10/10/10: A PRACTICAL METHOD FOR PROTECTING BREASTFEEDING POTENTIAL WHEN MEDICAL SUPPLEMENTATION IS NECESSARY

Susan Boekel, RDN, LD, IBCLC

Declarations

- I have no financial/commercial ties to declare.
- I do believe that humor improves adult learning.
- Please forgive me now.
- It is not my intention to offend anyone or to take this subject lightly.
- None of my photos have been photo-shopped.

Objectives

Participants will be able to :

- List which infants may need medically necessary supplements
- State developmental feeding skill progression of term and premature infants
- Discuss methods to promote good maternal supply
- Describe how the 10/10/10 plan can provide supplements while continuing to support breastfeeding

Our Dilemma…

- Who picks the babies that are supplemented?
- Who picks how and when the babies are supplemented?
- Who picks what the babies are supplemented with?
- Who decides how much to supplement?
- Who does the actual supplementation?
- Who decided to breastfeed the baby in the first place?
- Who educates the family on maintaining lactation?

- How long does all of this take
- When do we do this again?

Lets Be Practical About This

- Adjective:
  - relating to what is real rather than to what is possible or imagined
  - likely to succeed and reasonable to do or use
  - appropriate or suited for actual use

Which Infants are Most at Risk

- Premature Infants
- Failure to Latch
  - Birth Trauma or Difficult Delivery
- Congenital Anomalies
- Respiratory Distress
- Feeding Difficulty
  - unknown cause or neurologic complication
- Dehydration, Failure to Thrive or Poor Weight Gain
- Jaundice or Hypoglycemia
- Mom is unavailable- due to her own illness
- Primary Lactation Insufficiency
- Breast Trauma or surgery

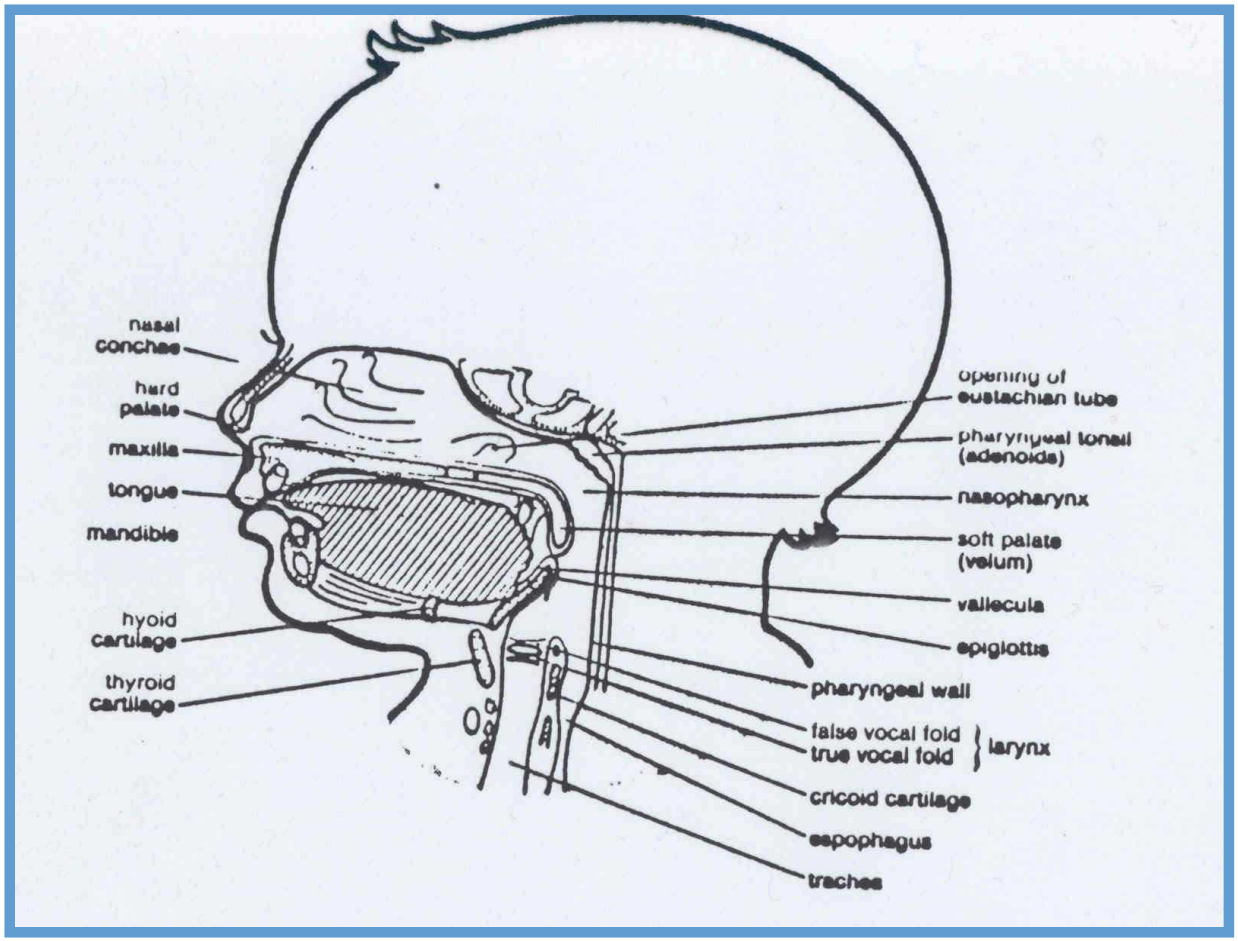
Background Information

- Eating is not the infant's first priority.
- Eating is only instinctive for the first month of life.
- Eating is the most complex task that humans engage in.
- Eating is the only task children do which uses all 8 of our sensory systems simultaneously.

More Background Information

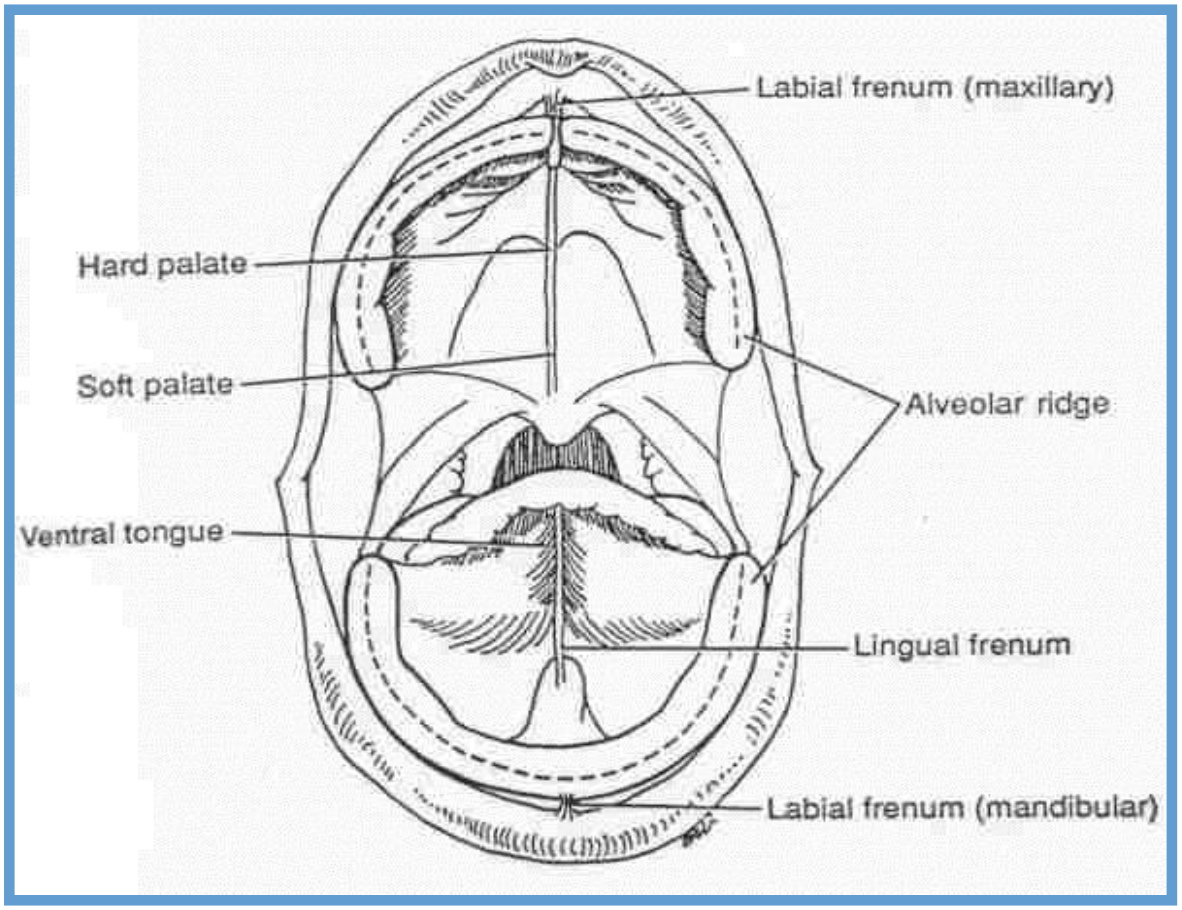
- It takes 26 muscles and 6 cranial nerves to coordinate one swallow.
- 4-6 % of the pediatric population who have feeding problems will “starve” themselves.
- 25% of the normal pediatric population has some form of a feeding problem.

Infant Mouth Anatomy



Assessing the Oral Cavity

- Anatomy
- Reflexes
- Function



Respiratory/Cardiac Evaluation

- Baseline respiratory rate (should be 40-60)
- Baseline breathing pattern (nose versus mouth, rhythm)
- Baseline work of breathing
- Baseline color
- Baseline vital signs if monitored (O2 sats, heartrate)
- Baseline heart rate (should be 120-180

Skills in the Pre-term Infant

- Swallowing at > 11 weeks PCA
- Suck/Swallow/Breathe coordination ~32 weeks
- Decreased organization of physiologic system
- Decreased muscle tone
- Poor state stability and transitions
- Immature motor modulation

Development of Breastfeeding Skills

- Baby Steps
  - Kangaroo
  - Rooting and licking
  - Holding nipple in mouth
  - Sustained suckling
  - Swallowing
  - Weight gain at breast

What Are The Goals For Medical Supplementation?

1. Feed the baby to prevent excess weight loss or promote growth
2. Establish and maintain mother's milk supply
3. Promote baby's breastfeeding skills

Supplementation Methods

- Swab
- Spoon
- Cup
- Bottle
- Starter Supplementer
- Supplementer
- Cleft Palate Nurser/Pigeon Bottle

Kangaroo Care: It's Not Just For Premies

- Skin to skin contact improves breathing, feeding, sleeping, and weight gain
- Wear front buttoning clothes
- Beginning step for breastfeeding (even for term babies)

Milk Supply

No Nursy,

No Expressy,

No Pumpy,

No Milky!

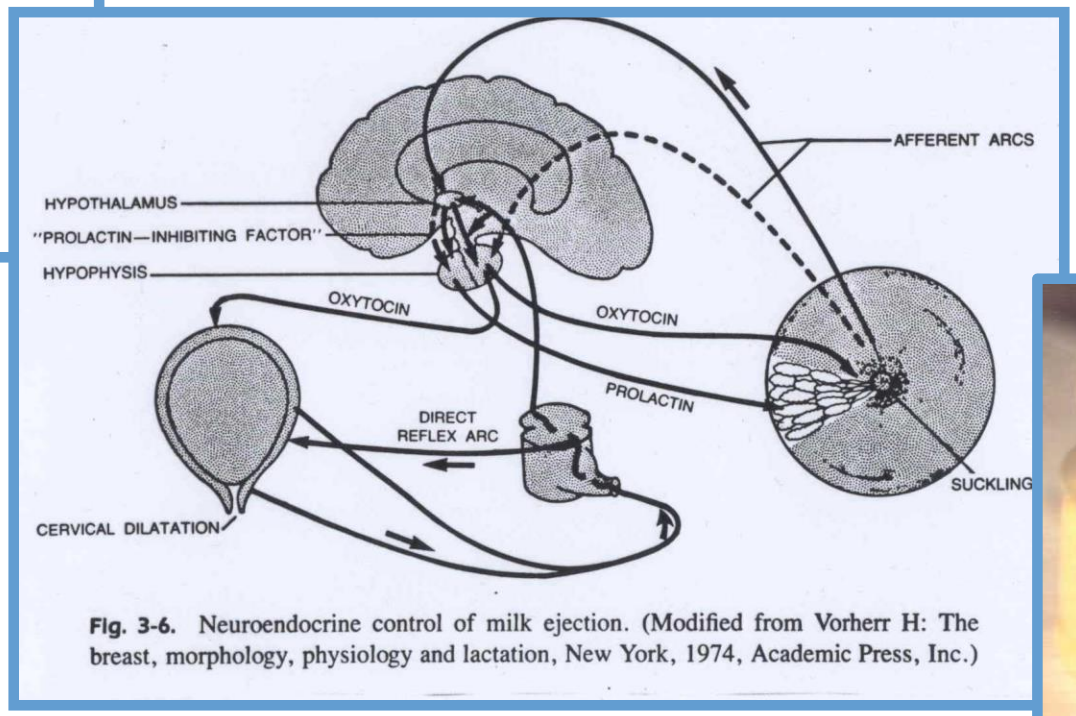
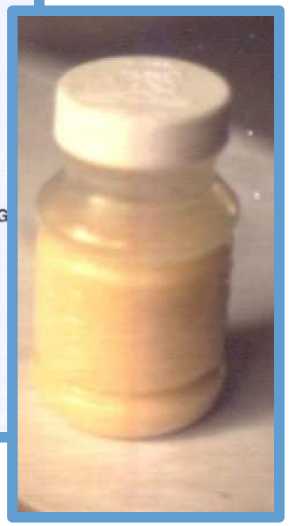


Fig. 3-6. Neuroendocrine control of milk ejection. (Modified from Vorherr H: The breast, morphology, physiology and lactation, New York, 1974, Academic Press, Inc.)



Use 10/10/10

- 10 minutes at the breast
- 10 minutes with supplementation
- 10 minutes with hand expression and pumping

How can we do this without killing anyone?

- Pediatricians and Neonatologists want to prevent medical problems or complications; they are legally responsible
- The family wants to breastfeed, but they are aware things are not going well and may be having a hard time coping
- Staff want to prevent nipple confusion and complications from formula use; they have to support and prepare this family for survival at home

10 minutes at the breast-Benefits

- Allows skin to skin contact for mom's milk stimulation and let-down prior to pumping
- Allows baby to practice nursing whether or not the milk supply or suckle is adequate
- Transfers colostrum/milk to baby in some cases

10 minutes with Supplementation- Benefits

- Documents calories in
  - (Care team is happy!)
- Allows Dad/family members to supplement
  - (Family is happy!)
- Allows mom time to express/pump and get to sleep sooner
  - (Mom is happy!)
- Uses mom's colostrum or expressed milk before formula
  - (Mom & Family happy again!)
- Feeds baby over a 20 minute period to prevent feeding fatigue and promote weight gain
  - (Baby and SLP/RD are happy!)
- Uses a supplementation method that family is comfortable using and can sustain if needed
  - (Ped & Family are happy!)

10 minutes with hand expression/pumping-Benefits

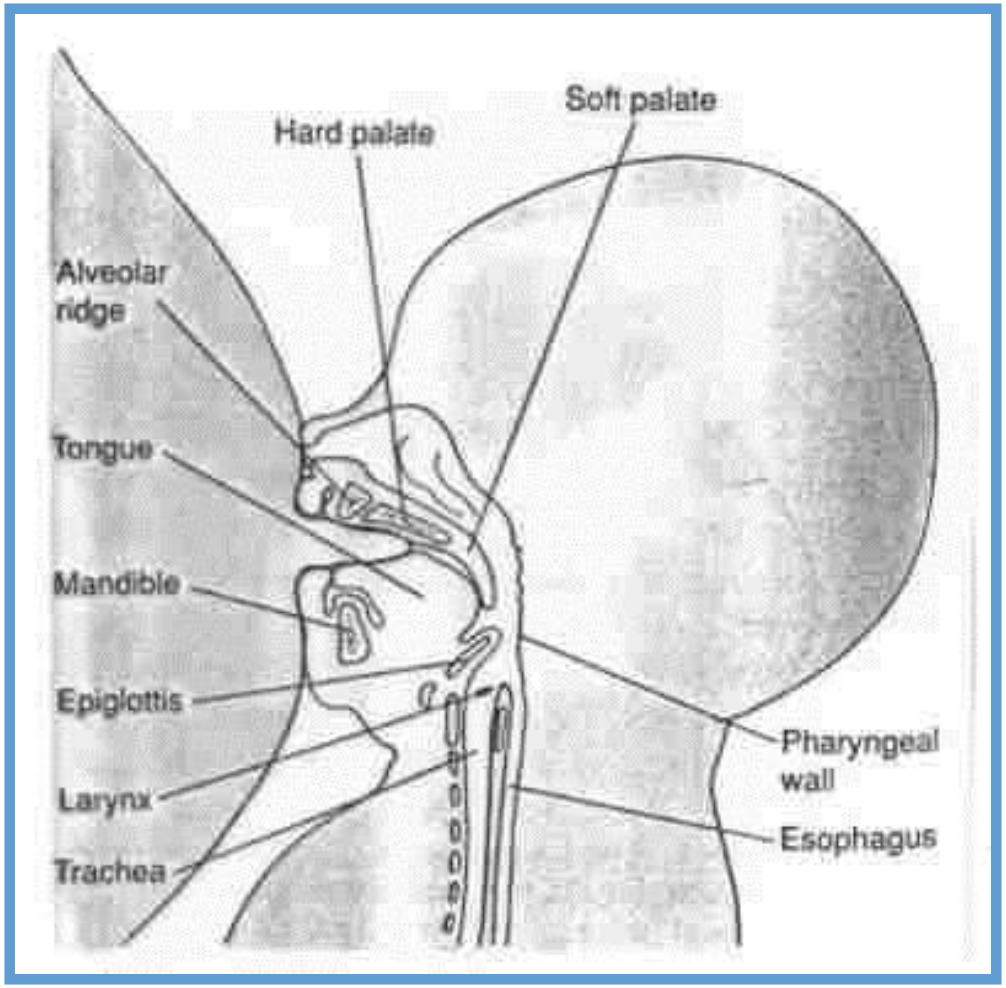
- Stimulates Mom's milk production from milk removal
- Gets colostrum or EBM for baby's next supplement
- Reassures Mom that she has milk and can provide

Assessing Breastmilk Transfer

- Audible swallows
- Feeding duration and frequency
- Stools
- Test weighing
- Weight gain (25-30 gm/d)

Assessing Feeding Quality

- Rate/Rhythm
- Time to Complete
- State During Feeding
- Energy Used
- Quantity
- Losses
- Respiratory Status
- GI Status



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A quick word on volume

AVERAGE REPORTED INTAKES OF COLOSTRUM
BY HEALTHY BREASTFED INFANTS

- Time Intake (mL/feed)
  1st 24 hours 2–10
  24–48 hours 5–15
  48–72 hours 15–30
  72–96 hours 30–60

- From: ABM Clinical Protocol #3, Revised 2009.

Resources & Bibliography

- Texas Children's Hospital Pediatric Nutrition Reference Guide 10th Edition (2013) by Texas Children's Hospital. Editors: Jocelyn Mills, Emily Ramsey, Sundae Rich, Susanne Trout, and K.Dawn Bunting.

- Wolf, LS, & Glass, RP. (1992) *Feeding and Swallowing Disorders in Infancy*. Therapy Skill Builders.

- Riordan, J and Wambach, K. Breastfeeding and Human Lactation, Fifth Edition. Jones and Bartlett Publishers, Boston, 2014.

Websites

- Dr. Jane Morton's video on hand expression

http://newborns.stanford.edu/Breastfeeding/HandExpression.html

- SPIN: Supporting Premature Infant Nutrition

http://healthucsd.edu/specialties/obgyn/maternity/newborn/nicu/spin/about/pages/default.aspx