



Outpatient Breastfeeding Champion Course Lecture Notes

Feb 2023

Session 7



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Institute for the Advancement
of Breastfeeding &
Lactation Education

The Outpatient Breastfeeding Champion Program Session 7



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of Breastfeeding &
Lactation Education**

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- The Instructor has no conflicts of interest to disclose
- Continuing medical education credits (CMEs) and continuing education recognition points (CERPs) for IBCLE are awarded commensurate with participation and complete/submission of the evaluation form
- CMEs can be used for nursing credits



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**Building
Breastfeeding-Knowledgeable
Medical Systems & Communities**



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A mother is seen on day 5, 1 day after leaving the hospital s/p cesarean birth. She reports pumping and bottle feeding because her baby has not latched to either breast yet. Every time she puts the baby to the breast, the baby screams. She wonders what to do. You advise:

- A. Stop bottle feeding, switch to finger-feeding, and keep trying to put the baby to the breast before finger-feeding.
- B. Your baby probably has a problem such as torticollis or a sucking problem. Continue to do what you are currently doing and see a lactation specialist.
- C. Continue to pump + manual expression every 3 hours. Keep your baby skin-to-skin as much as possible and let the baby move down towards the breast when he is interested. You should also see a lactation specialist.
- D. A and C



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A lactating parent who is 2 weeks postpartum reports that the baby refuses to feed from the L side. The baby fed from both sides the first 3-4 days, then became fussier on the L side over time. Now the parent is just pumping the L side. What is the most important question to ask this parent?

- A. Is your let-down heavier on the left?
- B. Is your milk production lower on the left side?
- C. Does your baby turn his head equally to both sides?
- D. Do you think your baby has any pain when lying on that side?
- E. All are important



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This parent now tells you that the L breast makes more milk and has a heavier let-down. She now realizes that he chokes on that side. You advise all EXCEPT:

- A. Try to nurse from the L before it becomes too full.
- B. Just keep pumping the L side and nurse from the R side.
- C. If the L side is too full before feeding, express the first letdown into a container or towel.
- D. Change positions so that the baby is more on-top of the breast rather than underneath it.



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Mom calls at 7 weeks postpartum and reports that her milk production is low. She is taking herbs and pumping after most feeds. She supplements by finger-feeding 1.5 oz (45ml) of formula after nursing, but this takes a long time. She is worried that her baby won't nurse if she introduces a bottle. She wants your opinion re what to do.

Reasonable advice would include:

- A. Would you be interested in learning how to use a feeding tube at the breast?
- B. Introducing a bottle is reasonable at this point, but you are correct that the baby might have less interest in nursing, it depends on the baby. Pacing the bottle may help.
- C. I would like to see you to watch a feeding and do a pre and post-feed weight.
- D. I suggest you see a breastfeeding specialist for a consult regarding your low production and an infant feeding plan.



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Today you are seeing mom and baby 2 weeks postpartum. The baby had trouble latching in the hospital, so was given a nipple shield on day 2. She is still using the nipple shield because her baby won't latch without it.

Weight	Date
Birth	8 lb 1 oz (3657g)
Day 2 (hosp discharge)	7 lb 7 oz (3373g)
Day 3 (office visit)	7 lb 8 oz (3403g)
Day 14 (today)	7 lb 11 oz (3493g)



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Mom wants to know how his weight is. You respond:

- A. The baby has not gained sufficient weight. I would like you to give a bottle of formula after each feeding.
- B. The baby has not gained sufficient weight. We need to evaluate this further.
- C. The baby has not gained sufficient weight. It looks like your milk production is low. I will ask the doctor to give you a medicine for this.



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This same mother reports that her breasts feel full before feeding, and she always sees milk in the nipple shield after nursing. You've decided that you are going to refer them to the lactation consultant. In the meantime, your advice to mom includes:

- A. Please pump after feeding to maintain your production. Offer expressed breastmilk to the baby after nursing, however much he'll take, and let's talk about how to supplement.
- B. Let's arrange a weight check in 3 days.
- C. I'd like you to work on latch without the shield starting with skin to skin and allowing infant-led latch when the baby is not overly hungry. Another option is to latch with the shield, then remove it after the first letdown.
- D. IF your baby is sleepy during feeding, please keep him awake.
- E. All of the above



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You think about this mom and baby later, and come up with ideas as to why the baby's weight is low. What is the least likely reason for the insufficient weight gain?

- A. The baby is ill and has a decrease in appetite.
- B. The baby is falling asleep at the breast.
- C. Mom's production is low, possibly due to nipple shield use.
- D. The baby does not transfer milk well with the shield



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Mom calls, concerned that her 5-month old baby won't nurse when she returns from work. She nurses the baby in the am, and pumps 3 times at work. She pumps ~3 oz (90ml) each session and believes that her milk production has decreased. The baby takes a 4 oz (120ml) bottle of expressed milk every 3 hours at daycare. After work, the baby will only feed from a bottle, but will nurse in the middle of the night. You advise:

- A. The baby loses the ability to coordinate the suck/swallow at the breast when awake and excited.
- B. The baby may be too distracted to nurse at the breast.
- C. The baby may be frustrated with the lower milk flow rate from the breast.
- D. B & C



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What would you recommend to this mother?

- A. Try nursing before the baby is overly hungry, in a location where there are few distractions.
- B. Don't bottle feed. If the baby is hungry enough, she will nurse at the breast.
- C. Arrange a visit to have her pump method checked for effectiveness.
- D. Start solids in the evening so that mom does not need to pump and bottle feed.
- E. A & C



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You are meeting with a group of pregnant people, and they ask if there are any special recommendations for their diet during lactation. You advise:

- A. If you are on a restrictive diet, such as vegan, please contact your health care provider or a nutritionist about whether you need nutritional supplement(s).
- B. You need to drink approximately 8 glasses of water a day.
- C. Avoid all caffeine to avoid infant irritability
- D. Broccoli and cauliflower should be avoided because they will likely cause infant gas.
- E. Losing weight postpartum will drop your milk production.



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Session 7 Topics

- Milk expression
 - Manual, pumps
- Breast pumps
 - Manual, battery, electric
- Choosing a breast pump
- Fitting breast shields
- Operating and cleaning a breast pump
- Use of expressed breastmilk
- Returning to work and breastfeeding



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Session 7 Objectives

- Identify 2 reasons why manual expression can be beneficial to add to electric pumping
- Describe to the parent how to manually express the breasts
- Demonstrate how to assemble the parts for a double electric pump
- Describe how pumps and pump parts should be cleaned



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Session 7 Objectives Cont'd

- Identify the steps to safely store and reheat breastmilk
- Know how to counsel on storing milk for going back to work



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Manual Expression of the Breast



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Ideal Situations for Manual Expression

- The first week postpartum
- Engorgement
- Low milk production
- No pump available
- Infrequent need
- Personal/cultural preference



Manual Expression
Video



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Advantages to Manual Expression	Advantages to Pump Expression
Hands are easily available	Expression might be faster
Only parts to wash are hands	Improved comfort if manual expression hurts
Can be done anywhere, no need for electricity	Can be done hands free if using an electric pump
Costs nothing	Easier for people with physical limitations
Increases milk production and fat beyond pumping	Increases milk production
Reduced risk of nipple trauma	
No associated noise	
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Manual Breast Pumps

- No electricity used
- Vacuum is created by squeezing a handle or lever
- Most are single sided
- The individual has control over duration of each cycle and frequency of cycles



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The Haakaa Milk Collector

- Soft, silicone
- Apply to the breast after squeezing
- Draws milk during a letdown
- Often used on the 2nd breast when pumping/nursing on one side
 - Only use if infant won't nurse from that breast or is done on that side
 - No stealing from the infant!
- May be traumatic due to high negative pressure and wide opening



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Battery or Electric Powered Breast Pumps



Easier
than a
clothes
washing
machine!

Proper use
imperative
to protect
milk
production

Proper fit
needed to
prevent
injury!



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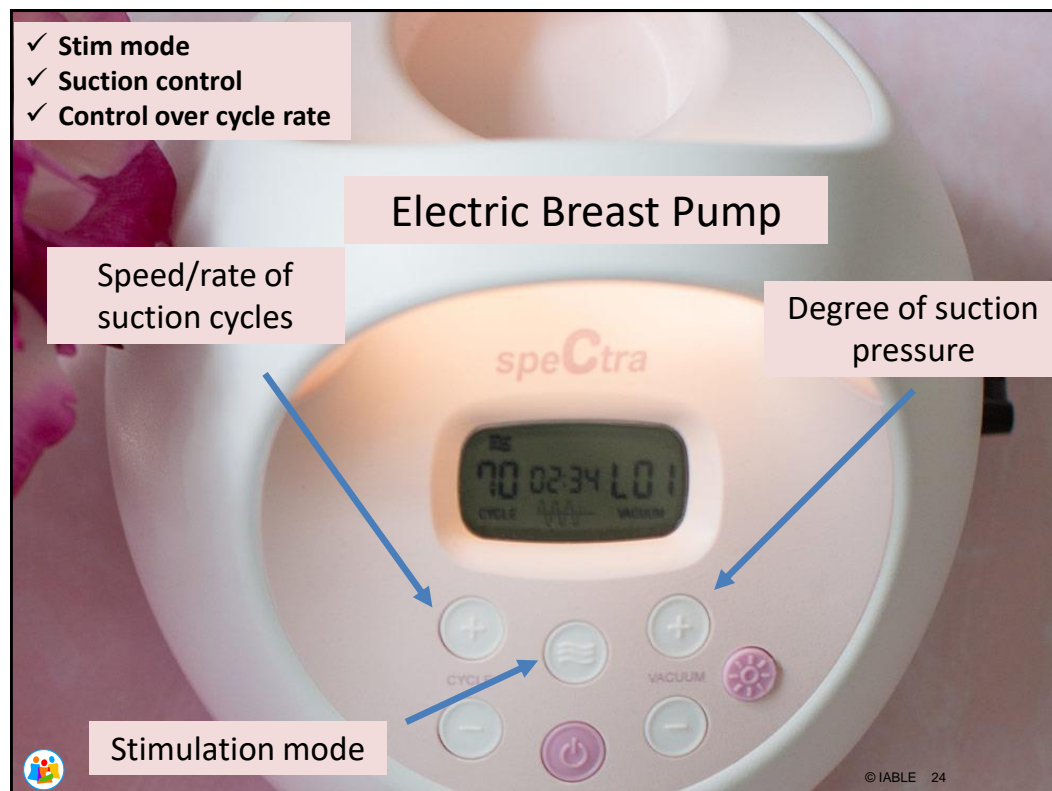
Control Options for Electric or Battery-Operated Breast Pumps

- Stimulation/massage mode
 - Stimulates let-down w/fast, light suction
 - Not all pumps
 - Some pumps automatically start on stim, others don't
- Amount of suction
 - Most if not all pumps allow suction control
 - Ideal suction at -150 to -200mmHg during expression mode
- Rate of cycles
 - Some allow fast vs slow rate of pumping
- Single or double pumping



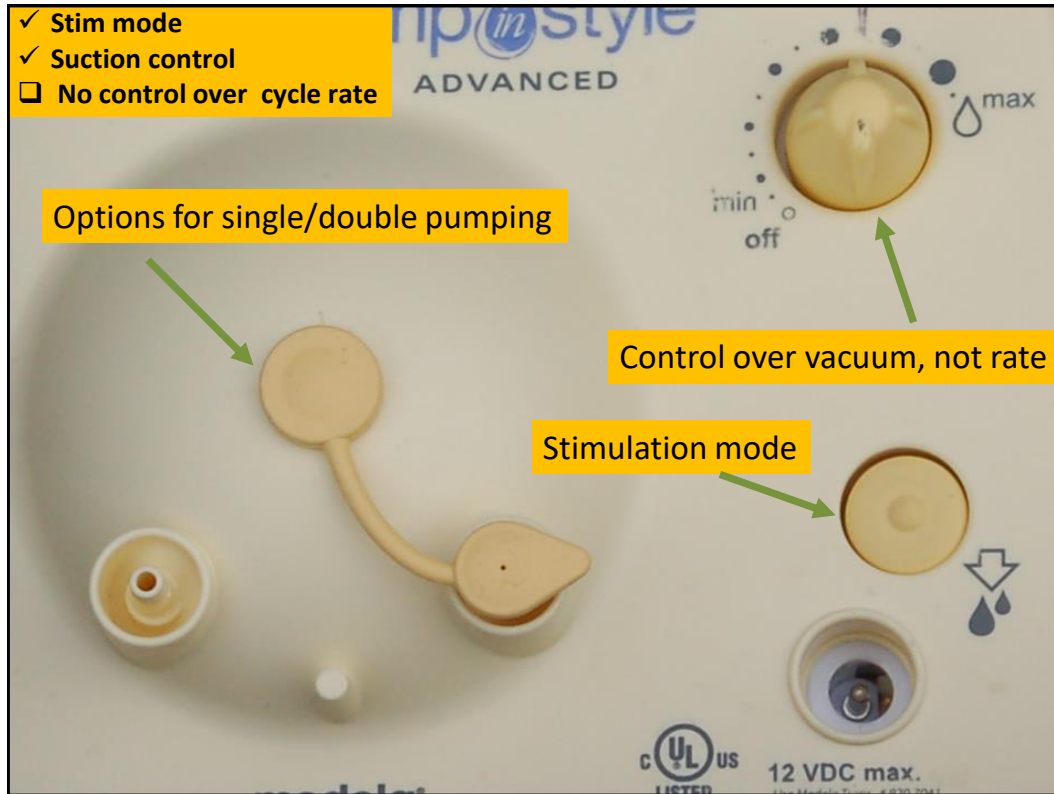
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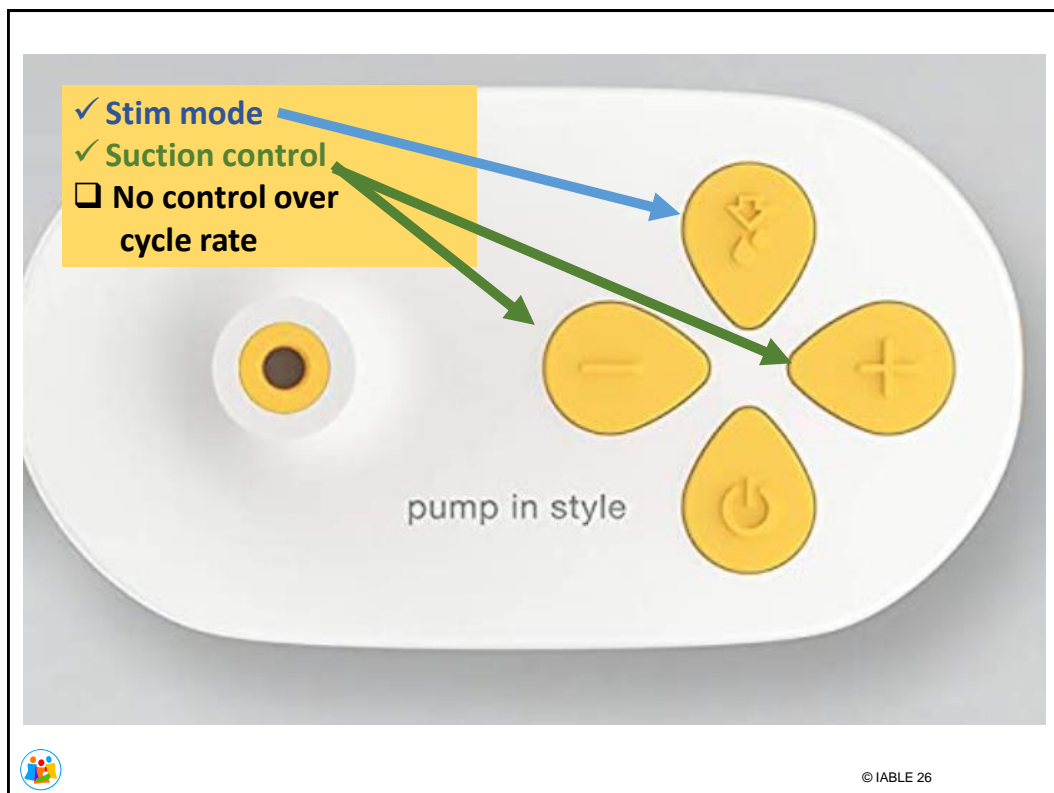


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- ☐ No Stim mode
- ✓ Suction control
- ✓ Control over cycle rate



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- ✓ Stim mode
- ✓ Suction control
- ✓ 3 pre-set cycle rates

Stimulation
mode

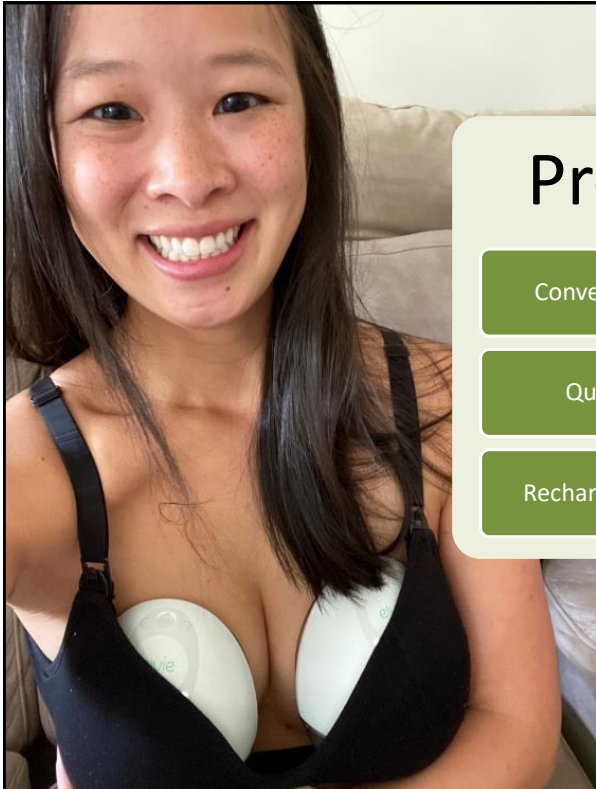
3 pre-set cycle rates

Controls for suction



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Wearable Pumps

Pros

- Convenient
- Quiet
- Rechargeable

Cons

- Can spill
- Limited flange sizes
- Limited volume
- Expensive

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- ✓ Stim mode
- ✓ Suction control
- ☐ No control over cycle rate

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Pump Expression Video



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Manual Vs Electric Pumps

- Manual pumps
 - slower, takes longer
 - hand fatigue
 - quiet



- Electric pumps
 - double pumping stimulates higher production
 - faster
 - need electricity
 - louder



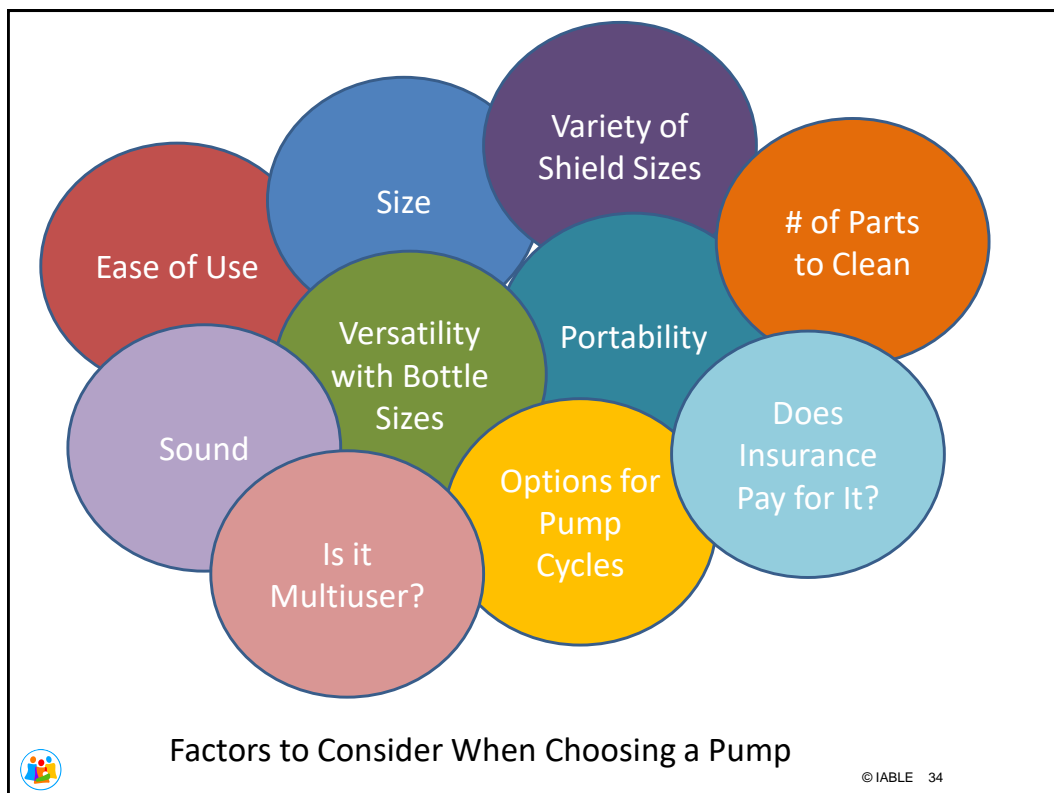
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Factor	Suggestion
Lowest cost	Manual pump
Intermittent use for a stay-at-home parent who plans to mainly nurse	Manual pump
Primary need is to increase milk production	Double electric pump
Baby is separated from Parent; NICU	Consider renting a hospital grade electric pump*
Parent is back to work	Double electric pump
Parent bottle feeds many feedings/day	Double electric pump
No access to an electrical outlet	Manual or battery operated pump
Easy to transport	Lightweight pump in its own carrying case

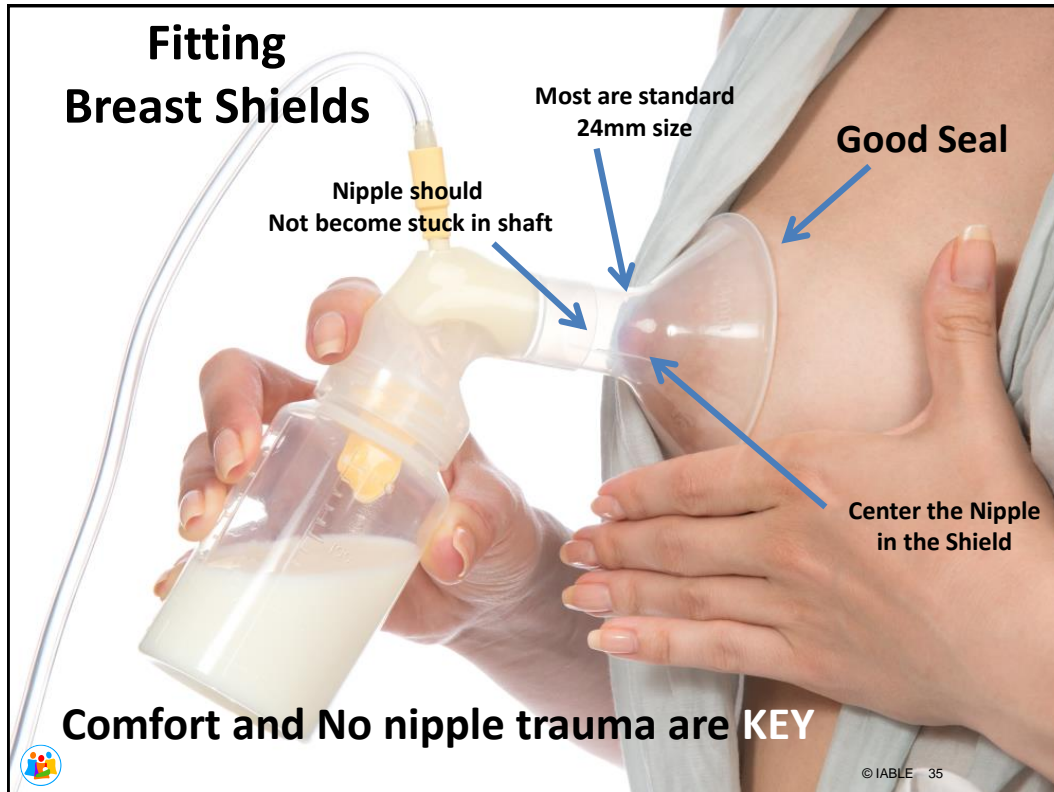
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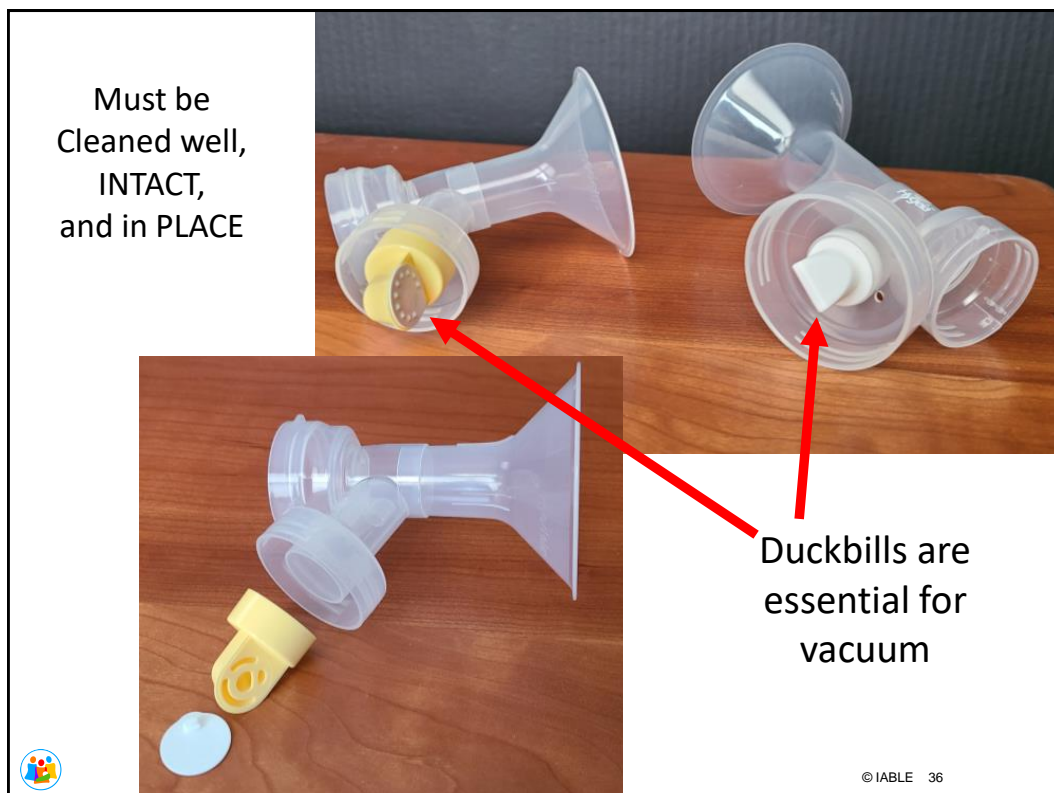


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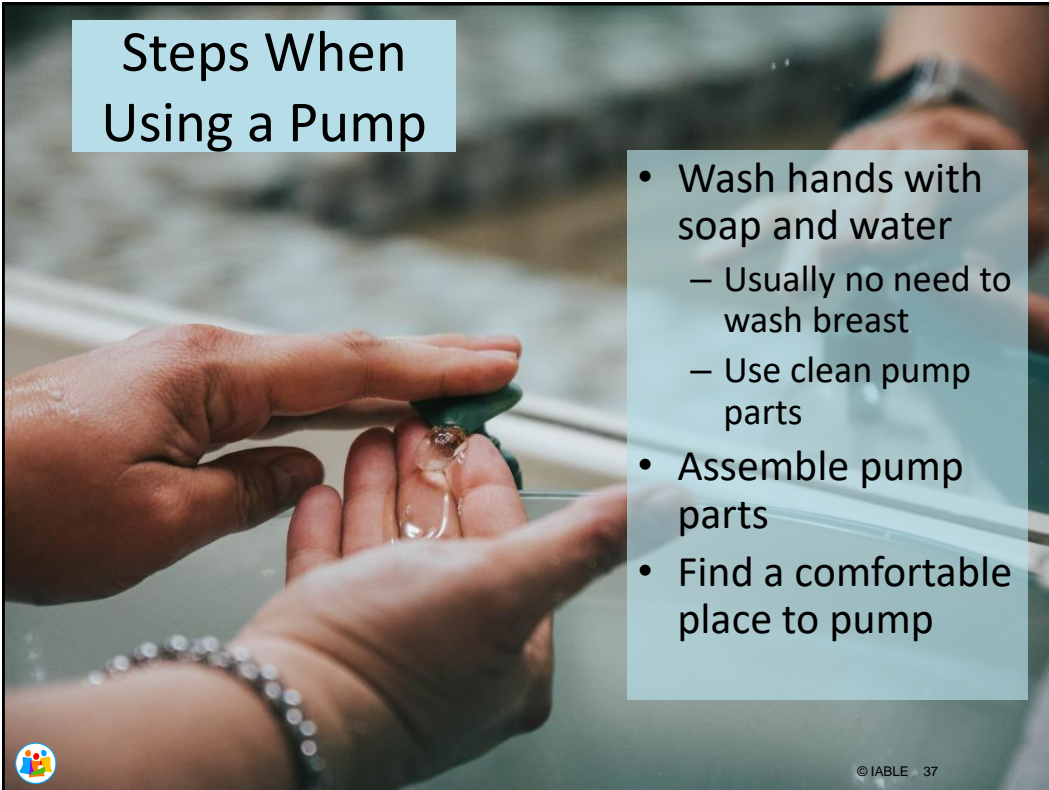
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Steps When Using a Pump

- Wash hands with soap and water
 - Usually no need to wash breast
 - Use clean pump parts
- Assemble pump parts
- Find a comfortable place to pump



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Other Pumping Tips

- Hands-free system
- Start w/low suction or stimulation phase
- Increase to highest comfortable vacuum
- Manual expression during or after pumping as needed



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Freq/Duration of Pumping

- Pump every 3 hours
- Average duration = 12-20 minutes
- Average session = 2-3 let-downs
- High production
 - limit volume expressed
- IF pumping takes 25+ minutes, check flange size and vacuum setting



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CDC Guidelines for Cleaning Pump Parts

Clean Pump Kit

CLEAN BY HAND



Place pump parts in a clean wash basin used only for infant feeding items. **Do not place pump parts directly in the sink!**

Add soap and hot water to basin.

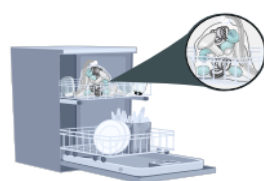
Scrub items using a clean brush used only for infant feeding items.

Rinse by holding items under running water, or by submerging in fresh water in a separate basin.

Air-dry thoroughly. Place pump parts, wash basin, and bottle brush on a clean, unused dish towel or paper towel in an area protected from dirt and dust. Do not use a dish towel to rub or pat items dry!

Clean wash basin and bottle brush. Rinse them well and allow them to air-dry after each use. Wash them by hand or in a dishwasher at least every few days.


OR CLEAN IN DISHWASHER



Clean pump parts in a dishwasher, if they are dishwasher-safe. Be sure to place small items into a closed-top basket or mesh laundry bag. Add soap and, if possible, **run the dishwasher using hot water and a heated drying cycle (or sanitizing setting).**

Remove from dishwasher with clean hands. If items are not completely dry, place items on a clean, unused dish towel or paper towel to air-dry thoroughly before storing. Do not use a dish towel to rub or pat items dry!

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CDC Guidelines for Sanitizing Once a Day For Infants Who are Premature, Ill, or < 3 months

- Boil for 5 minutes, remove with tong
- Steam in a microwave bag or plug-in steam system
- Dishwasher on sanitize cycle
- Bleach
 - 1 tsp of bleach in 16 cups of water
 - Submerge completely and soak for 2 minutes
 - Do not rinse, to avoid re-contamination
 - Bleach will break down as it dries and is safe
 - Dry on a clean paper towel or unused dish towel

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Milk Storage Containers

- Hard plastic bottles
 - BPA- free
- Glass bottles
- BM storage bags
 - Protect with added bag
 - Avoid food-grade freezer bags
- Wash bottles in hot soapy water or dishwasher





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Human Milk Storage Guidelines

	Countertop or table	Refrigerator	Freezer with separate door
Storage Temperatures	77° F or colder (25° C)	40° F or colder (4° C)	0° F or colder (-18° C)
Freshly Pumped/Expressed Human Milk	Up to 4 hours	Up to 4 days	Within 6 months is best, up to 12 months is acceptable
Thawed Human Milk	1-2 hours	Up to 1 day (24 hours)	Never refreeze human milk after it has been thawed

These guidelines are for healthy full-term babies and may vary for premature or sick babies. Check with your health care provider. Guidelines are for home use only and not for hospital use.

United States Department of Agriculture
Slightly Revised July 2018

Find more breastfeeding resources at:
WICBreastfeeding.fns.usda.gov
cdc.gov/breastfeeding/

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Additional Principles of Human Milk Storage

- Fresh is best!
- Freeze in 2-4 oz (60-120ml) volumes
- New milk (chilled) can be added to older milk
- Leave room in container when freezing
- Write date and baby's name before freezing

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Using Expressed Milk

- Fresh
 - Heat in warm water
- Frozen
 - Defrost in a warm water bath or overnight in refrigerator
 - Use within 24 hours after thawed
 - Use within a few hours after it is warmed
- Never reheat in a microwave!!

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Toss or Donate Stored Milk?

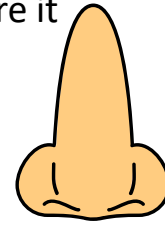
- Reasons to not use stored milk:
 - Baby is allergic to a substance in parent's milk, e.g. food or medication
- Milk can be donated
- Very rare need to toss milk from a yeast or bacterial infection

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All Stored Breastmilk has a Smell

- Due to an enzyme lipase breaking up the fat in the milk.
 - Not due to excessive lipase
 - Keep the bottle/bag airtight to decrease odor
- The longer it is stored in frig or freezer, the more it smells
 - Fresh milk is the least smelly
- Scalding milk is NOT recommended
 - Scalding destroys milk properties
- Most babies don't care about the smell
 - We eat stinky foods- cheese, fish, eggs, cooked broccoli/cauliflower



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Return to Work

- Discuss lactation needs with employer
 - Longer lunch times to nurse the baby
 - Altered work schedule
 - Part time work the first few weeks
- Find a supportive daycare
 - Many states have toolkits for breastfeeding-friendly daycare centers (WI, RI, MN, CO, etc)



Source: US Breastfeeding Committee

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The Break Time for Nursing Mothers US Fair Labor Standards Act



- No defined frequency for breaks
- Break time must be 'reasonable' in duration



- Allowed for 1 year



- Not in bathroom
- Sink not required
- 'Functional space'
- Shielded from view
- Free from intrusion from others
- Available when needed



- Employer not required to pay for uncompensated breaks
- Mainly applies to hourly workers



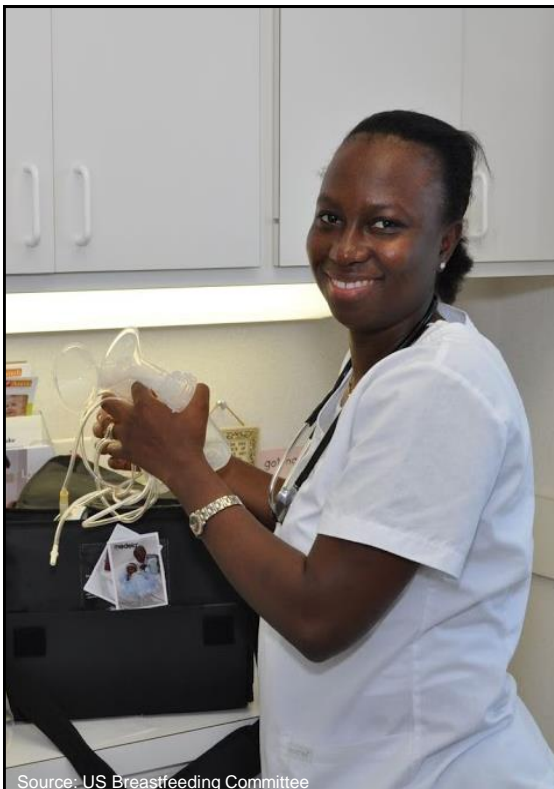
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Return to Work

- Learn tips from other lactating parents at the workplace
- Take as much postpartum leave as possible
- Store 1-4 oz (30-120ml) of breastmilk/day starting at 3 weeks pp
- Store in 2-4 oz (60-120ml) increments
- Introduce a bottle before going back to work



Source: US Breastfeeding Committee

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Promoting a Letdown at Work

'Experience' the baby

- Photos/video
- Article of clothing/blanket
- Audio of the baby



Source: US Breastfeeding Committee



- Massage/tickle breasts
- Rub nipples
- Warm packs



Get Comfy!

- Music
- Eat/drink
- Distract
- Feel safe



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Conclusions Session 7

- Pump selection is based on individual needs
- Parents often need guidance on proper breast shield (flange) size
- Offer counseling to parents on human milk storage for work
- Parents often need guidance and preparation for going back to work while lactating.



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