



2021 Healthy Start “Beyond COVID” Webinar Series Demystifying the Secrets of Milk Production

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Learning Objectives:

1. Describe the basic process of establishing milk production for the breastfeeding mother.
2. Distinguish between perceived vs. real low milk production.
3. Name ways to counsel new mothers about their milk production to build confidence.

Beliefs about Milk Production

- Concern about milk production is the #1 reason breastfeeding women give for beginning formula, and for weaning at every critical weaning period. (*McLeod 2002; Lewallen 2006*)
- Over half of breastfeeding women believe they are not making enough milk. (*CDC*)
- Supplements begin early among low-income participants on the WIC program. Only a third of breastfeeding WIC mothers meet their own breastfeeding goals. The first month is a critical time when many begin formula supplements; up to half combine formula with breastfeeding by 14 days. (*USDA FNS 2017*)
- Myths about milk production abound.

Why Parents Might Doubt Their Milk Production

- Unrealistic expectations
- Cannot see how much milk the baby takes
- Visual cues in the baby (e.g., fussiness or baby not sleeping well) {DaMota 2012}
- Family pressure
- Low pumping yield
- Unaware of the impact of supplements
- Early feeding practices
- Anatomical/physiological issues

Signs of Perceived Low Milk Production

- Baby stools 3 or more times every 24 hours in first 3-4 weeks
- Appropriate weight gain (1 ounce/day during first 6 months)
- Baby breastfeeds 8-12 times every 24 hours
- Breasts feel full before the feedings and softer at the end of feedings
- Parents may receive negative messages from family or friends
- Baby may be fussy
- Baby may have been given a bottle of formula and baby “gulped it down eagerly”
- Parent may have tried using a breast pump and did not get good yield

Teaching Mothers How Their Breasts Make Milk

1. Three things needed: the breast, the brain, and the baby
2. During pregnancy: breast growth happens during first half; colostrum begins secretion around 16 weeks
3. Milk factories
 - Milk-making cells (alveoli) develop during pregnancy
 - Alveoli bunch into 7-10 clusters or lobes
 - Muscles (myoepithelial cells) tighten to release milk
4. Milk highway system - transports milk through the breast
5. Hormones
 - Prolactin - responsible for making milk
 - Oxytocin - releases milk by facilitating muscle contraction outside alveoli
 - Hormone receptors - enable lactation hormones to enter the breast tissue
6. Milk removal (especially EARLY milk removal) drives the system
7. The opposite (full breasts) slows things down!
 - FIL levels rise
 - Internal pressure reduces blood flow
 - Milk cells are compressed
 - Breast tissue begins involution

Stages of Lactogenesis (LEAARC 2018)

- (1) Lactogenesis I - 16 weeks to
- (2) Lactogenesis II - 30-72 hours - milk volume begins to increase
- (3) Lactogenesis III - 3-9 days post partum

Delayed Lactation (Delay of lactogenesis II beyond 3 days)

- Birth practices/c-section delivery (*Hobbs 2016*)
- Feeding practices (e.g., not breastfeeding in the early hour after birth, not feeding baby 8-12 times/24 hours)
- Poor milk transfer (due to inadequate positioning and latch)
- Hormonal issues (e.g., PCOS, hypothyroidism) (AAP/ACOG 2014)
- Maternal diabetes (*DeBortoli 2016*)
- Maternal obesity (BMI > 30 kg/m²) (*Preupsting 2017; Kair 2016; Rasmussen 2004*)
- Retained placental fragments (AAP/ACOG 2014)
- Medical concerns of the mother or baby (*Wambach 2021; LEAARC 2018; Hurst 2007*)

Low Milk Production - Common Causes

- Early feeding practices result in ineffective milk removal
- Formula supplementation
- Prior breast surgery
- Insufficient glandular tissue (AAP/ACOG 2014)
- Medical conditions - maternal (e.g., hormonal conditions, certain medications, unresolved engorgement, significant blood loss post birth)
- Medical conditions - infant (e.g., baby with weak suck or anatomical issues such as tongue tie; congenital heart problem, etc.)
- Smoking more than a pack of cigarettes daily (*Napierla 2016*)
- Subsequent pregnancy (*Wambach 2021; LEAARC 2018; Hurst 2007*)

Enhancing Milk Production

- Get a good start with breastfeeding
- Skin to skin care
- Feed baby on cue
- Prioritize feedings at the breast
- Hand expression
- Consider M.O.M. (Mom's Own Milk) for supplements
- Rebuild as necessary
 - Skin-to-skin care
 - Frequent milk removal (*Acuna-Muga 2014*)

- Power pumping
- Breastfeed during sleep periods
- Breast massage

Talking with New Moms

- During early weeks many mothers report difficulty following instructions, remembering facts, and keeping track of time – all governed by left brain. [Eidelman 1993]
- Mothers have enhanced RIGHT brain capacity – perhaps to connect with baby [Schoore 2001]
- Tune in to the mother’s EMOTIONS
- Teach her why her baby fusses and cries.
- Affirm! Affirm! Affirm!
- Show her what she is doing right.
- Show her how her baby loves her.
- Power of praise!



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