a lined or lightly greased baking tray. Flatten the biscuits and place in the oven for 10-12 minutes.
LACTATION SMOOTHIE RECIPE

Ingredients:

* 2 medium sized bananas
* 1 cup of chopped strawberries
* 1/2 cup steel cut oats
* 2 tbsp flax seed
* 2 tbsp Brewers yeast
* 1&1/2 cups of almond milk or coconut milk / water (depending on whether or not you like your smoothie thick)
2-4 cups of crushed ice (again, depending on whether or not you like your smoothie thick)
Add-ins: cacao, vanilla or chocolate chips.

Method:

Blend the oats until fine.

Add in fruit and other ingredients and blend again.

Add in ice and blend until smooth, you can add a small amount of water or extra milk to achieve the desired consistency.

Pour and enjoy!

Make sure that when making lactation aides such as cookies or smoothies that you use Brewers yeast and not bakers yeast as they are completely different and bakers yeast can cause you to become ill.

Sourcing organic ingredients are healthier and safer so try finding organic wherever you can.
Flaxseed and Brewers yeast can be purchased from many health shops and larger pharmacies such as dischem.
Weaning can be done at any point provided it is the mother’s choice, it should be done slowly and carefully by dropping pumping sessions and pumping duration until the breasts can comfortably go without discomfort for several hours and to prevent the development of breast infections such as mastitis or breast abscesses.

Many weaning mothers have found using peppermint oil, large amounts of parsley or cabbage leaves in your bra can help reduce milk supply without the need for medication.

Weaning before the mother is comfortable with her decision, or being pressured into weaning increases the risk of weaning depression. Talking out your decision to wean with your support system or lactation consultant can help you come to terms with your decision before even the beginning the weaning process.

**Weaning depression**

It is important for lactating mothers to be aware that weaning depression can occur during, or several weeks after weaning, this is due to certain hormone levels dropping, signs to look out for are, but not limited to:

- Irritability
- Feelings of despair
- Not wanting to get up, go out or do normal everyday activities
- Not enjoying every day things that you normally would
- Feeling overly anxious or blue
- Feelings of wanting to harm oneself or your baby should be taken seriously and discussed with a licensed practitioner immediately.

Speaking to your partner, support system or doctor can help you come to terms with your feelings, medication may be an option for more severe cases.
SUPPORT SYSTEMS

Support is vital in any breastfeeding relationship, exclusively pumping is no different. With social media becoming an integral part of society and how we interact with each other, there are a few great support systems available to pumping moms.

La Leche League South Africa is great local source of fantastic support, they are passionate, knowledgeable and informative, they also offer group meetings where you can find one on one support and help if you wish to get baby back to the breast. You can find additional information and resources at www.lll.org/southafrica

Exclusive Pumpers South Africa is a support group specifically for all pumping mothers, from exclusive pumpers to moms pumping only for donation or pumping when returning to work, we have several pump manufacturers to help with any technical issues, lactation consultants and a lot of experienced pumpers with tips and tricks to help you succeed.
You can also find information and resources at www.parentingthefuture.wordpress.com

Family and Friends can be a huge support, especially if they are pro-breastfeeding, leaning on friends and family members who you can trust and who respect you and your decision can make life so much easier.

Health Care Providers such as a pro-breastfeeding doctor, homeopath, midwife or lactation consultant can be a real help, especially when you find yourself, or baby ill. Having a health care provider who has sound advice and knowledge can help you meet your goals and avoid premature weaning.

Finding the right support will help you to make peace with exclusively pumping, grow your knowledge and meet your pumping goals.
Breastmilk

A special kind of love
only a mother can share!

DID YOU KNOW THAT ONLY 50MLS OF BREASTMILK CAN FEED A PREMATURE OR SICK INFANT FOR A WHOLE DAY?

Donate Today!
DONATING BREASTMILK

For some mothers who give birth too soon, or suffer complications at birth, milk production can be delayed or not medically possible. Their babies, who often end up in a Neonatal Intensive Care Unit, are not able to receive their own mothers milk and can end up with life threatening complications from artificial infant milk such as NEC (necrotising enterocolitis).

Donated breastmilk can help save these fragile babies lives and as little as 50mls can feed a premature baby for up to a day.

The South African Breastmilk Reserve, iThemba Lethu Breastmilk Bank and Milk Matters are registered breastmilk banks that supply hospitals and orphanages with donated breastmilk around South Africa.

To become a registered donor you will be required to fill in a few forms and have an HIV and TB blood test. You will be given special containers to pump into and instructions on how to store and sterilize your pump and containers before pumping for donation.

If you are unable to donate breastmilk, there are other ways to support these organizations and the amazing work they do.

You can contact these organizations at:

South African Breastmilk Reserve: www.sabr.org.za
info@sabr.org.za
(011) 482 1920

iThemba Lethu Breastmilk Bank: www.ithembaletu.org.za
kirsten.coutsoudis@gmail.com
(031) 261 7723

Milk Matters: www.milkmatters.org
info@milkmatters.org
(021) 659 5599
PUMPING APPS

There are several really good apps available for Apple and Android. Most are for a reasonable price and there are one or two free options.

Here is a list of the best apps that I have personally tested:

**MILK MAID**
Milk Maid is available on iTunes and has several great features, you are able to keep track of your stash, stats and time your sessions. There is even features to remind you to pump, rotate stash and even replace spares.
It is well worth the money and a great tool for keeping track of your precious liquid gold.

**FIRST YEAR**
First year has everything from pumping to nappy output and more, it is not exclusively dedicated to pumping, but has a great pumping section.

**EXPRESS YOURSELF PUMPING ASSISTANT**
This app was designed by an exclusive pumper and has everything you need to track your sessions and yield.

**BABY DAYBOOK**
Baby Daybook is a general baby daily tracker but has the option to track pumping.

**FEED BABY - BABY TRACKER**
This app again is not solely focused on pumping, it has features for tracking breastfeeding, nappy output and pumping.

There are so many more apps out there that can help you keep track of pumping, and all your other needs.
BREASTMILK RECIPES

Sometimes we find an extra pack of milk in the freezer that’s past its expiring date, or baby refuses our frozen stash due to high lipase, but there’s no need to dump the milk.

We are all aware of the amazing healing properties of breastmilk, those benefits extend far beyond ingestion of breastmilk, here are a few ideas on how to use up excess milk, there are many, many more available on the internet, try to make sure you use recipes that do not contain excess sugar, milk and chemicals that may harm your baby.

Breastmilk Baths
The most simple of all uses, aside from nourishing our baby’s, is to draw a relaxing bath for you or baby with breastmilk. The breastmilk is great for dry skin and amazing for soothing things like heat rash or allergic dermatitis, it also soothes sunburns, itchy bites and eczema.

Breastmilk Butter
Quick and simple and great for adding to your baby’s first foods. Pour approximately 150mls of breastmilk into your mixer and mix on moderate until the milk thickens, this can take anywhere from 30 to 45 minutes.
Breastmilk Ice Cream
Ingredients:
1/2 cup of breastmilk
1/2 tsp of organic vanilla (make sure the brand you use does not contain alcohol)
1 tbsp of sugar or organic honey.

Equipment:
Standard size coffee can with plastic clip on lid
Large coffee can with plastic clip on lid
4 to 5 cups of crushed ice
4 to 5 tbsp of salt
Gloves or a towel to protect your hands

Method:
Combine the breastmilk, vanilla and sugar / honey in the standard size coffee can, mix thoroughly and close the lid tightly. Place the standard size can inside the large can and pack the ice around the smaller can and sprinkle the salt on top. Close the tin and while protecting your hands with the gloves or towel and roll the can until the ice cream has set.

Time will vary based on how many servings you are making.

There are so many wonderful and fun recipes for breastmilk, from soaps and lotions to coconut breastmilk chocolates, cookies, sauces, cheese and yogurt. You can even use breastmilk as a coffee creamer (ssssh! Don’t tell dad!) Why not try one and see how much breastmilk can really do!
Loosing suction, pump not working effectively? Check your duckbill valves for hairline tears and replace.

Suction poor? Frothy Milk? Milk getting sucked into your pipes? Turn the duckbill valve to get suction to work more effectively.
Nowhere to wash and rinse pump spares are work? Not enough time to stand washing after every session, place your pump in a ziplock bag and store in the fridge between your sessions and save some time.

Squeeky pump waking the baby? Or worse yet, embarrassing you at work?
Place a blob of baby bum cream on the connector and the handle to stop the squeek!
I’m not saying its going to be easy.

I’m saying its going to be WORTH it in the end.

I would like to take this opportunity to thank my supportive husband who eagerly listened to me and my ramblings every day for the better part of five years, my daughter for the inspiration, I knew that if we had to go through hard times that I would make it stand for something and use our experience to help others, my lactavist friends and supporters who share knowledge, experience and support and a special mention to Mari-sa Hendricks, Carol Kensett, Hilton Weber and all the proof readers at Fountain Medical.

A donation of R10 from every book sale will go towards La Leche League South Africa in order to help more mothers get the necessary support in order to meet their personal breastfeeding goals.