COMMON BREASTFEEDING PROBLEMS AND BREASTFEEDING THE LATE PRETERM INFANT

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OBJECTIVES

At the end of this session, the participant will be able to:

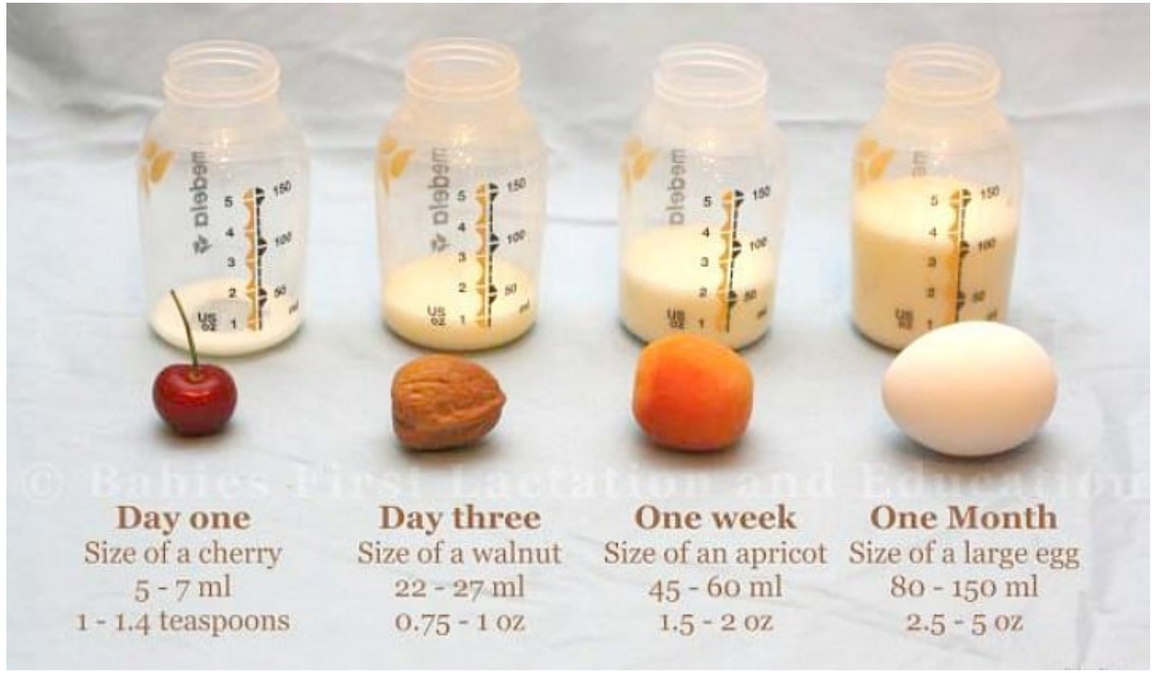
1. Diagnose and manage common breastfeeding concerns
   - With a focus on maternal factors and interventions feasible for OB/FP providers
2. Explain the unique challenges late preterm infants face in breastfeeding, and be prepared to support successful breastfeeding in this group

OVERVIEW

- Common maternal breastfeeding issues:
  - (Perceived?) insufficient milk supply
  - Nipple pain/breakdown
  - Breast yeast infections
  - Raynaud's phenomenon of the nipple
  - Plugged duct, mastitis, and breast abscess
  - Medications and drugs
- Problems and solutions specific to breastfeeding late preterm infants

INSUFFICIENT MILK SUPPLY: REAL OR PERCEIVED?

- **Common concern (50% of breastfeeding mothers), many contributors:**
  - **Lack of education re: normal breastfeeding patterns and behavior**
  - Fussy baby, baby “must be starving because they want to eat constantly”
  - Soft breasts/lack of engorgement
  - Ease with which infant eats from a bottle
  - Inability to express large volumes
  - No let-down



Gatti, L. 2015

INSUFFICIENT MILK SUPPLY

- **Only 5% of women actually have inadequate milk supply**
  - **Common Causes:**
    - separation of mother-infant dyad
    - strictly scheduled intervals between feedings
    - poor latch/position
    - early use of pacifiers or bottles
    - maternal medications (decongestants, antihistamines, estrogen – including combination OCPs)
    - maternal pain or stress (delayed milk ejection)
    - prematurity
  - **Less Common Causes:**
    - Hormonal: hypothyroidism, PCOS, Sheehan's, retained placenta
    - Prior breast surgery: reduction, augmentation, nipple piercings
    - Anatomic: breast hypoplasia, inverted nipples

Akre, J. 1989

COMMON CAUSES OF LOW MILK SUPPLY

Lack of early stimulation/milk removal

Infrequent stimulation/milk removal

Disregard for infant feeding cues

ASSESSING MILK SUFFICIENCY

- **Visual cues for feeding interaction**
  - Baby eagerly seeks breast, latches on, feeds; body tone (mother and baby) relaxes; full breasts; leakage from the opposite side
- **Auditory confirmation**
  - Suck swallow ratio variable but not consistently more than 4:1
- **Infant weight**
  - 0-90 days: 20-30g/day
  - 90-180 days: 15-20g/day
  - Back to BW by 2 wks
  - No more than 10% weight loss in first 5 days***
    - ****If Mom's milk is just coming in, may not need to supplement even if weight loss is 10-12%*

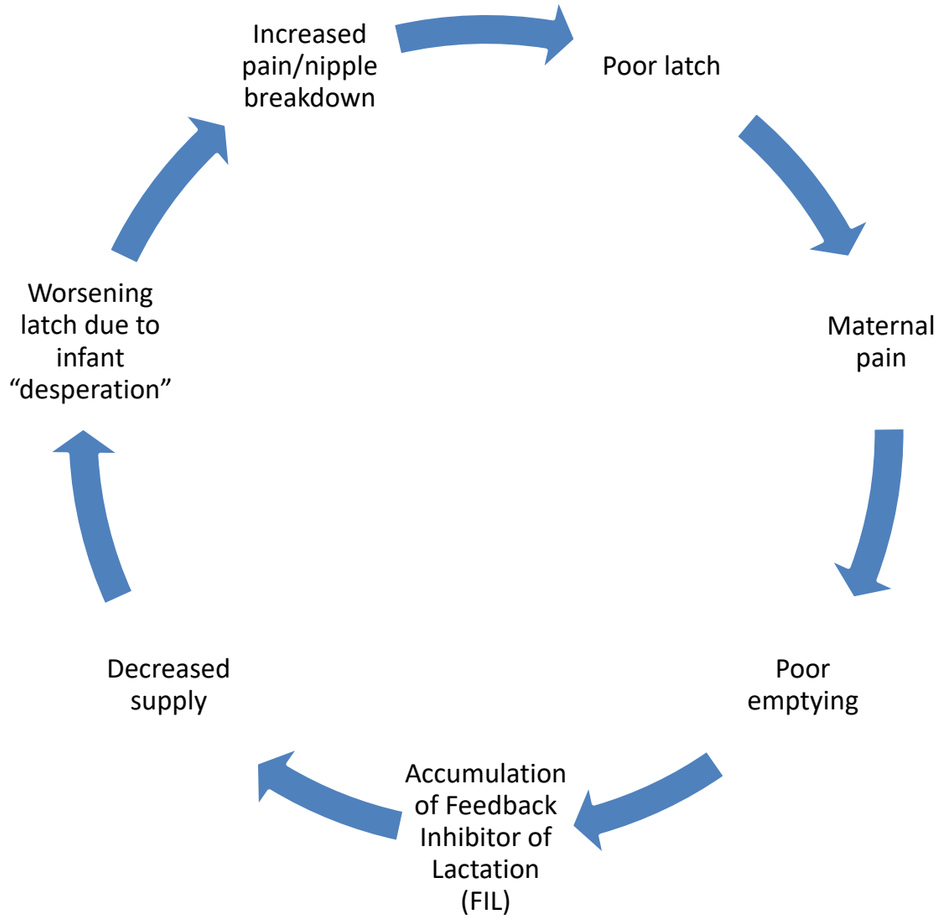
MANAGEMENT OF MILK INSUFFICIENCY

- **FIRST: Address the underlying cause(s)**
  - Optimize position/latch
  - Increase frequency of feeds (*nighttime feeds may help*)
  - Express/pump after feeds
    - *Hands-on pumping*
    - *Power pumping*
  - Treat maternal or infant medical issues
- **NEXT: Consider galactogogues**
  - Herbal/natural remedies: fenugreek, mother's milk tea, oatmeal, beer, brewer's yeast
    - High dose fenugreek safe and effective though mechanism unknown: 3500mg divided TID
      - Caution in mothers with diabetes, peanut allergy
      - May cause diarrhea
  - Metoclopramide (Reglan): increases prolactin, may cause GI issues, anxiety, sedation, dystonia
    - 10mg PO daily-TID for 1-3 weeks
- **THEN: Supplement if medically indicated**
  - Ideally with EBM,15-30mL after feeds

ABM Clinical Protocol #9; File:Breastfeeding.jpg - Wikimedia CommonsWikimedia Commons

SORE/CRACKED NIPPLES

- **Causes:** suboptimal latch, poor positioning, yeast infection (nipple or ductal), Raynaud's, mastitis, infant ankyloglossia
- **Management:**
  - Optimize latch (and assess for ankyloglossia)
  - Breastmilk, air dry, lanolin
  - Newman's nipple ointment: 15 g mupirocin 2% ointment + 15g BMZ 0.1% ointment + miconazole powder (for total concentration 2%)
  - Ibuprofen
  - Cool gel pads
  - Nipple shields: **CAUTION!**



Chow et al, 2015

NIPPLE/DUCTAL CANDIDAL INFECTION

- **Predisposing factors**
  - Diabetes
  - Steroid or antibiotic use
  - Immunodeficiency
  - Nipple trauma
- **Nonspecific signs and symptoms (and no good microbio test)**
  - Nipple pain, itching, or burning sensation or shooting breast pains that radiate back towards the chest wall (possibly ductal candidal infection; may persist or worsen after feeding is complete and breast is drained)
  - Nipple wounds that do not heal w/ time and proper latch/positioning
  - Nipple and areola may appear erythematous or shiny or have white patches
  - NO external signs
  - *Infant usually has thrush*

TREATMENT OF CANDIDAL INFECTIONS

- **Treat mother and infant simultaneously** (2+ wks or for 2 days after symptoms resolve)
  - Infant: nystatin 100,000u/ml 1 cc PO QID
  - Mother:
    - Nystatin suspension/cream or clotrimazole applied after each nursing session
    - Fluconazole
      - 100-200mg po daily x 14-21 days if not improving w/ nystatin or for ductal yeast infections
      - 200mg po x 1 day, then 100mg po daily x 10-14 days
- **Sterilize bottles, pacifiers, pumping supplies**

Berens et al, 2016

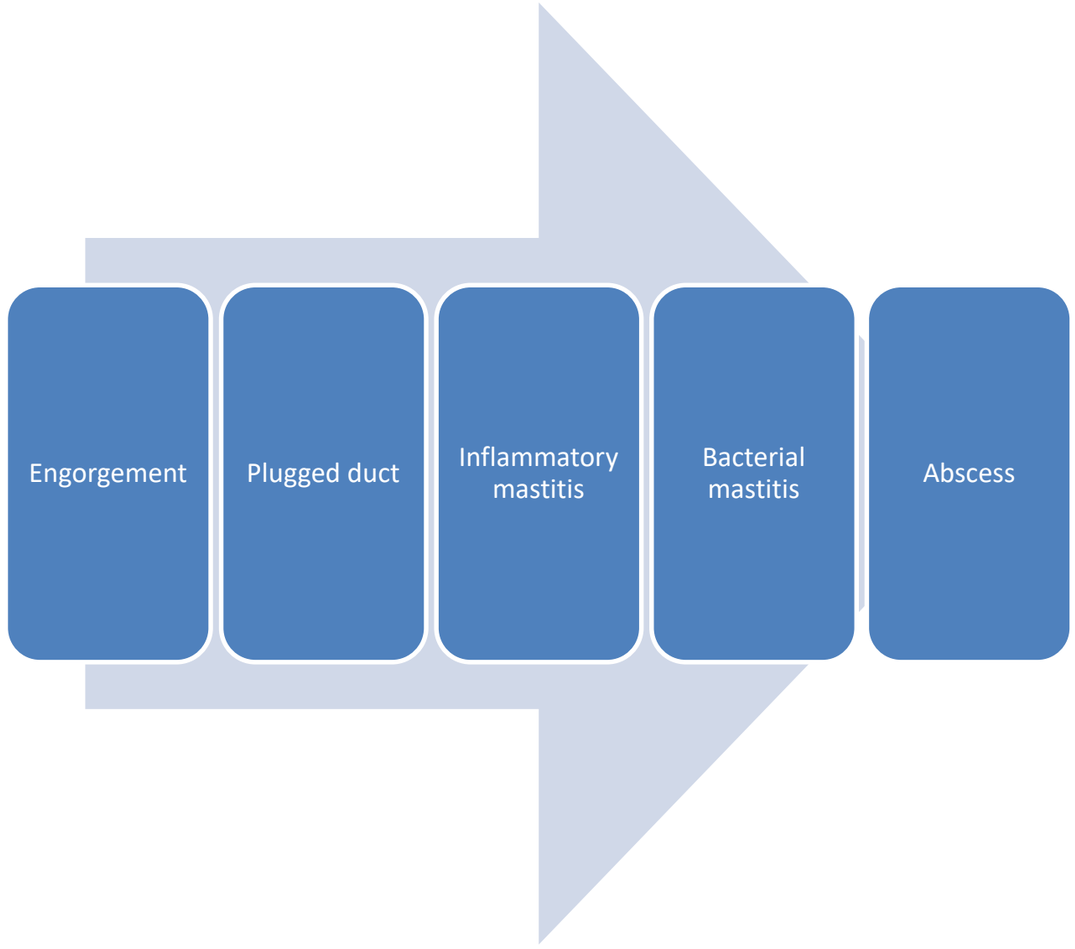
RAYNAUD'S PHENOMENON OF THE NIPPLE

- **Frequently misdiagnosed**
  - May be etiology of pain in up to 25% of breastfeeding mothers
    - Nerve irritation from breastfeeding + increased estrogen → increased alpha-adrenergic receptors
    - Emotional stress → increased epinephrine → increased vasoconstriction
- **Vasospasm precipitated by cold**
  - Deep burning/shooting/throbbing pain that persists throughout the entire feed
  - Bi- or triphasic color changes
- **Treatment**
  - Warmth
  - Minimize vasoconstrictors (including caffeine, tobacco)
  - Nifedipine 30-60mg sustained release PO daily or 10-20mg immediate release TID x 2-3 weeks (longer as needed)

American Academy of Dermatology, 2011

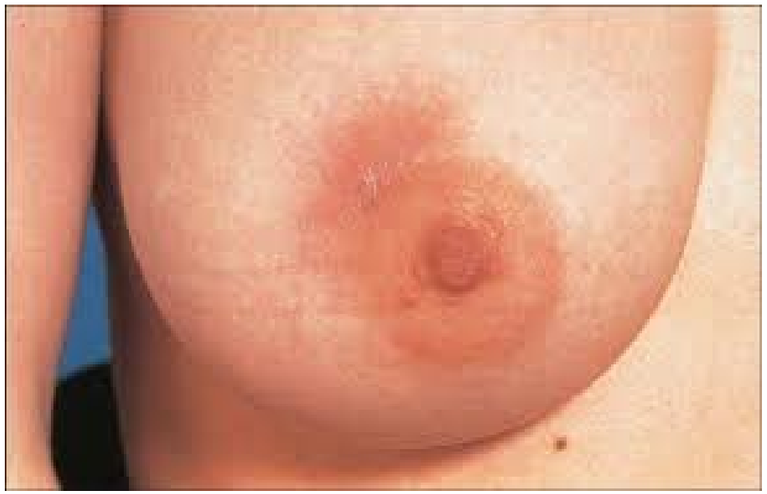
PLUGGED DUCTS

- **Tender lump**
- **Predisposing factors**
  - Positions that don't empty breast
  - Underwire bras
  - Mother holding breast while feeding
- **Treatment**
  - Ensure complete breast drainage
  - Massage
  - Warm packs
  - Position changes



BACTERIAL MASTITIS

- Most common in the first month, occurs in 5%–10% of breastfeeding women
  - **commonly (25%) leads to lactation cessation**
- Usually caused by Staph aureus (less commonly Strep or E. Coli)
  - *Fevers, myalgias, breast pain*
  - *Wedge-shaped, tender, erythematous, unilateral*
  - *Upper, outer quadrant most common*
- Risk factors: plugged ducts, untreated engorgement, cracked nipples, missed feedings, excessive fatigue decreased resistance to infection



Amir, 2014; Hickson, 2011; https://step2.medbullets.com/gynecology/121861/mastitis; Wei et al, 2016

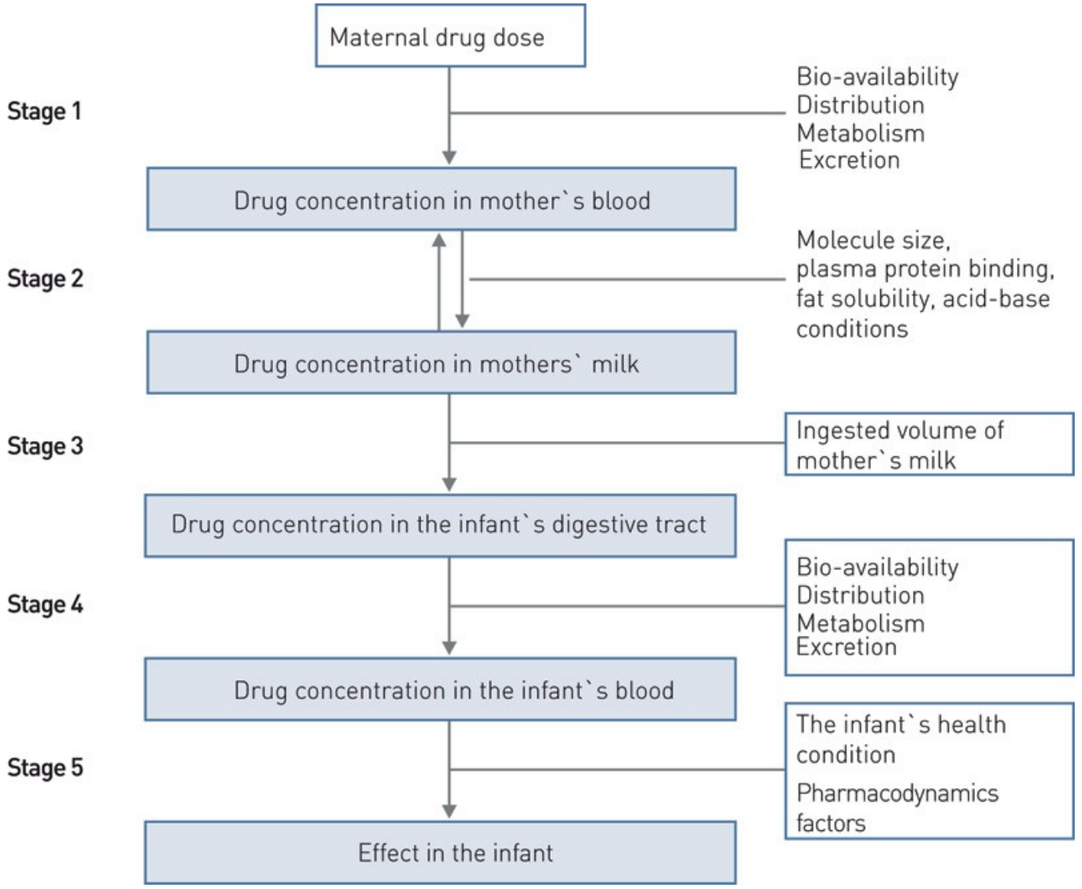
MASTITIS

- **Treatment**
  - CONTINUE BREASTFEEDING!
  - Monitor closely for abscess formation (3%)→needle aspiration or I&D
  - If mild and <24hrs, frequent breastfeeding with complete emptying, ibuprofen, warm packs
  - If moderate-severe or > 24 hrs: dicloxacillin 500mg po QID, Augmentin 875mg PO BID, or cephalexin 500mg PO QID x 10-14 days
    - Reserve clindamycin 300mg po QID for severe cases, recommend probiotics

Wei et al, 2016

MEDICATIONS, DRUGS, AND LACTATION

- **Medications: *most are safe***
  - Small molecules (e.g. caffeine), lipid-soluble molecules (e.g. citalopram), and free unbound molecules (e.g.venlafaxine) are more readily excreted into breastmilk
    - Insulin, heparin have high molecular weights and are not excreted into breastmilk
  - Protein-bound molecules (e.g. sertraline, ibuprofen, and warfarin) are not readily excreted
  - **CONTRAINDICATED:** chemotherapeutics, lithium, oral retinoids, iodine, amiodarone
- **Iodinated and gadolinium-based contrast media: *likely safe***



Nordeng et al, 2012; ACR Manual on Contrast Media, 2018; CDC, 2018

MEDICATIONS, DRUGS, AND LACTATION

- **Alcohol:**
  - Excreted in breastmilk, but unlikely to be harmful in moderation (1 drink/day)
  - May decrease milk supply (interferes with milk ejection reflex)
- **Methadone:**
  - May result in neonatal motor delays, but benefits outweigh risks (Breastfeeding should be encouraged)
- **Buprenorphine:**
  - No short-term negative effects, may ameliorate effects of NAS (Breastfeeding should be encouraged)
- **Other opioids:**
  - Short-term use generally ok, but avoid codeine (CYP2D6 ultra-rapid metabolizers may experience high morphine metabolite serum levels resulting in neonatal death)
- **Marijuana:**
  - Found in breastmilk at 8x plasma concentrations
  - Limited data suggests even low doses may have profound consequences for brain maturation with long-lasting alterations in cognitive function, emotional behaviors
- **Other illicit drugs:**
  - Breastfeeding generally contraindicated

Nordena et al, 2012; CDC, 2018; Reece-Stremtan, 2015

LATE PRETERM BABIES (34 0/7+)

- Neurological immaturity, disorganized suck, weak oral muscles, decreased stamina, suboptimal transfer
- Maternal-infant separation
- Maternal medical issues leading to prematurity may delay lactogenesis II

OPTIMIZING BREASTFEEDING FOR LATE PRETERM INFANTS

- **Early skin-to-skin**
- **Hand expression of colostrum https://med.stanford.edu/newborns/professional-education/breastfeeding/hand-expressing-milk.html**
- **Cue-based feeding (but awaken at 4 hrs)**
  - 8-12x/24hrs
- **Limit feeds at the breast to 30-40 min total**
- **For ineffective milk transfer, suboptimal supply, and/or weight loss of >7%**
  - Breast compression while infant suckles
  - Nipple shield
  - Supplementation
    - 5-10mL per feeding on day 1, 10-30mL per feeding thereafter
- **Triple feeding regimens (breastfeed, supplement, express) as feasible; iron and vit D supplementation**

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