

Helping Mothers with Breastfeeding Concerns: Mother and Infant Centered Issues
La Best for Babes Network
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Thank you!

LA Best for Babies
Network

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Thank you for taking
the time to join me
for this workshop!

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Why Breastfeeding Matters



Photo by Timothy Meinberg on Unsplash

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WHO/UNICEF
Global
Strategy 2003

"Mothers and babies form an inseparable biological and social unit. The health and nutrition of one group cannot be divorced from the health and nutrition of the other."

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For Breastfeeding to Succeed

- The baby is able to feed: able to cue, suck, swallow, and breathe smoothly
- The mother is producing milk and willing to bring her baby to breast many times a day
- Breastfeeding is comfortable for both
- Surroundings support the dyad

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Birth influences mother's confidence

Mother's **confidence** and **trust** in ability to birth = confidence in her ability to breastfeed

- Attitudes matter
- "You can do this!"

Many "mother-friendly" practices enable breastfeeding

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Lamaze

Lamaze International Healthy Birth Practices

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Practices Based on Evidence

adapted from
World Health Organization Guidelines for Care of Women Having Normal Birth



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Evidence-Based Practice

“An approach to decision making in which the clinician uses the best evidence available, in consultation with the patient, to decide upon the option which suits that patient best”.



Photo by Joshua Rodriguez on Unsplash

Source: Muir Gray JA. (1997) Evidence-based healthcare: How to make health policy and management decisions. London: Churchill Livingstone



Photo by Bill Oxford on Unsplash

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Lamaze Healthy Birth Practices

 Let labor begin on its own.	 Walk, move, & change positions.	 Plan for continuous support.
 Avoid unnecessary interventions	 Avoid giving birth on your back.	 Keep mothers and babies together.

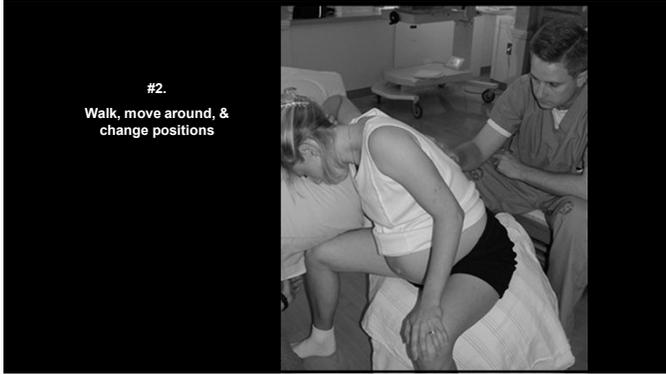
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#1.

Let labour begin on its own



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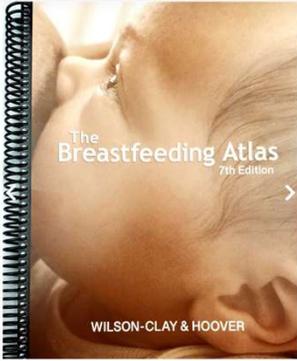
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#6.
Keep mother & baby together— It's best for mother, baby, & breastfeeding



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BreastfeedingAtlas.com
Student discounts!



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Maternal Focused Breastfeeding Concerns



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Preventing Breastfeeding Issues

Preconception

- Human lactation incorporated into school curriculum
- Societal acceptance of breastfeeding as the biological norm
- Other?

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Preventing Breastfeeding Issues

- Prenatal (antenatal)
- Prenatal education
 - Choice of birth place
 - Lamaze Healthy Birth Practices
 - Baby-Friendly

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Step 3: Antenatal Information Baby Friendly Hospital Initiative (WHO/UNICEF, 2018, p.25)

- Step 3: Discuss the importance and management of breastfeeding with pregnant women and their families

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Step 3: Discuss the importance and management of breastfeeding with pregnant women and their families

(WHO/UNICEF, 2018, p.21)

- Rationale: Enable informed decision making
- Provide practical information that mothers want
 - Breastfeeding
 - Impact of maternity care practices
 - "Mothers generally do not feel that infant feeding is discussed enough in the antenatal period and that there is not enough discussion about what to expect with breastfeeding." (Pérez-Escamilla et al. 2016)

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Step 3: Discuss the importance and management of breastfeeding with pregnant women and their families (WHO/UNICEF, 2018, p.22)

Global standards for prenatal education:

- Importance
- Recommendations
- Skin to skin care
- Early initiation
- Rooming-in
- Positioning and attachment
- Feeding cues

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Step 3: Discuss the importance and management of breastfeeding with pregnant women and their families
(WHO/UNICEF, 2018, p.22)

Global standards for assessment:

- At least 80% of mothers who received prenatal care at the facility report having received prenatal counselling on breastfeeding.
- At least 80% of mothers who received prenatal care at the facility are able to adequately describe what was discussed about two of the essential prenatal education topics

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Preventing Breastfeeding Issues

- Intrapartum (peripartum) – healthcare professionals work to implement
- 6 Lamaze International Healthy Birth Practices
 - WHO Code of Marketing of Breastmilk Substitutes
 - WHO/UNICEF Ten Steps to Successful Breastfeeding

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Preventing Breastfeeding Issues

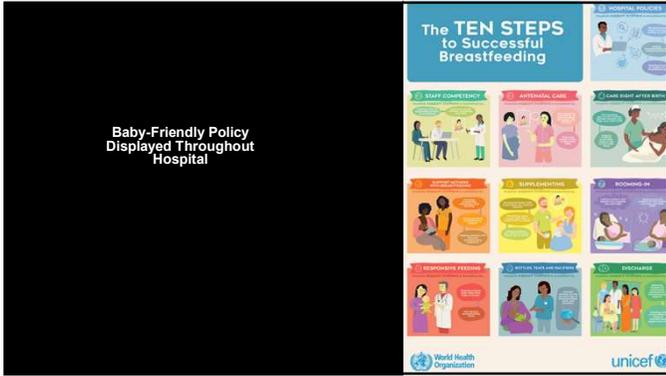
- Postpartum - healthcare professionals work to implement
 - Step 6 Lamaze International Healthy Birth Practices
 - Keep Mother and Baby Together: It's Best for Mom, Baby, and Breastfeeding (Crenshaw, 2019)
 - WHO Code of Marketing of Breastmilk Substitutes
 - WHO/UNICEF Ten Steps to Successful Breastfeeding

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Preventing Breastfeeding Issues

Postpartum: WHO/UNICEF Ten Steps to Successful Breastfeeding

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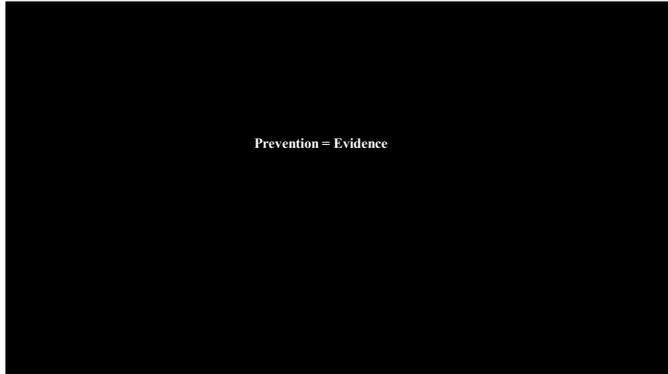
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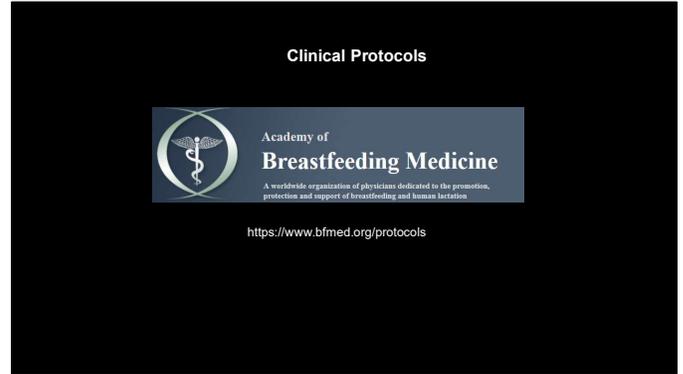
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Delay in Lactation

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Delay in Lactation

Newborn losing weight, no evidence of milk 'coming in'

- Mother perceives:
 - Lack of breast enlargement and/or fullness by end of **day 5** in primiparous (first time) mothers
 - Lack of breast enlargement and/or fullness by end of **day 3** in multiparous mothers (women who have had more than one birth)

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. Institute for the Advancement of Breastfeeding & Lactation Education (ABLE)

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Delay in Lactation

- Thorough assessment by lactation consultant
- Express milk after feedings (hand or pump)
- Assess for milk transfer issues if mother expresses adequate milk after feeding
- Supplement with expressed breastmilk
- If mother unable to express milk, supplement with pasteurized human donor milk.

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & other Healthcare Providers. 6th Ed. Institute for the Advancement & Lactation Education

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Note :

- "If the mother is able to express sufficient milk after nursing, this is not a delay in lactation, but rather, a situation where the infant is not transferring milk well.
- Infants who are not transferring well also need an evaluation by a lactation specialist".

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. p. 32. Institute for the Advancement of Breastfeeding and Lactation Education. <https://lacted.org/little-green-book-breastfeeding-management/>

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Supplementation

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Supplementation

- Any milk in addition to direct feeding at the breast
- Only if medically indicated (necessary)

Eglish et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers, 6th Ed. p. 32. Institute for the Advancement of Breastfeeding and Lactation Education. <https://lactand.org/little-green-book-breastfeeding-management/>

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Ten Steps to Successful Breastfeeding WHO/UNICEF, 2018, p. 25

"Mothers must also be supported and encouraged to express their milk to continue stimulating production of breastmilk, and to prioritize use of their own milk, even if direct breastfeeding is challenging for a period of time."

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WHO/UNICEF, 2018, p. 25

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Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated
(WHO/UNICEF, 2018, p.25)

Rationale: interferes with establishment of breastmilk production

Negative cycle

- Less vigorous suckling
- Inefficient stimulation of milk production
- Insufficient milk
- More supplementation
- Breastfeeding failure

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Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated
(WHO/UNICEF, 2018, p.25)

Rationale: interferes with establishment of breastmilk production

- Babies supplemented before discharge twice as likely to stop breastfeeding during first 6 weeks (DiGirolamo et al. 2008)
- Artificial milk alters intestinal microflora (Salvatori & Guaraldi, 2012)
- Foods and liquids may contain harmful bacteria and carry disease

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Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated (WHO/UNICEF, 2018, p.25)

Global standards:

- At least 80% of infants (preterm and term) received only breast milk (either from their own mother or from a human milk bank) throughout their stay at the facility.
- At least 80% of mothers who have decided not to breastfeed report that the staff discussed with them the various feeding options and helped them to decide what was suitable in their situations.

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Supplementation

Options

1. Mothers own expressed milk
2. Pasteurized donor milk
3. Hypoallergenic formula (extensively hydrolyzed – broken down)

Never supplement with water, sugar water, other animals' milk, or any other liquid.

Eglish et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & other Healthcare Providers. 6th Ed. Institute for the Advancement & Lactation Education

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Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated (WHO/UNICEF, 2018, p.25)

Global standards:

- At least 80% of mothers who have decided not to breastfeed report that the staff discussed with them the safe preparation, feeding and storage of breastmilk substitutes.
- At least 80% of term breastfed babies who received supplemental feeds have a documented medical indication for supplementation in their medical record.

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Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated (WHO/UNICEF, 2018, p.25)

Global standards:

- At least 80% of preterm babies and other vulnerable newborns that cannot be fed their mother's own milk are fed with donor human milk.
- At least 80% of mothers with babies in special care report that they have been offered help to start lactogenesis II (beginning plentiful milk secretion) and to keep up the supply, within 1–2 hours after their babies' births

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Possible Maternal Indications for Supplementation of Healthy Term Infant

Examples

- Delay in lactation (delayed secretory activation)
- Primary glandular insufficiency– also called primary lactation failure (incidence less than 5%)
- Temporary cessation of breastfeeding
 - Medications (for example, chemotherapy)
 - Temporary separation of mother and baby
- Insufficient milk (real, not "perceived")
- Maternal illness requiring separation

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Step 6: Supplementation
Baby Friendly Hospital Initiative (WHO/UNICEF, 2018, p.25)

- Step 6: Do not provide breastfed newborns any other food or fluids other than breastmilk unless medically indicated

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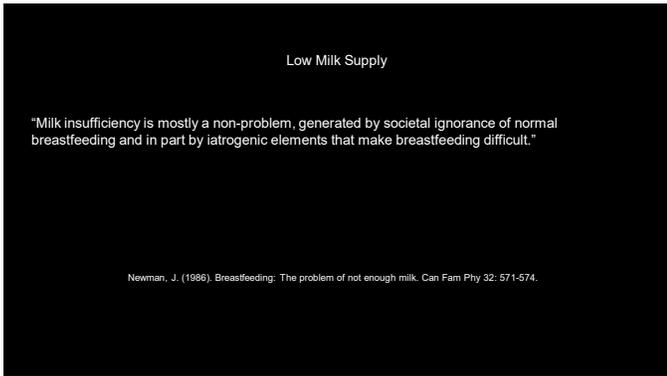
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Perceived Low Milk Supply

Mother interprets infant feeding behavior or breast changes as a loss of milk supply

- Examples
 - Feeding more frequently than expected
 - Infants with high suck need
 - Constant infant fussiness
 - Infant rejection of the breast
 - Decline in breast fullness after 2-4 months postpartum
 - Bottle preference

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Perceived Low Milk Supply

See a healthcare professional or lactation consultant

- Weigh the baby
- Observe a breastfeeding



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Real Low Milk Supply

Real Low Milk Supply – Examples of Prenatal Causes

- Insufficient glandular tissue (IGT) (breast hypoplasia) **Rare!**
 - Hormonal – placental hormones influence breast development and some conditions (like polycystic ovarian syndrome) may contribute to IGT
 - History of breast procedures
 - Anatomic

Eglish et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & other Healthcare Providers. 6th Ed. Institute for the Advancement & Lactation Education

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• Insufficient glandular tissue (IGT) (breast hypoplasia)!

May benefit from galactagogues

- Tubular breast (major or minor)
- Asymmetry (major or minor)



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Breast Reduction



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Real Low Milk Supply – Examples of Intrapartum Causes

- **Retained placental fragments:** prevents drop in progesterone, preventing lactogenesis II.
<https://www.babycentre.co.uk/a662148/retained-placenta>
- **Pituitary trauma** (Sheehan's syndrome):
 - Mother loses a life-threatening amount of blood
 - Causes lack of oxygen to pituitary gland (infarct) and tissue death
Pituitary gland produces little or no prolactin and oxytocin
<https://www.mayoclinic.org/diseases-conditions/sheehans-syndrome/diagnosis-treatment/drc-20351852>

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Real Low Milk Supply – Examples of Intrapartum Causes
真正的母乳供应量低—分娩期间原因的例子

- **Theca lutein cyst:** ovarian cyst secretes testosterone, inhibitor of lactation (Hoover et al. 2002)
- **Medications:** examples include decongestants, high dose steroids, postpartum progesterone for contraception (Eglash, 2017, IABLE)

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Real Low Milk Supply – Examples of Postpartum Causes

- **Lack of milk removal (most common)**
 - Results in build up of feedback inhibitor of lactation (FIL)
 - Tells lactocytes to decrease milk production
- **Examples**
 - Infrequent milk removal
 - Inadequate milk removal
 - Maternal medications

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Preventing Low Milk Supply

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Low Milk Supply Assessment

Primary low milk supply (less common): inability to fully lactate, problem with mother's body

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Some Causes of Primary Low Milk Supply

- Examples:
- Postpartum hemorrhage
 - Hypoplasia
 - Breast surgery
 - In vitro fertilization (IVF) conception

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Low Milk Supply Assessment

Secondary low milk supply ([more common](#))

- Occurs when a mother starts with a full supply or ability to make a full supply, but something occurs to interfere with normal production

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Some Causes of Secondary Low Milk Supply

- Pain medications during labor
- Interventions during labor
- No immediate skin to skin care
- Poor positioning and latch
- Imposed feeding schedule

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Strategies for Improving Milk Supply



- Refer to breastfeeding specialist
- Increase skin to skin
- Thorough and frequent milk removal
 - Breast compression while breastfeeding
 - Pumping or hand expression after feeding
- Discontinue pacifiers
- Mom and baby together

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Pumping both breasts at the same time



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Supplementation at the breast, if necessary

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Sore Nipples



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Preventing Sore Nipples

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Prevention!

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Preventing Sore Nipples

Examples

- Immediate skin to skin care
- Early and frequent breastfeeding
- Short intervals between feeds
- Position to increase success
- Effective latch
- Re-latch if painful
- Correct use of breast pumps
- What else?

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Preventing Sore Nipples

Avoid

- Supplements and pacifiers
- Nipple cleaning
- Moisture retention
- Soap and drying topical agents

Bathing with mild soap and water is recommended

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Sore Nipples: Anticipatory Guidance

What is "normal" nipple soreness?

Early postpartum sensitivity

- "30 second rule" 30
- Discomfort for 30 - 60 seconds until milk ejection reflex (MER)
- Peaks day 3 - 5
- Markedly improves as milk supply increases
- Resolves in 7 - 10 days

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Diagnosing Sore Nipples

- Direct assessment at the breast
- Visual assessment of nipple after feeding

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Management of Sore Nipples

- Research is not conclusive regarding the most effective management technique
- Many resolve with improved positioning, latch, and increased milk supply

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Management of Sore Nipples

"Insufficient evidence that glycerin gel dressings, breast shells with lanolin, lanolin alone, or all purpose nipple cream significantly improve mothers' perceptions of nipple pain"

Applying nothing or expressed breastmilk may be as effective as an ointment

(Dennis, 2014)

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Management of Sore Nipples

Acute phase: (newly acquired)

- Wound cleansing is standard first aid
- Wash hands first
- Gentle washing with mild soap and water (Mayo Clinic, 2016)
- Once per day to avoid drying
- Flush with water or saline after pumping (Fernandez, 2012)
- Air dry or gently pat dry
- Apply expressed breastmilk

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Management of Sore Nipples – Non-Healing Cracked Nipples

Bacteria? Fungus? Viral?

- Swab
- Culture

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Management of Sore Nipples – Non-Healing Cracked Nipples

All **P**urpose **N**ipple **O**intment (APNO)

- Antibiotic (mupirocin)
- Antifungal
- Steroid (anti-inflammatory)

More research needed – may not be better than lanolin barrier

May cause allergic reactions. Use only if recommended by a health professional/breastfeeding specialist; use sparingly and for a short period of time.

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Infected, Cracked Nipple – with Pus - Requires Medical Attention
(hydrogel dressings not appropriate on infected skin)

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Yeast Infection – Thrush

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Oral Thrush in a newborn – milk coating versus thrush

Thrush diaper rash

Maternal Yeast Infection

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White Tongue From Breastmilk

vs

Oral Thrush in Newborn

Maternal Yeast Infection (breast)

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Diaper Rash

vs

Thrush Diaper Rash

Management of Thrush (Yeast Infections)

Mother (physician consult only)

- Wash hands
 - Oral nystatin (USA)
- or
- Oral fluconazole, 200 mg daily, 7-10 days

Controversial: should mother and newborn both be treated?

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Management of Thrush (Yeast Infections)

- Nipple breakdown in the first few weeks postpartum is more likely to be from trauma or bacterial infection
- If infant has oral thrush, mothers should wash their nipples twice a day with mild soap and water; rinse nipples after feedings.

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Management of Oral Thrush (Yeast Infections) in Baby

- Clinician consult
- Oral nystatin (USA)
 - Miconazole oral gel (outside USA)
 - Continue breastfeeding
 - Not necessary to wash off breast
 - Reapply sparingly after feeding

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Allergic Reaction to Nipple Cream

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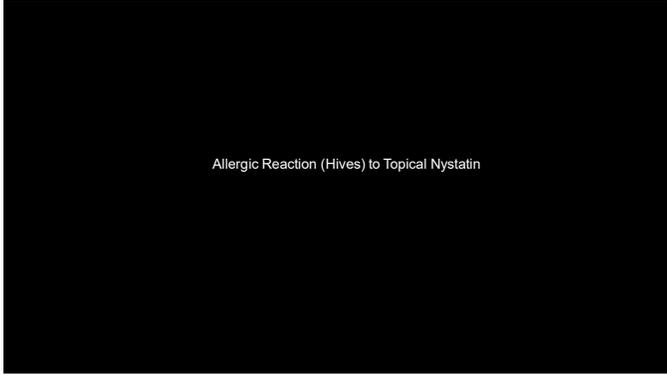
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Allergic Reactions

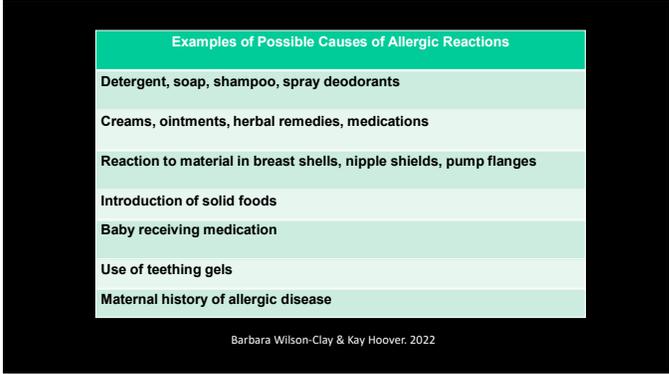
- Atopic dermatitis
- Can be mistaken for fungal (yeast) infection
- Consider dermatologist
- Short course of topical corticosteroid cream (use sparingly)

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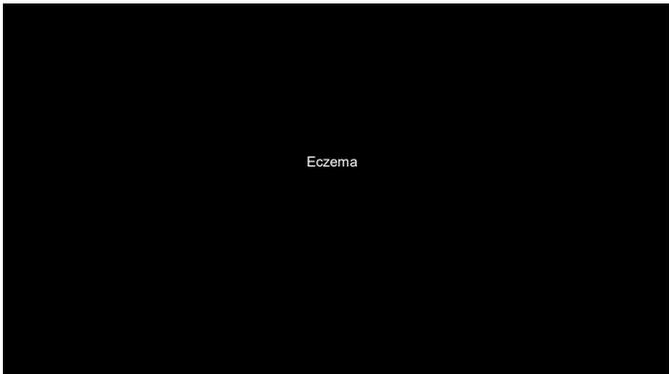
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Eczema

- Linked to family history of asthma
- Consult with dermatologist
- Communicate baby's clinician if mother using steroids
- Observe for infection due to broken skin

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Paget's Disease of the Nipple

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Paget's Disease of the Nipple

- Rare form of cancer
- Itching, tingling or redness of nipple and/or areola
- Flattened nipple
- Yellowish or bloody discharge from nipple
- Usually on one side
- Biopsy

Consider for unresolved dermatitis or eczema

Treatment: breast-conserving surgery (removal of nipple, areola, whole-breast radiation)

Source: National Cancer Institute <https://www.cancer.gov/types/breast/paget-breast-fact-sheet#1>

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Poison Ivy

Short term use of hydrocortisone cream and oral corticosteroids considered safe for breastfeeding mother

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White Spots on the Nipple: Non-Painful

- Not as symmetrical as a bleb
- May be associated with bites
- Cleanse
- Observe for signs of infection

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White Spots on the Nipple: Non-Painful

- Not as symmetrical as a bleb
- May be associated with bites
- Cleanse
- Observe for signs of infection

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Bleb
White Spots on the Nipple: Painful

May be blockage of milk duct opening and/or an inflammatory

- Painful
- White, clear, or yellow dot
- Do not attempt to remove "unroof" or probe

See a healthcare specialist to assess for inflammatory process and underlying conditions.



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Bleb
White Spots on the Nipple: Painful

If bleb leads to milk obstruction, apply HATI

H=heat (not moist)

A=Advil

T=Tylenol

I=Ice

Note: requires consult with clinician

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Vasospasm



- Constriction of blood vessels
- Nipple blanching (turning white)
- Painful (burning and stabbing)
- May be Raynaud's phenomenon (20% of women)
- Raynaud's not caused by breastfeeding

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Vasospasm

Strategies

- Keep nipples warm
- Apply dry heat over bra
- Avoid abrupt changes in temperature
- Use breast pads made of wool (if not allergic)
- Wear bra at all times
- Avoid caffeine and nicotine
- Carry baby skin to skin in a cloth carrier for additional warmth

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Gentle Squeezing to Promote Blood Flow

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Breast Pump Trauma

- Amount of suction
- Flange size



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Breast Pump Trauma

- Flange size
- Amount of suction

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Correct flange size

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Biting

- Eye contact
- "Don't bite"
- Remove from breast and put baby down
- Avoid yelling - can lead to sudden breast refusal (nursing strike)
- Risk of infection – broken skin
 - Cleanse with warm water and milk soap (no more than twice a day)
 - Antibacterial soap unnecessary!
 - See health care professional if increased pain

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Hormonal Changes

- Nipple tenderness before onset of period
- With pregnancy, diminished milk production
- Strong suction by toddler to compensate

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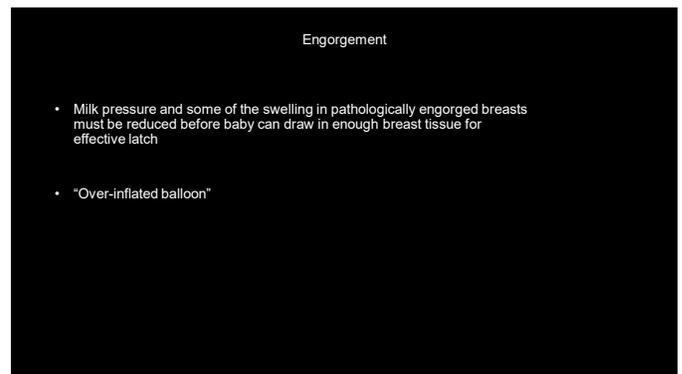
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Preventing Engorgement

Prevention

- Skin to skin
- Early initiation of breastfeeding
- Effective latch and positioning
- Frequent, unrestricted feedings
- Avoiding supplements
- Others?

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Engorgement

Physiology

- A fluid shift to the breasts during early postpartum in order to begin the process increasing milk production
- Increase in vascular supply (blood supply) as breasts undergo physiological changes required for milk production (lactogenesis II)
- Causes interstitial swelling (edema) in tissues that surround the glands and ducts
- Breasts feel full, warm, heavy

Egahn et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers, 6th Ed, p. 32. Institute for the Advancement of Breastfeeding and Lactation Education, <https://iabel.org/little-green-book-breastfeeding-management/>

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Engorgement

Physiology

- Milk production also may initially exceed infant's requirements
- If excess milk is not removed, alveolar space becomes over-distended
- Breasts feel hot, tender, swollen, painful breasts
- May be more severe in first time mothers

Egahn et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers, 6th Ed, p. 32. Institute for the Advancement of Breastfeeding and Lactation Education, <https://iabel.org/little-green-book-breastfeeding-management/>

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Engorgement

Examples of variables associated with severe breast engorgement include:

- No skin-to-skin care at birth
- Delayed initiation of breastfeeding
- Infrequent feeds
- Time-limited feeds
- Delayed onset of copious milk supply (lactogenesis II)
- Supplementary feeds
- Poor latch
- Poor positioning

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Engorgement

Treatment

1. Reduce swelling
2. Remove the milk

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Engorgement – Anticipatory Guidance

Mothers should be taught how to manage engorgement

Frequent nursing to prevent severe engorgement

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Engorgement

Enhancing milk removal

- Stimulate let-down
- Reduce inflammation
- Reduce vascular flow with cold - between feedings
- Improve vascular tone with heat - just before feedings (not all experts agree about use of heat)
- Reverse pressure softening

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Reverse Pressure Softening (RPS) to Reduce Areolar Edema (swelling)

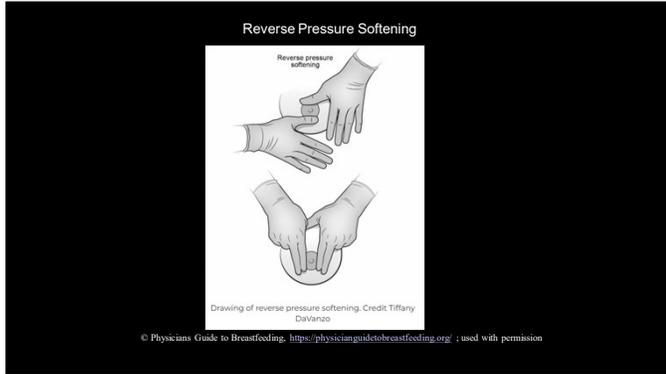
Shifts nipple and areolar edema

Allows nipple to protrude and enable deep latch

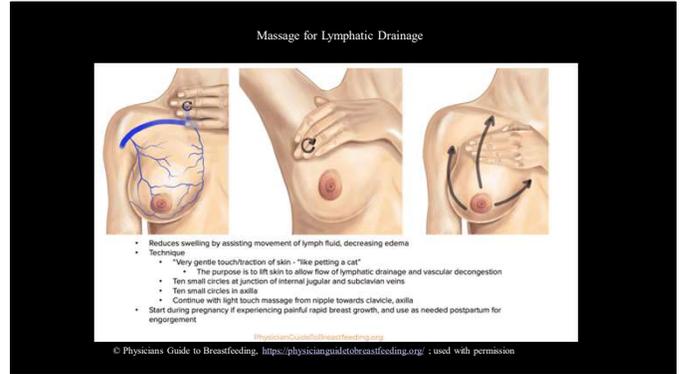
- Apply pressure on areolar tissue in a circle around the base of nipple
- Fingers or thumbs at base of nipple
- Press into breast tissue
- Hold for 1 minute
- Change position of fingers and repeat
- Latch
- Hand express or pump if baby cannot latch

(Another technique: https://www.youtube.com/watch?v=2_RD9HnOJ8)

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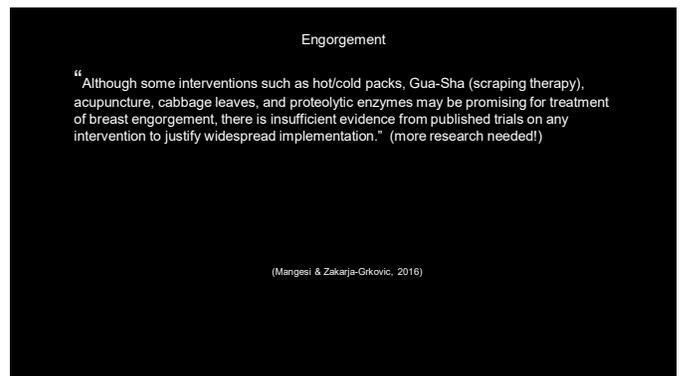
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134



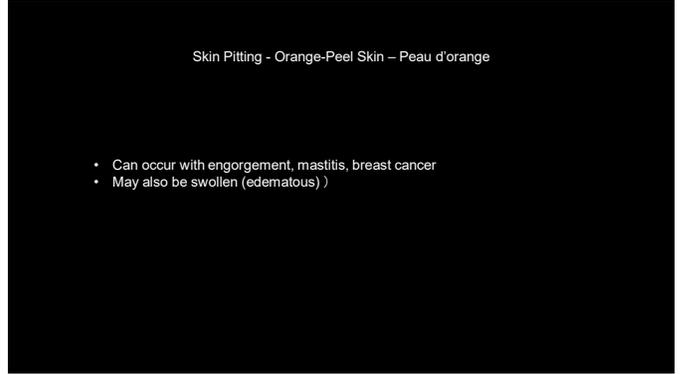
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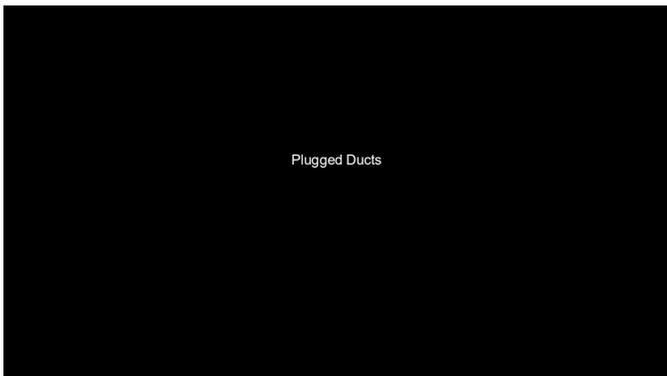
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137



138



139



140

Flat or Inverted Nipple
during pregnancy and after breastfeeding and pumping



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141

Plugged Duct

Cause

- Milk stasis

Symptoms

- Tender and lumpy area of breast
- Discomfort and engorgement in the non-draining lobe
- Typically no fever

Eglash et al., 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. IABLE, Barbara Wilson-Clay & Kay Hoover, 2022

142

Plugged Duct

Risk factors

High milk supply

- Irregular breast drainage – examples:
 - Schedule change due to work
 - Change in baby's sleep cycle
 - Nipple bleb

Eglash et al., 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. IABLE, Barbara Wilson-Clay & Kay Hoover, The Breastfeeding Atlas, 2022

143

Plugged Duct

Management

- Frequent nursing
- Breast massage
- Warm compresses
- Rest
- Fluids
- Consult clinician if not resolved in 3 days
- Educate about risk factors

Eglash et al., 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. IABLE, Barbara Wilson-Clay & Kay Hoover, The Breastfeeding Atlas, 2022

144

Recurrent Plugged Ducts

Consult with clinician about use of lecithin capsules 1200 mg, 4 times a day

Eglash et al. 2017, The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers, 6th Ed. IABLE; Barbara Wilson-Clay & Kay Hoover, The Breastfeeding Atlas

145

Mastitis

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146

Mastitis

- Prevention
 - Immediate and uninterrupted skin-to-skin care at birth
 - Frequent breastfeeding
 - Effective latch
 - Intact skin
 - Prevent sore nipples
 - Enhance milk flow
 - Early treatment of plugged ducts

147

Mastitis

- Definition controversial
- Inflammation?
 - Infectious process?
 - Breast as microbiome?

148

Mastitis

Risk factors

- Poor breastfeeding technique
 - Poor drainage of a duct
 - Insufficient emptying
 - Milk stasis
 - Cracks or fissures of nipple
- Lowered immune status due to stress or sleep deprivation

149

Mastitis

Risk factors

- Blocked ducts
- Stress (not predictive)
- Latch difficulties
- Tight, restrictive bra
- Nipple pain during feeding

150

Mastitis

Risk factors

- Previous history of mastitis
- Breast and nipple pain
- Cracks in nipple

151

Mastitis

Risk factors

- Nipple damage
- Milk oversupply
- Presence of *s. aureus* (staphylococcus aureus) on nipple or in milk
- Use of nipple shields



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Swelling (edema) from nipple shield

152

Mastitis

Subclinical

- Asymptomatic (no other symptoms) inflammation of mammary tissue.
- Low milk supply
- Low-grade breast pain
- Typically on one side (unilateral)

Note: more common with HIV

153

Mastitis

Clinical

- Breast pain
- Lumpy or reddened breasts
- Malaise
- Flu-like symptoms
- Fever may or may not be present
- Typically on one side (unilateral)

154

Mastitis

Continue nursing



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155

Mastitis

Treatment

- Keep milk flowing
- Manage plugged ducts
- Antibiotics (insufficient evidence)

156

Rapid or Forceful Milk Ejection Reflex (MER)

157

Milk Ejection Reflex (MER)

- MER triggered by
 - Skin to skin
 - Nipple stimulation
 - Thoughts of baby
 - Baby's scent
 - Baby crying

Wilson-Clay & Hoover, 2022

158

Rapid or Forceful Milk Ejection Reflex (MER)

- Symptoms
 - Seen with and without over milk supply
 - Fussing
 - Gulping
 - May choke or pull off breast
 - Colic symptoms linked to gulping
 - Appears distressed or anxious

Mom may think “not enough milk”

159

Milk Oversupply
(Excess milk Supply, Hyperlactation, Hyperglactia)

160

Milk Oversupply

Volume of milk exceeds infant's needs

161

Milk Oversupply

Examples of causes

- Excess stimulation (for example, pumping after nursing)
- Breast do not "down-regulate" to match their production to their baby's needs



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162

Milk Oversupply

Maternal symptoms may include:

- Breast fullness
- Frequent plugged ducts
- Recurrent mastitis
- Sore nipples due to infant pinching to slow milk flow

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians & Other Healthcare Providers. 6th Ed. IABLE

163

Milk Oversupply / Hyperlactation

Infant symptoms may include:

- Coughing and choking during milk ejection reflex
- Excessive weight gain
- Gas
- Frequent green, explosive (forceful) watery stools
- Breast refusal

Eglash et al. 2017

164

Strategies

Examples

- Refer to lactation specialist for individualized assessment
- Nurse in laid back position (infant on top to more easily manage fast flow)
- Nurse in prone position

Eglash et al. 2017; Physicians Guide to Breastfeeding.

165

Prone Positioning for Managing Milk Oversupply



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166

Strategies

Examples

- Block feeding to help down regulate milk production分
 - Use for mothers with large milk volume **and** large storage capacity (more than 120 ml per breast)
 - Offer only 1 breast for a 3 hour time block
 - Offer only 2nd breast for 3 hour time block
 - If breast becomes uncomfortably full, express small amount for comfort

Consult breastfeeding medicine specialist or lactation specialist if not resolved for other strategies

Eglash et al. 2017

167

Dysphoric Milk Ejection Reflect (D-MER)

168

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

- Abrupt dysphoria (negative emotions) that occur just before milk release
- "Sadness when breastfeeding"
- Physiologic response (not psychological response)

169

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

- D-MER is not:
 - Psychological response to breastfeeding
 - Postpartum depression
 - Dislike of breastfeeding
 - Impatience with baby

170

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

- Abrupt negative emotions 30 seconds to 2 minutes before letdown
- May feel normal after first letdown
- May continue for all letdowns
- May or may not experience with pumping

171

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

Background

- Oxytocin rises as milk is release
- Dopamine drops and prolactin rises to make milk

D-MER:

- Negative emotions (dysphoria) linked to inappropriate drop in dopamine as milk
- Typically subsides after breastfeeding (average 30 minutes)

172

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

- Mild (corrects after 3 months)
- Moderate (corrects after 9 months)
- Severe (does not correct)

173

Dysphoric Milk Ejection Reflect (D-MER)
d-mer.org

Management

- Education
- Tracking (what makes it worse) and what makes it better

174

Refer to a breastfeeding specialist, if necessary!

175

Infant Focused Breastfeeding Concerns



176

A Reminder of What is Normal

Educate family about:

- Normal infant states
- Normal feeding
- Nocturnal behavior
- Nighttime feeding
- Cluster feedings
- Growth spurts



177

First Day Sleep Patterns

Time	Description
Birth – 2 hours	Alert and eager
2-20 hours	Light and deep sleep
20-24 hours	Increasing wakefulness

Often includes 5-10 feedings during a 2-3 hour period, followed by 4-5 hours of deep sleep.

178

Sleepy Baby

179

Sleepy Baby

180

Possible causes of sleepiness in a term baby

181

Possible causes of sleepiness in a term baby

- Individual patterns
- Birth
- Labor medications
 - Sleepy
 - Disorganized
 - Moves quickly from deep sleep to wide awake to crying
- No skin-to-skin contact immediately after birth
- Postpartum pain medications (not as common)

182

Possible causes of sleepiness in a term baby

- Examples
- Painful procedures
 - Jaundice
 - Late preterm
 - Preterm
 - Small for gestational age

183

Sleepy - What Might Help

- Accurate information to parents
- Excellent labor support and healthy birth practices
- Immediate and ongoing opportunities for skin-to-skin care
- Rooming-in
- Delay of circumcision
- Anesthesia for circumcision

184

Strategies to Wake a Sleepy Baby

Mother decides what works for her baby

- Unwrap or undress
- Skin to skin
- Hand express a few drops of breastmilk
- Use breast compression to increase milk transfer
- Reduce distractions
- Light cover over mother and baby (avoid swaddling)
- Gently roll from side to side on flat surface
- Light stroking

185

Fussy Baby

186

Fussy Baby

- Reason many women choose to supplement
- Anticipatory guidance
 - Growth spurts
 - Temporary state-control issues
 - Clustered feeding

187

Fussy Baby - What Might Help

- Accurate information to parents
- Excellent labor support and healthy birth practices
- Immediate and ongoing opportunities for skin to skin care
- Rooming-in
- Delay of circumcision
- Anesthesia for circumcision

188

Colic versus Excessive Fussiness

- Colic
- Pattern of fussiness
 - Crying 3 or more hours, for 3 or more days a week, or at least 3 weeks.
 - Typically same time each day
 - Hard to soothe
 - Often nurse more often
 - Can occur from about 2 weeks to 4 months of age
 - Prevalence similar among all methods of feeding

Eglish et al. 2017, p.76; Wilson-Clay & Hoover, 2022

189

Excessive Fussiness

- Excessive fussiness (24 hours) may indicate a health problem
- Intestinal upset
 - Ear pain
 - Heartburn
- Maternal diet may contribute (rare)

Eglish et al. 2017, p.76;

190

Colic hold helps draw baby into flexion

191

Hypersensitive or Hyper-Aroused Baby

- Babies who have difficulty transitioning smoothly between states
- What might help?
 - Positions that help baby to be organized
 - Reduce external stimuli (for example, dimming lights)
 - Firm touch Rhythmic movement

Note - swaddling may be associated with sudden infant death syndrome (Peeke, 2016)

192

Jaundice (Hyperbilirubinemia) in the Newborn

193

Academy of Breastfeeding Medicine

#22 Guidelines for Management of Jaundice in the Breastfeeding
Infant 36 Weeks or More of Gestations (2017)

194

Bilirubin

Physiology overview

2 types of bilirubin

- **Conjugated**, water-soluble
 - Excreted by kidneys into the urine
- **Unconjugated**, lipid-soluble
 - Excreted by the liver into the bile through the bowel
 - Causes yellowish appearance

195

Hyperbilirubinemia in the Newborn

"Virtually all newborns have some elevation of their total serum bilirubin (TSB), based on 3 factors"

1. Increased bilirubin production caused by breakdown (degradation) of excess red blood cells (producing unconjugated bilirubin)
2. Decreased uptake and conjugation of bilirubin due to immature liver
3. Increased intestinal reabsorption of bilirubin

Academy of Breastfeeding Medicine. 母乳喂养医学会(2017). Protocol #22

196

Hyperbilirubinemia in the Newborn

More than 80% of newborns appear jaundiced in first week of life
Varies by racial and sociocultural population

Academy of Breastfeeding Medicine. (2017). Protocol #22

197

Breastfeeding and Jaundice

Academy of Breastfeeding Medicine (ABM) (2017)

Feeding Method	Amount first 24 hours of life	Physiologic Feeding
Breast	<ul style="list-style-type: none"> • 1-5 ml per feeding • 5-37 ml per 24 hours 	Yes
Formula	<ul style="list-style-type: none"> • 27 ml per feeding • 150 ml per 24 hours 	No

198

Jaundice

Influencing factors

- Physical status of infant
- Prenatal maternal factors
- Race and ethnicity (e.g., East Asian)
- Hospital routines and feeding practices

199

Hyperbilirubinemia in the Newborn

Bilirubin is an antioxidant and may protect infants from hyperoxygenic environment after birth (compared to uterine environment)

Academy of Breastfeeding Medicine. (2017). Protocol #22

200

Neonatal Jaundice (Early Onset Jaundice)

- Onset after 24 hours
- Affects all newborns
- Peaks day 3-4
- Exaggerated in babies who receive limited feedings and non-milk supplements

201

Suboptimal Intake Jaundice

("Not enough breastmilk jaundice")

202

Suboptimal Breastmilk Intake Jaundice

Prevention: maximize intake and stimulate milk production

203

Suboptimal Intake "Jaundice"

Prevention

- Initiation of breastfeeding within first hour of life
- Continuous rooming-in
- Responding to feeding cues
- Unlimited time at each breast
- 10-12 feedings starting on first day



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204

Suboptimal Intake Jaundice

Prevention

- Avoid of supplementation
- Evaluate breastfeeding effectiveness

205

Suboptimal Intake Jaundice

Prevention

- Early formal evaluation of breastfeeding effectiveness
- Correct breastfeeding problems

206

Suboptimal Intake Jaundice

Early weight loss of greater than 5-7% in breastfed babies suggests that breastfeeding may not be going well.

207

Suboptimal Intake Jaundice

- "Breastfed babies have a higher risk of excessive weight loss and lack of sufficient calories during the first week postpartum"
- Lack of sufficient calories increases unconjugated bilirubin
- Unconjugated bilirubin reabsorbed in intestines
- Increasing calories with increased stooling helps resolve hyperbilirubinemia

Eglash et al. 2017, p. 29

208

Kernicterus (bilirubin encephalopathy)

Most concerning outcome of hyperbilirubinemia

Rare, preventable brain damage in newborns with jaundice

209

Suboptimal Intake Jaundice and Breastmilk Jaundice
Academy of Breastfeeding Medicine (ABM) (2017) p.251

	Time	Weight	Stool	Urine	Clinical Description
Suboptimal intake jaundice	Onset 2-5 days of age; usually resolved by 2 weeks	Ongoing weight loss	Fewer than 5 per day with color black, brown, or green	Fewer than 5 per day with uric acid crystals (brick color)	Often < 38 weeks and rarely 40 or more weeks gestation; may be fussy and difficult to settle between feedings and difficult to wake for feedings
Breastmilk jaundice	Onset 2-5 days of age and may last up to 3 months	Gaining 30 or more grams a day	8 or more yellow color	8 or more yellow or clear color	Waking to feed 8 to 12 times a day or more

210

Identifying jaundice – press on the skin and observe underlying skin tone
Note: visual inspection unreliable of estimating bilirubin levels – need serum levels

Head to foot progression (cranio-caudal) **typical**

211

Traditional phototherapy and fiberoptic bili blanket (portable phototherapy)

212

Evidence-Based Strategies to Prevent or Ameliorate Jaundice in Breastfed Infant

- Initiate early breastfeeding (first hour)
- Encourage frequent exclusive breastfeeding
 - 8-12 or more times a day
 - Hand expression or pumping for at risk babies
- Optimize early breastfeeding management
 - Skin to skin – immediate and often
 - Positioning, effective latch, milk transfer
- Educate on early feeding cues
- Identify at risk mothers and infants
- Supplement only with mothers own expressed milk (with few exceptions)
- If discharged in less than 72 hours, see clinician within 2 days
- Other management recommendations vary by country

ABM, 2017

Mothers At Risk for Hyperbilirubinemia

Examples

- Diabetes
- Rh sensitization
- Family history of jaundiced infants
- Mothers of infants at risk for suboptimal intake
 - First time mothers
 - Cesarean surgery
 - Maternal body mass index of 27 kg/m² or higher

ABM, 2017

213

214

Infants At Risk for Hyperbilirubinemia

Pathologic conditions (rare)

- Onset \leq 24 of age (24 hours or before)
- Causes include
 - Diseases that cause hemolysis of red blood cells
 - Prematurity, sepsis
 - Liver and metabolic diseases
 - Rh or ABO hemolytic disease Rh或ABO
 - Glucose-6-phosphate dehydrogenase (G6PD)

ABM, 2017

Infants At Risk for Hyperbilirubinemia

Single most important clinical risk factor for hyperbilirubinemia in newborn gestational age (gestation prior to 40 weeks)

ABM, 2017

215

216

Infants At Risk for Hyperbilirubinemia

Examples

- East Asian newborns
- Bruising (for example, from forceps, vacuum extractor)
- Cephalohematoma

ABM, 2017

217

Breastmilk Jaundice

218

Breastmilk Jaundice

Prolonged jaundice in **healthy newborns** associated with breastmilk feeding

- Unconjugated hyperbilirubinemia extends in to 2nd and 3rd week
- May continue for 2-3 months

ABM, 2017

219

Breastmilk Jaundice

- "Breastmilk jaundice is a condition that starts as an exaggerated early physiologic jaundice in the first week of life." (mechanism not confirmed)

Eglash et al. 2017

220

Breastmilk Jaundice

Healthy, thriving infant with no other cause for jaundice

221

Hypoglycemia

222

- Hypoglycemia Prevention
- Early, exclusive breastfeeding
 - Thermal protection – dry newborn well and place directly onto mom’s skin
 - Avoid maternal-infant separation until successful latch

223

- Hypoglycemia Prevention
- Feed at earliest hunger cue
 - Frequent suckling

224

Hypoglycemia
低血糖

"Newborn infants have lower blood glucose values in the first hours after birth compared to older children and adults.

These values spontaneously increase in most infants after 2 or 3 hours." (p.155)

Thompson-Branch & Havranek. (2017). Neonatal hypoglycemia. Pediatrics in Review, 38(4), 147-157 DOI: 10.1542/pir.2016-0063

225

Hypoglycemia

- **Transient hypoglycemia** in the first hours after birth is common, occurring in almost all mammalian newborns.
- **"No evidence** that hypoglycemic infants with no clinical signs benefit from treatment."

Academy of Breastfeeding Medicine, p. 173

226

Hypoglycemia

- **Hypoglycemia:** low blood glucose concentration
- **Clinically significant hypoglycemia:** reflects an imbalance between the supply and utilization of glucose and alternative fuels and may result from several disturbed regulatory mechanisms.
- "Transient low blood glucose levels in the first two hours after birth are common....and is usual self-limited, asymptomatic, and considered part of adaption to postnatal life.....and stabilizes by 3 hours of live." ABM, 2021, p. 1

"As of 2020, there is still, significant dispute over the definition and the number."
Academy of Breastfeeding Medicine, 2021

227

Hypoglycemia

- "Routing blood glucose screening healthy newborns is not indicated .
- Healthy, term, low risk newborns do not develop clinically significant hypoglycemia due to limited duration or frequency of breastfeeding.
- Evidence shows that routine screening blood sugar testing for healthy infants can lead to negative consequences for breastfeeding."

Eglash et al. 2017, p. 31

228

Examples of Babies at Risk for Hypoglycemia

- Small for gestational age (less than 10th percentile for weight)
- Large for gestational age (greater than 90th percentile for weight and macrosomic appearance)
- Low birth weight (less than 2,500 grams)

Eglash et al. 2017, p. 31

229

Examples of Babies at Risk for Hypoglycemia

- Low birth weight (less than 2,500 grams)
- Infants of diabetic mothers
- Prematurity (less than 35 weeks, late preterm with poor feeding or other clinical signs)
- Discordant twin (10% or less than larger twin)

Eglash et al. 2017, p. 31

230

Hypoglycemia

Healthy, term, low risk newborns do not develop clinically significant hypoglycemia due to limited duration or frequency of breastfeeding." p.31

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians and Other Health Professionals. IABLE

231

Hypoglycemia

Transient neonatal hypoglycemia is a common phenomenon in the 48 hours after birth in healthy term infants and may be an evolutionary adaptation, as this is observed in all mammalian species, p. 154).

Thompson-Branch & Havranek. (2017). Neonatal hypoglycemia. Pediatrics in Review, 38(4), 147-157 DOI: 10.1542/pir.2016-0063

232

Hypoglycemia

- "...routine blood sugar testing for healthy infants can have negative consequences for breastfeeding." p. 31

Examples of newborn risk factors for which screening is recommended:

- Small for gestational age
- Infants of diabetic mothers
- Large for gestational age
- Prematurity

Continue breastfeeding if an asymptomatic infant requires treatment

Eglash et al. 2017. The Little Green Book of Breastfeeding Management for Physicians and Other Health Professionals. IABLE

233

Hypoglycemia

Management

- Identify at-risk neonates
- Initiate early feeding
- Assess mother's milk supply and infants feeding ability
- Provide breastfeeding support
- Urgent evaluation and treatment of symptomatic infants

Thompson-Branch & Havranek. (2017). Neonatal hypoglycemia. Pediatrics in Review, 38(4), 147-157 DOI: 10.1542/pir.2016-0063

234

Multiple Births

Multiple Births

Examples of issues contributing to early cessation of breastfeeding:

- Birth interventions
- Risk of maternal complications (for example, pre-eclampsia)
- Time
- Lack of ongoing lactation support leading to inadequate milk supply
- Burden of milk expression
- Fatigue
- Prematurity

Wilson-Clay & Hoover, 2022

235

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Twins

Mothers of twins need to produce twice as much milk (1620 ml / 54 ounces in 24 hours)

- Babies may be unable to transfer sufficient milk
- Combine pumping and hand expression to build supply
- Transition to direct breastfeeding is easier with adequate milk supply

Wilson-Clay & Hoover, 2022

237

Sequential versus Simultaneous Breastfeeding

Encourage sequential at first

- Newborns need more postural support
- Small, immature, weak infants need careful position

Simultaneous as babies grow

Wilson-Clay & Hoover, 2022

238

Discordant Twins

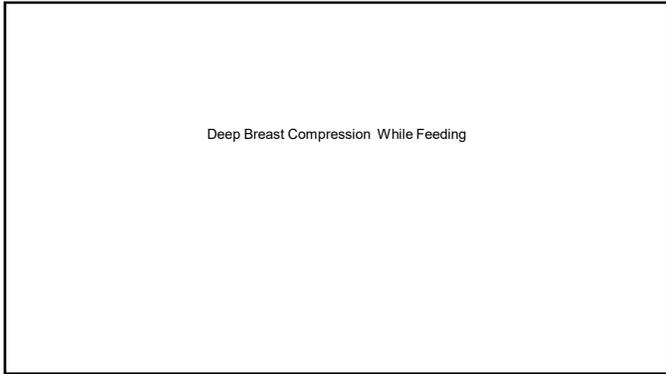
- Each baby should have opportunity to nurse from each breast to avoid under stimulation
- Switch during feeding or alternate breasts at next feeding

Eglash et al. 2017, p. 31

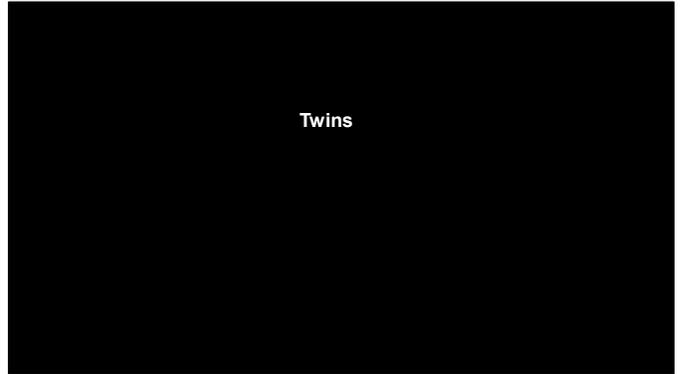
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Breast Compression While Feeding

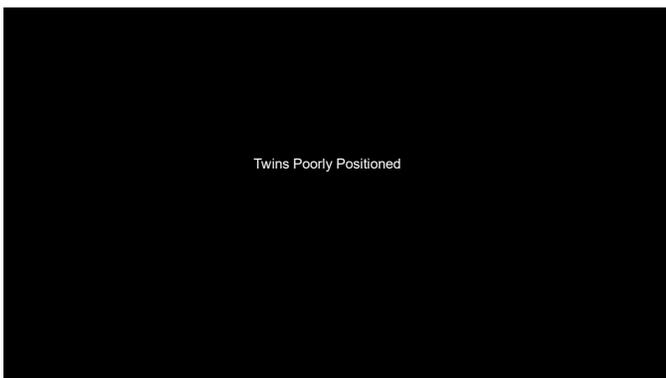
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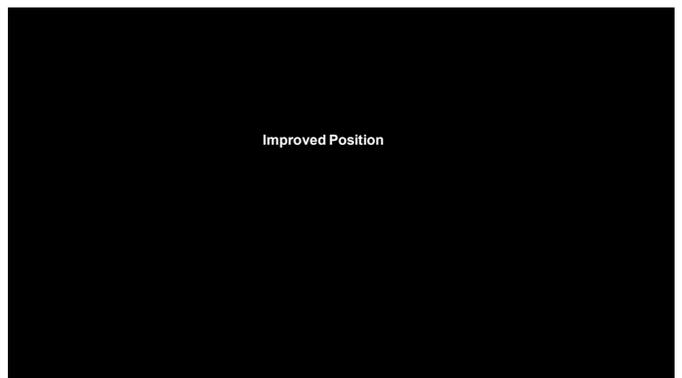
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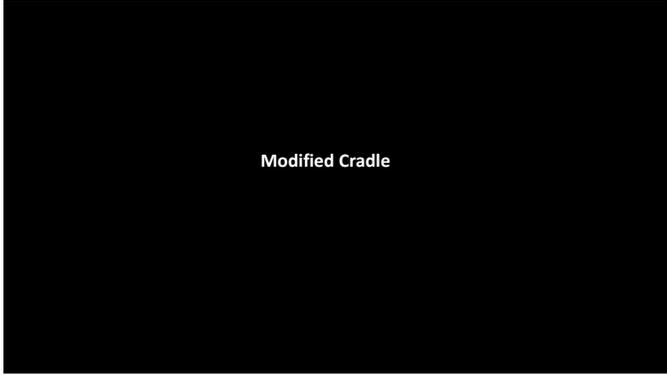
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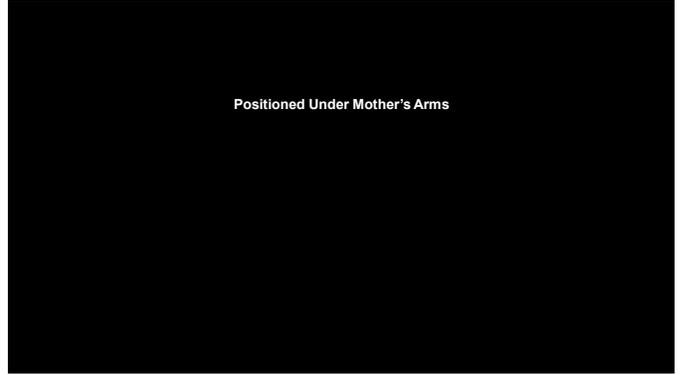


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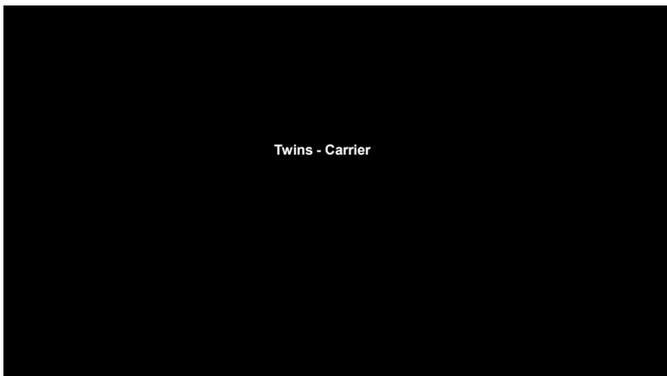
Modified Cradle

245



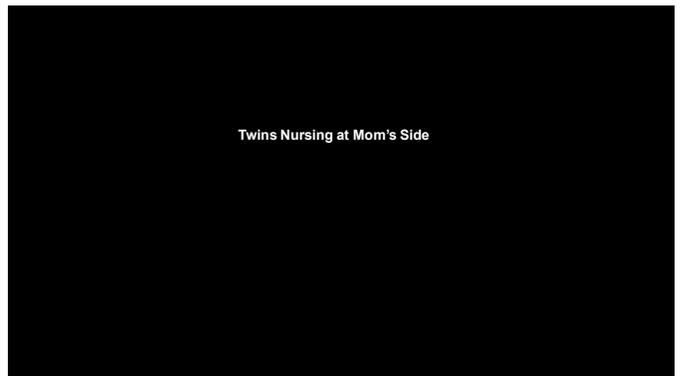
Positioned Under Mother's Arms

246



Twins - Carrier

247



Twins Nursing at Mom's Side

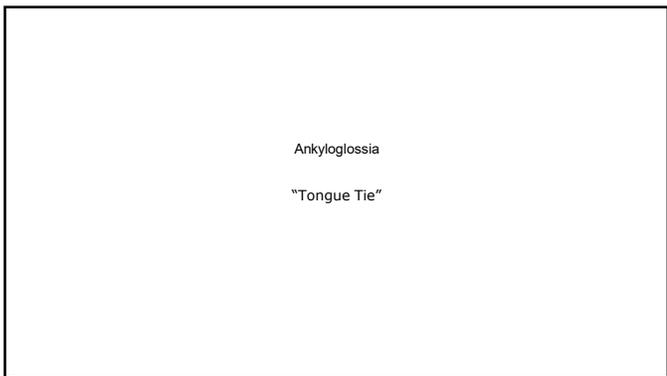
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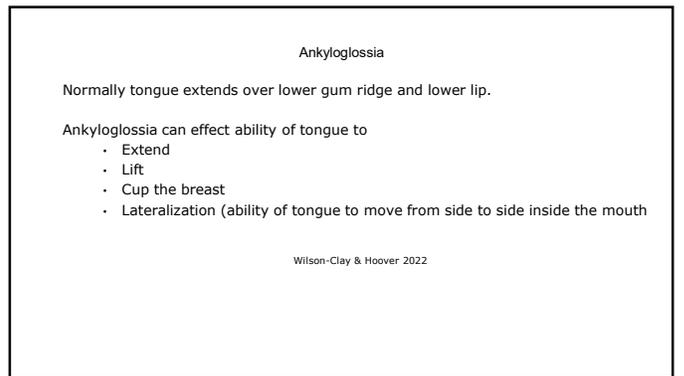
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250



251



252

Ankyloglossia

- Congenital (runs in families)
- 2-10% of infants 2-10%
- More common in females

Wilson-Clay & Hoover, 2022

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Ankyloglossia "

Second most common cause of nipple pain (Kent, 2015)

254

Normal tongue cups and extends beyond gum ridge

255

Normal infant tongue can lift to upper gum ridge

256

Normal lateralization in infant

257

Normal range of motion – tongue lift in adolescent

258

Normal lateralization and limited ability to lateralize in adolescent

259

Ankyloglossia

"Lack of universally accepted, standardized diagnostic procedures."

Wilson-Clay & Hoover, 2022

260

Ankyloglossia *

Examples: Criteria for recommending release of tongue

- Breastfeeding difficulty
- Atypical swallowing
- Difficulty licking upper and/or lower gum ridge
- Difficulty lifting tongue to upper gum ridge while mouth is open wide
- Distorted tongue shape / notched tongue tip

Oilvi (2012)

261

Ankyloglossia

- Lingual frenulum – mucous membrane connecting underside of tongue with floor of the mouth

- Membrane is short, fibrous, tight, or positioned too far forward
- Affects oral function
- Limits normal tongue range of motion
- May affect formation of oral palate

Wilson-Clay & Hoover, 2022

262

Ankyloglossia *

- Anterior lingual frenulum (tongue tie)
 - visible
 - thin or thick frenulum (tissue) that attaches underside of tongue to floor of mouth
 - limits tongue movement

Eglash et al. 2017. TABLE

263

Ankyloglossia

- Posterior lingual frenulum (tongue tie)
 - Not always visible
 - Can be felt
 - Feels like base or pump at base of tongue
 - Not as likely to need clipping

Eglash et al. 2017. TABLE

264



265

Ankyloglossia "Tongue Tie" and Breastfeeding

- Slide off breast frequently
- Difficult sustaining suction to create seal
- May compress or bite base of nipple
- Nipple farther from juncture of hard and soft palate
- Nipple damage

Wilson-Clay & Hoover, p. 144

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Breastfeeding the tongue-tied baby

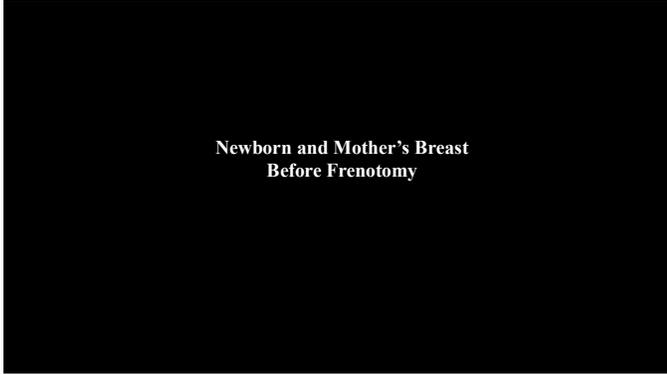
- Evaluate baby's latch and positioning
- Recommend consultation with specialist

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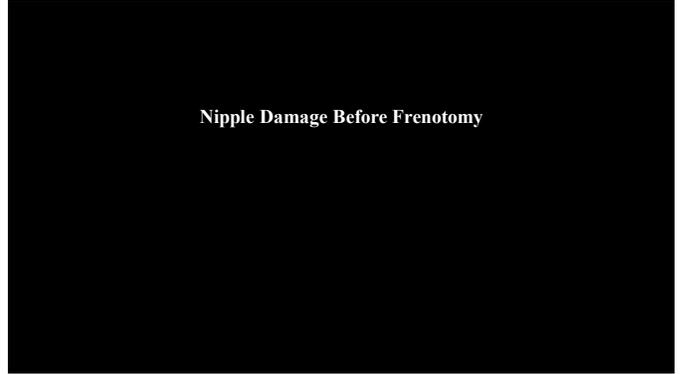
Breastfeeding the tongue-tied baby

- Monitor weight gain

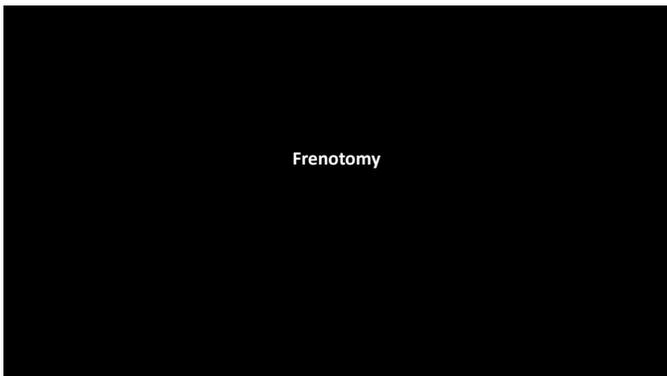
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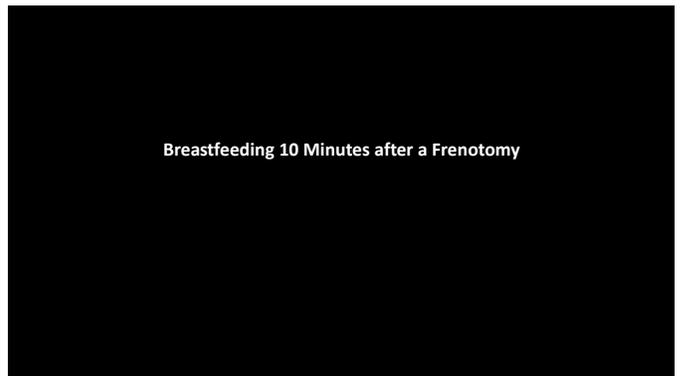
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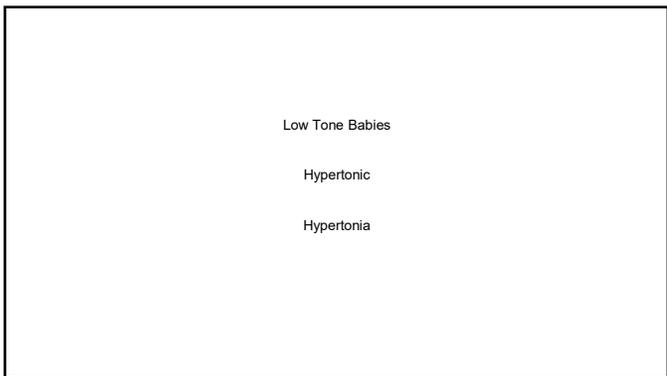
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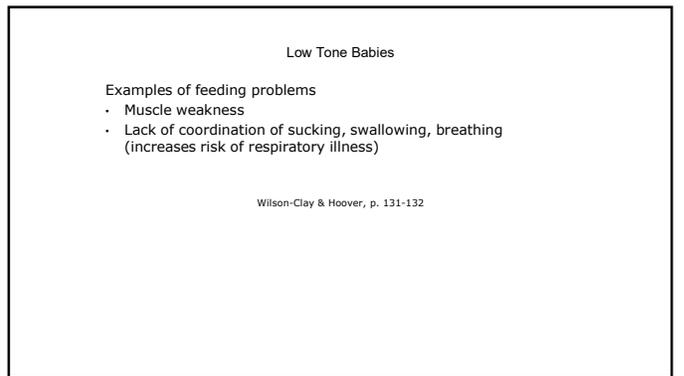
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Supporting the Low Tone (Hypotonic) Baby

Feeding

- External pacing techniques
- Avoid hyper-flexing or hyper-extending neck
- Use positions that stabilize
- Allow baby to come off breast during the milk ejection reflex if strong

Wilson-Clay & Hoover, 2022

Supporting the Low Tone (Hypotonic) Baby

(Academy of Breastfeeding Medicine (2016) (母乳哺育医学学会 (2016))

Examples

- Early feeding
- Skin to skin care
 - Mom alert
 - Infant's face uncovered
- Dancer's hold position

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Asleep - Normal Tone

Asleep - Low Tone

Deep sleep with poor facial tone

©Barbara Wilson-Clay & Kay Hoover; The Breastfeeding Atlas; Used with permission

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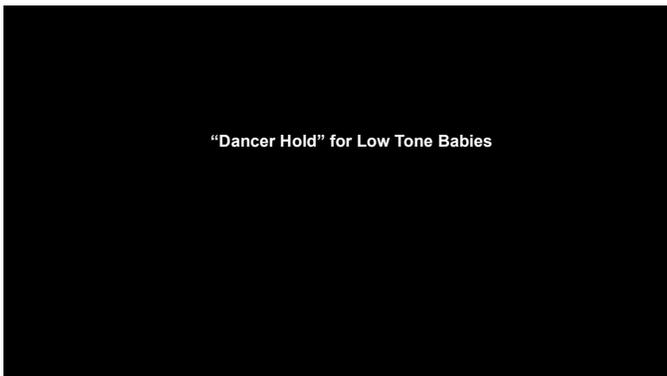
281

Supporting the Low Tone (Hypotonic) Baby
(Academy of Breastfeeding Medicine (2016) (2016))

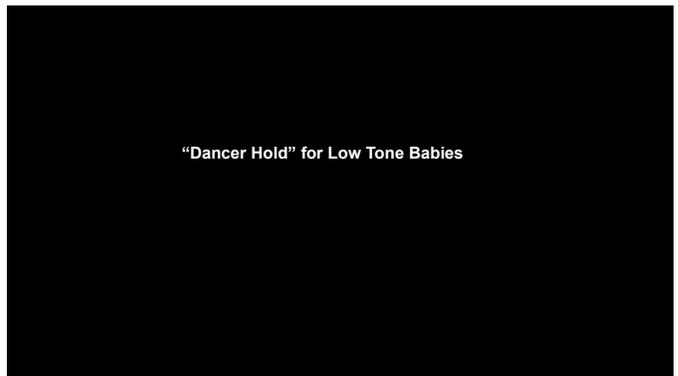
Examples

- Breast compression during feeding
- Patience with longer feeds
- Breastfeeding compression during feedings

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Low Tone – tongue-tip elevation on day 4

285

Supporting the Low Tone (Hypotonic) Baby

(Academy of Breastfeeding Medicine (2016) (母乳哺育医学学会 (2016))

Examples

- Appropriate supplementation using alternative feeding methods
- Milk supply protection with pumping and hand expression after feeding
- Breastfeeding compression during feedings

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Low Tone – tongue-tip elevation on day 4

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Breastfeeding the tongue-tied baby

- Monitor weight gain

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Supporting the Low Tone (Hypotonic) Baby
(Academy of Breastfeeding Medicine (2016))

Examples

- Breast compression during feeding
- Patience with longer feeds
- Milk supply protection with pumping and hand expression after feeding
- Appropriate supplementation using alternative feeding methods

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Paced Feeding
 (External Pacing Technique)

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Paced Bottle Feeding
 (External Feeding)

- Technique for infants with difficulty maintaining respiratory stability during feeding
- Recommended by speech-language pathologists and occupational therapists

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Paced Bottle Feeding
 (External Feeding)

- Observe baby closely
- Count sucks and swallows
- Interrupt fluid delivery if no breath in 3 – 5 sucks

(Law-Morstatt, 2003)

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Paced Bottle Feeding
(External Feeding)

- Hold fluid horizontally in bottle to slow rate of transfer
Withdraw bottle every 3-4 sucks
- Rest nipple on lip (do not remove teat from mouth)
- Watch for cue that baby is ready to suck and swallow again

(Law-Morstatt, 2003)

293

Paced Bottle Feeding
(External Feeding)

- Withdraw bottle every 3-4 sucks
- Rest nipple on lip
- Watch for cue that baby is ready to suck and swallow again

(Law-Morstatt, 2003)

294

Alternate Feeding Methods

"The main advantage of supplementing without a bottle is the nonverbal message to parents that the alternative method is temporary." (Wight, 2001)

More research needed

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The Hypersensitive Baby 高度敏感的宝宝

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Hypersensitive Baby
(Wilson-Clay, 2022)

Often have trouble transitioning between states and do not tolerate distractions

- Calm baby
- Decrease external stimuli
 - Dim lights
 - Create quiet environment
- Firm touch (to reduce stress reactions)
- Rhythmic rocking
- Swaddling may help (avoid prolonged, tight, straight-leg swaddling)

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Hypersensitive (Hyper-Aroused) Baby
(Wilson-Clay 2022)

- May breastfeed best when warm, drowsy, relaxes
- Swaddling may soothe
- Decrease external stimuli
 - Dim lights
 - Create quiet environment
- Firm touch (to reduce stress reactions)
- Rhythmic rocking

- Skin to skin care
 - Mom alert
 - Infant's face uncovered
- Dancer's hold position

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Hypertonic (Hypertonia)
High Muscle Tone

299

Excessive lip tone – “purse string lips”

300

Hypertonicity

301

Cleft Defects

- Risk of early failure to thrive (FTT) common – due to feeding difficulties
- Linked to type of cleft defect

302

Cleft Lip

<https://www.youtube.com/watch?v=PIKgbCUTOWE>

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Complete Cleft Lip

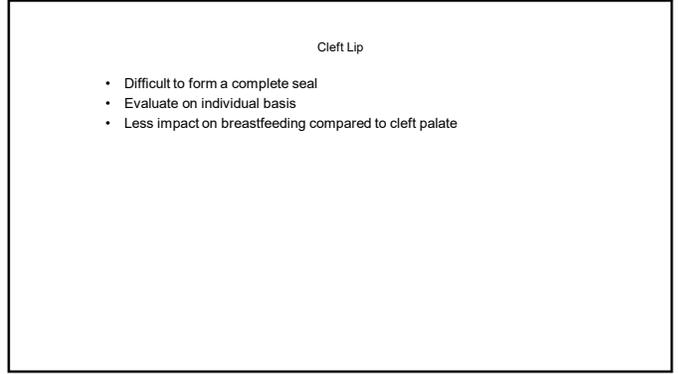
- Extends from lip to nasal cavity
- Harder to seal

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Complete Cleft Lip (also has cleft palate)

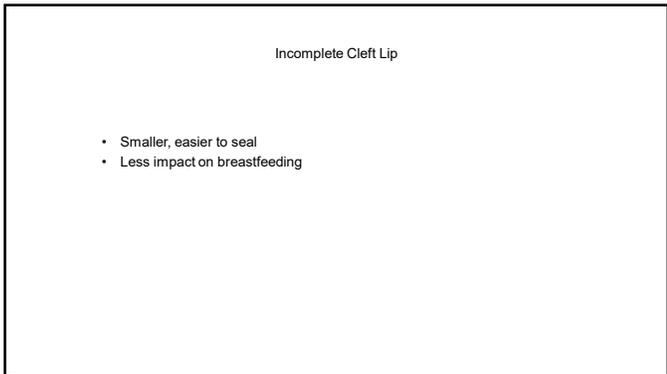
305



Cleft Lip

- Difficult to form a complete seal
- Evaluate on individual basis
- Less impact on breastfeeding compared to cleft palate

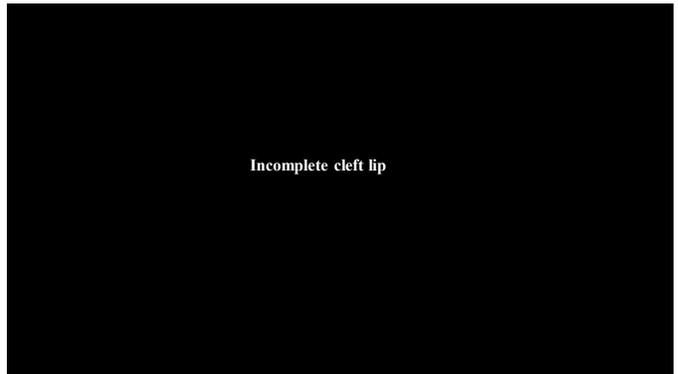
306



Incomplete Cleft Lip

- Smaller, easier to seal
- Less impact on breastfeeding

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Incomplete cleft lip

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Cleft Lip

Breastfeeding

- Soft tissue of breast may fill opening
- Helps create suction
- Mother can hold figure over cleft
- Listen for swallowing
- Weight evaluation

Source: Seattle Children's Hospital
<http://www.seattlechildrens.org/clinics-programs/craniofacial/patient-family-resources/cleft-feeding-instructions/>

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Incomplete cleft lip

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Teacup hold to plug gap and to help form a seal

311

Teacup hold - also can be used for inverted nipple – inverted nipple hold

312

Cleft Lip Surgical Repair

- Typically within days, weeks or months depending on size of baby
 - Early repair – at or before 3 months
 - Late repair – at or after 6 months
- After surgery
 - Minimize crying
 - Breastfeeding may not cause wound damage to wound

313

Early repair of cleft lip

314

Cleft Palate

- Small clefts may also cause significant feeding difficulties including inability to create suction
- Repairs between 6-32 months

315

Cleft Palate

- Express breastmilk
- May not be able to create suction for breast or bottle
- May need special bottles or feeders
- One-way valves helps to create suction
- Helps create suction
- Feed in semi-upright positions
- Weight evaluation

Source: Seattle Children's Hospital
<http://www.seattlechildrens.org/clinics-programs/craniofacial/patient-family-resources/cleft-feeding-instructions/>

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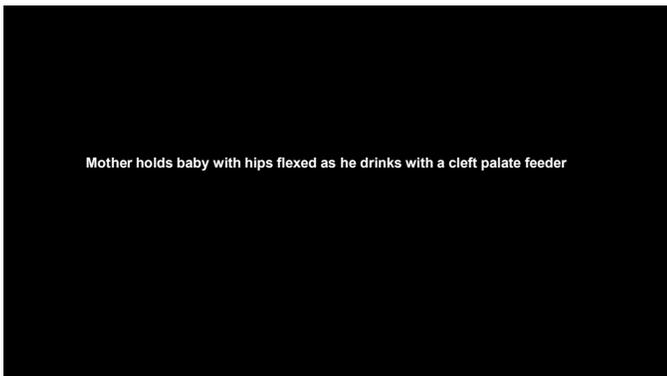
Cleft of the soft palate

317



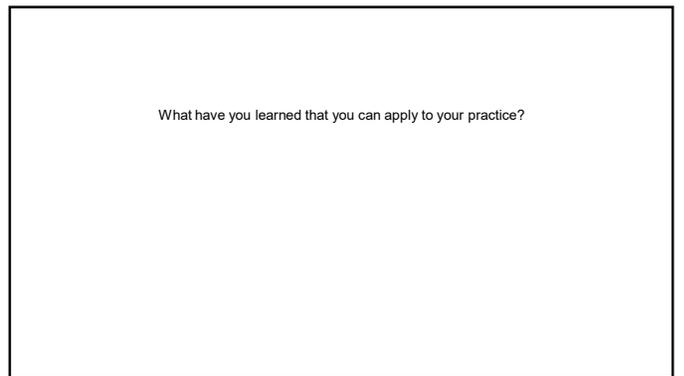
Mother holds baby close to naked breast as he drinks with a cleft palate feeder

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Mother holds baby with hips flexed as he drinks with a cleft palate feeder

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What have you learned that you can apply to your practice?

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Questions?

Jeannette.Crenshaw@ttuhsc.edu

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