Breastfeeding
A Public Health Imperative
How You Can Help!

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April 22, 2017

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Disclosures

- I have no financial relationships to disclose
- I will mention off label use of metoclopromide and Domeridone®

Objectives

- Describe ways providers can support breastfeeding mothers to reach their breastfeeding goals.
  - Delineate common breastfeeding problems seen in the pediatric office
    - Anatomical variants, sore nipples, low milk supply
  - Explain breastfeeding management tools for the pediatric provider

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Breastfeeding Matters

- Breastfeeding is the normative standard for infant feeding and nutrition. (AAP)

- "Given the documented short-and long-term medical and neurodevelopmental advantages of breastfeeding, infant nutrition should be considered a public health issue and not only a lifestyle choice."

AAP, (2012). Breastfeeding and the use of human milk. Pedi*atrics, 129*(3), e827-e841.

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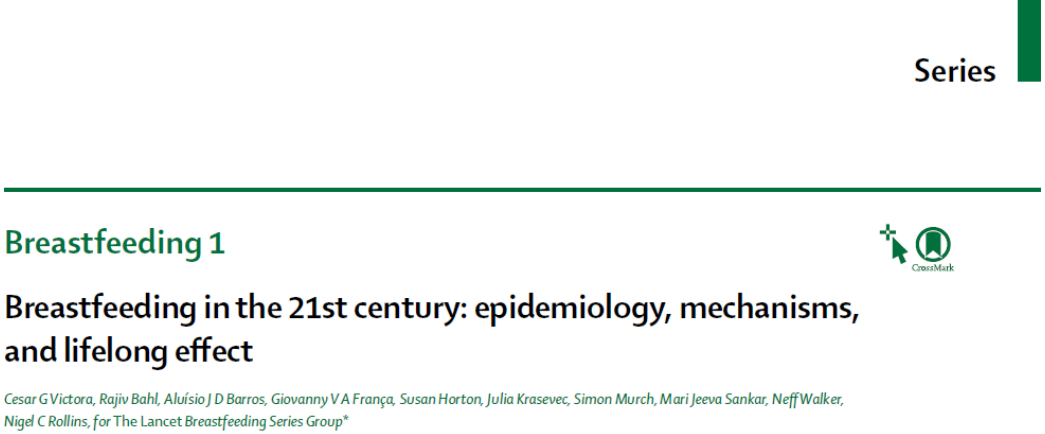
The Lancet



- The decision to not breastfeed a child has major long-term effects on the health, nutrition, and development of the child and on women's health.
- Possibly, no other health behavior can affect such varied outcomes in the two individuals who are involved: the mother and the child.

Victora C, et al., Lancet 2016; 387:475-90

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What Common Breastfeeding

Problems do you hear about from moms?

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Take Home Lessons

- Rule # 1

  Feed the baby

- Rule # 2

  Protect milk supply

- Rule #3

  Seek help

Mothers' Breastfeeding Goals

- 81% of women initiate breastfeeding in the US
- 77.7% of women initiate breastfeeding in Ohio
- 22.3% exclusively breastfeed at 6 mo (US & OH)
- **60% of US women do not breastfeed as long as they intend**
  - Problems with latch, milk supply, poor weight gain, pain
  - Concerns about medicine

Odom, et al., Pediatrics, 2013, 131;e726-e732,
CDC, National Immunization Survey, 2016

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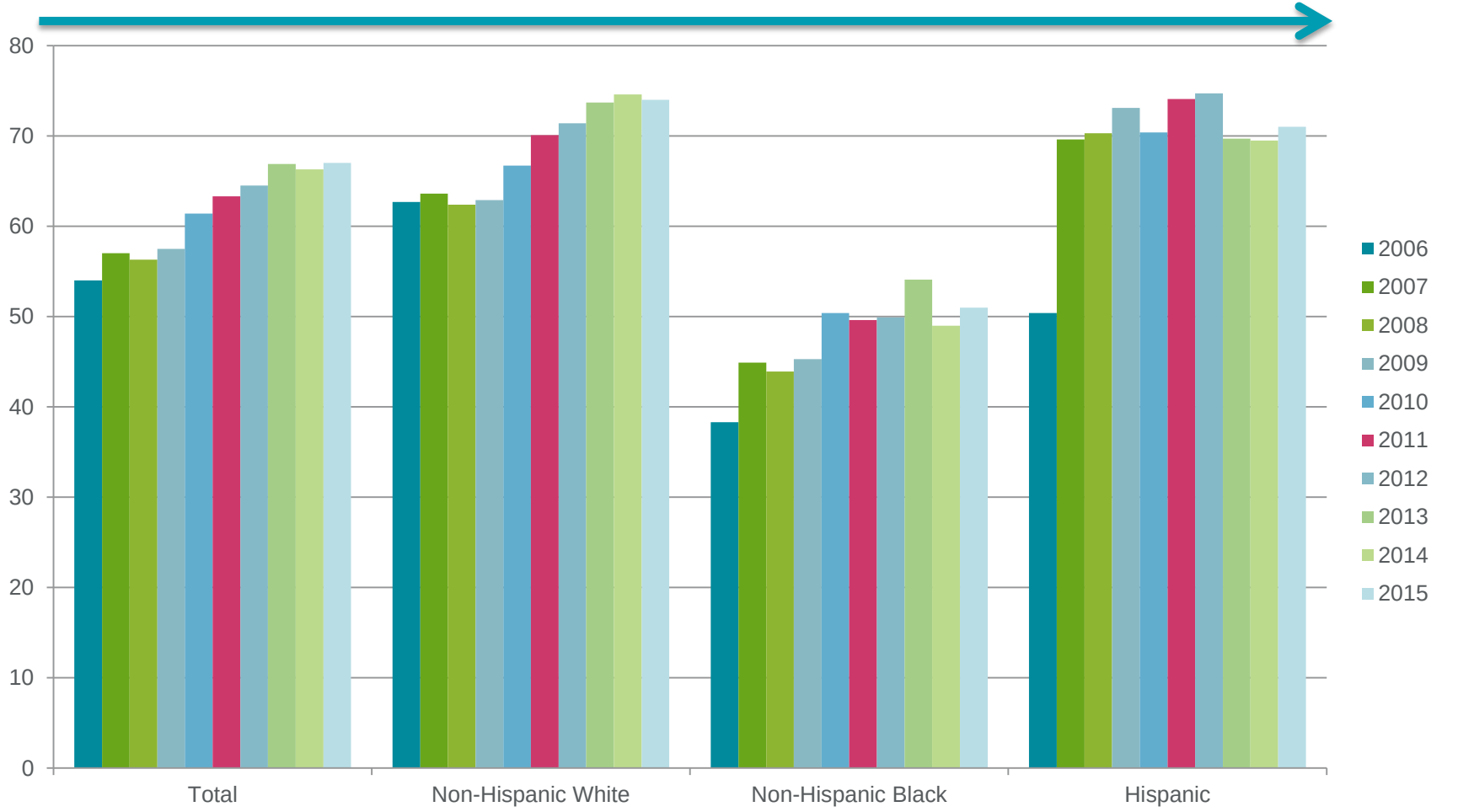
Hamilton County Breastfeeding Initiation

Price Hill 36.0%
Avondale 48.1%

Healthy People 2020
Goal – 81.9% initiation



2006-2015: Ohio Department of Health (ODH), Ohio Public Health Information Warehouse Birth Data Set. Obtained by Hamilton County Public Health

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You Can Help Moms and Babies!

You are perfectly positioned to help moms and babies be successful.

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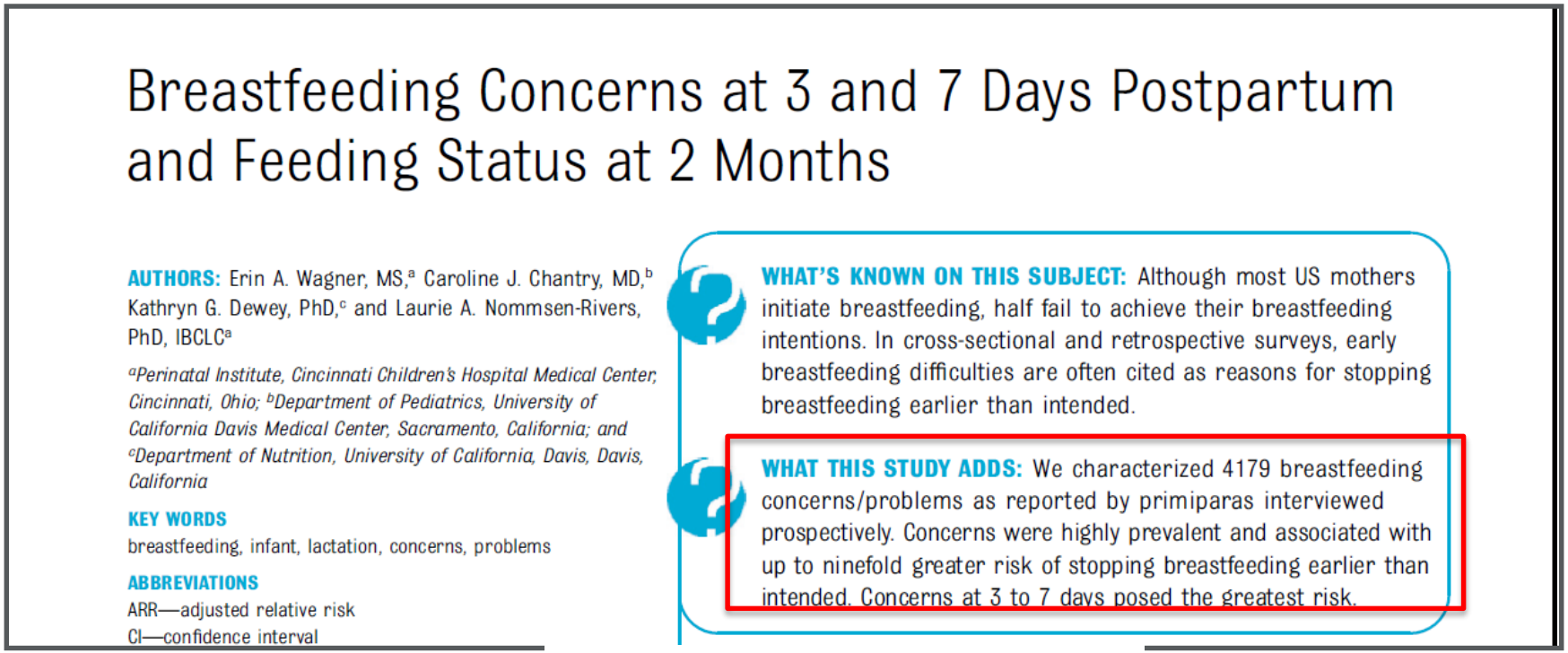
Does Your Help Matter?



Breastfeeding Concerns at 3 and 7 Days Postpartum and Feeding Status at 2 Months

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KEY WORDS
breastfeeding, infant, lactation, concerns, problems

ABBREVIATIONS
ARR—adjusted relative risk
CI—confidence interval

WHAT'S KNOWN ON THIS SUBJECT: Although most US mothers initiate breastfeeding, half fail to achieve their breastfeeding intentions. In cross-sectional and retrospective surveys, early breastfeeding difficulties are often cited as reasons for stopping breastfeeding earlier than intended.

WHAT THIS STUDY ADDS: We characterized 4179 breastfeeding concerns/problems as reported by primiparas interviewed prospectively. Concerns were highly prevalent and associated with up to ninefold greater risk of stopping breastfeeding earlier than intended. Concerns at 3 to 7 days posed the greatest risk.

PEDIATRICS Volume 132, Number 4, October 2013

Mothers' perceptions

of their health care providers' support for breastfeeding directly influences their duration of breastfeeding. (DiGirolamo 2003, Shealy 2005, Taveras 2004)

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So easy even a doctor can support it!

- Imagine a Super Medicine
  - Stable and palatable
  - Reduces and prevents multiple diseases and death
  - One dose treats two patients
  - Manufactured safely and legally at home
  - Requires no insurance coverage
  - Free to anyone who needs it.

Todd Wolynn, MD, FAAP
CEO National Breastfeeding Center
ED of Breastfeeding Center of Pittsburg

As easy as 1-2-3!
3 holds and 3 tips

Breastfeed Med. 2011 October; 6(5): 345–347.
doi: 10.1089/bfm.2011.0087

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Pediatricians are on the Front Lines

- To detect red flags for breastfeeding concerns
- To take a maternal breast and breastfeeding history as part of our evaluation
- To protect the optimal “First Food” for our patients

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Breastfeeding – Put in Your Order!

- **Frequent** on demand feedings ***(at least*** 8-12 times per 24 hours) NOT TIMED FEEDINGS!
- Finish the first breast first
- By 5 days of age – 6-8 wet diapers and 3-4 bowel movements/24 hours
  - Changing from meconium to seedy yellow stools by day 5
- Weight loss of more than 7% is cause for **feeding assessment not necessarily formula feeding**
- ***Pediatrician needs to see by 3-5 days of age - AAP***

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Maternal Red Flags for Breastfeeding Problems

- Little or no breast growth in pregnancy
- History of maternal PCOS, infertility, diabetes, obesity, thyroid disease
- Inverted nipples that don’t evert
- History of breast radiation or surgery
- Low milk supply in past
- Medications that inhibit letdown or decrease milk supply

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Infant Red Flags for Breastfeeding Problems

- Late Preterm
- Sleepy baby
- Tongue Tied
- Low tone
- Jaundice
- Substance exposed

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Let’s Start at the Very Beginning

A very good place to start

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The Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy
2. Provide staff training in policy implementation
3. Provide breastfeeding education for pregnant women
4. Help initiate breastfeeding within 1 hour of birth
5. Show mothers how to initiate and maintain breastfeeding (even if separated from infant)
6. Give no food or drink other than breastmilk, unless medically indicated
7. Practice rooming in 24/7
8. Encourage breastfeeding on-demand
9. Give no artificial nipples/pacifiers to breastfed infants
10. Support and utilize support groups

unicef

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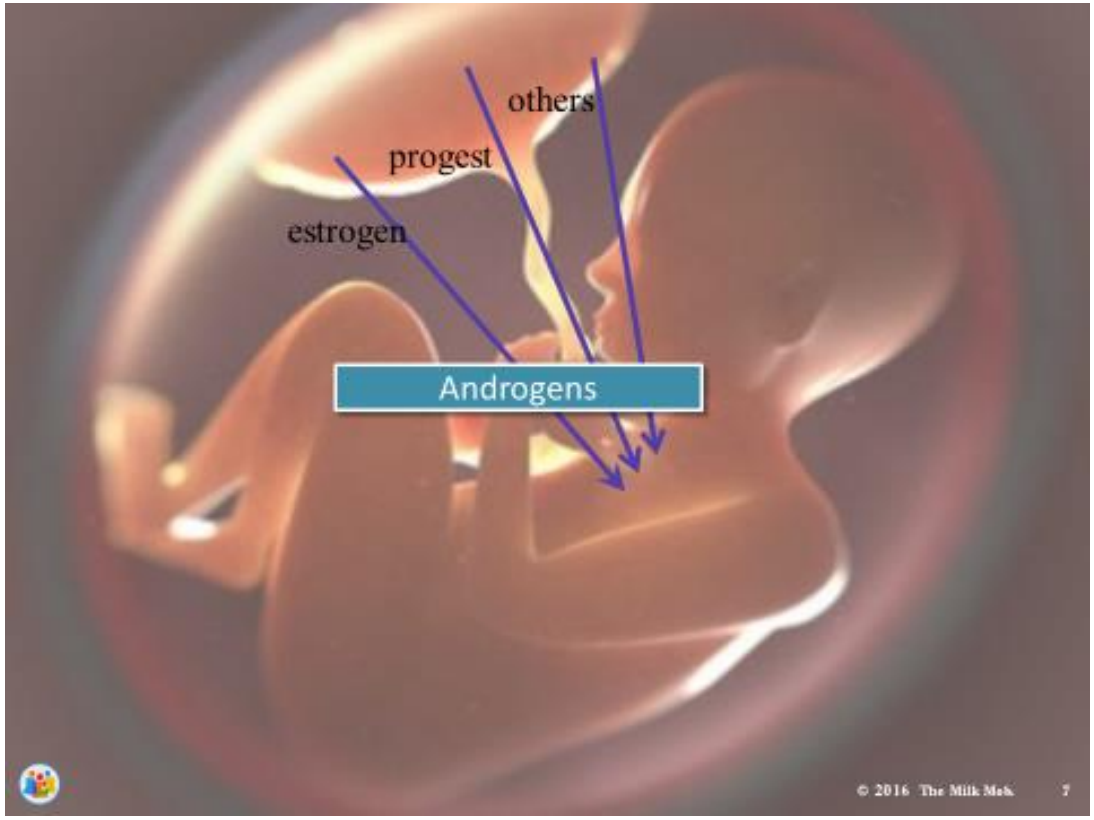
Review of Breast Anatomy and Development



Milk streak appears in the fourth week of gestation

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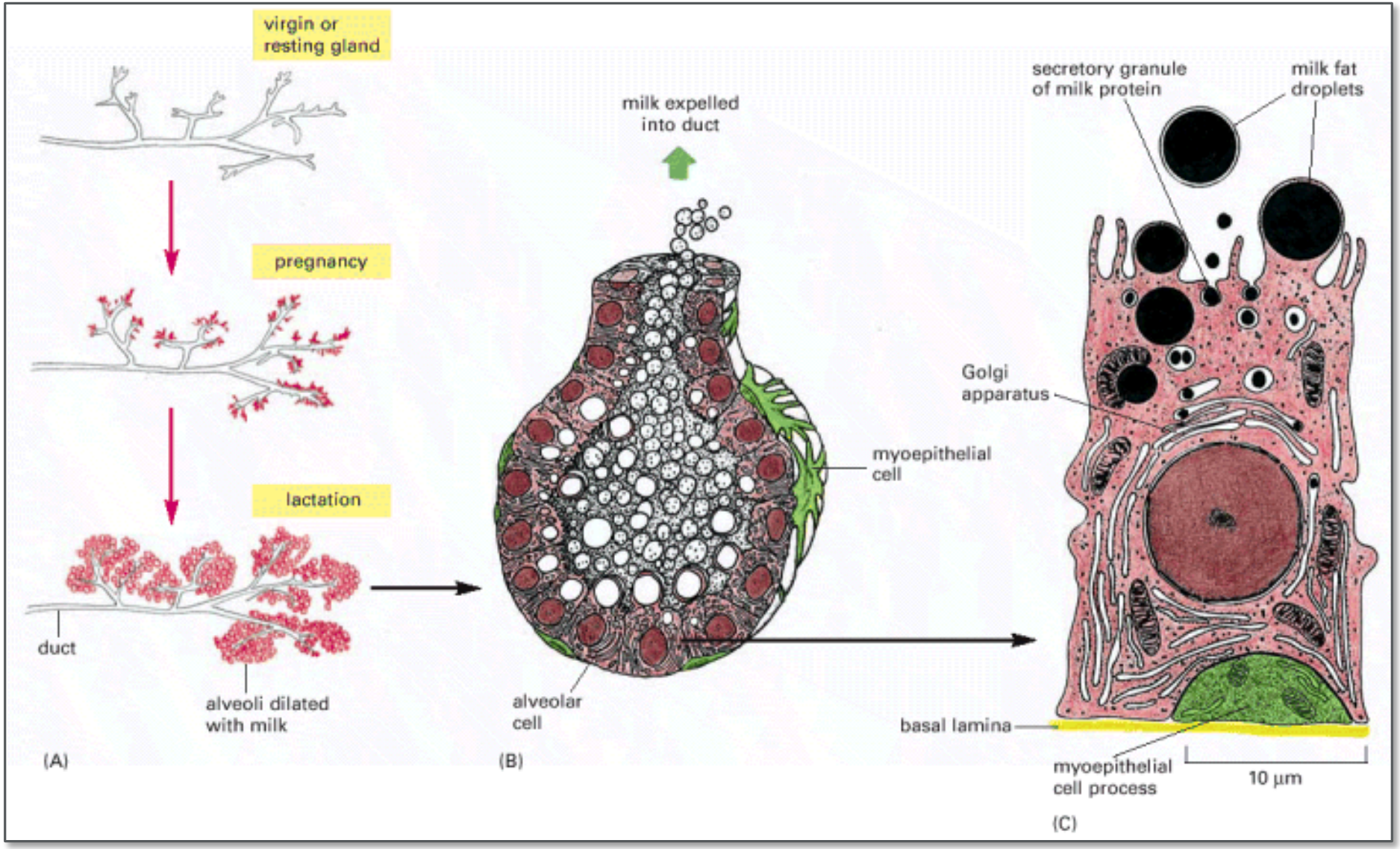
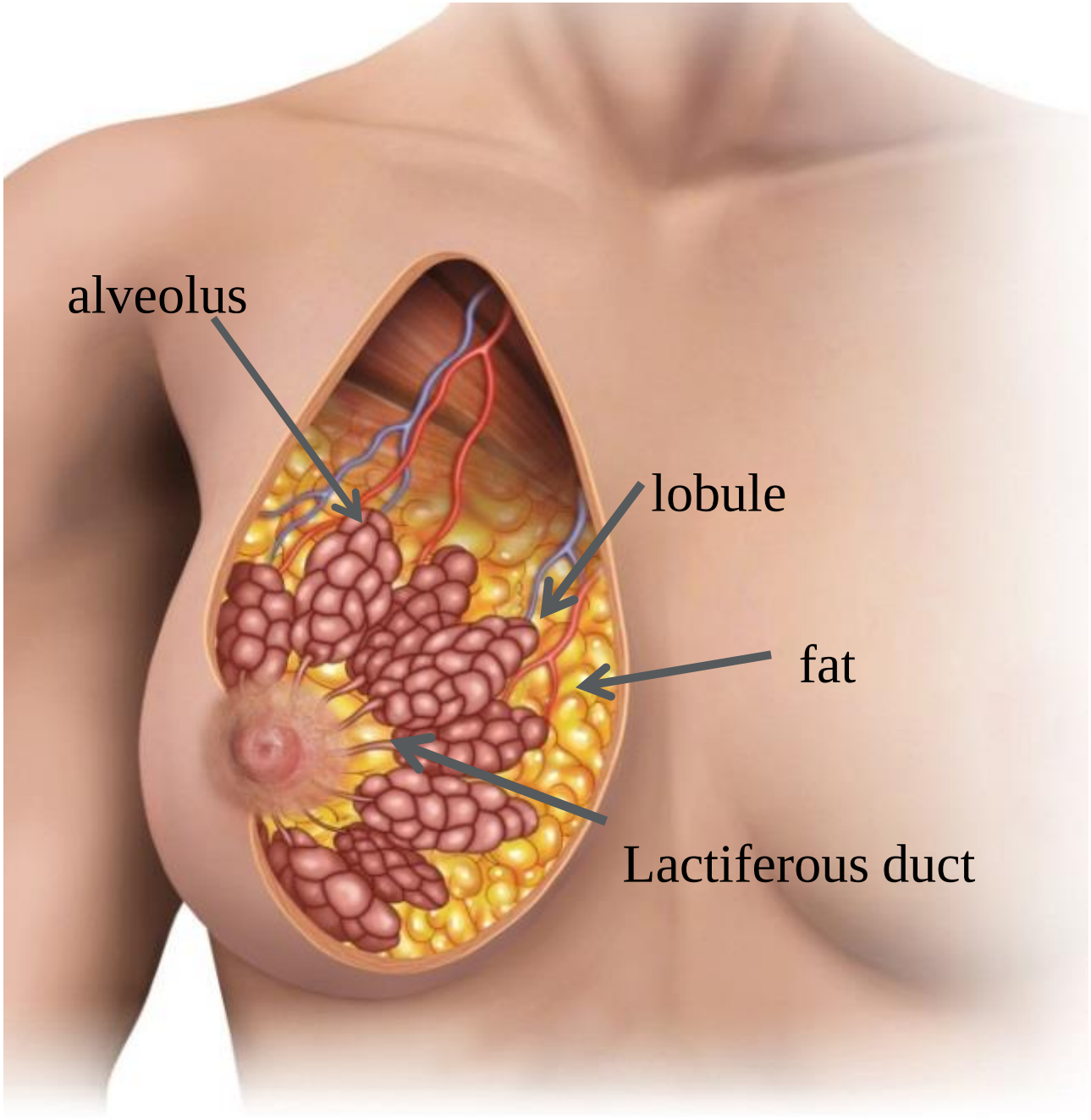
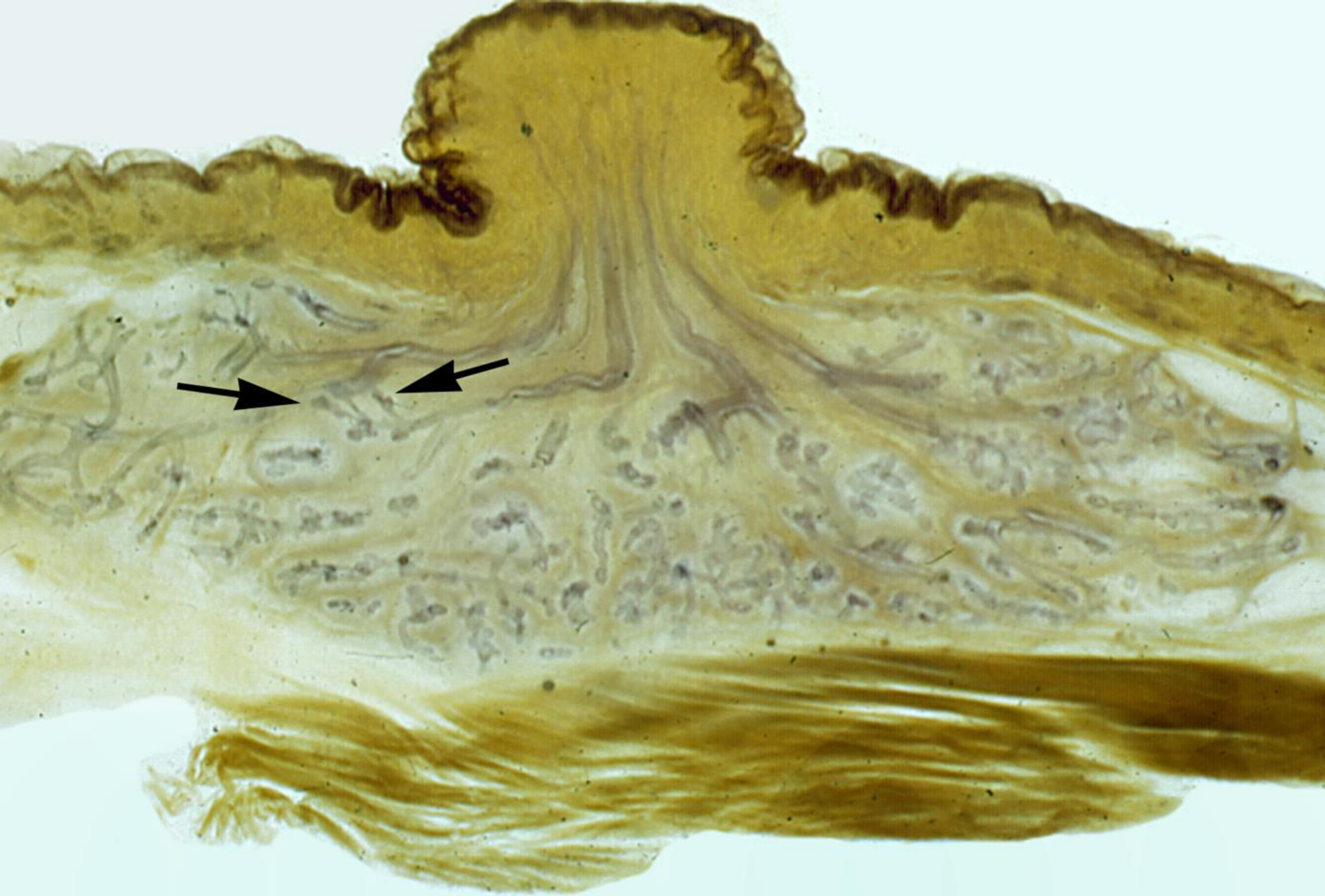
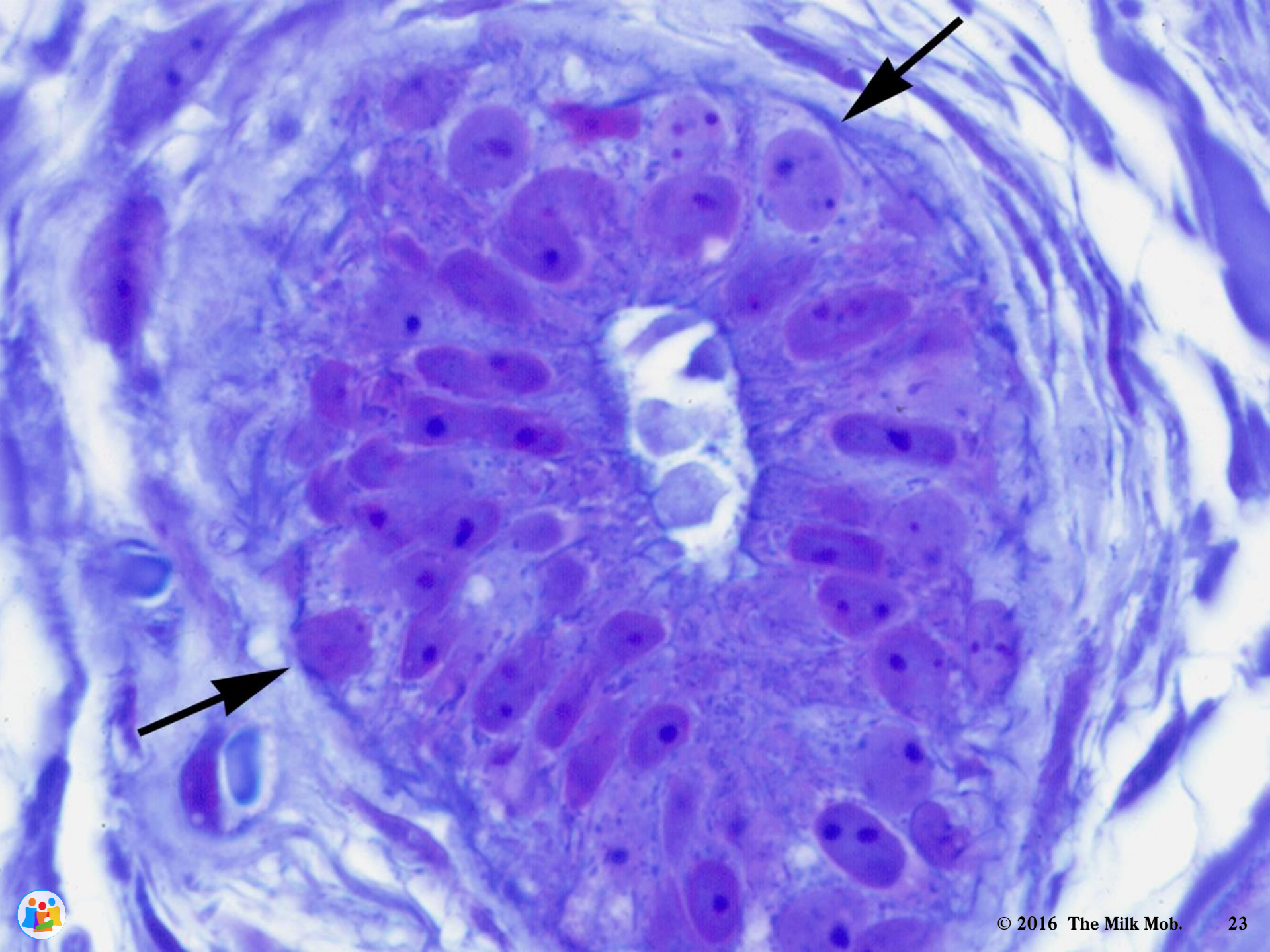


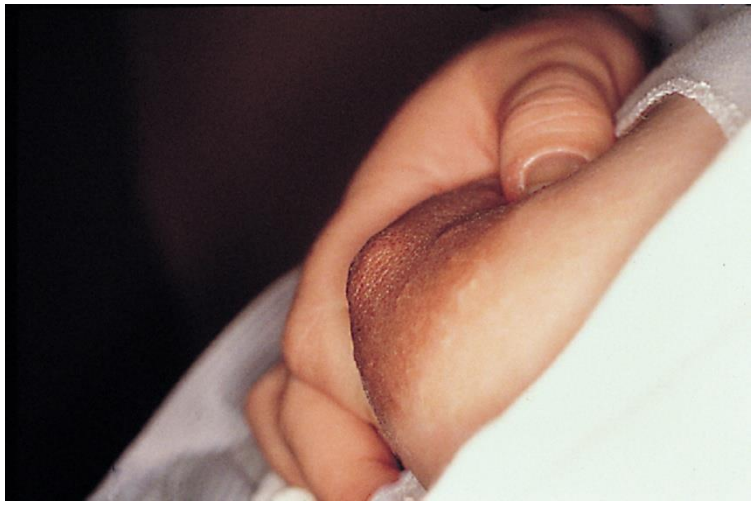

alveolus
lobule
fat
Lactiferous duct

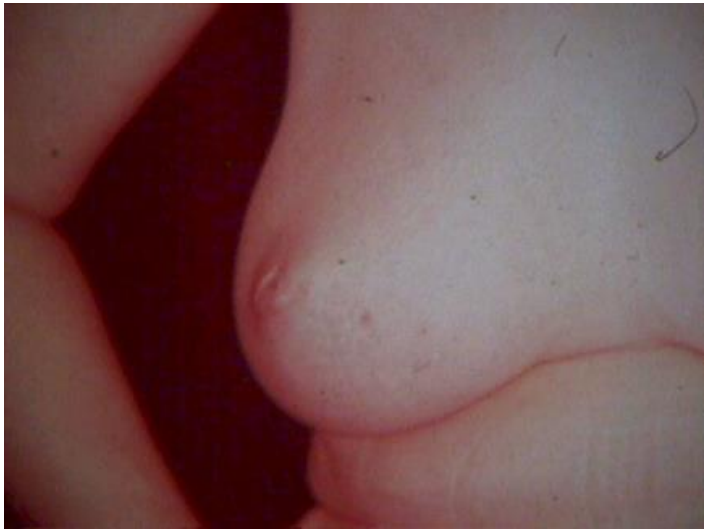


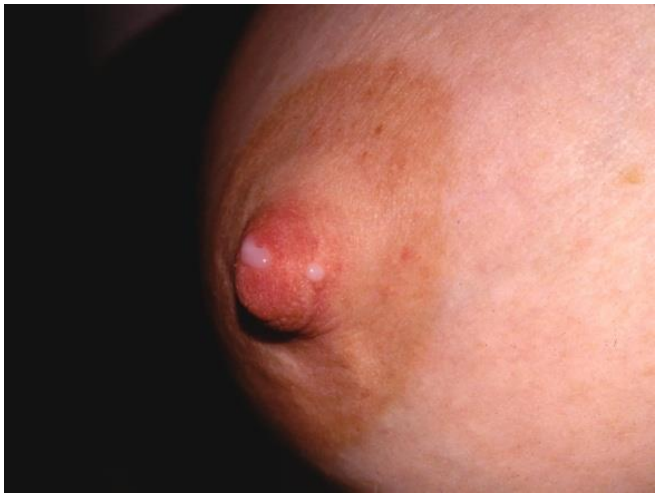


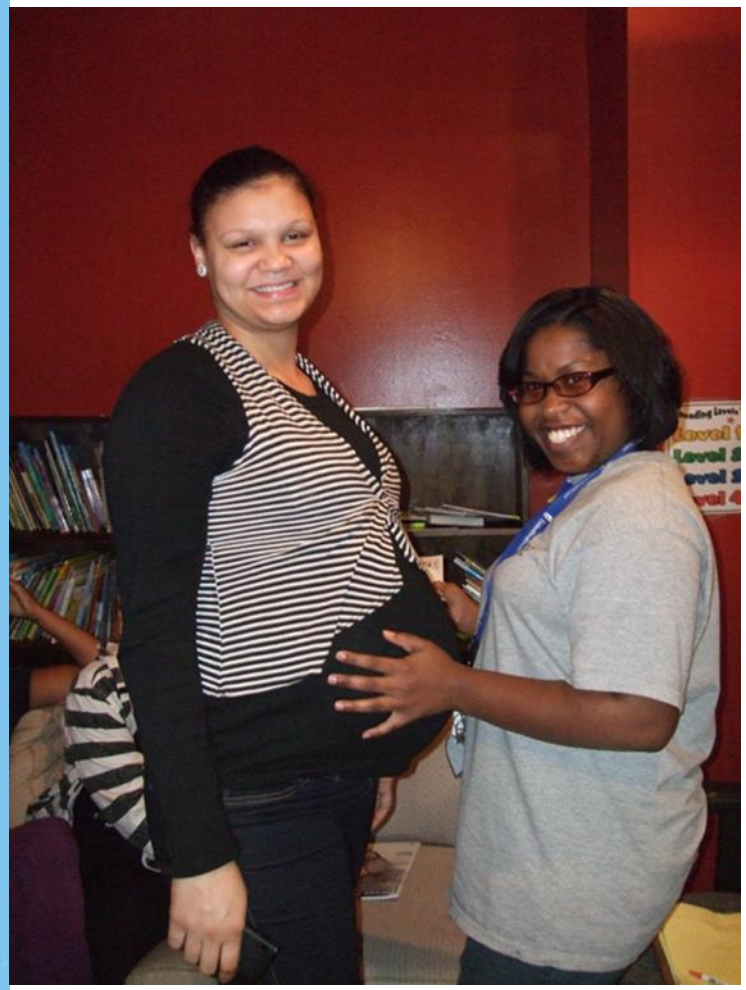
Nipple Variations

- Flat nipples
- Inverted nipples
- Pierced nipples









A free service of the National Healthy Mothers, Healthy Babies Coalition

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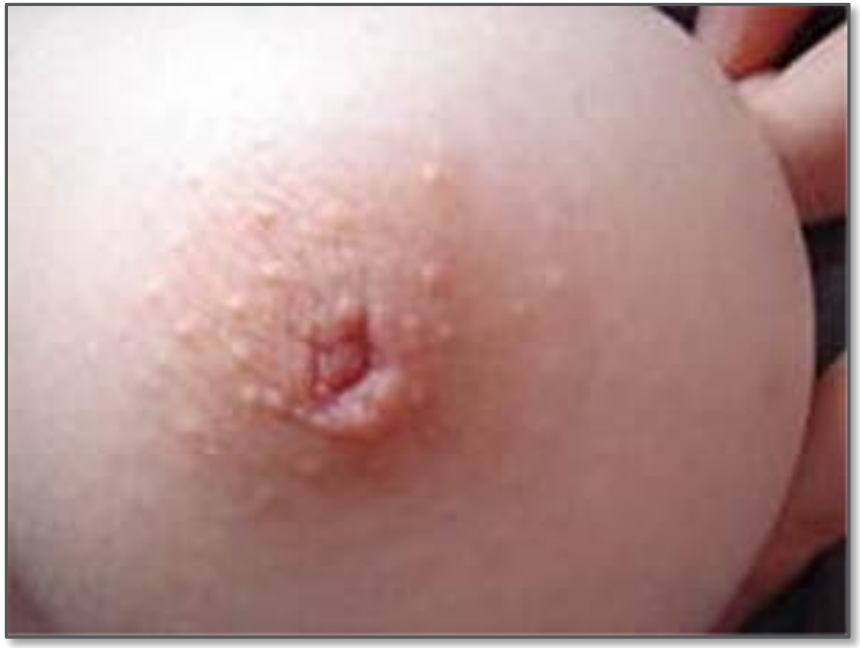
Prenatal Case Presentation



- Ann is seeing you at a prenatal visit at 32 weeks.
- She tells you about her inverted nipples and is concerned about being able to breastfeed.

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What preparation does Ann …

Need to do for successful breastfeeding?

a. Prenatal Hoffman Maneuvers
b. None- She will be unable to breastfeed
c. Plan to breastfeed soon after birth, and ask for help
d. A & C

Key points – Inverted Nipples

1. Moms can breastfeed but may need more lactation help
2. Request assistance and feed early
3. A breast pump may help to evert the nipples prior to latch
4. Avoid bottles and pacifiers
5. Nipple shield – IF ALL ELSE FAILS

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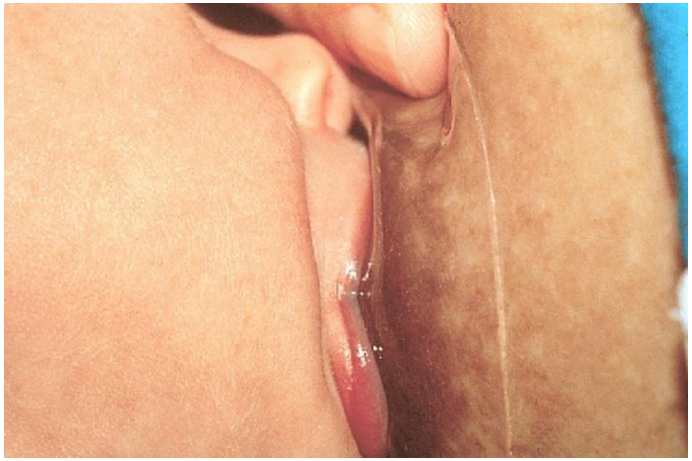
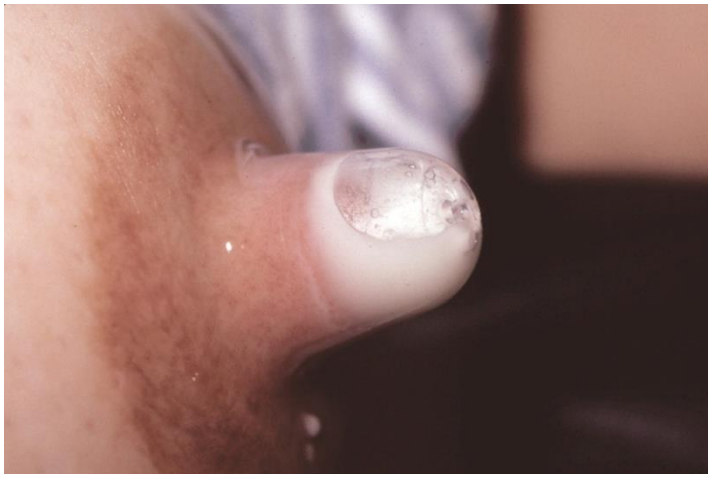
What about Nipple Shields?

- Sometimes helpful to get baby to breast
- Flat or inverted nipples
- Mom should pump after feedings and REFER!





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“When in doubt…

Pump it Out!”

Ellen Springer, MD - Mason

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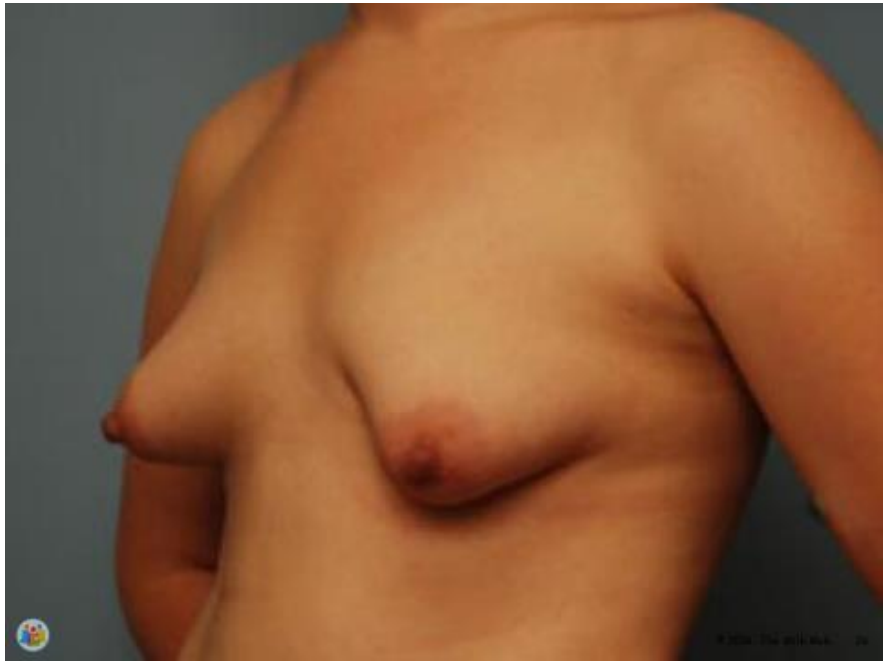
What about variations in breasts?



Note the wide space between breasts

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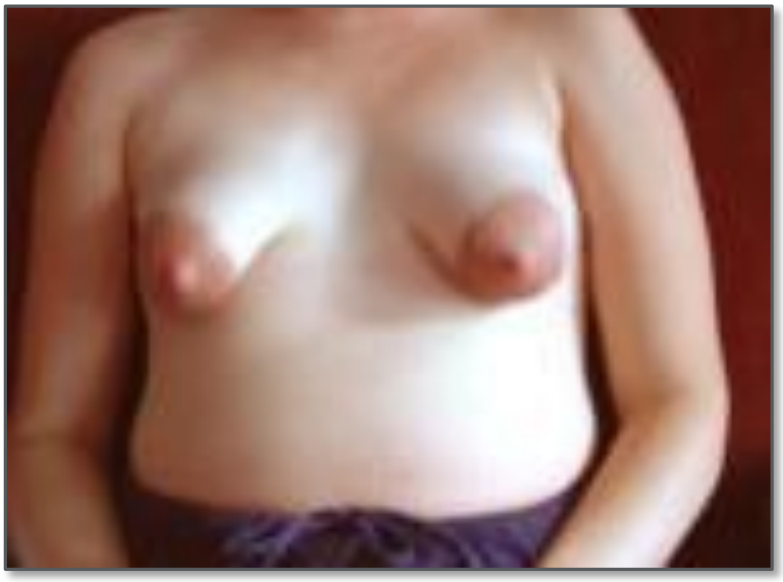
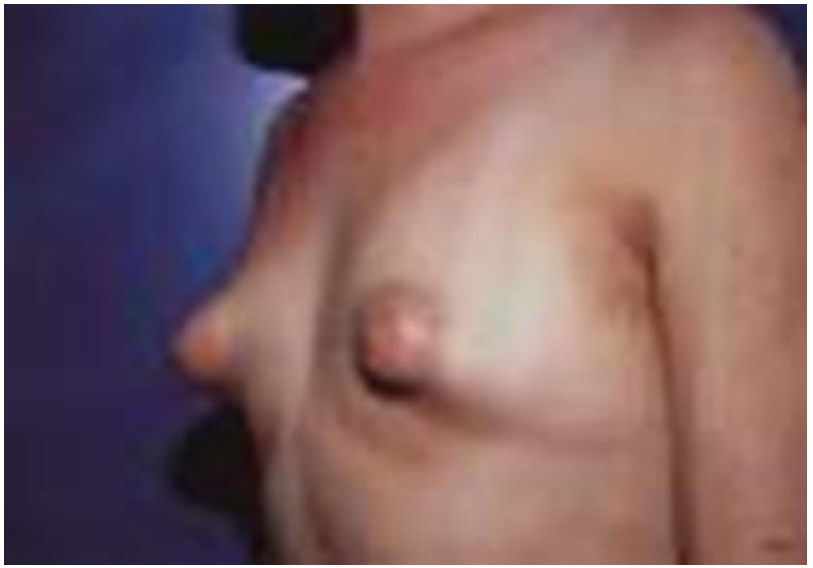
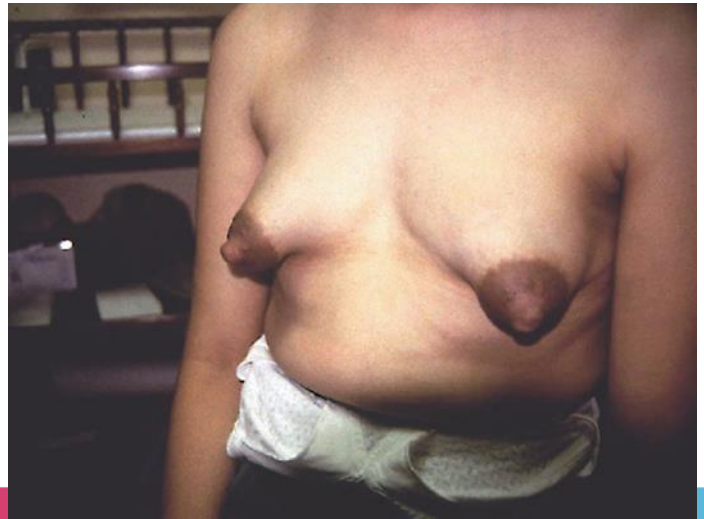
Tubular Breasts







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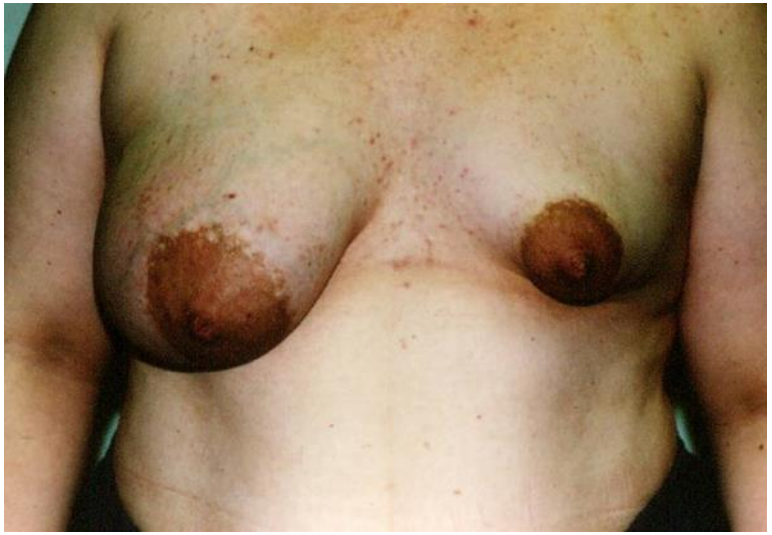
Assymetric Breasts



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Mrs. Jones

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Case Presentation

- Mrs. Jones is breastfeeding her new baby Jane on the first day of life as you make newborn hospital rounds.
- Jane seems to be latched well, actively suckling, and mom is very pleased
- When you observe, you notice Mrs. Jones's breasts you see…

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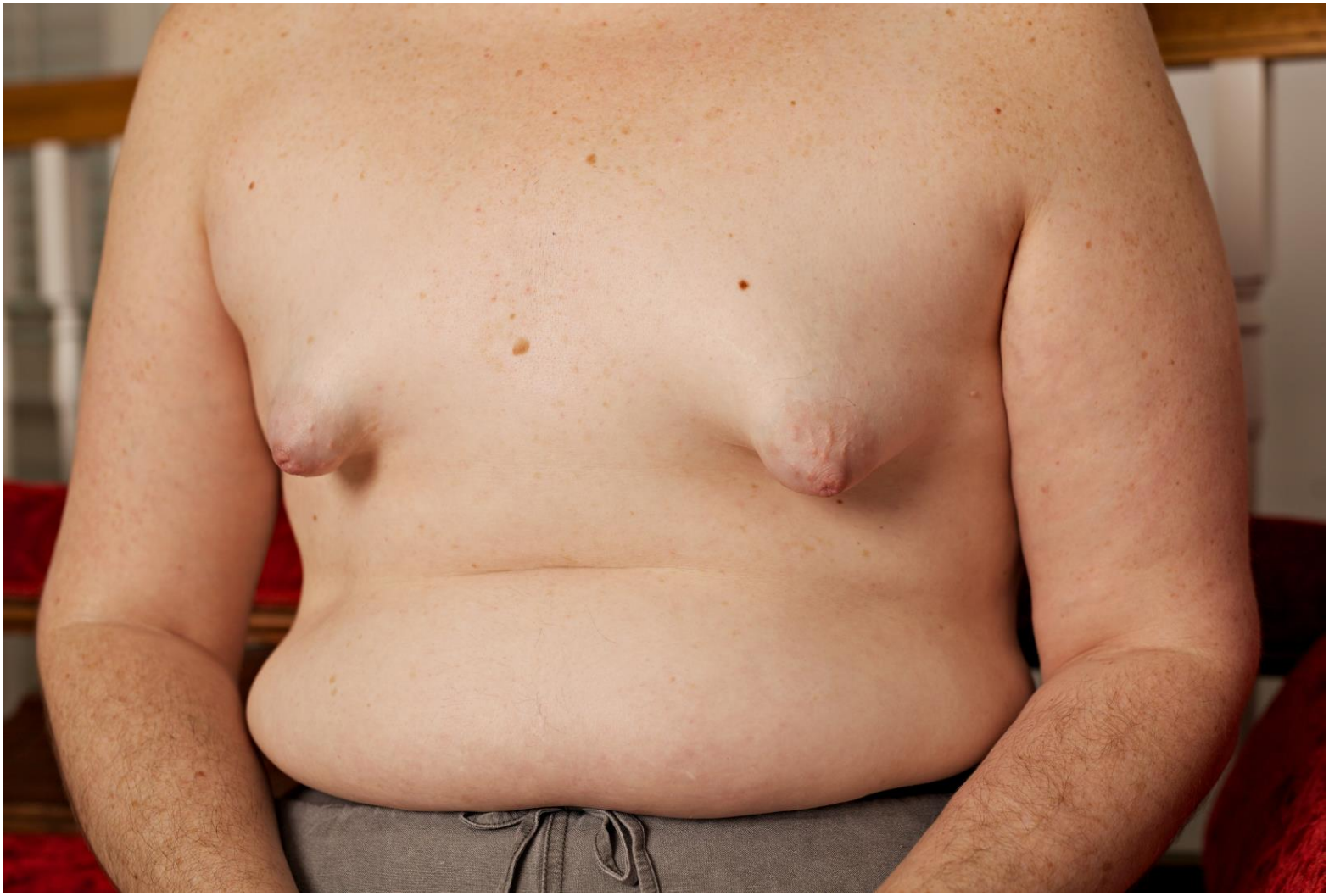

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A proper comment/question for…

Mrs. Jones is:

a. You will not be able to breastfeed Jane
b. Let's get the lactation consultant in here right away
c. Did you notice any changes in your breasts during the pregnancy?
d. What a nice latch Jane has!
e. C & D

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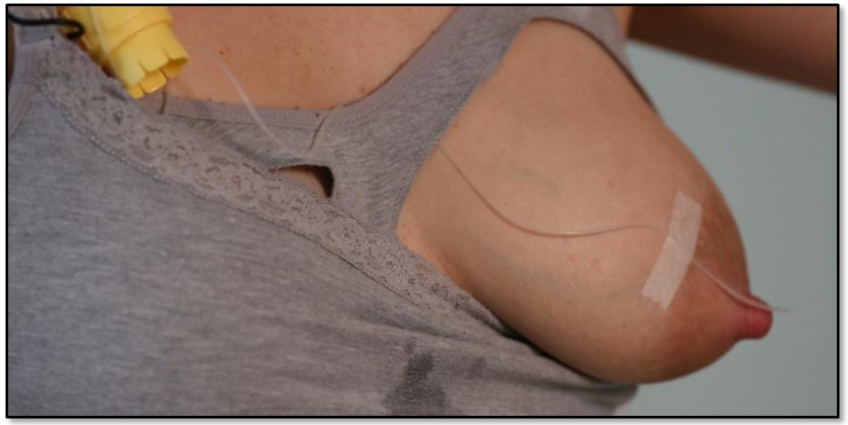
Insufficient Glandular Tissue

- Uncommon but not rare
- Should be identified prenatally
- Some breastfeeding likely
- Needs close monitoring of infant weight gain
- May need supplementation, but this can occur at the breast



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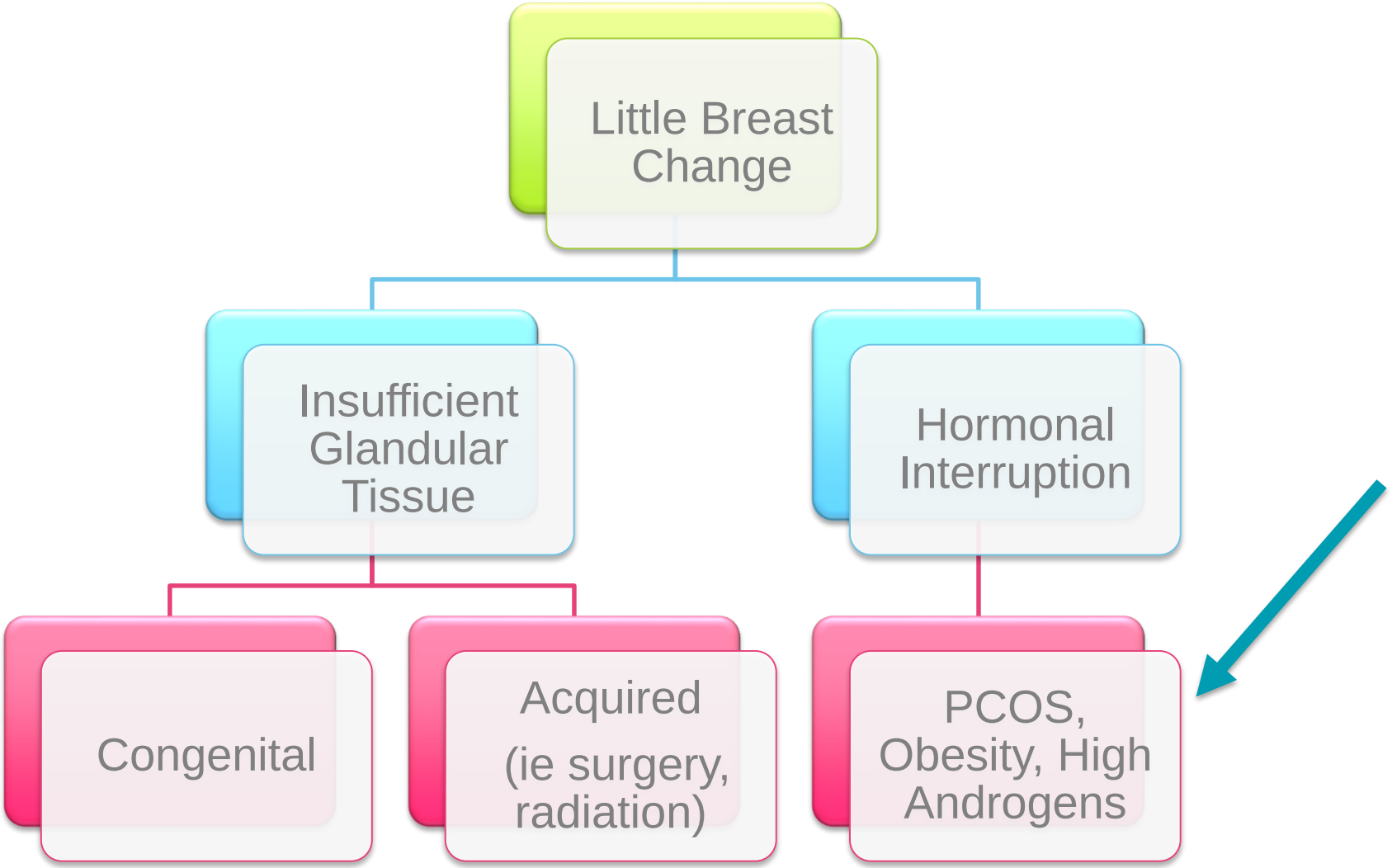
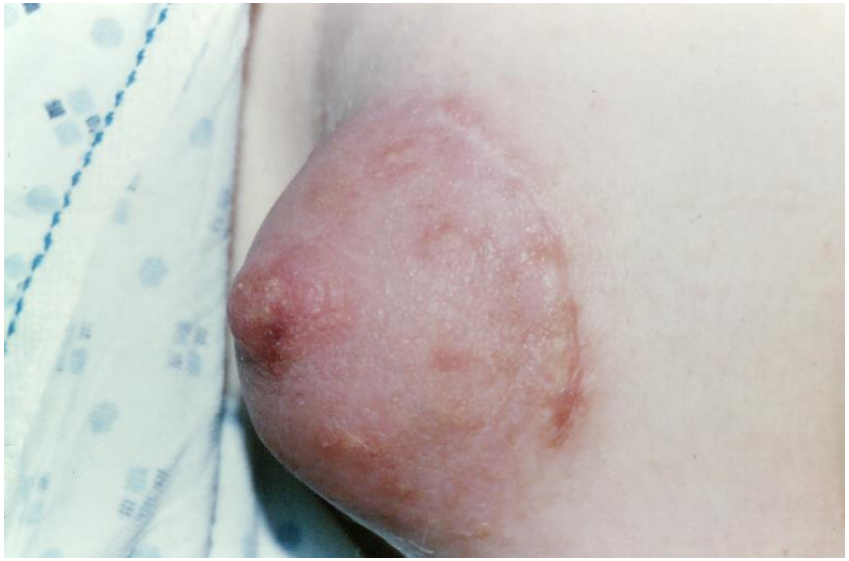
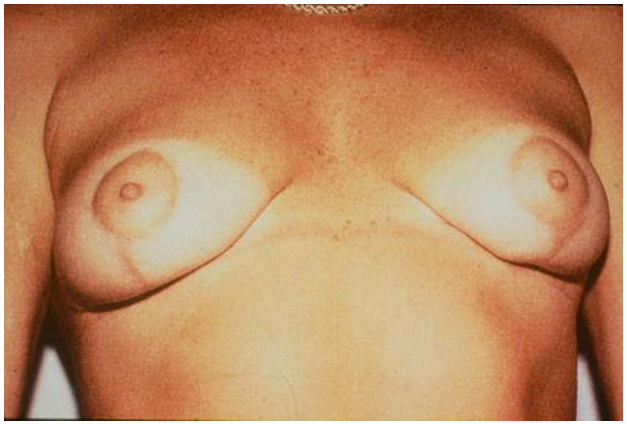
Little-No Breast Changes in Pregnancy



What about Breast Surgery?

- Augmentation
- Reduction
- Lifts





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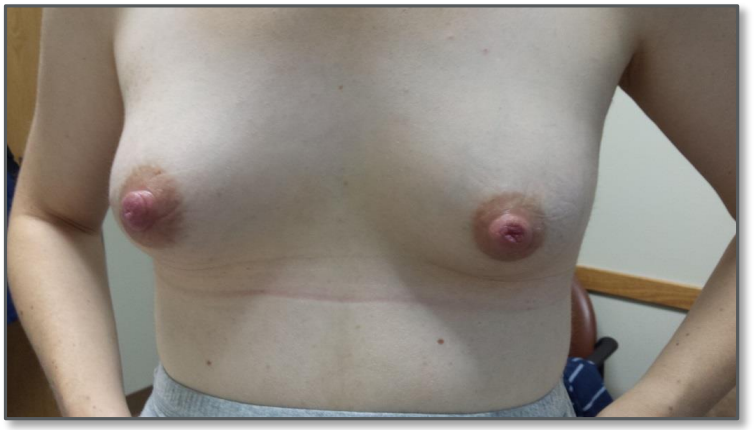
Augmentation

- Typically placed behind pectoralis muscle
- Usually compatible with breastfeeding
- Large implants may impinge on capacity for breast to enlarge during lactation and restrict blood flow
- Most important – what was the reason for the augmentation?



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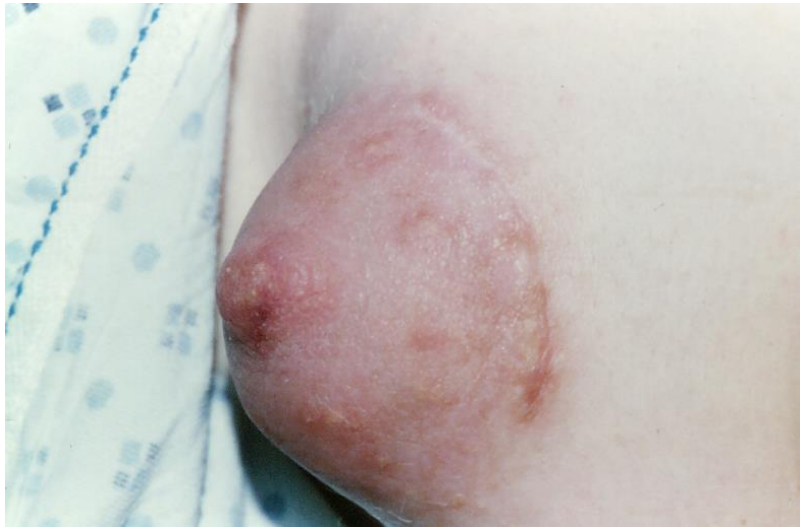
Reduction surgery

- If periareolar incisions, increased risk of producing an insufficient supply of milk – **monitor infant growth**
- May be some recannulization
- May produce ***some*** milk



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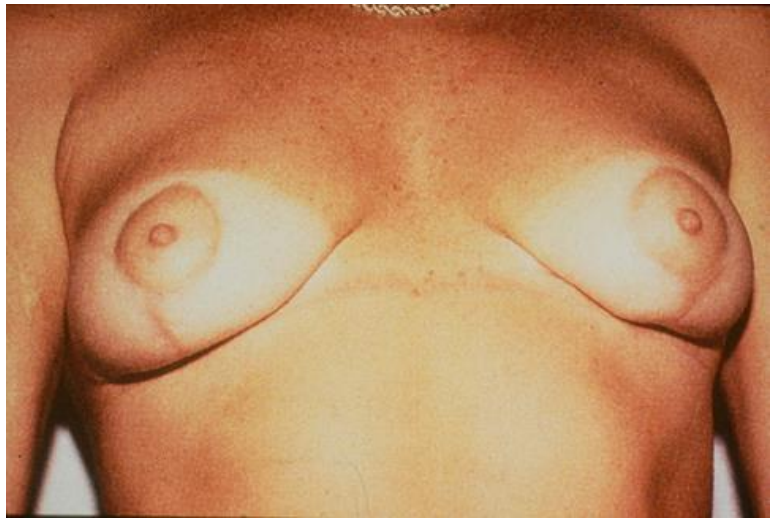
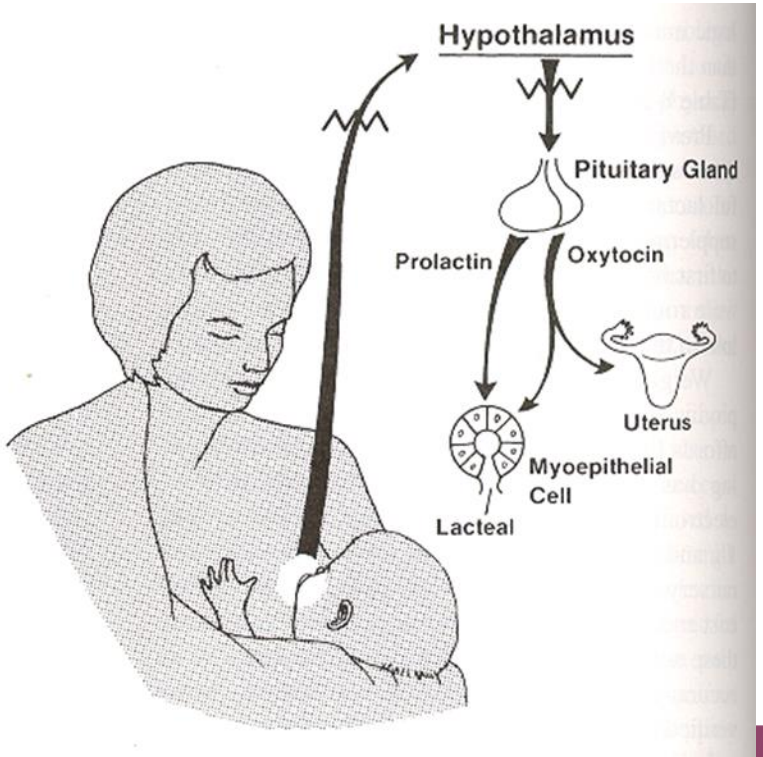
Reduction Surgery

- Prognosis improved if nipple and areola left on pedicle during surgery





4th intercostal nerve innervates the nipple

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Case Presentation

- Mrs. Smith brings Tom to your office on the 4th day of life.
- Tom is 14% below birthweight and crying all the time, despite feeding every 2-3 hours
- He is ready to eat, and you watch him feed in the exam room.

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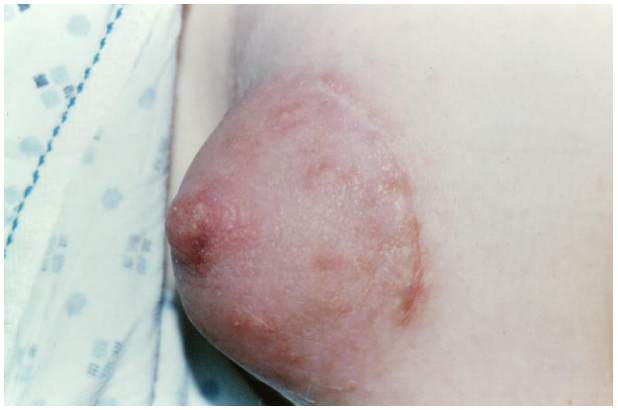
Continued Case – Baby Tom

- You hear no audible swallows, but he is suckling vigorously
- You note a periareolar scar on mom's breast
- You ask mom about previous surgery
- She says her surgeon told her breast reduction wouldn't cause any problems and it was 9 years ago.



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What do you tell Mrs. Smith to expect with breastfeeding?

a. You will not be able to breastfeed Tom

b. You may need to supplement Tom with formula, and you can do that at the breast

c. Many mothers with reduction surgery like yours have difficulty making a full milk supply

d. B & C

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Sore nipples

- The most common reason for sore nipples?

IMPROPER LATCH

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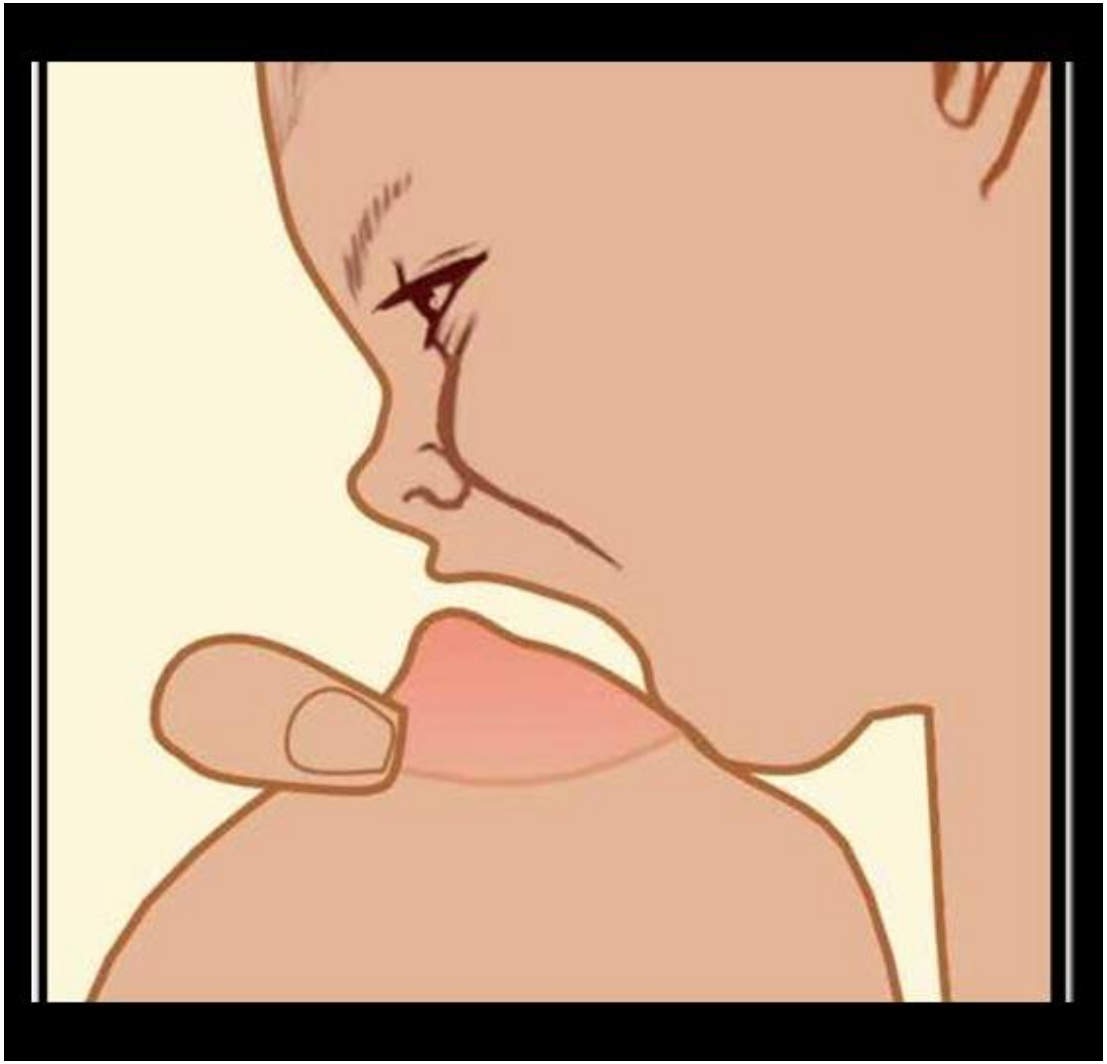
What about that latch?



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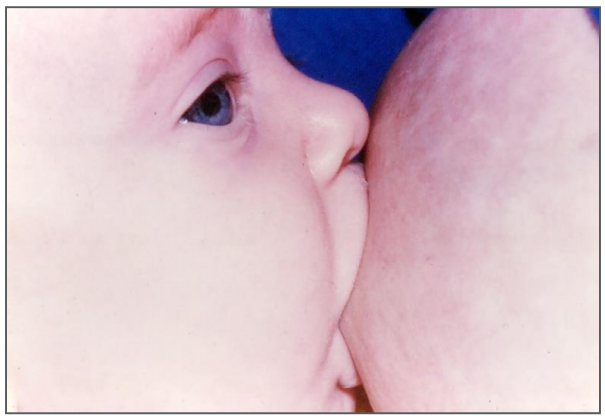
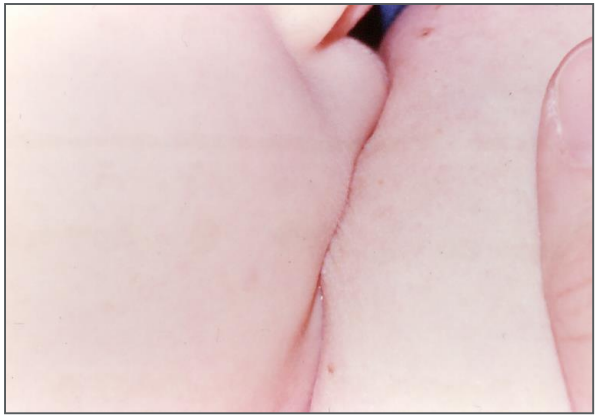
Latch on

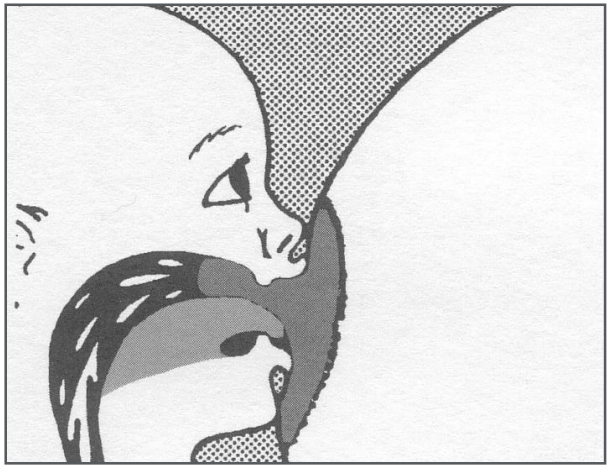
Mouth: Deep and wide latch

Lips: Rolled out like a fish

Baby Awake: Milk Flowing







A Good Latch – No Pain!

Moms feel a tug, but no severe pain.

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The Best Latch

https://globalhealthmedia.org/portfolio-items/attaching-your-baby-at-the-breast/

The Best Latch

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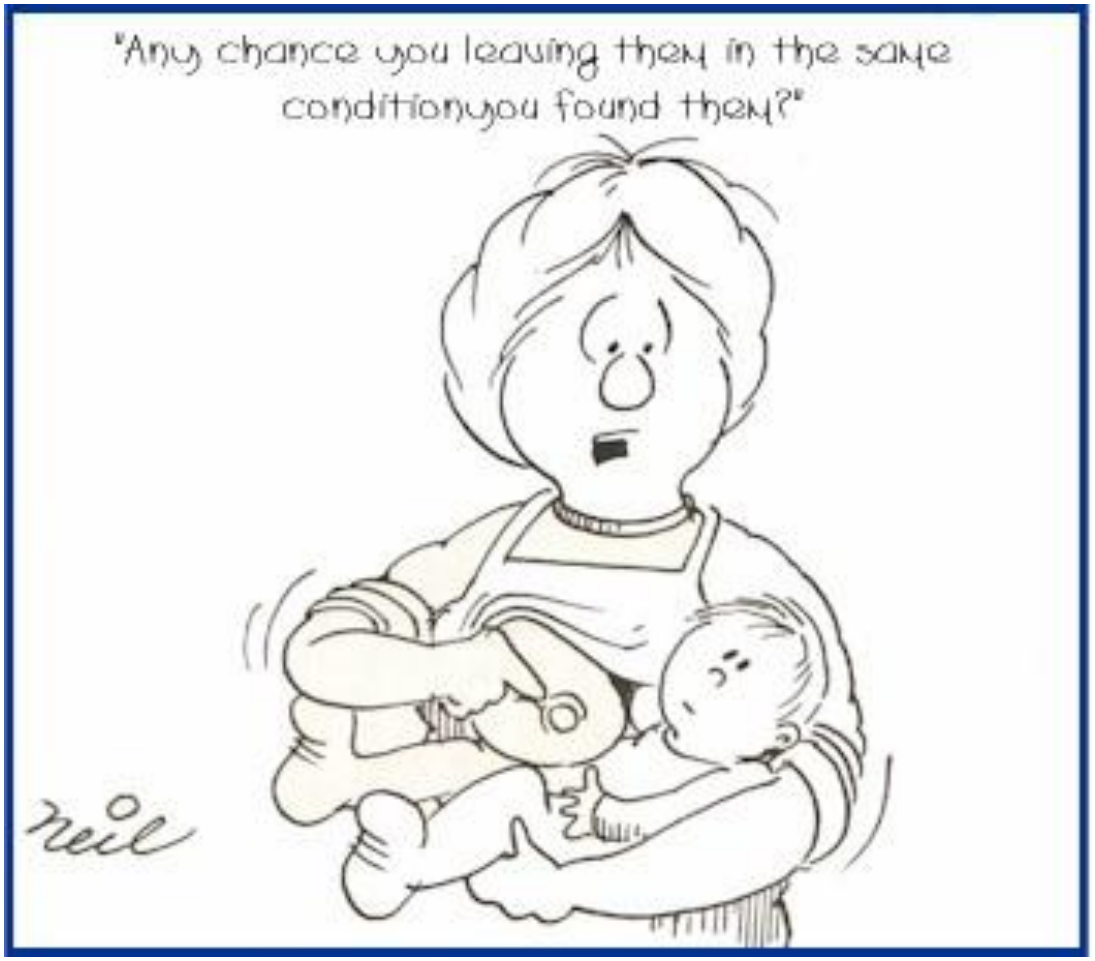
"Any chance you leaving them in the same
conditionyou found them?"
neil

Mrs. Jackson

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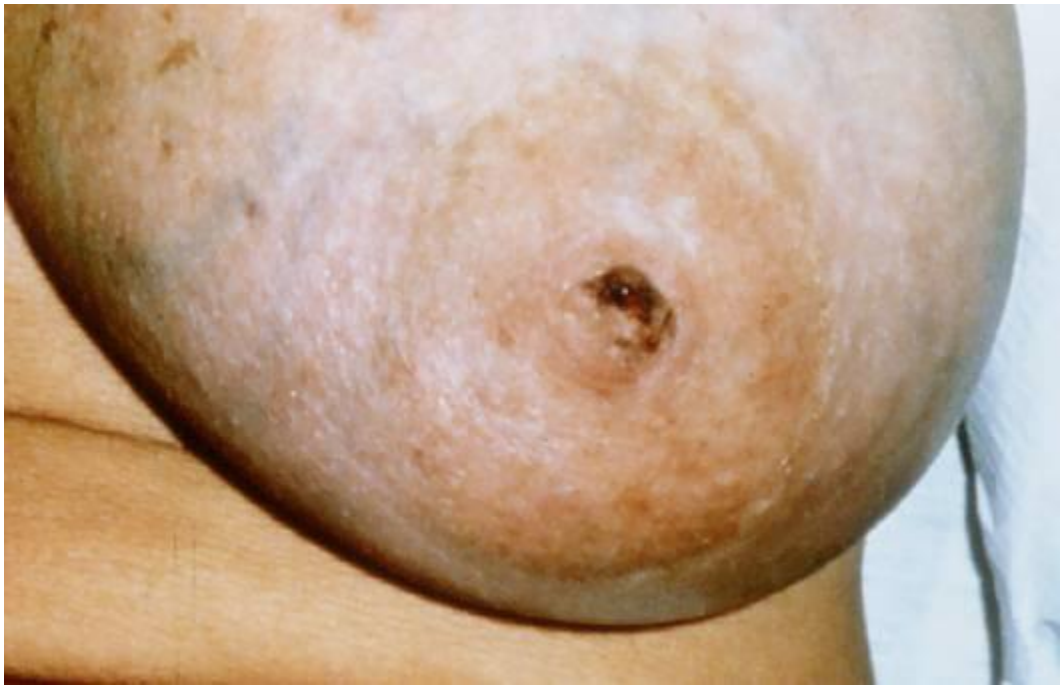
Case presentation

- Mrs. Jackson delivered a healthy 9 lb 5 oz baby boy at term via C Section at 41 weeks gestation.
- He had some difficulties latching on in the hospital and was initially supplemented with bottles of formula.
- At 6 days of life, mom calls your office in tears, saying that her nipples are sore, and she doesn't know what to do.

You ask her to come in and see…



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What recommendation(s) do you have for Mrs. Jackson?

a. Let's get you some help with breastfeeding

b. You will need to stop breastfeeding and dry up your milk

c. Let's try to latch the baby now to see if we can improve his latch

d. We need to be sure you are emptying your breasts

e. A, C, & D

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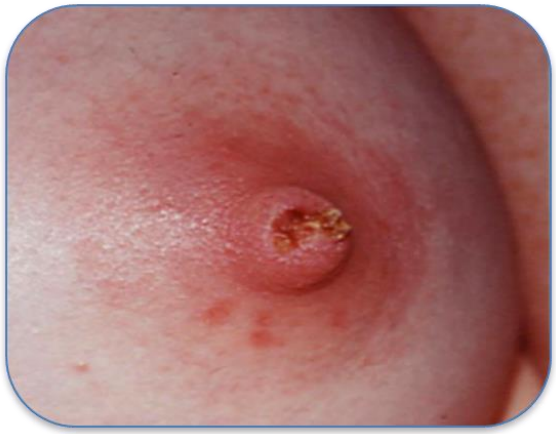
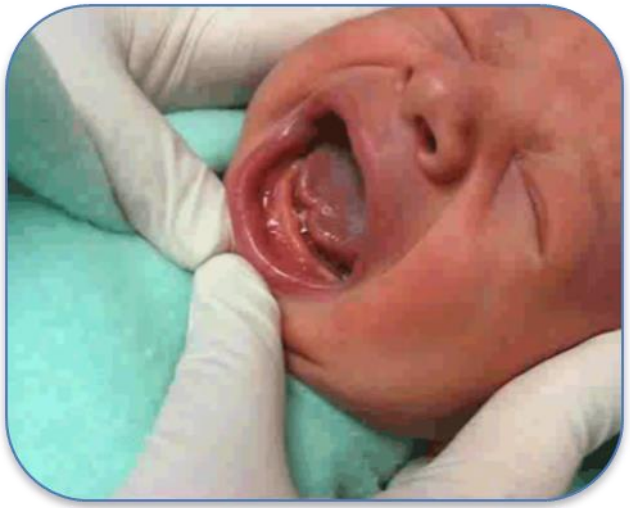
If Mom Has Nipple Pain…

- Causes of nipple pain
  - Poor latch #1 cause
  - Incorrect positioning
  - Infection (bacterial or fungal)
  - Milk bleb
  - Vasospasm
  - Infant anatomical issues – e.g. ankyloglossia





Photos Courtesy PA EPIC

UNC Protocols http://mombaby.org/PDF/PainProtocols.v3.pdf

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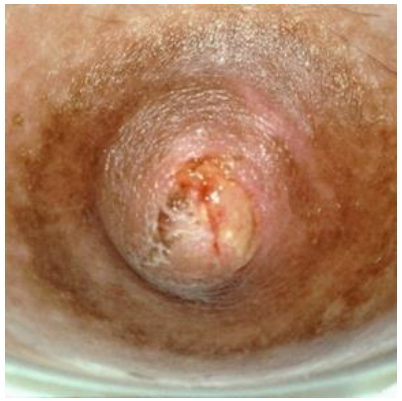
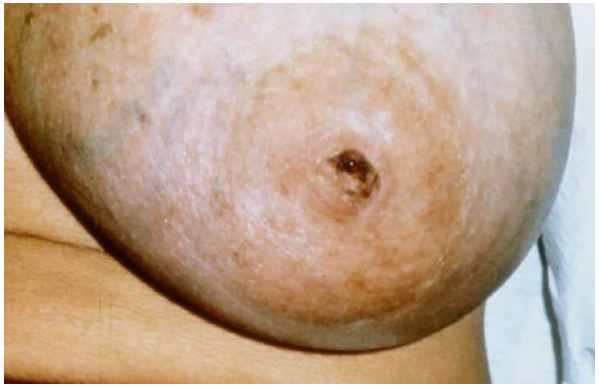
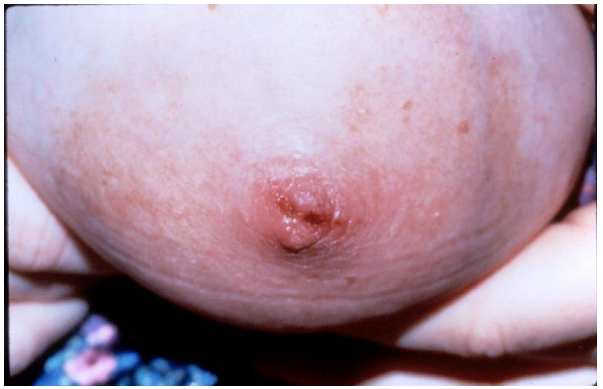
Sore Nipples

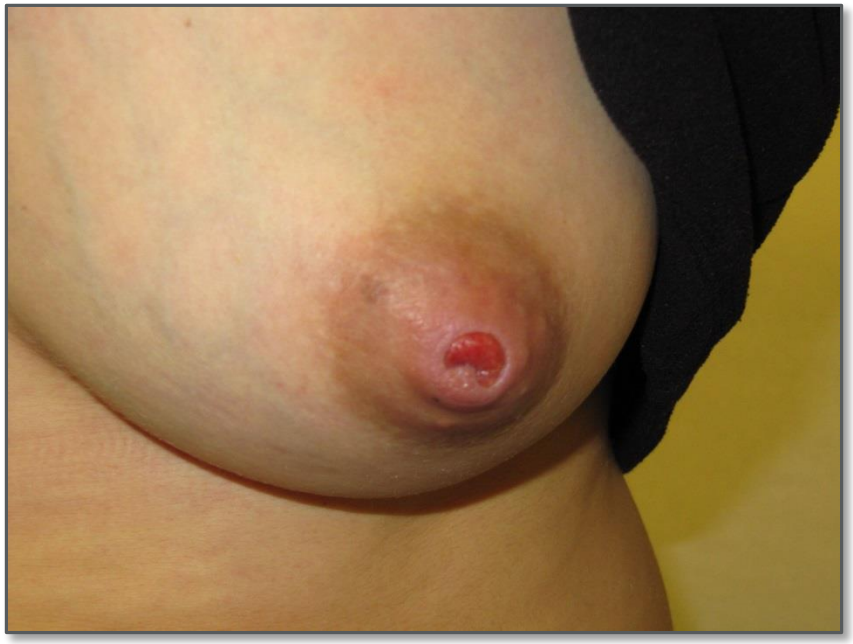
- Trauma
  - abraded area
  - bloody stripe
  - severe pain with latch-on
  - baby not content/ poor intake
  - correct latch-on relieves pain
  - no pain after feeding







Cracked Nipple Treatment



- Moist Wound healing
  - Don’t let nipple stick!!
    - Antibacterial ointment
    - Nonstick pad
- Decrease trauma
  - Improve latch!!
  - Check for pump trauma
  - Teach how to break seal
  - Avoid prolonged nonnutritive sucking
- Start with less sore nipple first
- Hands on pumping if needed

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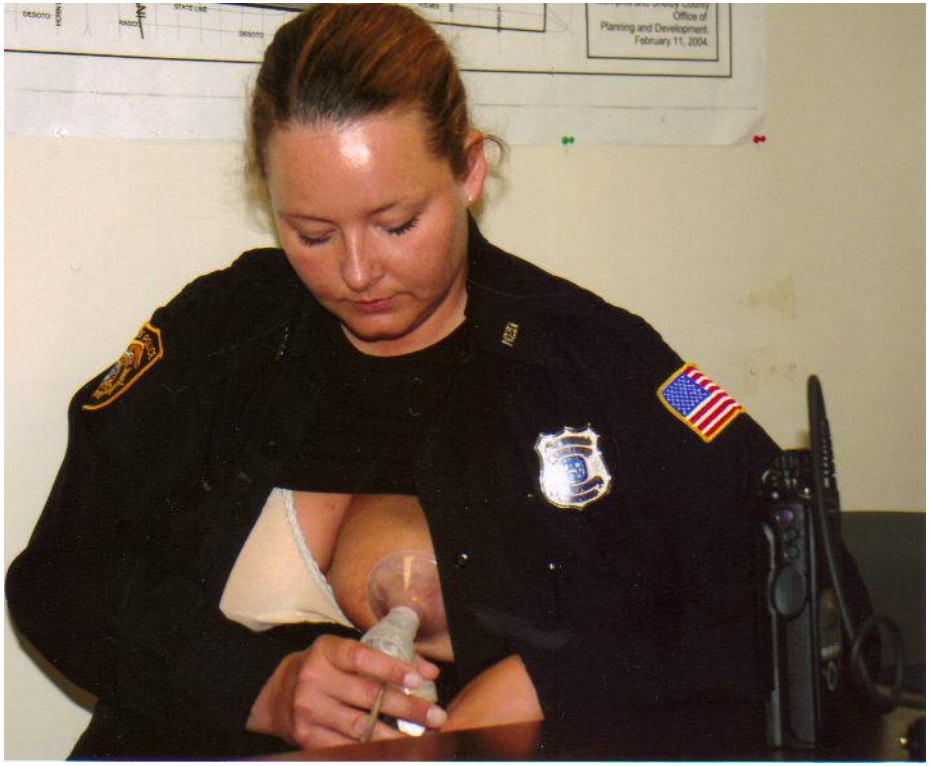
Mrs. Bond

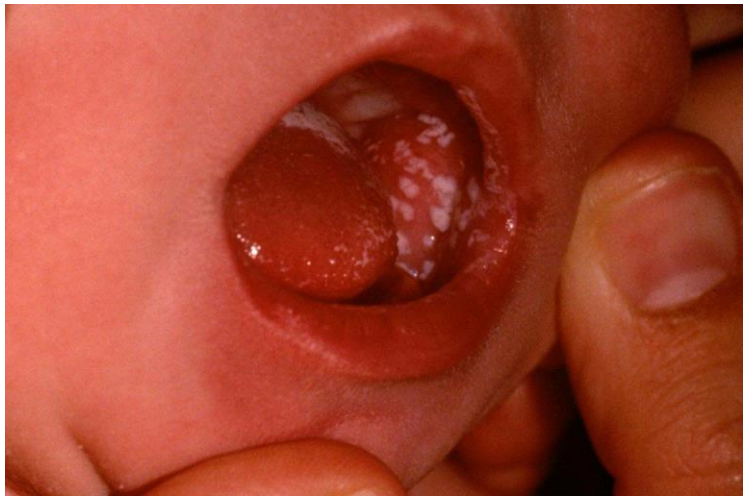


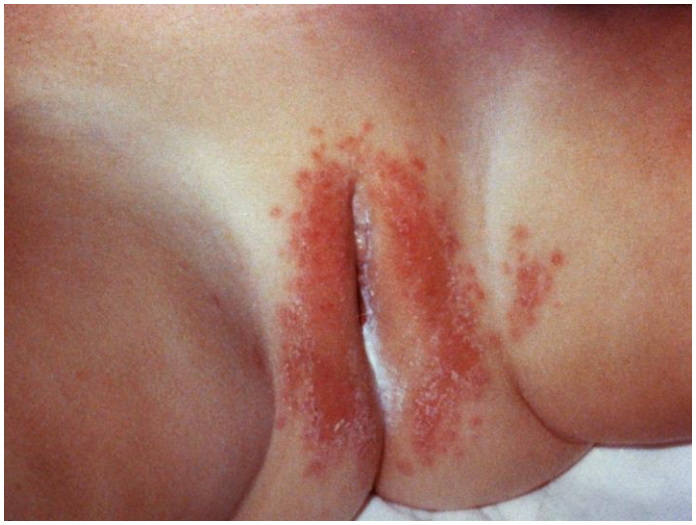
Cincinnati Children's
changing the outcome together

Case Presentation

- Mrs. Bond had a healthy 8 lb 2 oz. baby boy and breastfeeding was going well until about 3 weeks.
- She began feeling burning in her nipples, sometimes with radiation of the pain through the breast.
- She complained that if her clothes touched her nipples they were exquisitely tender.

When examining the baby you saw…





The proper treatments for baby and Mrs. Bond include:

a. Anti-fungal treatment for baby's thrush and diaper dermatitis

b. Hygiene measures for bras, pacifiers, bottles, nipples

c. Antifungal treatment for mother's ductal candidiasis

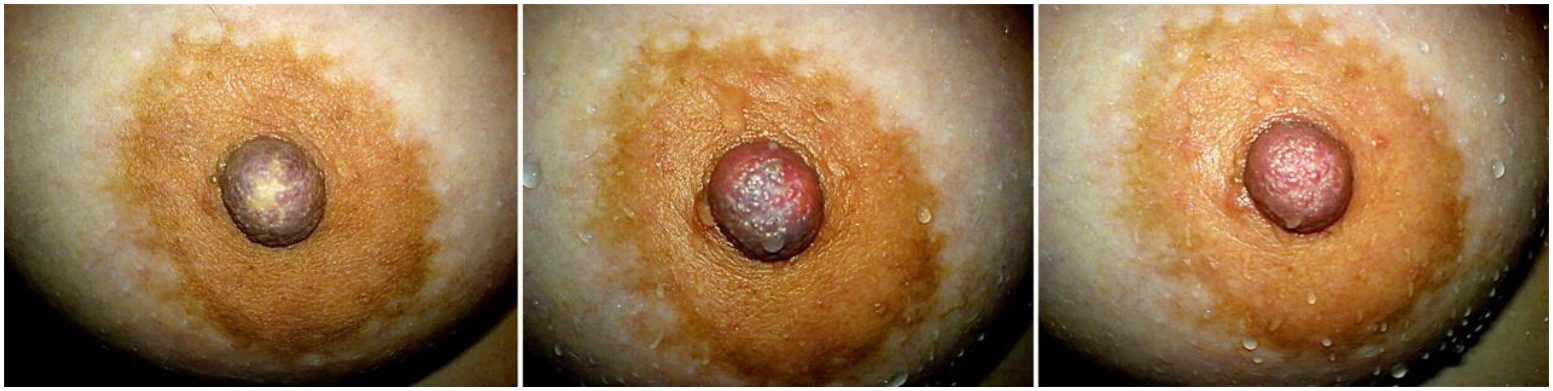
d. All of the above

e. A & B

Mrs. And Baby Bond

- Mrs. Bond took her Diflucan (200 mg, followed by 100 mg daily for 14 days
- Baby Bond completed his topical anti-fungal treatment for mouth and groin
- Mom's pain initially subsided, then recurred again.
- The baby's mouth and groin are now normal
- Mom reports discoloration of her nipple during episodes of exquisite pain.

Vasospasm of the arterioles manifesting as pallor (left), followed by cyanosis, and then erythema (centre).



Holmen O L , Backe B BMJ 2009;339:bmj.b2553

Raynaud's Phenomenon

- Severe blanching and debilitating nipple pain
- Typical color changes are white, blue, then red
- RX
  - Discontinue smoking
  - Warmth to nipples
  - B6 has been used (100-200 mg qd for 4 days, then 25 mg qd) (Newman)
  - Occasionally Nifedipine is used 30 mg slow release

Mrs. Thomas and Baby John

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Mrs. Thomas and Baby John

- 8 lb 2 oz born via SVVD.
- Placed skin-to-skin immediately after birth, and fed within the first hour.
- No problems noted in hospital stay.
- In your office on day 4, John's mother complained that he could no longer latch on, was crying all the time, and her breasts were both very sore.
- His weight was down 7%.

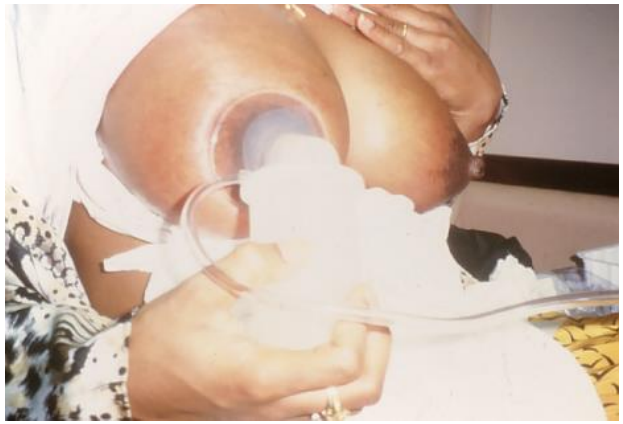
What could be causing Mrs. Thomas's problems now?

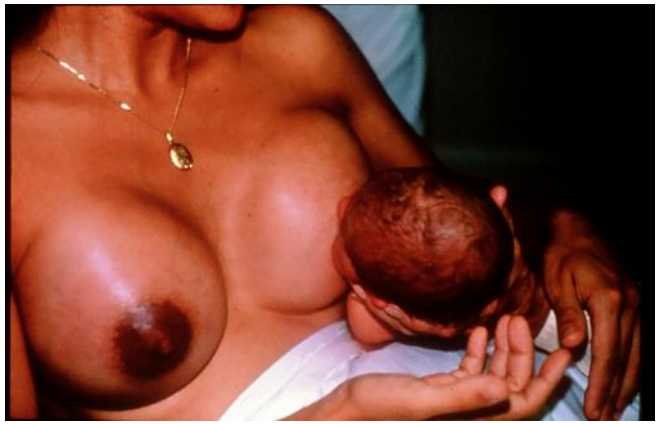
a. Mastitis
b. Tongue tie
c. Insufficient Glandular Tissue
d. Engorgement

Engorgement

Engorgement

- Usually day 3-5
- Edema - response to lactation hormones
- Reduce the swelling with ice packs and anti-inflammatory drugs
- Pump to soften areola
- Breastfeed the baby
- Usually relieved within 24 hours of treatment





BREASTFEEDING MEDICINE
Volume 11, Number 4, 2016

DOI: 10.1089/bfm.2016.29008.pjb

ABM Clinical Protocol #20: Engorgement, Revised 2016

Pamela Berens,[1] Wendy Brodribb,[2] and the Academy of Breastfeeding Medicine

A central goal of The Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

Reverse pressure softening can help with latch
Therapeutic Breast Massage also helpful

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Hand Expression

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Basics of Breast Massage and Hand Expression

https://vimeo.com/65196007

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Ms. Robinson and Baby Jay

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Case Presentation

- Ms. Robinson calls your office because she is having trouble with breastfeeding on one side.
- Baby Jay is 3 weeks old and has been doing well until now
- Ms. Robinson has a fever, chills, and myalgias

Your nurse asks and/or tells Mrs. Robinson…

a. Do you have a sore reddened area on your breast?

b. Please call your obstetrician to let her know about your symptoms

c. Continue to feed Baby Jay on both breasts if possible

d. Most medications are safe in breastfeeding

e. All of the above

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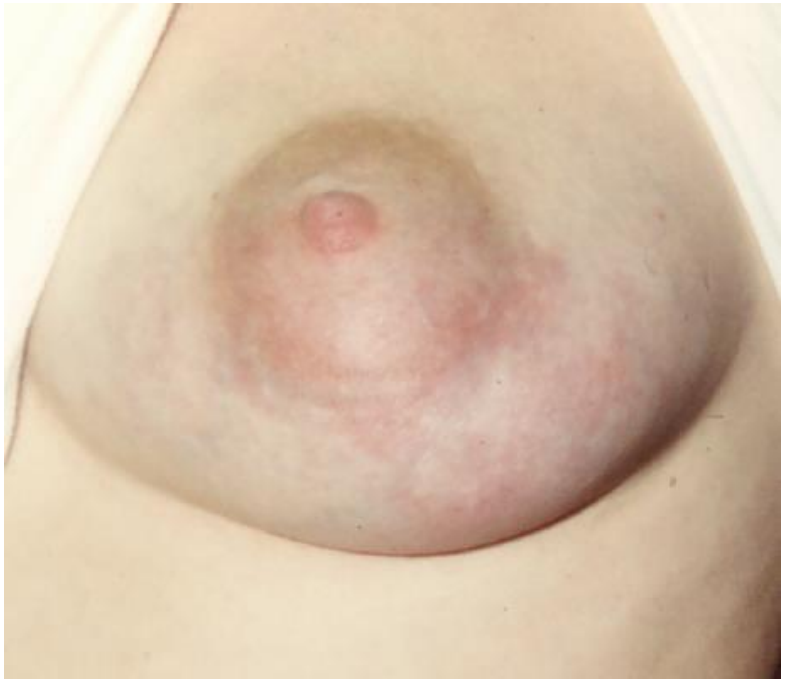
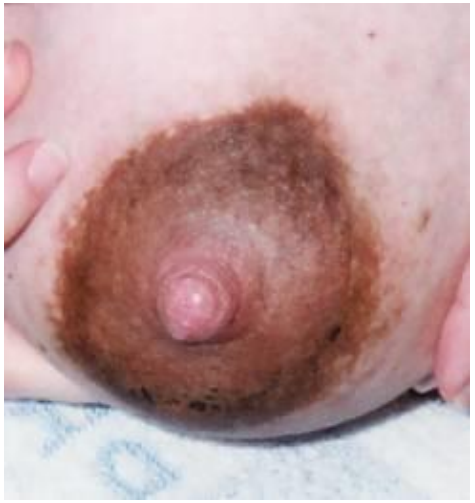
Mastitis

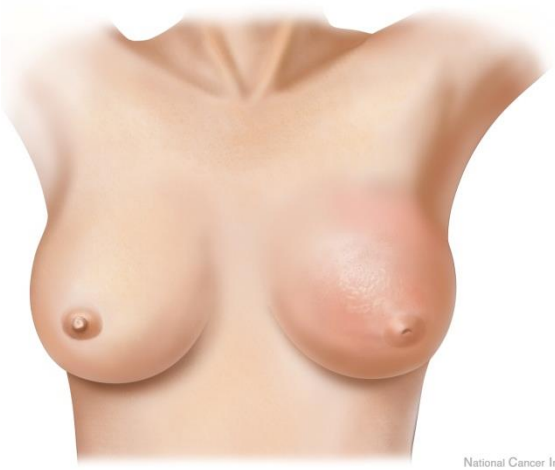
- Occurs in 2-9.5% lactating women
- Most common in 2nd-3rd weeks post partum
- Sore, reddened area on one breast
- Fever, chills, and malaise
- A segment of breast becomes hard and erythematous



Mastitis - DDx

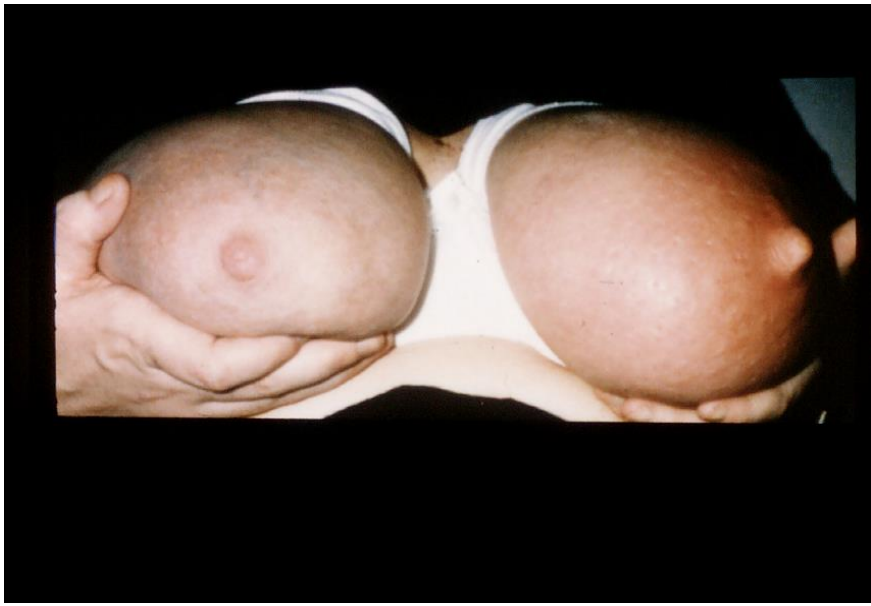
- Plugged Duct – localized tender mass, responding to warm wet compresses and massage of loculated milk toward nipple
- Engorgement – always bilateral, occurs first few days postpartum
- Inflammatory breast carcinoma – unilateral erythema, heat, and induration that is more diffuse and recurrent





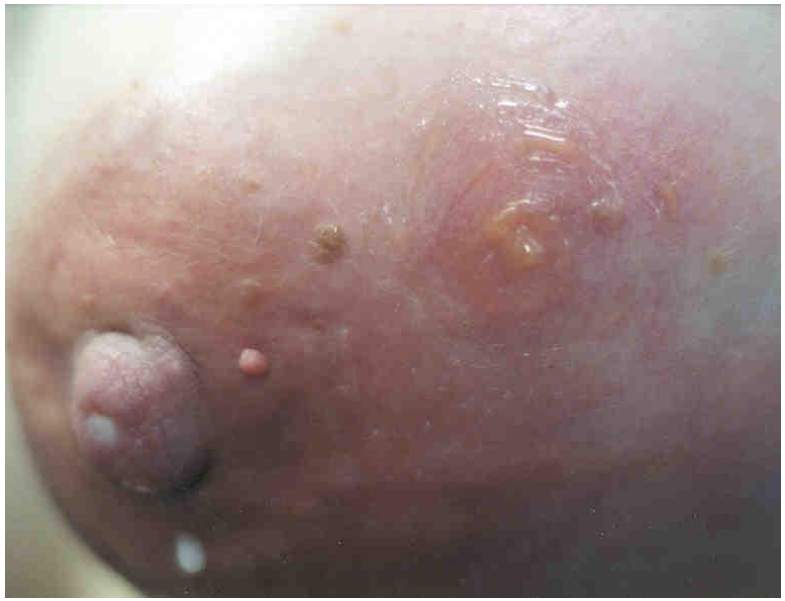
Mastitis - Treatment

- *S. aureus* most common pathogen
- Treat with Dicloxacillin® 500 mg q.i.d. for minimum of 10-14 days and 2 days after symptoms subside
- Continue breastfeeding or pumping
- Do not discard milk
- If bilateral, usually Group B Strep



Breast Abscess

- Palpable mass not resolving after 48-72 hours of antibiotics
- Treat with incision and drainage
- Discard milk X 24 hours
- Ultrasound needle aspiration has been shown to be effective



ABM Mastitis Protocol

BREASTFEEDING MEDICINE
Volume 9, Number 5, 2014

DOI: 10.1089/bfm.2014.9984

ABM Protocol

ABM Clinical Protocol #4: Mastitis, Revised March 2014

Lisa H. Amir[1,2] and The Academy of Breastfeeding Medicine Protocol Committee

A central goal of The Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

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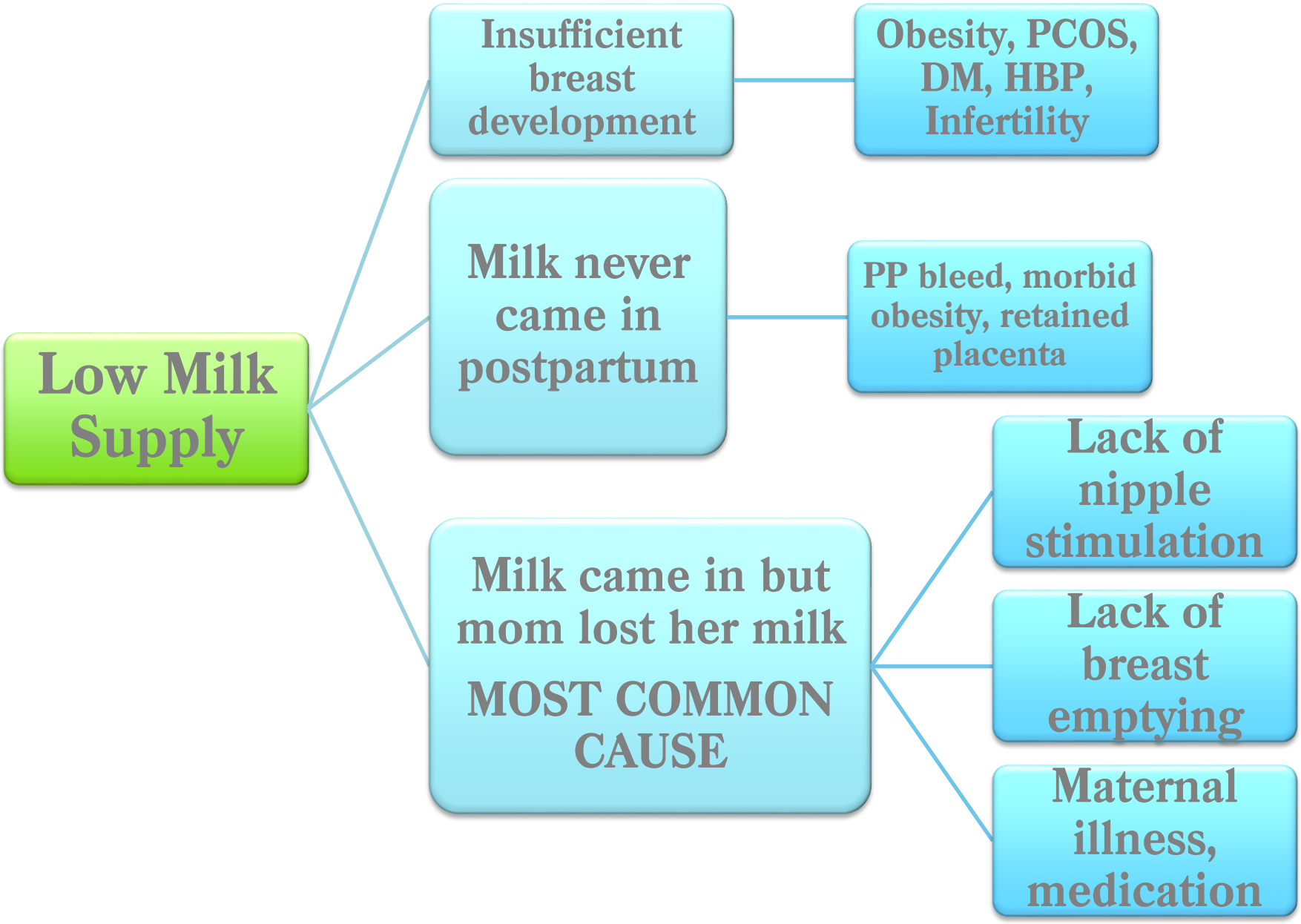

Low Milk Supply

- #1 reason
  - Most common reason mothers stop breastfeeding whether
    - Perceived
    - Actual

You can help!

Li, R., et al., *Why mothers stop breastfeeding: mothers' self-reported reasons for stopping during the first year.* Pediatrics, 2008. **122 Suppl 2**: p. S69-76
Garner, C.D., et al., *Discontinuity of Breastfeeding Care: "There's No Captain of the Ship".* Breastfeed Med, 2016. **11**(1): p. 32-9..

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Low Milk Supply

- Lack of optimal breastfeeding management is #1 cause
- Impaired glucose tolerance may contribute to intrinsic low supply

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Momma’s gotta make it

Baby’s gotta take it!

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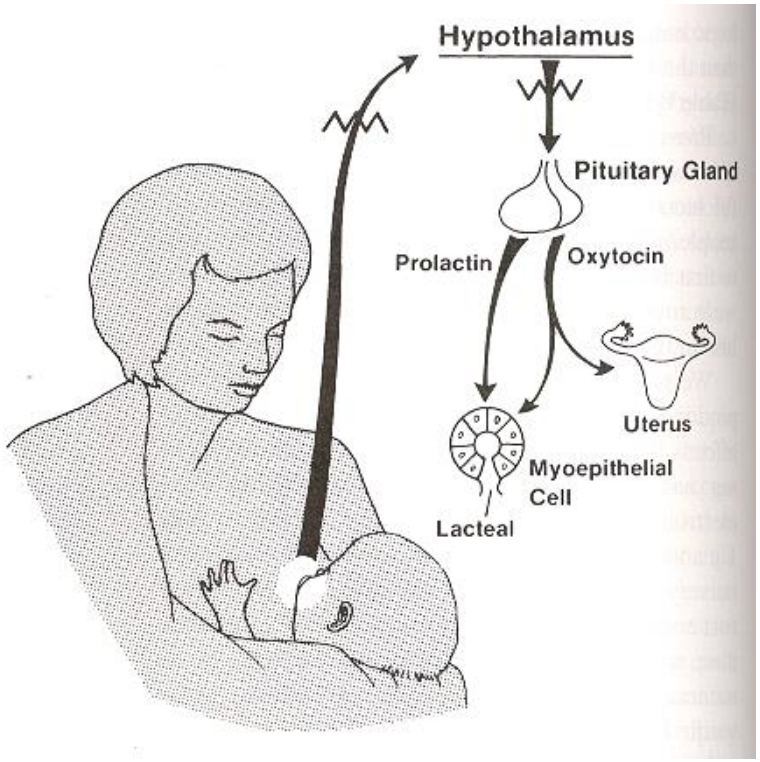
Milk Supply

- Endocrine control
  - Prolactin - milk production
  - Oxytocin - milk ejection
- Autocrine control
  - "Supply meets demand"
  - ***If milk is not removed, a feedback inhibitor of lactation (FIL) protein will inhibit production and cause weaning***



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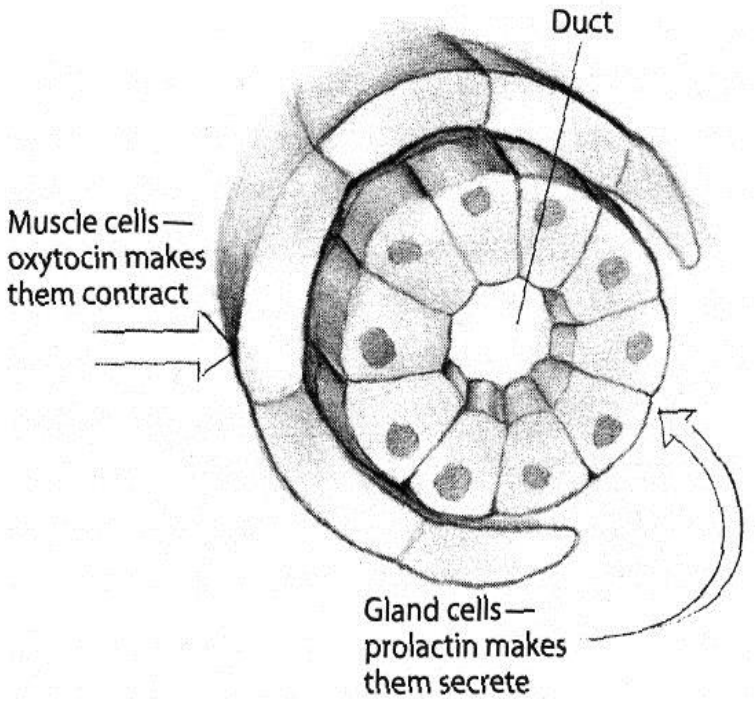
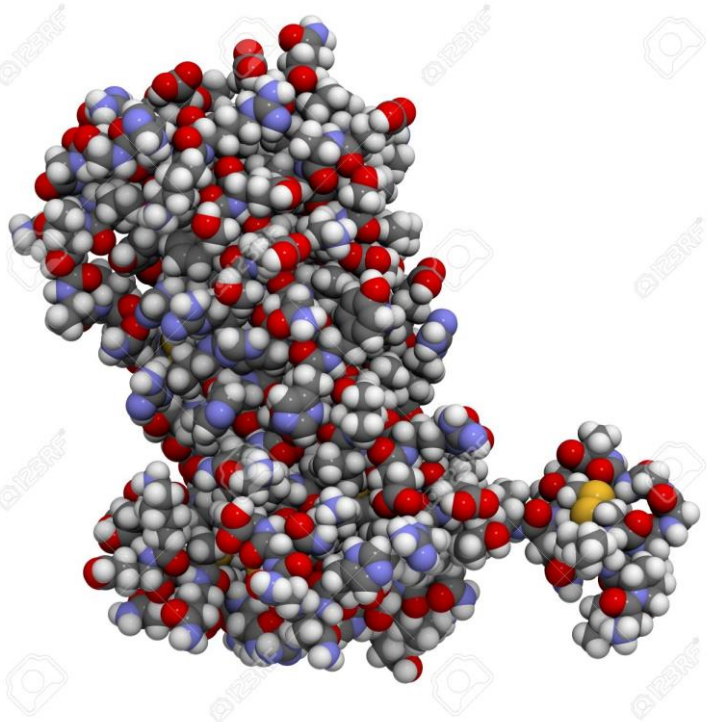
Prolactin

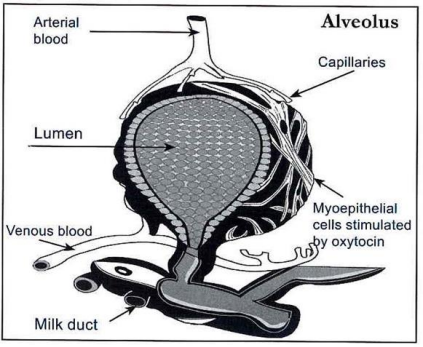
- Released from anterior pituitary
- Causes milk synthesis
- Effect prevented by elevated levels of progesterone
- **Requires nipple stimulation**



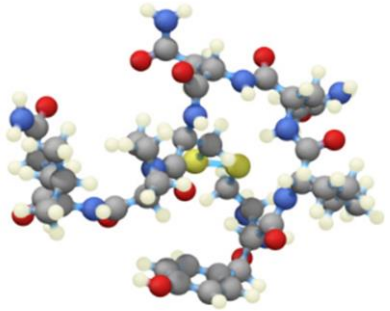
Prolactin

- Blunted by:
  - Medications and drugs
    - Tobacco
    - Bupropion
    - Pseudoephedrine
    - Estrogen
    - Certain antipsychotics
  - Nipple insensitivity
  - Pituitary trauma
  - **Insufficient demand**
  - Hormonal blockage
    - Testosterone secreting ovarian cyst
    - Estrogen





Oxytocin



- Tactile stimulation of the nipple-areolar complex by suckling signals hypothalmus
- Released from posterior pituitary gland
- Causes contraction of the myoepithelial cells
- Forces milk into the ducts from alveolar lumens then out through the nipple
- Engorged breasts restrict blood flow to alveoli blocking ejection
- Triggers contractions to decrease blood loss and promote involution of the uterus

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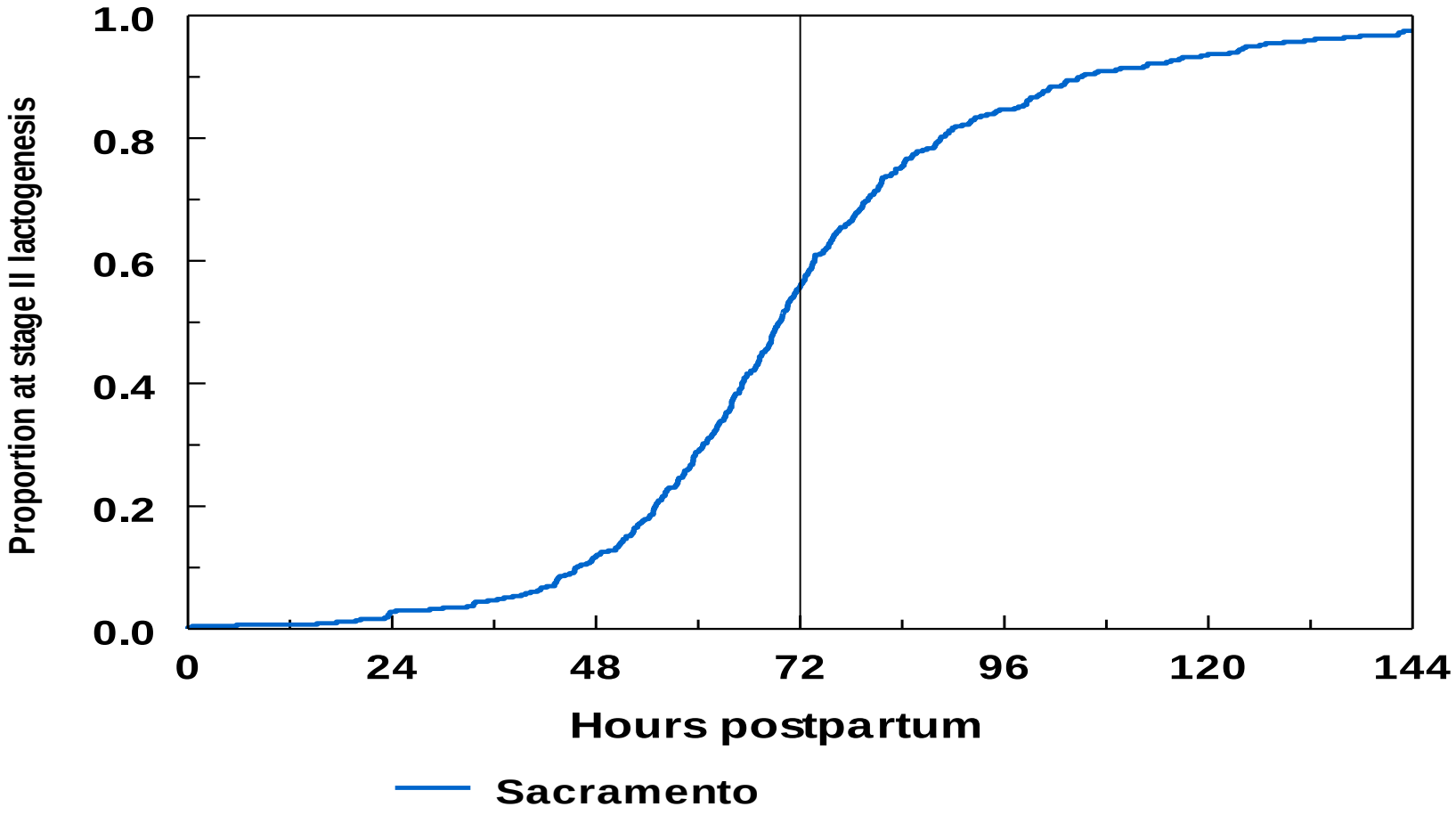
Maternal Causes of Delayed or Failure of Lactogenesis II

- Primiparity**
- Psychosocial stress/pain
- Maternal Obesity
- Diabetes
- Hypertension
- Hypothyroidism
- Cesarean section
- Prolonged second stage of labor
- Cigarette smoking
- Hypopituitarism
- Ovarian theca-lutein cyst
- Insufficient mammary glandular tissue
- PCOS
- Retained Placenta
- Postpartum hemorrhage (Sheehan's Syndrome)
- Breast surgeries

Timing of stage II lactogenesis in first-time mothers delivering at term (N=432)



(Nommsen-Rivers, *Am J Clin Nutr* 2010)

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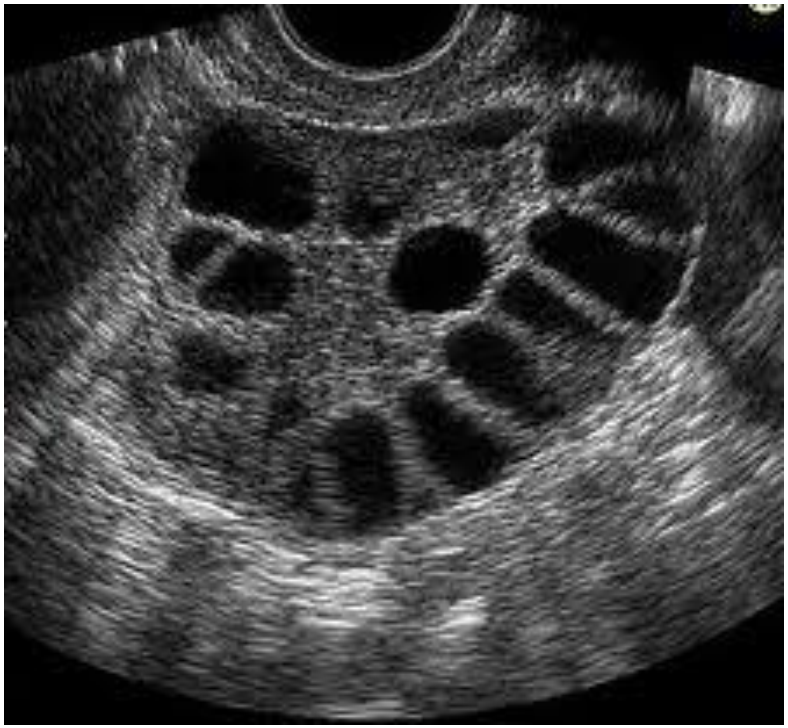
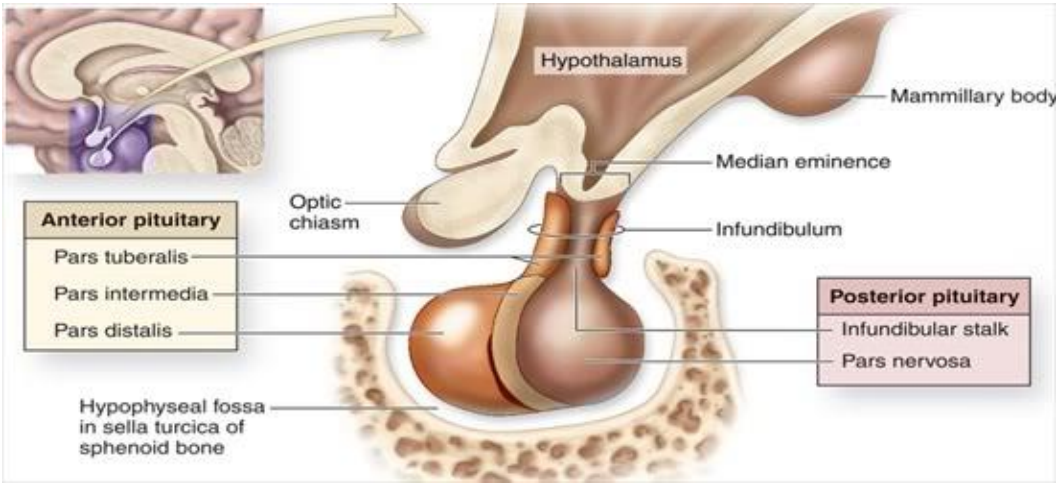
A Word about PCOS

- At risk for low milk supply
- Multiple hormonal abnormalities
- Treatment with Metformin may increase milk supply
  Gabbay, 2003
- Safe for baby (Lactmed and Hale, 2016)
- MALMS study – data analysis ongoing



Sheehan's Syndrome



- Postpartum hemorrhage
- Pituitary thrombotic infarction or hypoperfusion
- 0.01-0.02% of post partum women
- Lactation failure

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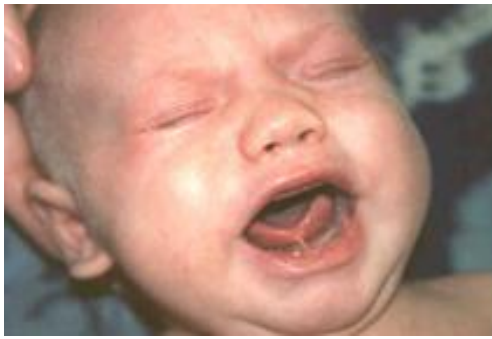
Ineffective Milk Removal – Infant Causes

- Late preterm infant
  - Weak suck, tire easily, sleepy
- Weak or uncoordinated suck
  - Low tone infants,
  - Substance exposed infants
- Ineffective latch
- Jaundiced



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Case – Mrs. Mitchell

- 24 year old G1 mom, delivered at 36 6/7 weeks by C Section
- Mom did have breast changes during pregnancy
- Baby Sarah did not latch on well in hospital, requiring use of a nipple shield
- Jaundice requiring phototherapy day 3-5
- Mom cannot latch Sarah to the breast

Baby Sarah comes in at 5 days

- Sarah is 14% below birthweight
- Sarah is having 2 tarry stools per the last 24 hours and 4 wet diapers
- She is still visibly jaundiced
- She is crying and sucking on her hands

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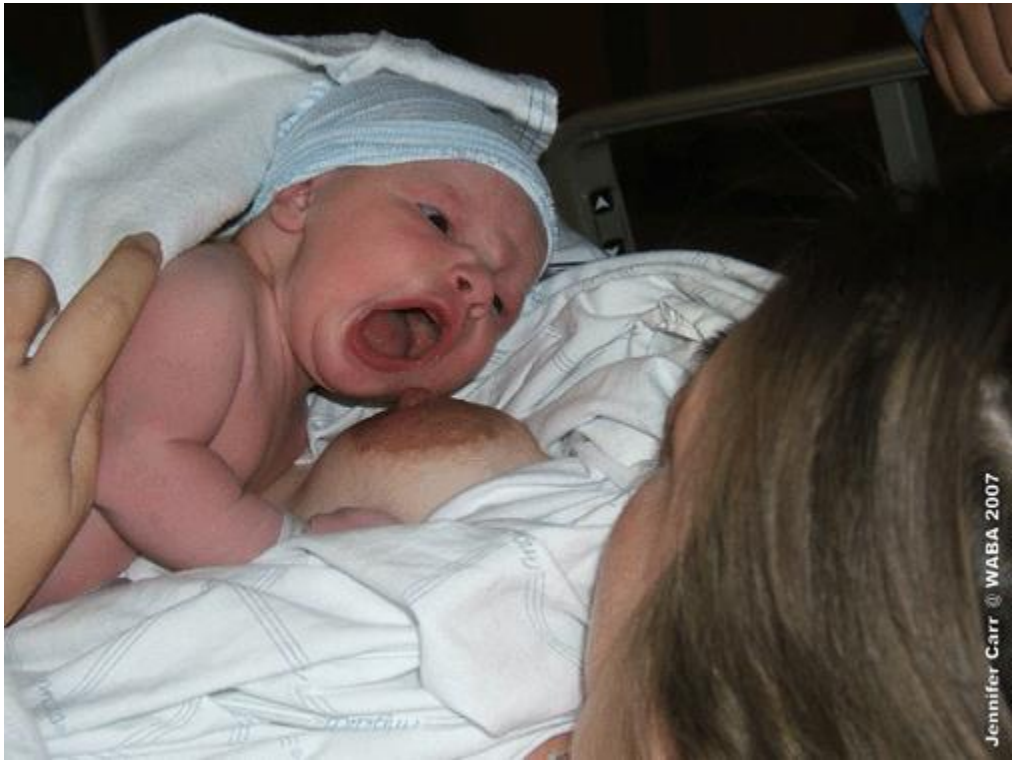
Perceived or Actual?



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What are risk factors?

- Maternal
  - Primiparous
  - C Section
- Infant
  - Late Preterm
  - Jaundice
  - Latch on problems
  - Nipple shield

What's the first thing you do after examining the baby?

a. Get out a bottle of formula to give Sarah

b. Call lactation expert to come see the baby if available

c. Ask mom to see if you can help latch the baby on

d. Ask about infant weight at discharge and feeding history

e. All of the above

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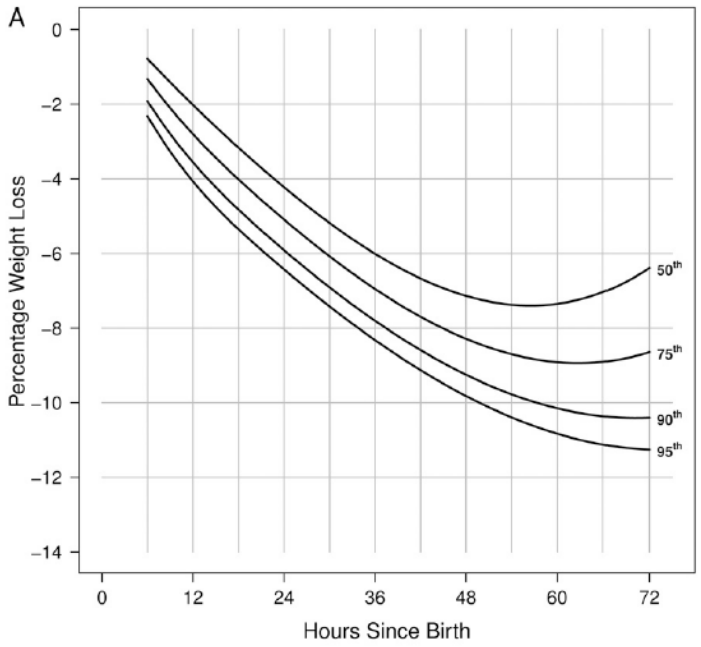
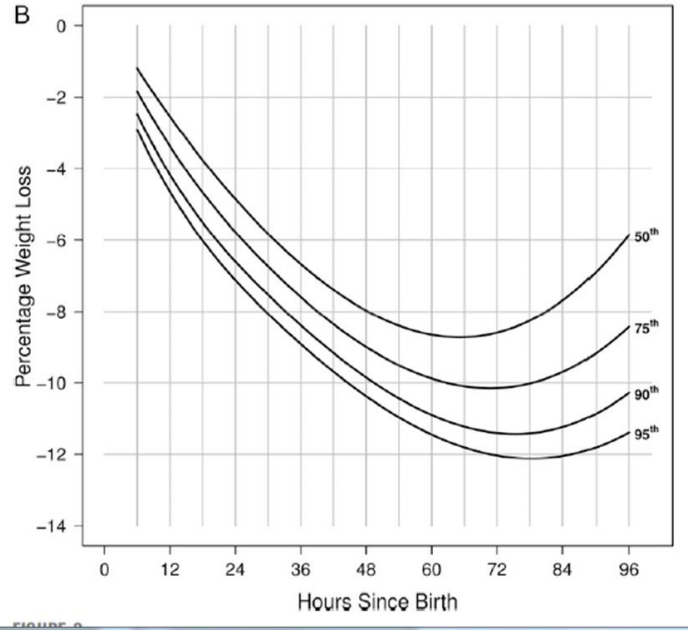
Early Weight Loss Nomograms for Exclusively Breastfed Newborns

Valerie J. Flaherman, MD, MPH[a,b], Eric W. Schaefer, MS[c], Michael W. Kuzniewicz, MD, MPH[a,d], Sherian X. Li, MS[d], Eileen M. Walsh, MPH, RN[d], Ian M. Paul, MD, MS[c,e]

Vaginal Deliveries



Cesarean Births



http://pediatrics.aappublications.org/content/pediatrics/early/2014/11/25/peds.2014-1532.full.pdf
Flaherman, et al., 2014, Pediatrics

83,433 vaginal births, 25,474 Cesarean births

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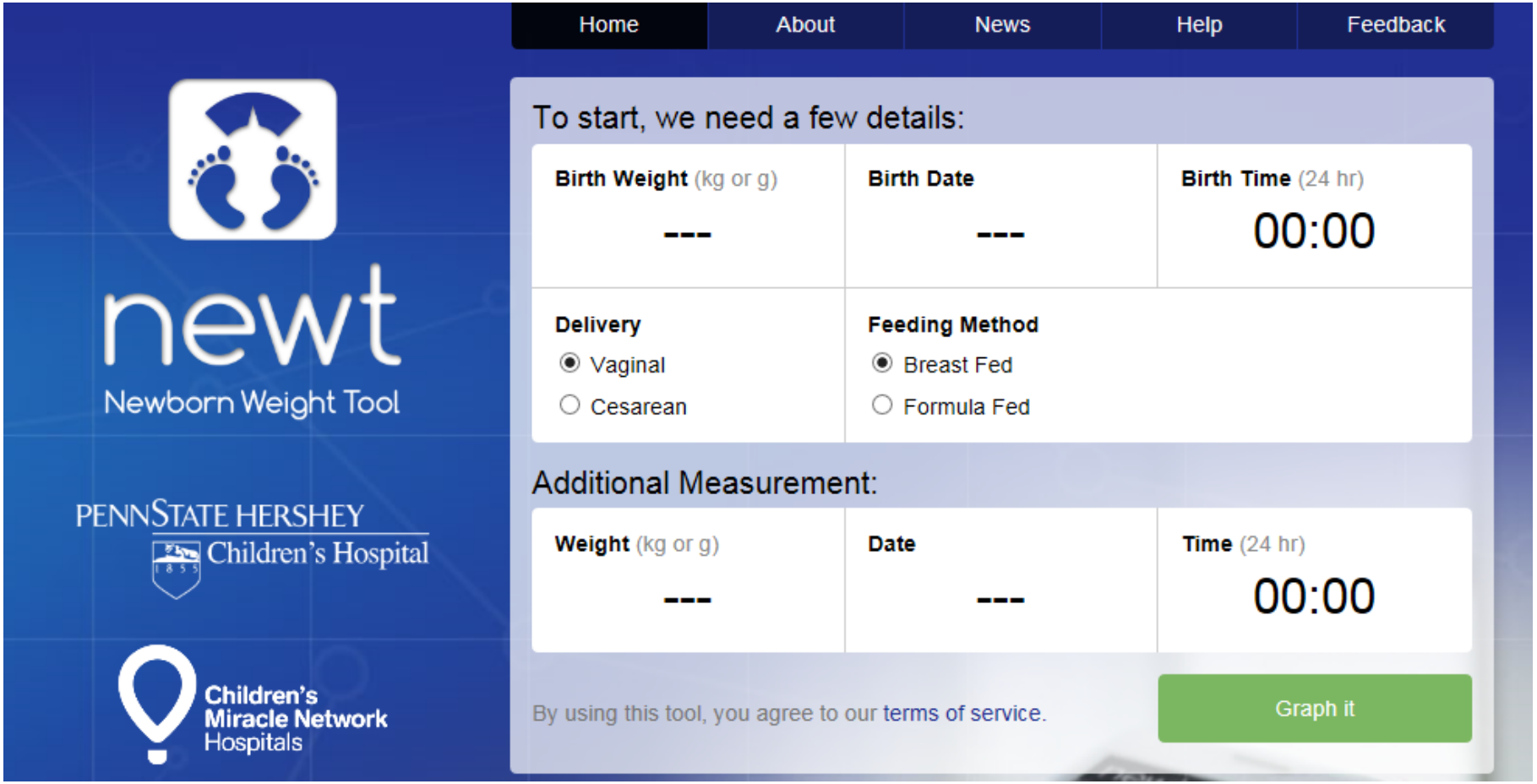
newt



https://www.newbornweight.org/

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Expected weight gain after initial loss

- 15-30 gms per day
- Can do pre and post weights to test intake

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REVIEW

Low milk supply and the pediatrician

Sarah W. Riddle[a] *and Laurie A. Nommsen-Rivers*[b]

Purpose of review

Human milk is the optimal food for human infants, and provides many diverse and well described benefits for both mother and infant. Low milk supply, whether perceived or actual, is one of the most common reasons why mothers stop breastfeeding. Breastfeeding mothers often seek out the guidance and support of

Age (n)	Centile	Girls (g/day)	Boys (g/day)
0–7 days	Median	14	21
	25th	0	0
	10th	−14	−21
	5th	−29	−36
	(n)	(384)	(383)
7–14 days	Median	29	36
	25th	14	19
	10th	0	0
	5th	−7	−7
	(n)	(382)	(381)
14–28 days	Median	39	47
	25th	32	38
	10th	25	32
	5th	21	25
	(n)	(441)	(417)
28–42 days	Median	35	40
	25th	27	32
	10th	21	25
	5th	18	21
	(n)	(441)	(417)
42–60 days	Median	29	34
	25th	22	28
	10th	18	22
	5th	15	18
	(n)	(440)	(416)

Volume 29 • Number 2 • April 2017

https://www.ncbi.nlm.nih.gov/pubmed/28134707

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To help mothers reach their milk supply potential, it is important to:

- Ask her to take herbs and eat lactation cookies
- Pump her breasts, even if the baby is nursing well
- Make sure every mom sees a lactation consultant after discharge
- Ensure that she is having frequent and effective milk removal
- Be sure she drinks lots of water, and eats extra calories everyday

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Perceived Low Milk Supply

- Baby Sarah at 5% below birthweight on day 5
- Feeding 10-12 times per 24 hours, and sometimes in clusters
- Having 4 stools now yellow and 6-8 wet diapers per 24 hours
- Moms breasts soften after feedings

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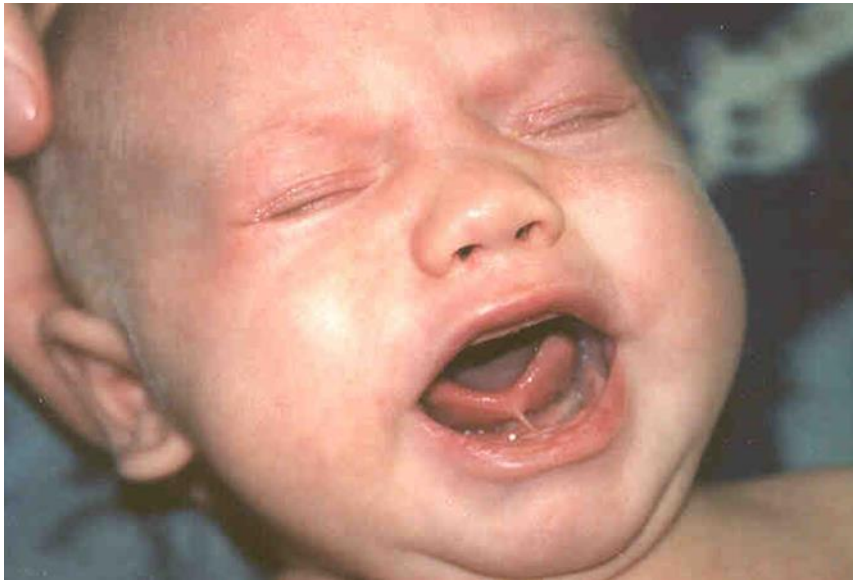
And what if you see this?



A possible cause of:
Ineffective milk removal
Slow weight gain
Sore nipples

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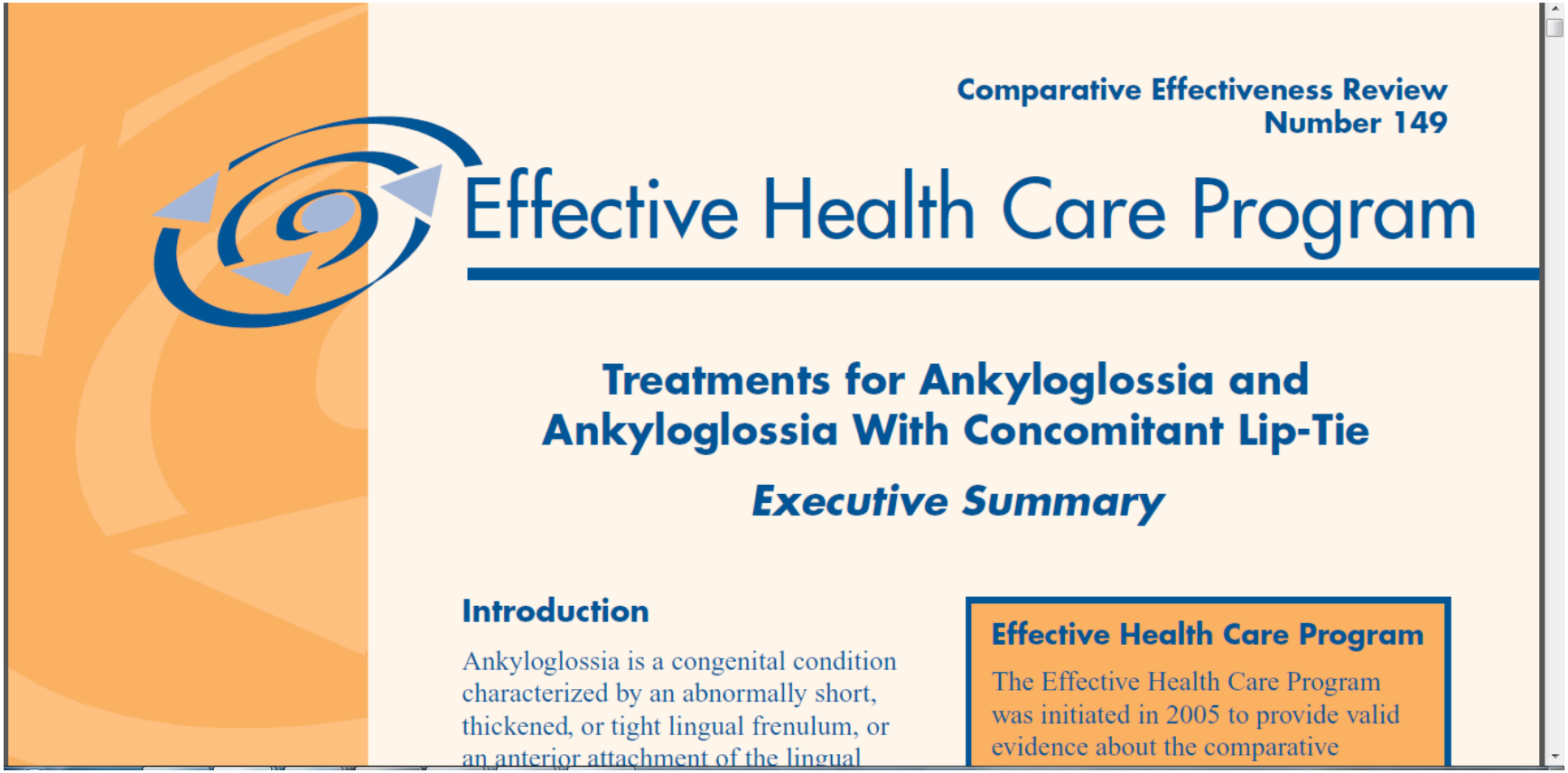
AHRQ, May 2015



Comparative Effectiveness Review
Number 149

Effective Health Care Program

Treatments for Ankyloglossia and Ankyloglossia With Concomitant Lip-Tie

Executive Summary

Introduction

Ankyloglossia is a congenital condition characterized by an abnormally short, thickened, or tight lingual frenulum, or an anterior attachment of the lingual

Effective Health Care Program

The Effective Health Care Program was initiated in 2005 to provide valid evidence about the comparative

"Strength of evidence is low to insufficient, preventing us from drawing firm conclusions…"

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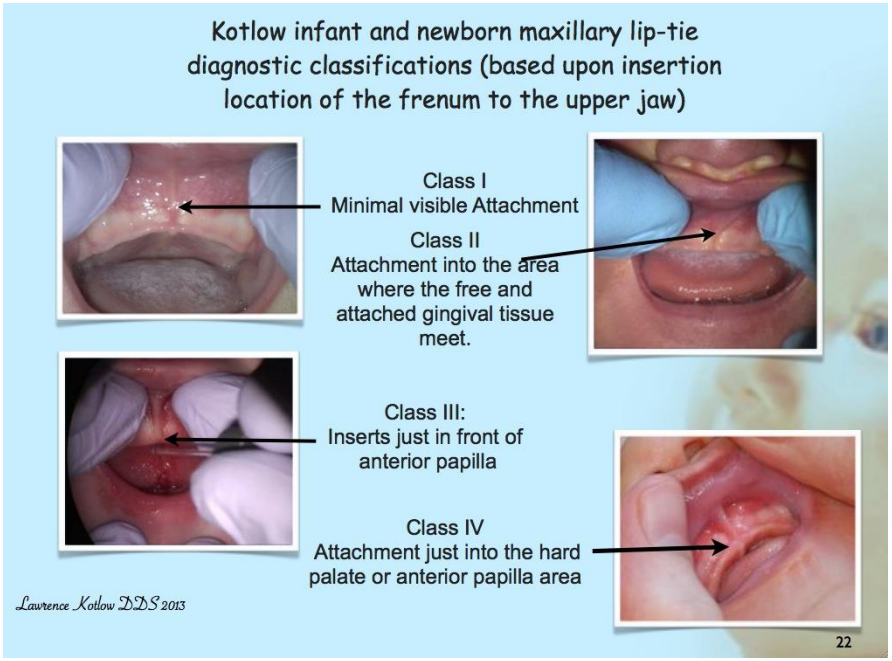
What about the Lip Tie?

KQ 4. Benefits of Simultaneously Treating Ankyloglossia and Lip-Tie

We did not identify any studies addressing this question.

KQ 5. Harms of Treatments for Ankyloglossia or Ankyloglossia With Concomitant Lip-Tie in Neonates, Infants, and Children Through Age 18

In order to identify all possible harms, we sought harms from all comparative studies and case series that we identified as potentially providing effectiveness data, and we sought case reports of harms. With this approach, we examined harms information from 46 studies that reported that they had looked for harms, either reporting actual harms or specifically indicating that they found none. These included 6 RCTs, 1 cohort study, 25 case series,



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Case Presentation – Mrs. Green

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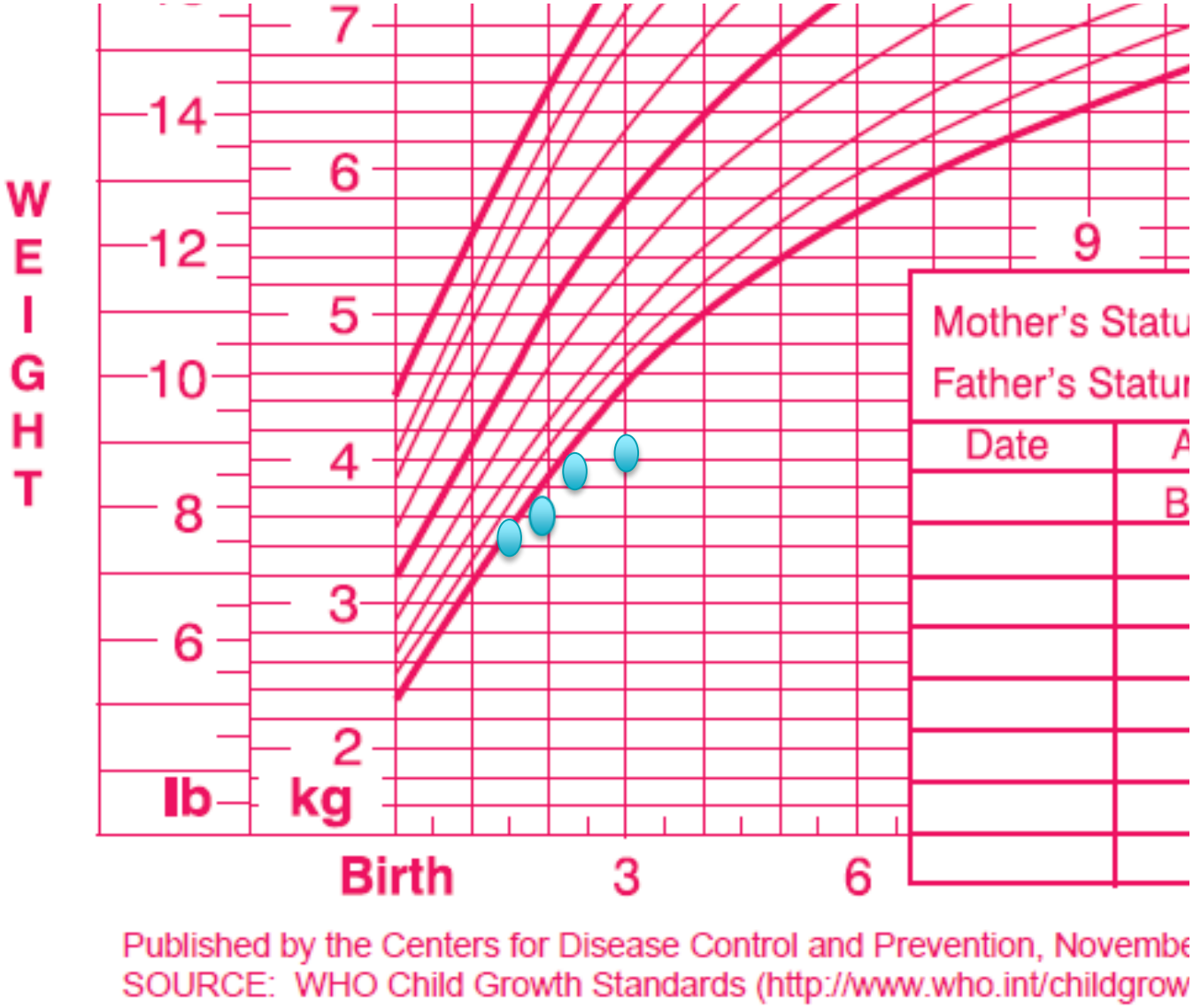
Low Milk Supply and Breastfeeding

- Mrs. Green- a 24-year-old G1 for evaluation of low milk supply.
- 7-week-old baby gained well until 1 week ago when the mother noticed less wet diapers and a decrease in the volume she was able to pump.
- Mrs. Green had been healthy prior to the pregnancy, had no pregnancy complications, noted breast growth during pregnancy, and had an unremarkable labor and delivery. Her breast exam was normal.

Growth Chart shows…



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Weight gain after initial loss

- Was 30 gms per day at the 1 month check
- Since then gain is <15 grams per day

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What else do you want to ask Mrs. Green?

a. Are you taking any medications, including birth control?

b. Have you started back to work?

c. Have you had your thyroid tested recently?

d. Are you restricting your diet?

e. All of the above

Contraception

BREASTFEEDING MEDICINE
Volume 10, Number 1, 2015

DOI: 10.1089/bfm.2015.9999

ABM Protocol

ABM Clinical Protocol #13: Contraception During Breastfeeding, Revised 2015

Pamela Berens,[1] Miriam Labbok,[2] and The Academy of Breastfeeding Medicine

A central goal of The Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

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Galactogues

BREASTFEEDING MEDICINE
Volume 6, Number 1, 2011

DOI: 10.1089/bfm.2011.9998

ABM Protocol

ABM Clinical Protocol #9: Use of Galactogogues in Initiating or Augmenting the Rate of Maternal Milk Secretion (First Revision January 2011)

The Academy of Breastfeeding Medicine Protocol Committee

A central goal of The Academy of Breastfeeding Medicine is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care.

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Metoclopramide and Domperidone

See http://www.bfmed.org/Resources/Protocols.aspx

- Dopamine antagonists, causes ↑ prolactin secretion
- Metoclopramide
  - Not effective in more recent higher quality RCTs
  - Potential significant side effects
- Domperidone
  - Well designed pilot RCT (N=46), delivery at < 31 weeks, shows promise
- Neither currently endorsed by ABM
  - "Medication should never replace evaluation and counseling on modifiable factors"
  - "…not approved by regulatory agencies in most countries."

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Fenugreek

- Considered possibly safe by the FDA in medicinal amounts.
- 1 small Turkish trial found effectiveness
- Most capsules 500mg-610mg crushed seeds, take 2-3 three times a day
- Side effects- maple syrup body odor, flatulence.
- Risks-allergy to legumes, worsening asthma, hypoglycemia
- **DNA barcoding detects contamination and substitution in North American herbal products,** SG Newmaster, *BMC Medicine* 2013

Take Home Lessons

- Rule # 1

  Feed the baby

- Rule # 2

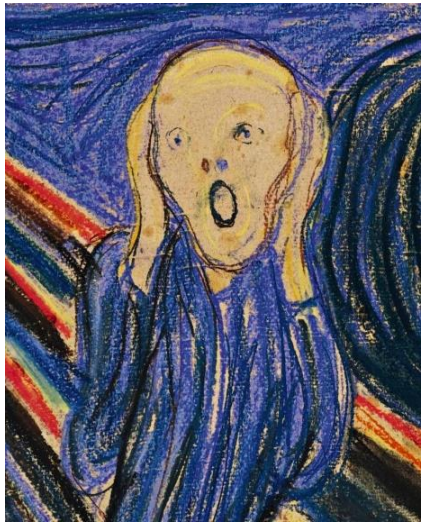
  Protect milk supply

- Rule #3

  Seek help

Potential Maternal Mental Health Benefits with Breastfeeding

- Breastfeeding may attenuate anxiety



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Methadone

- Methadone transferred to milk in low levels
- The estimated neonatal dose of methadone through breast milk is approximately 1-3% of the mother's weight-adjusted dose
- American Academy of Pediatrics
  - Methadone compatible with BF at any dose
  - Breastfeeding should be encouraged when not contraindicated

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Buprenorphine

- Not well studied, but no adverse effects reported.
- Excreted into breast milk in low levels—estimated infant dosage equivalent to <1% - 2.4% of maternal weight adjusted dose
- Low drug concentrations found in urine and serum of breastfed infants
- Poor oral bioavailability (30-40% in adults)
- Compatible with breastfeeding
- Amounts in BM may not be enough to prevent treatment for NAS

ABM Protocol # 21

- Circumstances in which breastfeeding should be encouraged:
  - Moms in substance abuse treatment programs
  - Received consistent prenatal care
  - No evidence of relapse >90 days prior to delivery

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ABM Protocol # 21

- Circumstances in which breastfeeding should be discouraged:
  - Moms with no prenatal care
  - Evidence of relapse within 30 days of delivery
  - positive toxicology for illicit drugs at delivery (or misuse of licit drugs)

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ABM Protocol # 21

- Circumstances in which breastfeeding should be evaluated on an individual basis:
  - Moms with late prenatal care (2nd trimester) or late entry into substance abuse treatment
  - Relapse in the 90-30 days prior to delivery, but sober in the 30 days prior to delivery

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ABM Protocol "Breastfeeding mothers should be counseled to reduce or eliminate their use of marijuana to avoid exposing their infants … and advised of the possible long-term neurobehavioral effects from continued use." (2015)

MARIJUANA AND BREASTFEEDING

The American Academy of Pediatrics says that mothers who are breastfeeding their babies should not use marijuana.

Breastfeeding has many health benefits for both the baby and the mother. But THC in marijuana gets into breast milk and may affect your baby.

Because THC is stored in body fat, it stays in your body for a long time. A baby's brain and body are made with a lot of fat. Since your baby's brain and body may store THC for a long time, you should not use marijuana while you are pregnant or breastfeeding.

Breast milk also contains a lot of fat. This means that "pumping and dumping" your breast milk may not work the same way it does with alcohol. Alcohol is not stored in fat, so it leaves your body faster.

CDPHE CO
COLORADO
Department of Public Health & Environment

https://www.colorado.gov/pacific/sites/default/files/MJ_RMEP_Pregnancy-Breastfeeding-Clinical- Guidelines.Pdf

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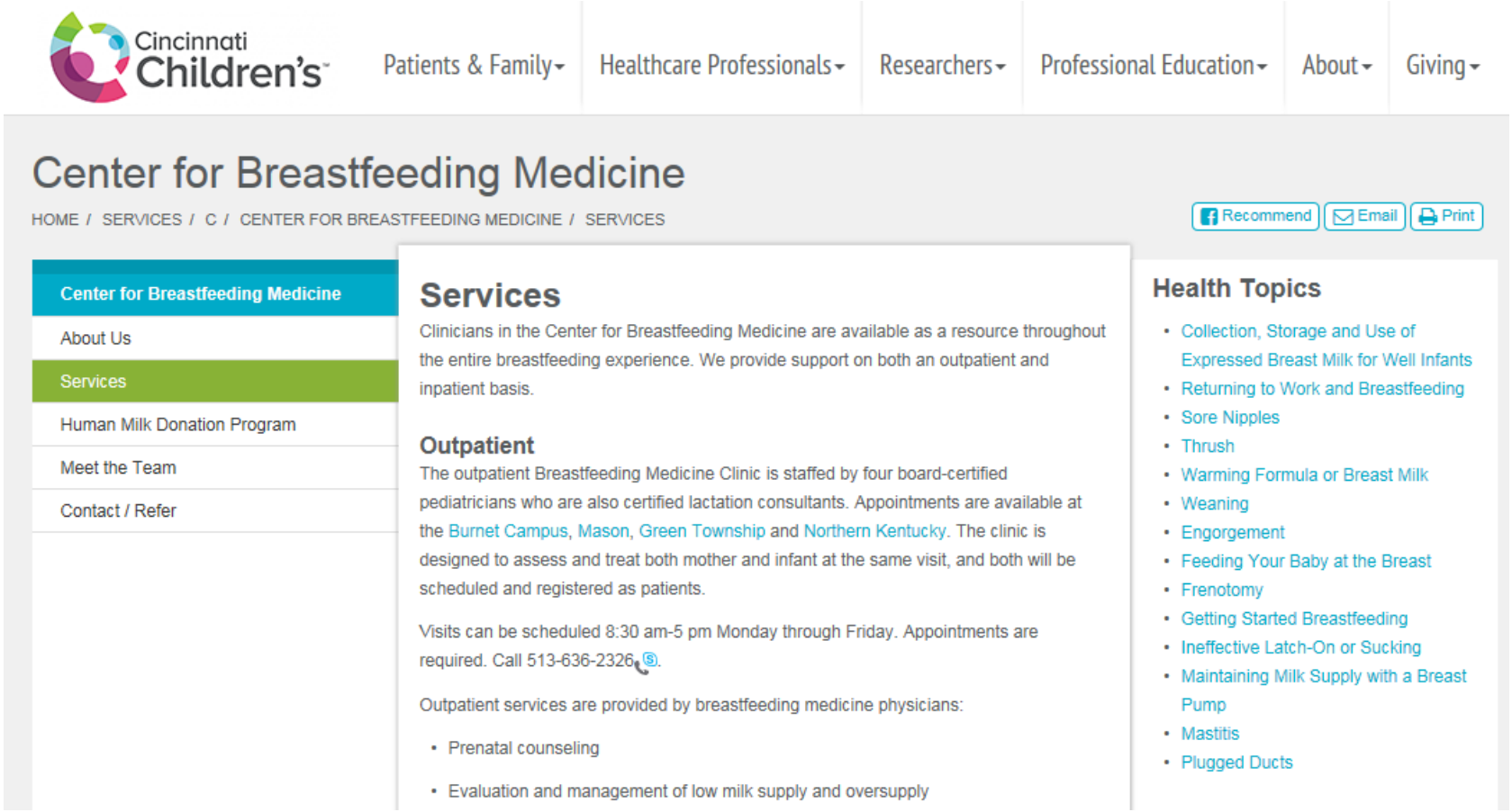
Patient Handouts



https://www.cincinnatichildrens.org/service/c/breastfeeding/services

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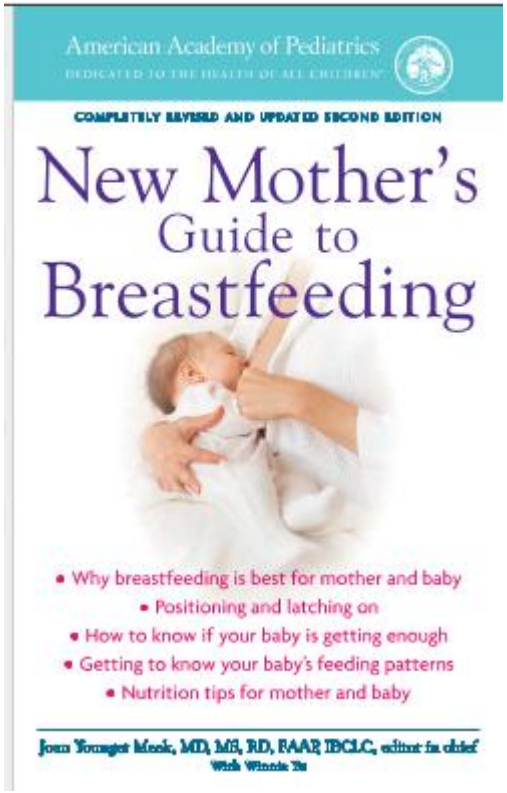
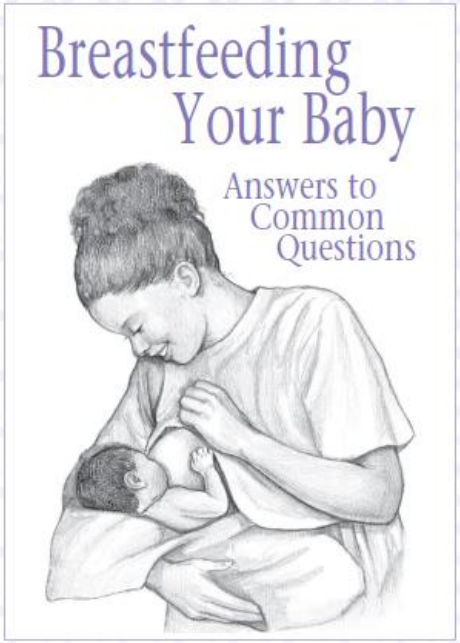
AAP Parent Resources





www.aap.org/breastfeeding

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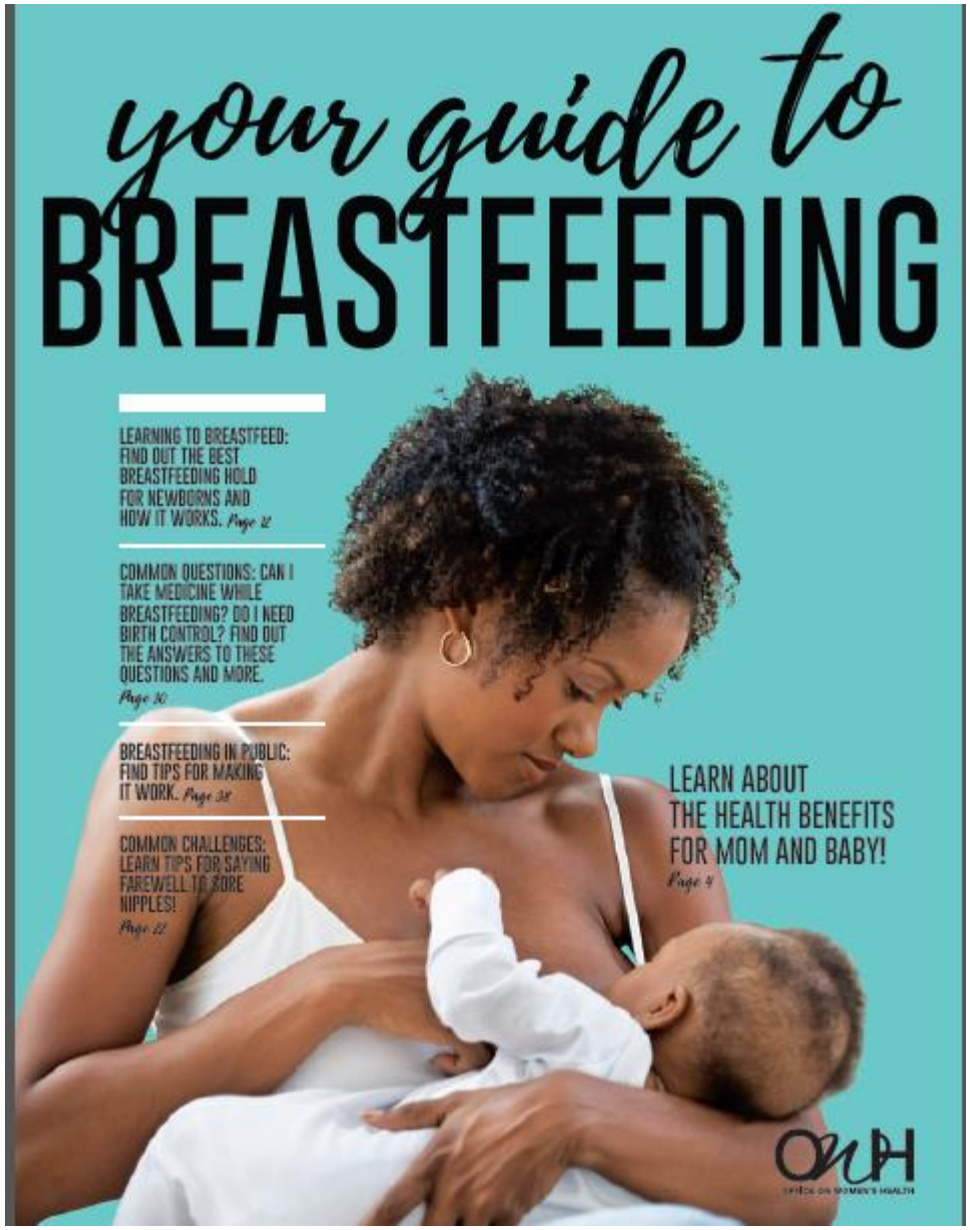

GUIDE TO STORING FRESH BREASTMILK FOR USE WITH HEALTHY FULL-TERM INFANTS

PLACE	TEMPERATURE	HOW LONG	THINGS TO KNOW
COUNTERTOP, TABLE	Room temp (up to 77°F)	Up to 4 hours is best. Up to 6 to 8 hours is okay for very clean expressed milk.	Containers should be covered and kept as cool as possible. Covering the container with a clean cool towel may keep milk cooler. Throw out any leftover milk within 1 to 2 hours after the baby is finished feeding.
REFRIGERATOR	39°F or colder	Up to 3 days is best. Up to 5 days is okay for very clean expressed milk.	Store milk in the back of the main body of the refrigerator. When at work, you can place your expressed milk in the refrigerator. Use a canvas or insulated bag, and place it at the back of the refrigerator.
FREEZER	0°F or colder	Up to 3 to 6 months is best. Up to 9 months is okay for very clean expressed milk.	Store milk toward the back of the freezer where the temperature is most constant. Milk stored at 0°F or colder is safe for longer durations, but the quality of the milk might not be as high.
DEEP FREEZER	-4°F or colder	Up to 6 months. Up to 12 months is okay for very clean expressed milk.	Store milk toward the back of the freezer where the temperature is most constant. Milk stored at 0°F or colder is safe for longer durations, but the quality of the milk might not be as high.

Source: Adapted from 7th Edition American Academy of Pediatrics (AAP) Pediatric Nutrition Handbook (2014); 2nd Edition AAP/American College of Obstetricians and Gynecologists (ACOG) Breastfeeding Handbook for Physicians (2014); Academy of Breastfeeding Medicine (ABM) Clinical Protocol #8 Human Milk Storage Guidelines (2010); CDC Human Milk Storage

https://www.womenshealth.gov/publications/our-publications/breastfeeding-guide/Your-Guide-to-Breastfeeding-508_final.pdf

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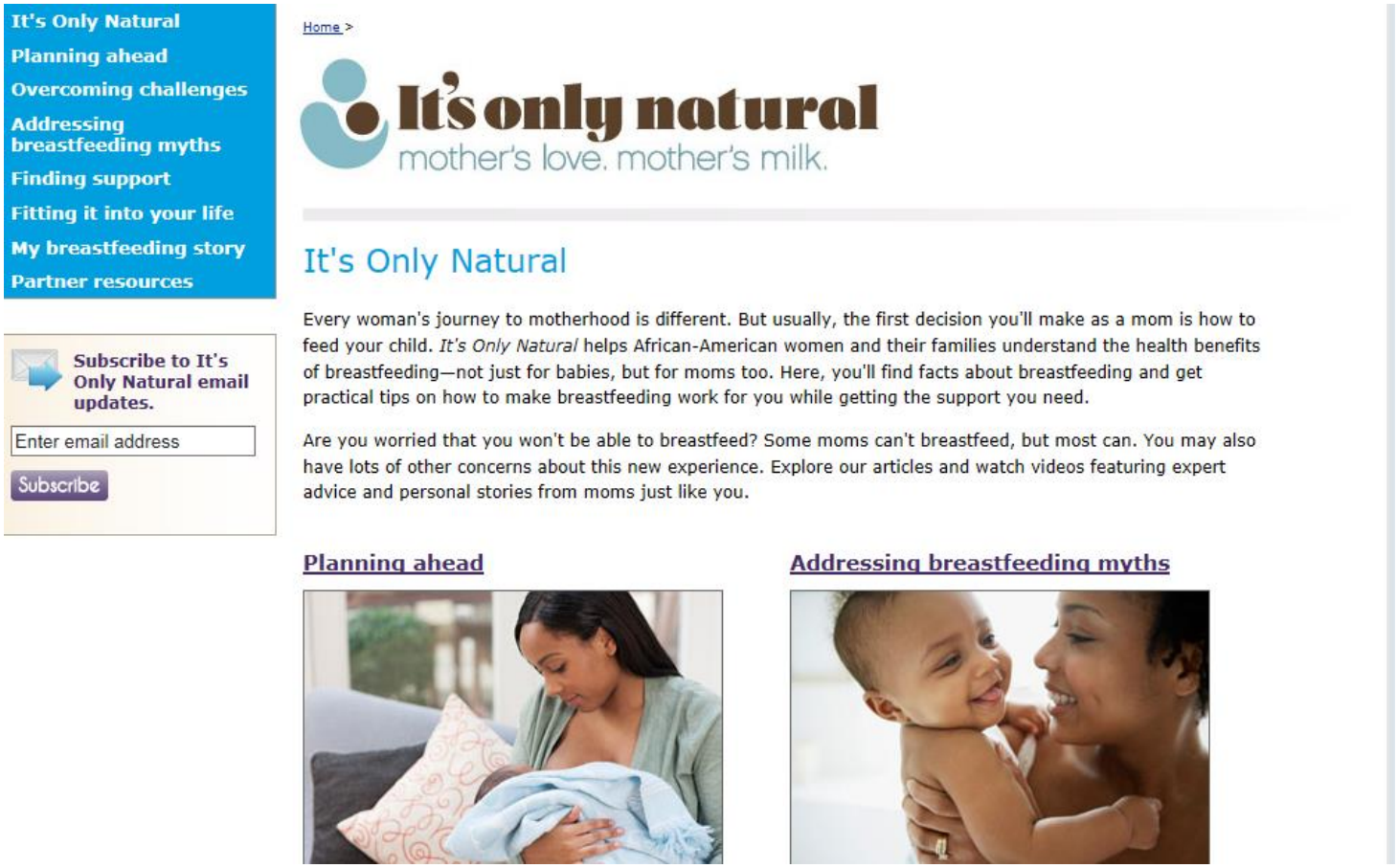
Office of Women's Health



https://www.womenshealth.gov/itsonlynatural/

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Tools for your Toolbox

- Good breastfeeding management!
- Keep mom emptying the breasts
- Seek help

- Birth hospital lactation warmlines and outpatient visits
- 7 days a week appointments at Christ and St. E.
- 24 hour warmline UC
- WIC lactation available M-F

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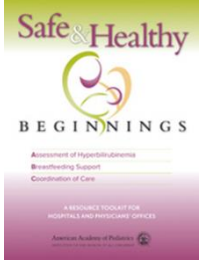
Tools to Help You



Safe & Healthy BEGINNINGS

Breastfeeding Support
Tools for Clinicians

A Clinician's Guide: Suggested Questions to Assess Breastfeeding in Primary Care Practice

1. **Has mother noted an increase in milk supply?**
   - Has she experienced engorgement?
   - Do her breasts feel full before feeding and softer after feeding?
   - Does she leak milk from her breasts?
   - Does the baby feel full and satisfied after a feeding?
   - If no, are there any risk factors for delay in lactogenesis (ie, none of the above by 72 hours)? Risks include cesarean delivery, maternal obesity, large for gestational age (primiparous), long stage 2 labor, and inverted or flat nipples.
   - Delay in lactogenesis can be supported with frequent breastfeeding as long as the newborn has normal voiding and stooling pattern and is not dehydrated.
2. **Does baby latch onto breast without difficulty?**
   - Latch-on can be improved with proper positioning and effective hold.
3. **Does mother hear the baby swallow her milk during feedings?**
   - No audible swallow may be a sign of poor milk transfer.
4. **Does mother experience signs of milk ejection reflex such as tingling in breast, cramping of uterus during the first week, dry mouth, or sleepiness during feeding?**
   - Any of these signs is reassuring that the mother is able to relax and let oxytocin act on the myoepithelial cells necessary for milk transfer.
5. **Does the mother have nipple pain or pinching during feedings?**
   - Nipple pain is a sign of poor latch-on that may be caused by poor positioning, hypotonic suckle, or ankyloglossia.
   - Poor latch-on results in poor milk transfer, low milk supply, and early breastfeeding termination.
   - Refer to person with expertise in observing latch-on.
6. **Does the newborn feed at least 8 to 12 times per day? (Counsel mom to tally feeds per day.)**
   - Infrequent feeds (<8 times/day) are associated with increased risk for jaundice and poor weight gain.
7. **Does the newborn feel full and satisfied after feeding?**
   - Does the newborn complete most feedings within 15 to 45 minutes? (Feedings that are too short or too long may indicate inadequate milk transfer.)
   - Does the baby self-detach from the breast after most feedings?
   - Does the baby sleep at least 1 hour between most feedings?
   - If not full and satisfied after feeding and mother's milk is in, refer to expert in breastfeeding.
8. **Is the baby having appropriate weight pattern?**
   - Calculate percent loss as current weight divided by birth weight multiplied by 100 (aim is <8%–10% loss).
   - The goal is to return to birth weight by 10 to 14 days.
   - Watch for no additional weight loss after day 4, with minimum 15- to 30-g weight gain per day once milk supply is in.
9. **Is the baby having adequate elimination patterns?**
   - Six voids and 3 to 4 stools per day by day 5 of life
10. **What are the mother's breastfeeding plans/goals? How long does she want to exclusively breastfeed or continue to do any breastfeeding?**
    - Ending with open-ended questions enables mothers to raise additional concerns and to identify community support programs that match the mother's goals.

_____

_____

_____

_____

_____

QuIIN Quality Improvement Innovation Network
A program of the American Academy of Pediatrics
Tested through the American Academy of Pediatrics Quality Improvement Innovation Network.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Safe & Healthy BEGINNINGS

Breastfeeding Support
Tools for Clinicians

Breastfeeding Assessment Checklist for Mothers in Primary Care Practice

Name: _____

1. *If this is your first visit since being discharged from the hospital*, have you noticed an *increase* in your milk supply?	❑ Yes	❑ No
• Have you experienced increased firmness, tenderness, and swelling of your breasts?	❑ Yes	❑ No
2. Do your breasts feel full before feeding and softer after feeding?	❑ Yes	❑ No
3. Are you leaking milk from your breasts?	❑ Yes	❑ No
4. Does your baby latch onto the breast easily?	❑ Yes	❑ No
5. Do you hear the baby swallow your milk during feedings?	❑ Yes	❑ No
6. Have you experienced any of the following?		
• Tingling in your breasts	❑ Yes	❑ No
• Cramping of lower abdomen during the first week	❑ Yes	❑ No
• Dry mouth	❑ Yes	❑ No
• Sleepiness during feeding	❑ Yes	❑ No
7. Do you have any nipple pain or pinching during feedings?	❑ Yes	❑ No
8. Does your baby feed at least 8 to 12 times in a 24-hour period?	❑ Yes	❑ No
Are you keeping a written record or is this an estimate?	❑ Written Record	❑ Estimate
9. Does your baby seem full and satisfied after feeding?	❑ Yes	❑ No
• Does your baby complete most feedings within 15 to 45 minutes?	❑ Yes	❑ No
• Does your baby self-detach from the breast after most feedings?	❑ Yes	❑ No
• Does your baby sleep at least 1 hour between most feedings?	❑ Yes	❑ No

10. How many wet diapers does your baby have in a 24-hour period? _____

11. How many dirty diapers does your baby have in a 24-hour period? _____

12. How long would you like to exclusively breastfeed? _____

13. How long would you like to continue to do any breastfeeding? _____

THANK YOU!

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Tested through the American Academy of Pediatrics Quality Improvement Innovation Network.

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AAP Safe and Healthy Beginnings Toolkit, 2011

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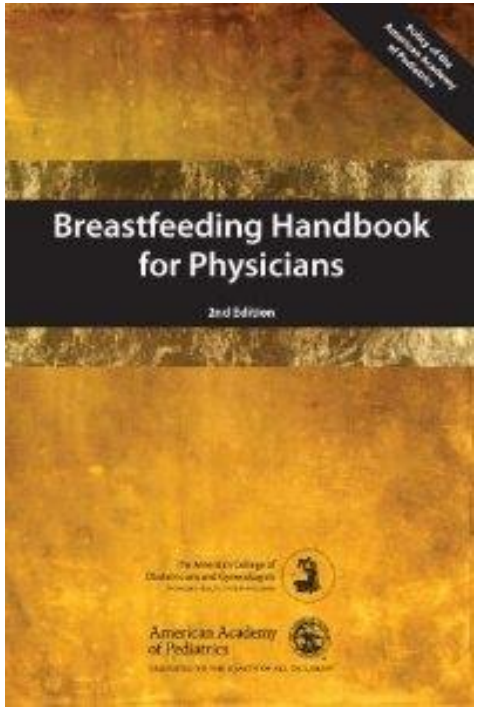
Tools to Help You



Evidence based protocols for many breastfeeding questions
Used by our Hotline staff as well!
AAP Breastfeeding Telephone Triage and Advice, 2012, Bunik, M.

AAP/ACOG, 2nd Ed., Schanler, et al. 2014

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How to Get Paid

1/1/2016

Supporting Breastfeeding and Lactation: The Primary Care Pediatrician's Guide to Getting Paid

Affordable Care Act

The Affordable Care Act (ACA) has two major provisions affecting breastfeeding - (1) coverage of comprehensive lactation support and counseling and (2) costs of renting or purchasing breastfeeding equipment for the duration of breastfeeding.
These provisions, however, are typically linked to *maternal benefits* under the insurance plans and therefore coverage may be dependent upon submitting claims under the mother's name. If pediatric providers plan to provide these services and expect the claims to be adjudicated with benefits covered under ACA provisions, the claim may have to be submitted under the mother's name and not the baby's. Check with your payers under the essential health benefits for more details. Remember that services provided

- Use modifier **25** appended to a separately reported office or other outpatient service to bill for extended time spent on feeding problems at a well baby visit.
- Bill for care provided for the mother, often as a new patient, in addition to billing for the baby, if history, exam, diagnosis and treatment are done for her.
- A *new patient* is one who has not received any professional face-to-face services rendered by physicians and other qualified health care professionals who may report evaluation and management services reported by a specific CPT code(s) from the physician/ qualified health care professional or another physician/ qualified health care professional of the exact same specialty and subspecialty who belongs to the same group practice, within the past three years.

https://www.aap.org/en-us/my-aap/Documents/coding_breastfeeding_lactation.pdf?nfstatus=200&nftoken=c9c4dd5a-4caa-47b6-ac83-c80fd5650faa&nfstatusdescription=Set+the+cookie+token

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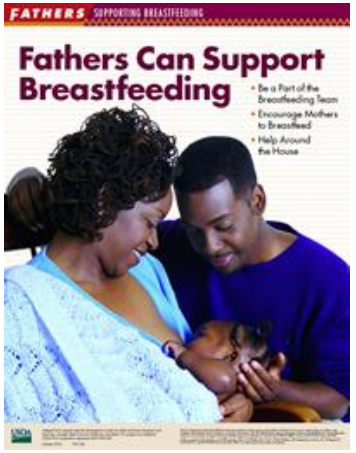
Breastfeeding Friendly Office



http://www.fns.usda.gov/sites/default/files/FathersCanSupportBF-brochure2.pdf

Picture Courtesy of PA EPIC

http://www.bfmed.org/Media/Files/Protocols/Protocol_14_revised_2013.pdf

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A Place for Moms and Employees

http://www.womenshealth.gov/breastfeeding/employer-solutions/common-solutions/solutions.php

All Better Pediatrics Breastfeeding Room

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ACOG Toolkit

http://www.acog.org/About-ACOG/ACOG-Departments/Toolkits-for-Health-Care-Providers/Breastfeeding-Toolkit?IsMobileSet=false

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Take Home Pearls

- Pediatric providers should take a maternal breastfeeding history
- Remember Rule #2 – Frequent and effective milk removal to protect the milk supply
- Your encouragement and support matters

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Physician Education Resources

MOC 2 and 4.

- Brand New! – Maryland (FREE with CME) Physician Webinar Series http://phpa.dhmh.maryland.gov/mch/Pages/Hospital_Breastfeeding_Resources.aspx.
- Virginia Breastfeeding Friendly Consortium
- https://bfconsortium.org/pages/13 – $$ for those outside Virginia, (CME and MOC 2 and 4)
- Alabama 3 hour FREE CME Maximizing Breastfeeding Outcomes in the Outpatient Setting Online Training https://www.alaap.org/maximizing-breastfeeding-module
- Massachussetts (FREE) Expanding Clinicians Role in Breastfeeding Support http://www.northeastern.edu/breastfeedingcme/
- Wellstart International (FREE no CME) http://www.wellstart.org/Self-Study-Module.pdf
- AAP Pedialink $$ (CME) Breastfeeding Matters: The Pediatrician's Role http://shop.aap.org/breastfeeding-matters-the-pediatricians-role/
- ACOG Breastfeeding Toolkit
- http://www.acog.org/breastfeedingtoolkit

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Key websites

- AAFP
- http://www.aafp.org/about/policies/all/breastfeeding-support.html
- AAP
- www.aap.org/breastfeeding s
- Academy of Breastfeeding Medicine
- www.bfmed.org
- CDC Breastfeeding Report Card
- www.cdc.gov/breastfeeding
- Joint Commission
- www.jointcommission.org
- Lactmed http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT
- Texas Ten Step Guide
- http://www.texastenstep.org/guide.htm
- US Breastfeeding Committee
- www.usbreastfeeding.org
- http://newborns.stanford.edu/breastfeeding/maxproduction.html
- http://newborns.stanford.edu/breastfeeding/handexpression.html
- UNC Protocols http://mombaby.org/PDF/PainProtocols.v3.pdf

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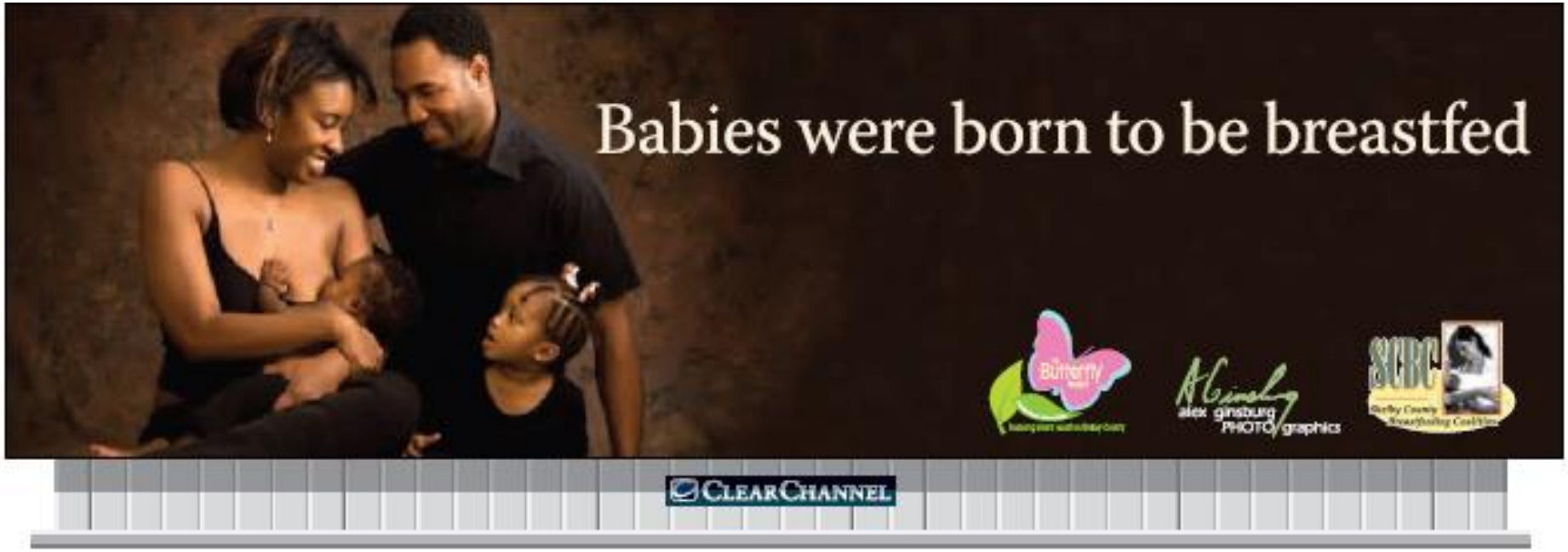
Ruth Lawrence MD
Breastfeeding: A Guide for the Medical Profession



"Breastfeeding is the most precious gift a mother can give her infant. When there is illness or malnutrition, it may be a lifesaving gift; when there is poverty, it may be the only gift."

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