

Lactation and Infant Feeding

Part I!

A quick note on terminology

- Neither “Breastfeeding” nor “Chestfeeding” are considered all-inclusive terms. Just as not all who feed identify with having breasts, not all identify with having chests either. Remember to consider your audience and ask your clients’ preference - we’ll only learn the best way forward for our clients by having conversations about what they prefer!
- A few inclusive terms include “body feeding”, “lactation”, “nursing”, or simply, “infant feeding”. Instead of “breastmilk”, consider “human milk”.

Benefits to Baby

- Complete nutrition, customized to the nursing baby*
- Promotes healthy weight, appetite regulation, fat storage due to high amounts of leptin
- Some evidence supports a link between breastfeeding and cognitive development, including higher IQ scores
- Antibodies/Immunity (both short and long term)
 - Immunoglobulin A forms a protective layer in the mucus membranes of the nursing infant, which helps them fight illnesses and inflammation
- Long term disease reduction
 - Exclusive breast/chestfeeding is scientifically linked to a reduction in ear infections, respiratory infections, improved gut health, heart disease, allergies, SIDS, childhood leukemia, and diabetes

Benefits to Lactating Parent

- Promotes bonding with the infant
- Linked to more efficient PP recovery and lower blood loss in the postpartum period (helps the uterus contract)
- Associated with lower rates of postpartum depression
- Reduces long-term disease risk, including reduced risk of breast and ovarian cancer, high blood pressure, heart disease, and type 2 diabetes.
- It's cheap!
- Once successful nursing is established, it is disaster proof (no need for clean water, supplies, etc).

WHO Recommendations

- Exclusive human milk for the first 6 months of life (including water)
- Feeding on demand (no scheduled feedings), especially in the first 6 months
- Complementary foods beginning at 6 months, or when child is ready, with complementary human milk for up to 2 years and beyond*
- WHO Fact Sheet: <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>

Barriers to Breast/Chestfeeding

- Lack of knowledge/incorrect or unclear expectations
- Social norms/community or family pressure
- Perceived inconvenience
- Lack of social support
- Infant oral anatomy issues (tongue ties, etc)
- Lactation problems (pain with nursing, low supply, oversupply, etc)
- Employment/child care issues /household duties/time

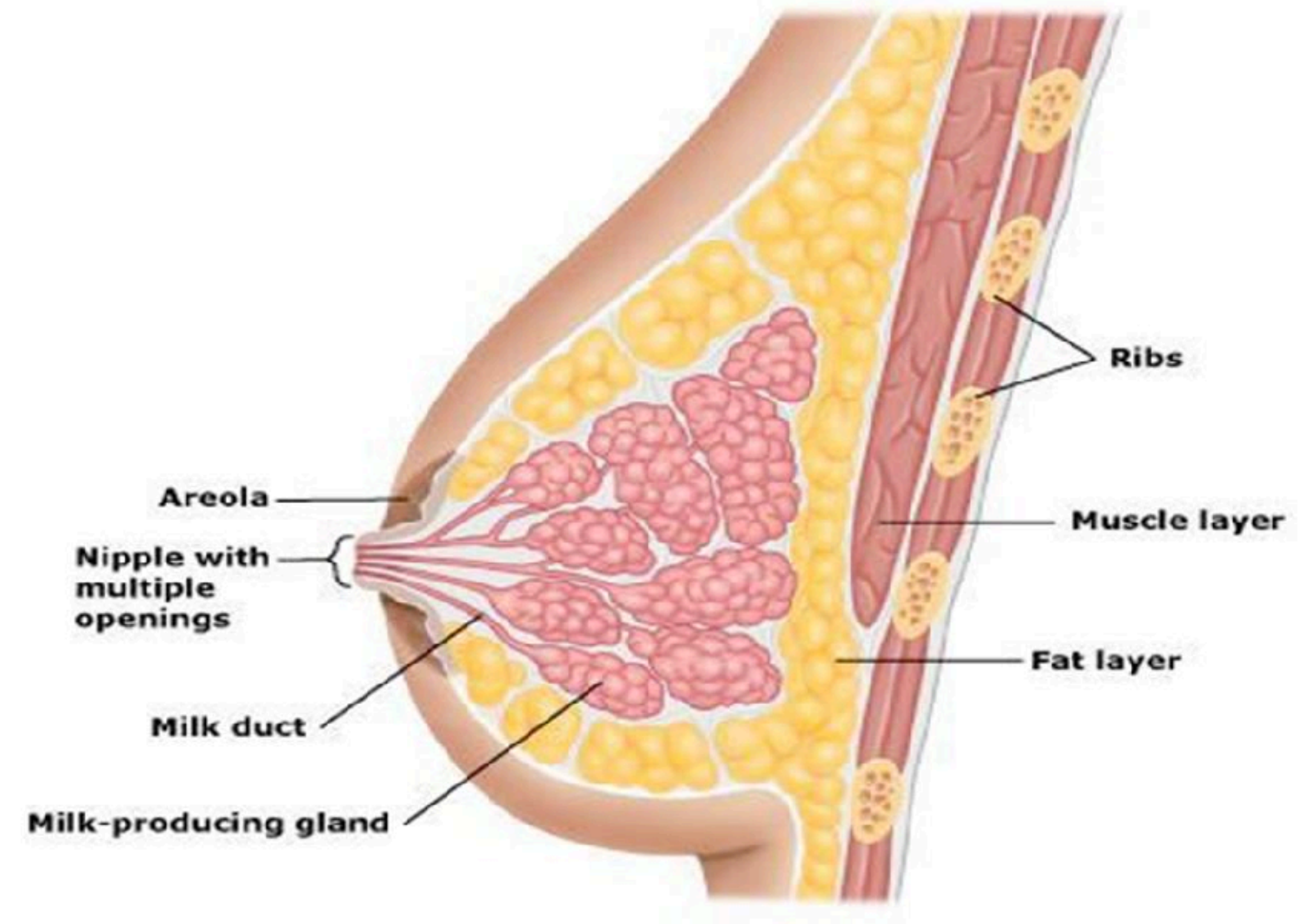
**Many meta-data studies have demonstrated
that the number one barrier to successful
long-term breast/chestfeeding is:**

**Lack of a good support system
(Family, professional guidance, etc)**

Anatomy and Physiology of Lactation

The Lactating Body

- 15-20 lobes of glandular tissue that 'flowers' out into smaller nodes, aka alveoli
- Milk reservoir just behind the nipple
- 4-18 milk ducts (your hoses, so to speak!)
- Majority of glandular tissue is found within 30mm of the nipple



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Colostrum Phase

- The “initiation” phase of lactation
- Low in volume, high in antibodies, sugar, and nutrients
- Hormonally driven (production begins with the hormones of pregnancy and increased/initiated by expulsion of the placenta)
- Hormones stimulate the alveoli to create lactocytes to secrete prolactin, which leads to milk production
- *Stimulation* encourages the creation of prolactin receptors on the surface of the alveoli. No stimulation = minimal prolactin receptors; hormonal dysfunction = minimal prolactin
- Movement of milk/colostrum through the ducts stimulates the smooth muscle tissue of the breast/chest to secrete oxytocin

Secretory Activation: The milk phase!

- Aka: Lactogenesis 2, or “when the milk comes in”
- Typically occurs within 2-5 days after birth
- Hormonally driven: prolactin levels rise over the course of the initial days following birth, which trigger the lactocytes to make milk. This “turns on” the prolactin receptors.
- Delays can be caused by:
 - Retained placenta or products of conception
 - Hormonal imbalances or problems within the endocrine system (PCOS, diabetes, etc)
 - Significant blood loss
 - Severe stress
 - Infection
 - Thyroid conditions

The Maintenance Phase

- Aka Lactogenesis III
- Locally driven (stimulation rather than hormones)
- Baseline prolactin levels fall (approximately 50% after the first week PP)
- Prolactin surges are triggered by nipple stimulation and drainage of milk through the milk ducts: Remove milk to make milk
- More frequent prolactin peaks = more overall prolactin: Frequency vs duration

**How do we apply this
knowledge?**

Best Practices: Colostrum Phase

- Early initiation: adequate latch within the first hour of birth (Associated with increased milk production and earlier initiation of lactogenesis 2)
- Frequent feeding/expression: 15 minutes, 8 times a day (minimum)
- Studies show effective removal of milk is the priority, if baby isn't latching well, what do we do?
- Studies show this deficit is *not* corrected with long term pumping/latching
 - What does that mean for our clients?

Best Practices: “My milk is in!”

- Feed on demand: the body will take its cues from baby’s needs (and stimulation)
- Reduce symptoms of engorgement, *not* the supply: warm and cool compresses, manual expression to comfort, warm water submersion (bath or shower), up to 1000mg of tylenol q 6 hours
- Pump only to relief: studies show pumping >5 minutes beyond the letdown will increase supply (a great tool for those struggling with a low supply, but will be counterproductive to those suffering from engorgement)

Best Practices: Long Term Feeding

- Feed on demand! Scheduled feeds are associated with low infant weight gain and increased mastitis symptoms
- Supply and demand - when the supply goes down, check the demand. Pumping/stimulation is the fastest way to boost supply
- On average, babies >2 weeks will take 2-5oz a feed and feed q 2-4 hours. But you know what we always say... people are not robots! Every baby will have a different pattern
- The pattern changes daily in the newborn phase: encourage your clients to assess patterns over time, rather than reacting to events of a single day

“Breast Crawl” or “Physiological Nursing”

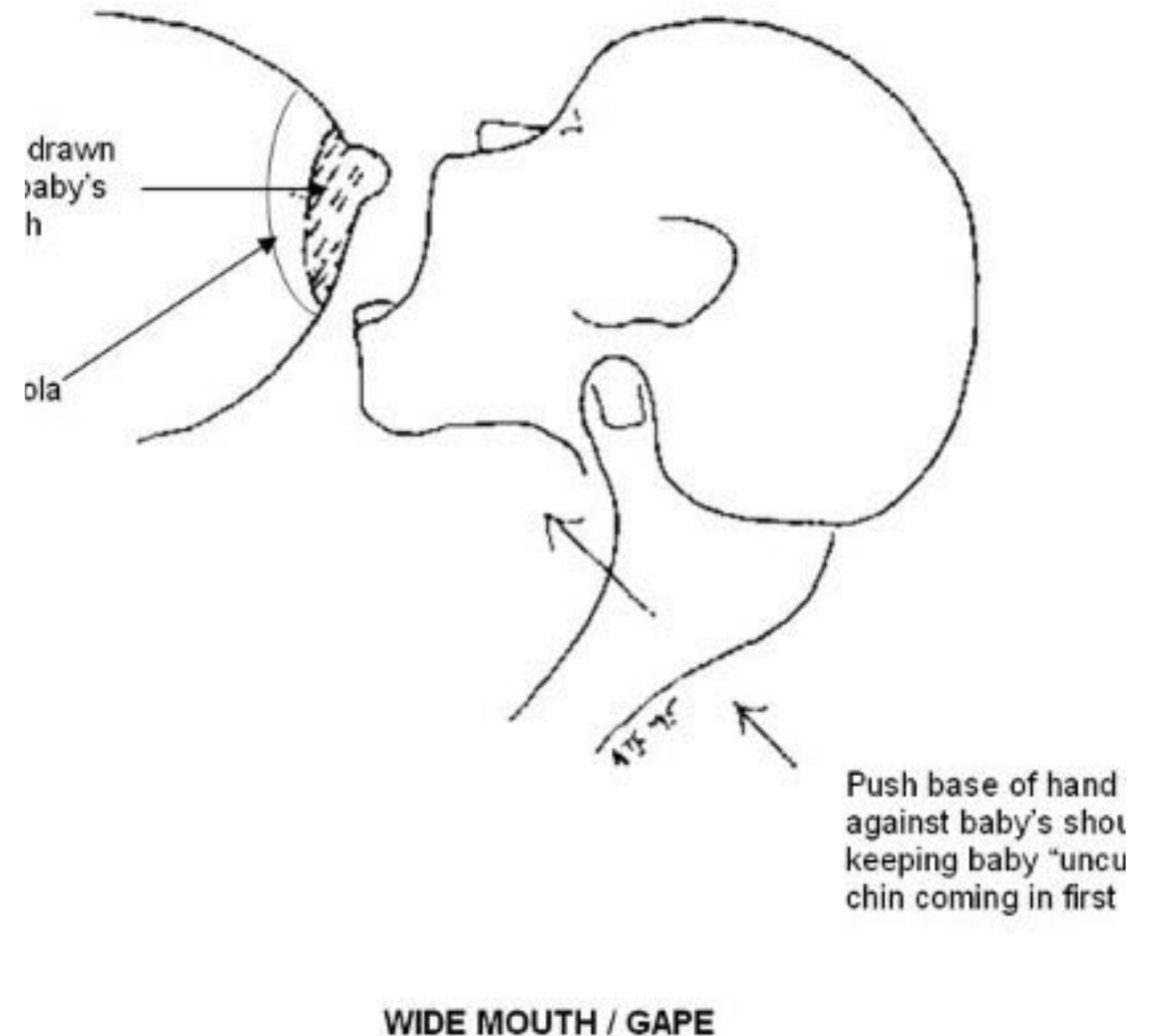
- Allows for integration of reflexes, removes pressure from newborn
- Naturally stimulates the uterus to contract even before latching
- <https://globalhealthmedia.org/videos/breastfeeding-in-the-first-hours-after-birth/>

Integrating Primitive Reflexes

- Primitive Oral Reflexes: Suck, Root, and Snout; We know the others from our newborn exam studies (moro, grasp, Babinski, etc)
- Moving from an intrauterine to an extrauterine world can be difficulty for babies - they need time to integrate these reflexes
- Golden hour, physiologic nursing
- Encourages bonding, associated with less postpartum bleeding for the parent (uterine stimulation), removes “pressure”
- We still want baby latched (or parent to be stimulating their nipples) by the 1 hour mark - it’s okay to step in if needed, but give baby a moment!

Latch Techniques

- “Hands on” feeding for newborns: utilizing breast compressions, firm holds on baby’s neck, avoiding pressure on the back of the infant’s skull
- “Sniffing” position (we bite a cheeseburger looking up, not down!)
- Alignment: you probably don’t like to swallow when you’re contorted into weird positions - check to see that baby’s neck is aligned over their shoulders, which are aligned over their hips
- Stimulate infant to open mouth wide, put downward traction on the chin to help open further or massage the jaw



Signs of a Good Latch

- Rhythmic suckling
- Audible swallowing
- Parent denies pain or pinching with latch (pain vs discomfort, “pulling” vs “pinching”)
- Uterine cramping with latch



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Positions

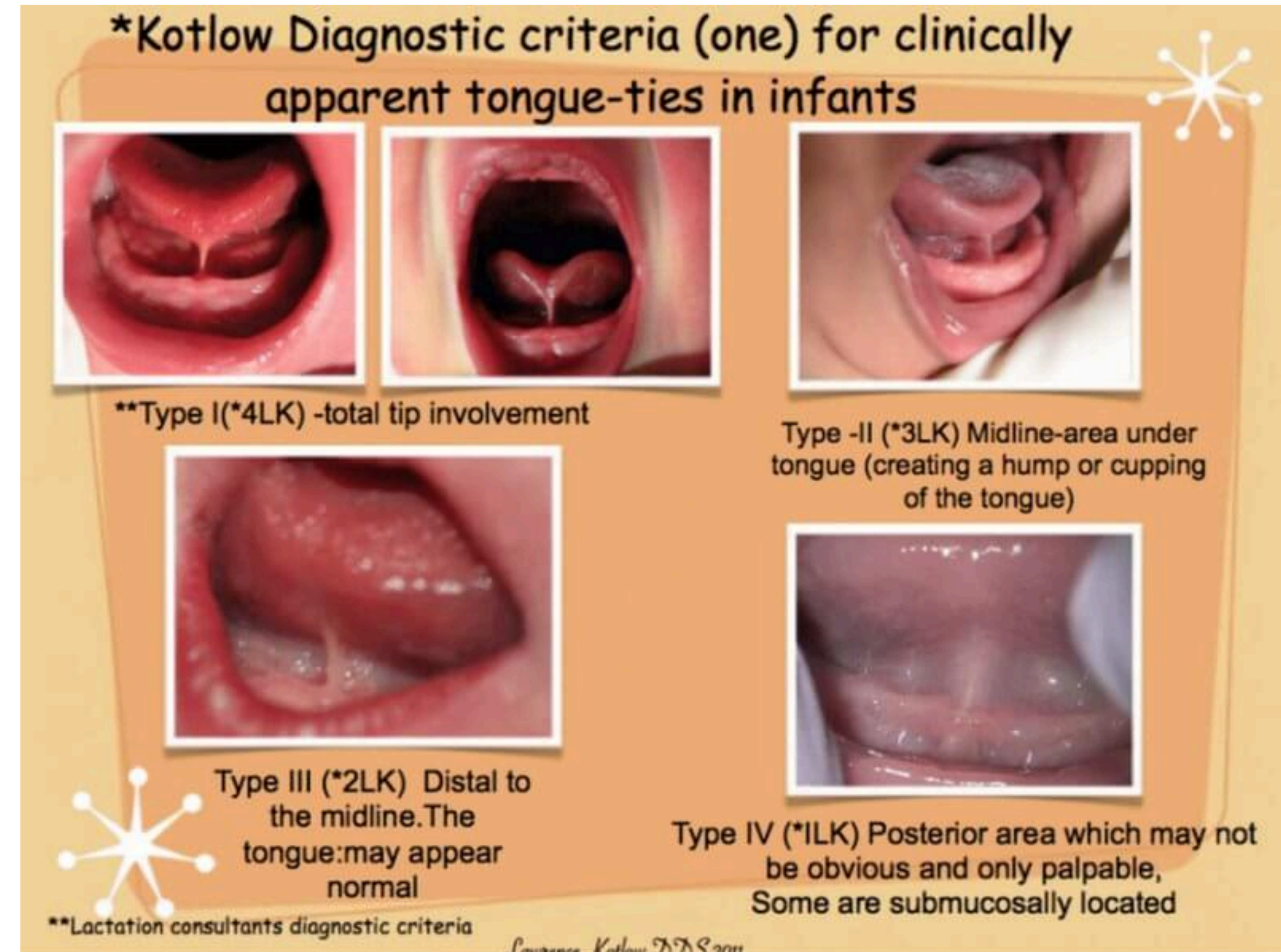
- Cross Cradle or Cradle: Offers the most control and clear visual of baby, can be challenging for clients with flat nipples and high amounts of breast tissue, can be painful to the abdomen/uterus or cesarean incision site
- Side lying: Allows for most restful position for the parent, requires some practice, can be difficult for those with certain anatomy
- Football hold: Gives parent the clearest visual of baby's mouth during latching, offers less abdominal stimulation to the parent, allows for more control in getting the most glandular tissue into baby's mouth
- Laid back: Allows for rest, excellent for parents with a forceful letdown or oversupply, encourages baby to integrate and utilize newborn reflexes (ie breast crawl)

Hands-On Nursing

- Newborns need help! This is an important reminder for parents of older babies/toddlers/children
- Utilize one hand to compress the breast - we want to visualize the nipple going to the roof of baby's mouth. This is particularly important for parents with flat nipples
- Firm pressure on baby - the more they have to "reach" for the breast, the more shallow the latch will be
- Massage the milk out, help stimulate the flow as needed. Particularly important for plugged ducts.
- Normalize needing both hands in the beginning for parents.

Tongue Ties

- How do they cause problems?
 - Limit upward mobility, make it difficult to maintain suction or move the tongue efficiently to remove milk from the parent
- Symptoms
 - Pinching or pain with latch, “clicking” sound while nursing or eating from the bottle, increased reflux (from swallowing air), baby sleeps with mouth open, unable to rest tongue on roof of mouth, tongue does not extend beyond gum line, tongue “snaps back” when suckling
- Visual Assessment
 - Get two fingers under the tongue and lift up. Do you see a piece of tissue? What about blanching? Is it turning white?
- Unsure? Refer!!!



Bottle Feeding and Nipple Shields

- “Nipple Confusion” - is it a thing?
- Flow preference - paced bottle feeding to preserve nursing relationship
 - <https://www.bfsuccess.com/paced-bottle-feeding-for-the-breastfed-infant/>
- Proper nipple shield use and placement. Unsure? Refer!

Baby's Not Gaining: What do we do?

- Birth weight by 2 weeks of age, average of .5-1oz q day in weight gain
- Oral assessment - is there something interfering with baby's ability to nurse effectively?
- Parent's supply: how's it going? How can we help? (Pumping, stimulation, why is the supply low)
- Triple Feeding Plan: This is a HARD plan and is TEMPORARY. Do not flippantly place parents on this plan without complete support and frequent follow up: Feed baby at breast/chest for 20 minutes max, pump for 10, feed expressed milk back to baby. Repeat!

When do we refer?

- Inadequate weight gain (not at birth weight by 2 weeks or slow weight gains following that time)
- Persistent parent discomfort or pain with nursing
- Suspected oral issues, such as a tongue tie
- Difficulty getting baby to latch
- Anytime Triple Feeding is initiated
- Anytime a nipple shield is required beyond the first 2-3 days postpartum
- Trust your instincts - if this feels like a problem, it likely is one!
- Refer to local IBCLC, there are virtual options, WIC groups, LLL leaders, peer support groups - find the resources in your community!