Breastfeeding Support News
Spring & Summer 2015

UC Davis BFSP Evaluations

Please complete our annual Breastfeeding Support Program Evaluation Survey.

As a registered member of the program, you will also receive an email inviting you to participate.

Your input is very important to us, we try to bring your comments/requests to practice within our program as we are able. So please take a few minutes to let us know how we are doing well and what can be done better.

Galactagogues

Spend any amount of time around women that are breastfeeding, and you’re likely to hear some concerns about low milk supply. You’re also likely to hear a few recommendations or remedies on how to increase that milk supply with the assistance of various foods, herbs or medications known as Galactagogues. A galactagogue (or galactogogue) is a substance professing to promote lactation or increase milk production in humans and other animals.

There does exist some scientific evidence to support that certain pharmaceutical galactagogues, when combined with good breastfeeding management techniques, can result in maximizing the quantity of milk a mother expresses without having any adverse effects on the mother or infant. The number of published studies is small, however, and the available data is inconsistent.

Almost no evidence-based research is available that demonstrates the effectiveness of increasing one’s milk supply by using a food or herb-based galactagogue. Most of the information about the success of increased milk supply using these galactagogues, is anecdotal (i.e., based on personal experience rather than facts or research). Taking a galactagogue without confirming the practice of good breastfeeding management techniques, may mask underlying breastfeeding-related problems that may not get resolved or may cause further difficulties if not addressed adequately.

There are a number of reasons that mother’s may have or perceive that they have low milk supply. According to the Academy of Breastfeeding Medicine: the entire feeding process should be evaluated and modifiable factors should be addressed by a qualified lactation expert prior to the use of a galactagogue. Modifiable factors may include the comfort and relaxation of the mother, the frequency and thoroughness of milk removal, and/or any number of underlying medical conditions.

Comfort and relaxation of the mother:
A good latch and proper positioning contribute greatly to the comfort and relaxation of a breastfeeding mom but also to the effective transfer of milk by the baby.

A narrow latch is ineffective in maximizing the removal of milk from the breast can result in severe nipple trauma. Instead of latching their tongue around the nipple to draw

Upcoming Davis Groups & Classes

- Preparing for Breastfeeding June 25
- Continuing to Breastfeed When you Return to Work/School July 23
- Summer Support Group Meetings:
  - Student Community Center: June 19, July 17
  - Gladys Valley Hall: July 29

Upcoming UCDHC Classes

- Preparing for Breastfeeding June 8
  Main Hospital, Davis Tower, Room 1704
  4:00-5:30

Pumping at Student Housing?
To save valuable time, moms can now request an access card for use on a monthly basis for Segundo and Tercero Lactation rooms. Moms who are frequent/regular users of these rooms on the Davis campus can contact the respective Office Coordinator to request a card:

- Segundo: LeeAnnLuttrell, lluttrell@ucdavis.edu
  (Segundo Services Center Room)
- Tercero: Elizabeth Martinez, ezmartinez@ucdavis.edu
  (Wall Hall and Scrub Oak Rooms)

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the nipple into their mouth, babies with a narrow latch may compress the tip of the nipple with their tongue, with very little success at effective milk removal. Often, these babies can be trained to widen their latch during feedings with the help of a breastfeeding expert.

A shallow latch is also ineffective in transferring milk successfully and can also result in severe nipple trauma. In order to stimulate a baby’s reflex to suck, a mother’s nipple must reach to the back of her baby’s palate where hard and soft palettes meet. If a mother’s nipples are short or inverted, their baby may flip the tip of the nipple with each suck wearing off the skin of the nipple resulting in trauma to the nipple. Babies that do not receive the stimulus to suck because of short or inverted nipples may be inactive in their attempt to latch and “shut down” at the breast. Mothers with short or inverted nipples may find the intervention of a nipple shield will assist in providing the stimulation to suck, as well as give her some comfort and opportunity for her nipples to heal.

Positioning a baby to support a baby’s core and mom’s upper body contributes to effective milk transfer. Babies in most breastfeeding positions should be held tummy-to-tummy with mom, their chin tucked closely into mom’s breast, with their throat extended to support easy swallowing.

**Frequency and Thoroughness of Milk Removal:**
During the first 10-14 days of life, a baby’s stomach is growing rapidly. The day a baby is born, their stomach is just about the size of a Peanut M&M. By Day 10-14 of life, a baby’s stomach will reach the size of a large egg. Babies require many frequent feedings during these first few weeks (i.e., at least 10-12 feedings every 24 hours) to support this growth and development.

Your baby will grow at a rate faster than at any other time in their lives during their first 12 months of life. Since breast milk digests quickly, babies continue to require frequent feedings to provide a consistent caloric intake (i.e., about 8-10 feedings every 24 hours for the first 1-3 months of life; about 6-8 feedings every 24 hours at 3-6 months of life; and, continuing with around 5-6 feedings every 24 hours in the second 6 months of life).

Each time a baby latches on and feeds from a mother's breasts the mother’s body sends a message to their brain to make and to release milk. Thoroughly removing the milk from breasts at each feeding, either by breastfeeding a baby directly or by expressing the milk, will send the message to a mother’s brain to make more milk. During the first few months after a baby is born, a mother’s body is not only making milk, but building milk “receptors” to store that milk. Frequent feedings, in combination with thorough milk removal, will maximize the amount of milk that mother’s breasts will produce, collect and release.

**Underlying Medical Conditions:**
- **Insufficient glandular development** – starting with puberty, and the initiation of menses, a woman’s breasts begin to develop in preparation to breastfeed. Tissue then continues to develop with each successive menstrual cycle. In some women, and for unknown reasons, sufficient glandular development does not occur. While there are certain markers that may accompany this condition, appearance alone does not indicate insufficient glandular development;
- **Surgery** – woman undergoing chest or breast surgeries run the risk of severing mammary ducts or nerves that can result in lower milk production. The location, orientation, and extent of the surgical incision determines how much milk production will be affected.
- **Hormonal Disorders** – since a mother’s milk production and release rely on hormonal signals to their brain, disruptions or interference with these signals may result in a lower milk production (e.g., PCOS, hypothyroidism, diabetes, etc);
- **High Body Mass Index (BMI)** – studies have associated being overweight or obese with an increase in the risk of breastfeeding difficulties. Initiation is often delayed or fails altogether and lactation duration is typically shortened.
- **Infant medical problems** – prematurity; congenital abnormalities, including or especially oral anomalies; cardiac conditions; etc., can interfere with complete milk removal thus reducing milk production.
- **Contraception medications, return of menstruation, another pregnancy.**

Most women identified with these underlying medical conditions will provide some breast milk. Some will breastfeed exclusively. All women identified with these underlying medical conditions will benefit under the provision of good breastfeeding management support.

As low milk supply, perceived or real, is one of the most common reasons given for weaning a baby from breastfeeding, it’s important to first understand normal infant feeding patterns, typical growth development, and common feeding behaviors. When these have been expertly evaluated, modifiable factors have been addressed, and milk production is only partially effective, then galactagogues may be considered. Galactagogues alone, however, will not increase milk supply.
Breast milk is an amazing mixture of ingredients that helps a baby grow and be healthy. It contains fats and lactose to give babies energy, water to keep babies hydrated, and many micronutrients. However, it may surprise you to learn that not everything in breast milk is exclusively to feed the baby! Complex sugars in breast milk called “oligosaccharides” can’t be broken down and used by babies, and are instead used as food by good microbes in a baby’s intestinal tract. The most common good microbe in babies is called “bifidobacteria,” Sometimes these bifidobacteria are even put into yogurts or pills in what is called a “probiotic.”
**BABE project continued**

Bifidobacteria aid a baby in establishing a healthy gut microbial community, or “microbiome.” Bifidobacteria help teach a baby’s immune system to distinguish friend from foe, help crowd out bad microbes by eating all the available food and taking up all the space, and produce compounds that feed the baby and discourage bad microbes from growing. Some scientists even hypothesize that having these good bacteria early on in life is important for a person to avoid developing certain inflammatory conditions such as asthma and allergies.

As a Microbiology PhD student at UC Davis I studied the gut microbiomes of infants around the world. I noticed that babies in Davis (and other places in the developed world) were less likely to have high amounts of bifidobacteria in them. Since all the babies I looked at were breast-fed, I was confused by these large differences in their microbiomes. If the environment in a baby’s intestine was so welcoming to bifidobacteria, with its favorite food (the breast milk sugars) waiting for it there, why did some babies not have any bifidobacteria in them? Recently the Alfred P. Sloan Foundation awarded me a postdoctoral fellowship to try to find an answer to this question.

My hypothesis is that some babies in developed nations don’t have bifidobacteria in them because they never acquire bifidobacteria in the first place. We don’t know where the bifidobacteria that ends up in babies comes from, but some babies apparently aren’t getting any. I decided to go on a microbial “safari” to try to find the source of these baby-associated microbes. By carefully choosing the places where I look, I hope to find evidence to answer the question of where bifidobacteria come from. Many of the places in which I am searching are part of what is called the “built environment,” or locations that were built by people. For this reason we call our project the “Baby-Associated Built Environment Microbiome Project,” or BABE microbiome project for short.

There are a couple of different ideas about where bifidobacteria come from. One possibility is that bifidobacteria come from mothers. To test this hypothesis I am investigating both stool samples from mothers enrolled in a UC Davis study and investigating environments where mothers go without their babies, like the designated lactation rooms. We are asking mothers who use the rooms to make a note on the new sign-in sheets if they bring their baby with them into the room that day, so that we can disentangle the effects of mother and child on the microbiome.

If you use the designated lactation sites you might occasionally run across our female undergraduate volunteers who collect swab samples to see if mothers might be leaving traces of bifidobacteria behind. However, priority usage of the rooms will always be given to lactating mothers. We are also adding a small device to the designated lactation room doors to track when they are used and to measure environmental conditions such as temperature and humidity. The UC Davis Breastfeeding Support Program has been a wonderful partner to us by letting us sample in the rooms, and by helping with the logistics involved. By comparing all of this data, we hope to understand how bifidobacteria moves through the population and why some babies don’t have this symbiotic species in them.

~ Dr. Zac Lewis

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August 1-7 is World Breastfeeding Week. This year’s focus is revisiting the 1993 Mother-Friendly Workplace Initiative with the theme, Breastfeeding and Work, Let’s make it Work!