



BREASTFEEDING SUPPORT

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OBJECTIVES

At the end of this presentation, the attendee will

1. Be able to explain the importance of breastfeeding for the health of the baby, the mother, and for public health
2. Understand the physiology of breastfeeding, and the impact of common misunderstandings
3. Be able to assess breastfeeding technique and assist a mother with good latch and position

EFFECTS OF NOT BREASTFEEDING - INFANTS

Infants (modified by total duration, and duration of exclusive breastfeeding)	Odds of Disease
Otitis media	2
Lower respiratory tract infection	3.6
Gastrointestinal infections	2.8
Asthma and eczema	1.6
SIDS	2.1
Leukemia	1.3
Obesity	1.3
Type 2 diabetes	1.6
Preterm infants (Mother's own milk >>> pasteurized donor human milk >> preterm formula)	
Sepsis, necrotizing enterocolitis, mortality	1.3
Intellectual disability	- 6-8 IQ points

Direct costs: \$200-400/episode
 Indirect costs: \$3-5 billion/year
 - Alsarraf R, 1999

Infants <1y old:
 ~30,000 hospitalizations/year,
 with ~7000 ICU admissions
 Greenbaum AH, 2014

Immune modulation: resistance to infection, reduced autoimmune disease
Metabolic programming: Satiety, Weight gain, Cholesterol metabolism, Hypertension
Growth modulation: Gastrointestinal mucosa, Visual acuity, Brain maturation

Steube 2009

EFFECTS OF NOT BREASTFEEDING - MOTHERS

Mothers	Odds of Disease
Uterine bleeding and involution	
Weight loss in the first year (and longer term effects)	- 4.4lb
Hypertension	1.3
Heart disease	1.3
Diabetes	1.7
Breast cancer in women with affected first-degree relative	2.4
Ovarian cancer	1.5

~50 million women >20y in 2017
- Abramson BL 2018

~10 million women >20y
- 2017 National Diabetes Statistics Report, CDC

Effect size is modified by cumulative years of breastfeeding – the more years of breastfeeding, the greater effect

Effect is greater for breast cancer in pre-menopausal women

Effect is greater in women under 65y for hypertension, diabetes and heart disease, and is almost no different after age 80



POLICY STATEMENT

Breastfeeding and the Use of Human Milk

- *Breastfeeding and human milk are the **normative standards** for infant feeding and nutrition.*
- *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.***
- *The American Academy of Pediatrics reaffirms its recommendation of **exclusive breastfeeding for about 6 months**, followed by continued breastfeeding as complementary foods are introduced, with **continuation of breastfeeding for 1 year or longer as mutually desired by mother and infant.***

PHYSIOLOGY OF LACTATION – STAGE II

Progesterone level drops

HYPOTHALAMUS
Prolactin Inhibiting Factor drops
Prolactin Releasing Factors rise

Suckling

Stretch receptors

ANTERIOR PITUITARY

SUPPORT HORMONES
Insulin, Thyroid, Growth, PTH

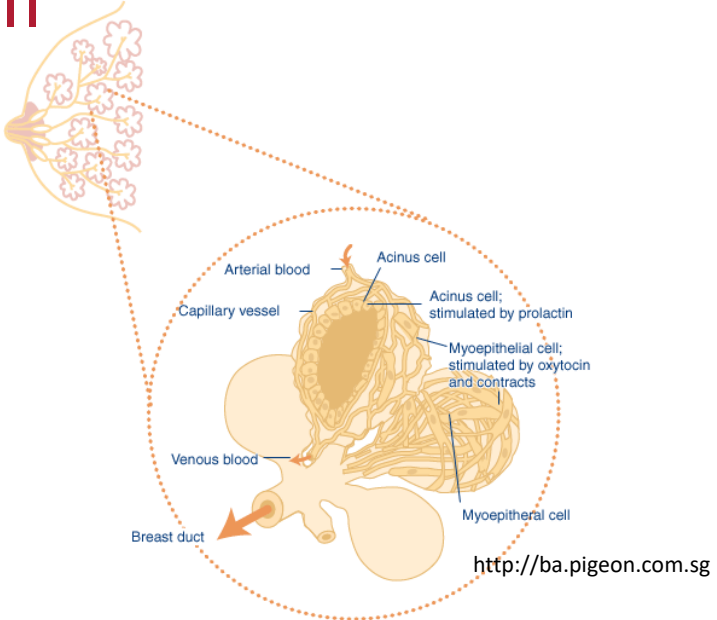
POSTERIOR PITUITARY

Prolactin

Milk Synthesis

Milk Ejection

Oxytocin



PHYSIOLOGY OF LACTATION

- Breast acinar cells complete maturation during pregnancy, and the first episode of lactation
 - Breast enlarges throughout pregnancy
- Frequent, sustained, high prolactin surges are necessary to establish lactation
 - Prolactin surges higher at night, and with stronger suck
 - Established by ~1mo
 - Night feeds are essential to establish
- Presence of milk in the acini and ducts is the strongest inhibitor of milk secretion
 - Lactation Inhibition Factor levels → local negative feedback to reduce milk secretion
 - Infrequent feeds lead to decline or cessation of production
 - Breasts need to be emptied 8-12 times a day
- When night time feeds stop, milk volume may decline due to lower prolactin surges (and fertility returns)
 - Some infants continue to need 1-2 night feeds to grow at 6-9 months
- Oxytocin is necessary to eject milk at every feed

PHYSIOLOGY OF LACTATION

- Colostrum is almost the same caloric content as mature milk, higher in protein, very high in white cell (macrophage) count
 - High sIgA content, changes with maternal or infant infection
- Volume on first day is about 30ml (~6mL/kg/day), rises to ~150mL/kg/day by day #6
- Milk 'comes in' between 60-72h; beyond 96h is considered delayed lactogenesis
- Mature milk is present ~14d after delivery

ANTICIPATE PROBLEMS WITH LACTOGENESIS IF

- Hormonal
 - Diabetes, Obesity, Metabolic syndrome, Hypothyroidism
- Anatomic
 - Inverted nipple (difficulty latching and sustaining suck)
- Surgery
 - Reduction, Augmentation, Piercings
 - Cesarean delivery
- Inadequate latch
 - Illness & separation
 - Prematurity
 - Congenital anomalies: Down's syndrome, maxillofacial abnormalities
- Absence of breast changes during pregnancy

SETTING THE STAGE – ANTENATAL

- Women are more likely to successfully breastfeed if
 - they are aware of some actual benefits
 - they are educated on the 'how to' breastfeed
 - they perceive their health care providers as promoting and positive (vs neutral or negative)
 - family and peers support breastfeeding

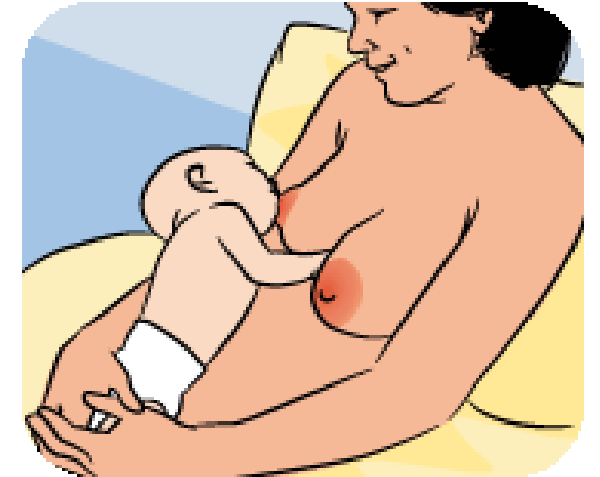
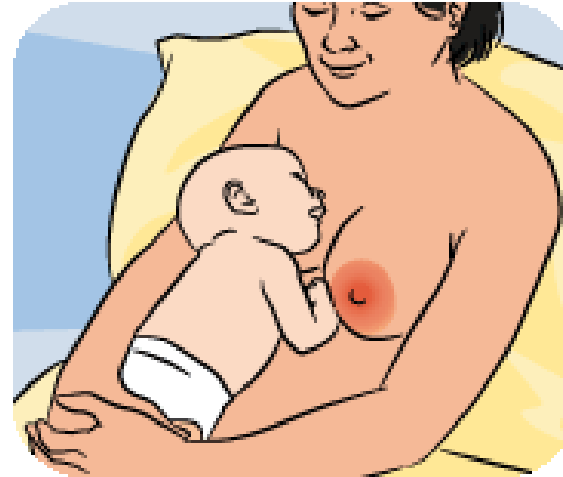
SETTING THE STAGE - POSTNATAL

- Skin-to-skin care
- First breastfeed within an hour
- Actively teach; Anticipate problems (*incremental learning*)
 - Good position
 - Good latch
 - Prevent engorgement
 - Normal feeding expectations
- Feed infant on cue: Responsive feeding
- Keep infant with their mother



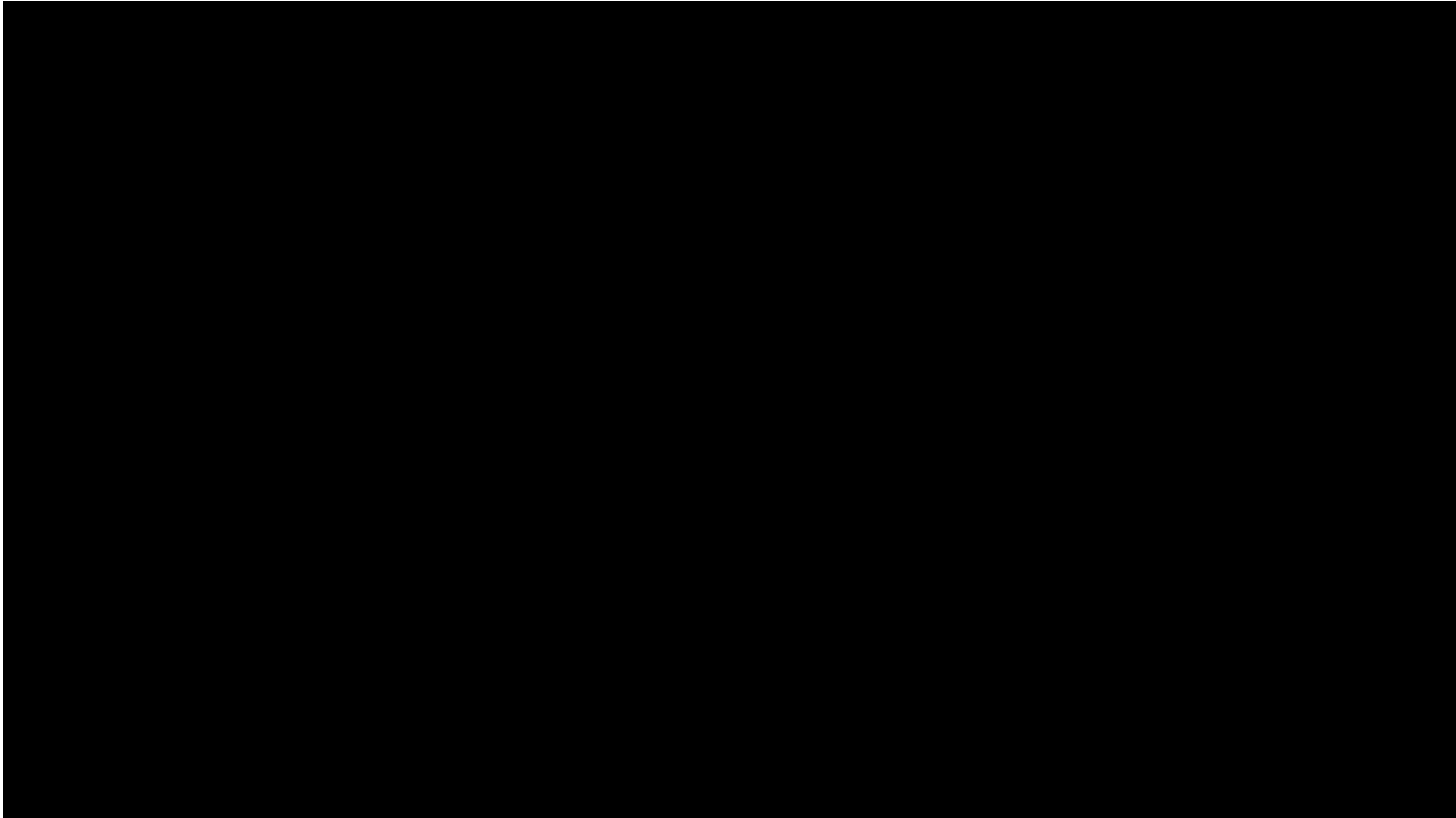
GOOD LATCH – BABY LED

- Create a calm environment
- Hold your baby skin-to-skin
- Let your baby lead
- Support your baby, but don't force the latch

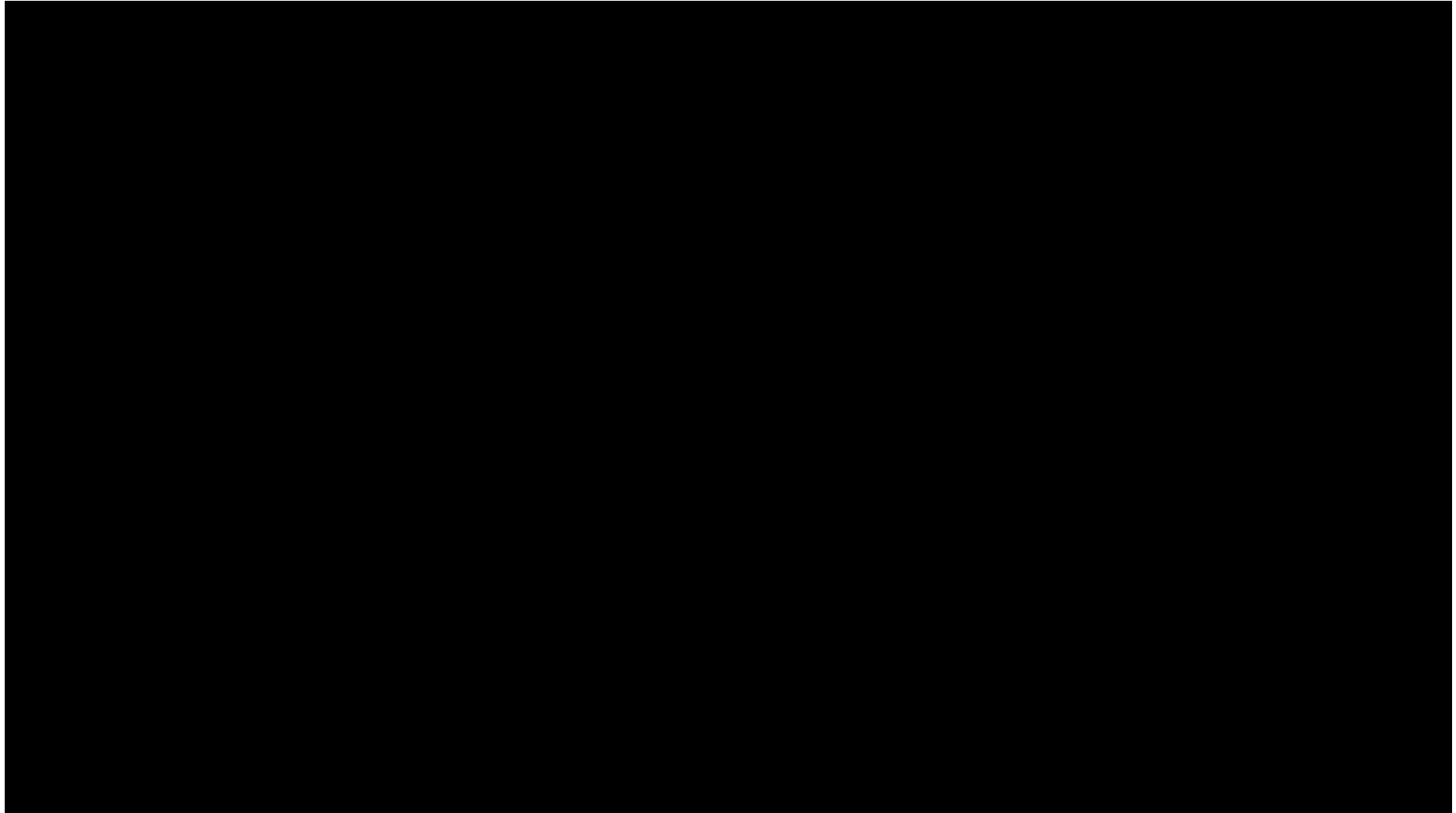


- **Allow your breast to hang naturally.** When your baby's chin hits your breast, the firm pressure makes her open her mouth wide and reach up and over the nipple. As she presses her chin into the breast and opens her mouth, she should get a deep latch

BREAST CRAWL



IMPORTANCE OF DEEP ATTACHMENT



GOOD POSITION

Mother

- Relaxed shoulders
- well-supported arms, back and feet

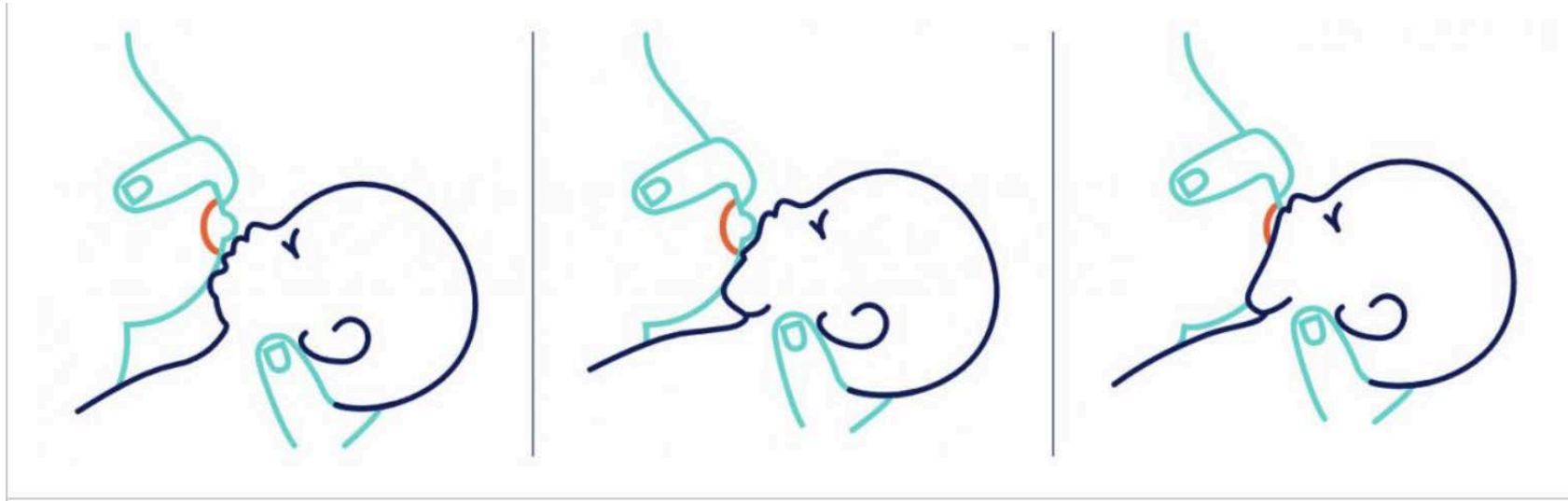
Baby

- Facing mom, spine straight, especially the neck
- Mom holds neck, not the head
- Hands clasping breast
- Neck slightly extended
- Ear, shoulder and hip in line
- Butt supported, tucked in

*Belly to belly,
Nipple to nose,
Hold that baby
Really close
Molly Gros, IBCLC*



GOOD LATCH – ASSISTING BABY



- Tickle the baby's lips with your nipple to encourage him or her to open wide.
- Pull your baby close so that the baby's chin and lower jaw moves in to your breast.
- Watch the baby's lower lip and aim it as far from the base of the nipple as possible so that the baby takes a large mouthful of breast.

MORE POSITIONS



- FOOTBALL HOLD: for mothers with large breasts, c-sections, twins, sleepy infant needing stimulation



- SIDE-LYING: allows mom to rest as well

- CRADLE HOLD: works well when breastfeeding is well established

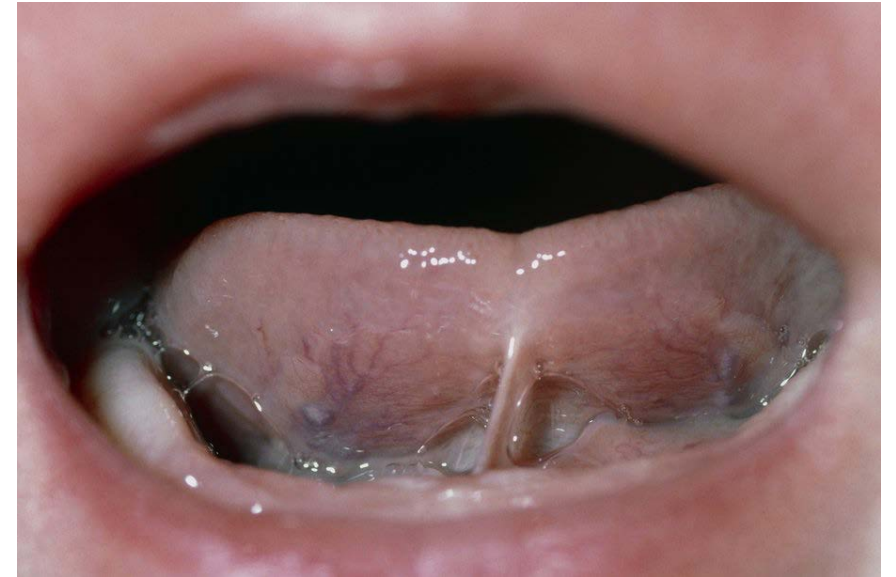
Health4mom.org

ASSESS BABY'S ORAL FUNCTION

- Mouth wide open
- Tongue cupped, flattened and extended past lip
- Lips flanged out when latched
- Assymmetric latch – more areola towards the lower jaw
- No dimpling or clicking sound with suck
- Wave-like movement under chin
- 3-5 sucks followed by a swallow

ASSESSING TONGUE TIE

- Heart-shaped tongue, or pointed
- Assess
 - Lift
 - Lateralization
 - Snap-back
- Mother will report pain very early (<<24h)



EXPECTED ROUTINES

- 8-12 feeds in 24h (first day may be 6-8 feeds if labor was prolonged, sedated infant)
- Cluster feeding at night upto 2-3 days of life
- +1 urine and +1 stool per day of life
- Meconium begins to transition by day #4
- Weight loss over the first 5 days
 - of about 2-3% per day
 - nadir by 5 days, around 7-10%
 - close to birthweight by 10 days
 - regain birthweight by 2 weeks

PREVENTING ENGORGEMENT

- Teach mother to recognize full breast, lumps
- Focus on emptying at least one side with each feed
 - Massage breast during feed
 - Gentle breast compression (promotes emptying, improves milk transfer; also stimulates suck in a sleepy infant)
- Hand express other side to level of comfort
- Well fitting bra (factor increase in cup size)

QUESTIONS

RESOURCES

- www.womenshealth.gov
- www.globalhealthmedia.org
- www.kellymom.com
- Massachusetts and California Breastfeeding coalitions

- Babyled latch – Breast Crawl
- https://www.youtube.com/watch?time_continue=93&v=b3oPb4WdycE
- From 3:15

- <https://www.youtube.com/watch?v=y--syZR0u1E>
- Deep attachment prevents trauma
- From 4:58