In our quest to support breastfeeding mothers and their babies, we encounter few cases more tragic than those in which the mother prepares and plans to breastfeed her baby, practices optimal breastfeeding management, and has lots of support in the early postpartum days—but never makes enough milk for her baby to thrive. Often, the mother is told by her baby’s pediatrician that she needs to feed the baby artificially at once or risk serious trouble, and no one explores her milk shortage because the health care providers are focused on ensuring that the baby’s nutritional status is adequate. The mother’s self-esteem might suffer if she feels that her body “failed” her, and she may feel cheated of the breastfeeding relationship and nurturing she dreamed of sharing with her new baby. Worse, she may never get any answers as to why she was unable to provide enough milk for her baby. As time passes, she may wonder whether she should even attempt to breastfeed any other babies she might have.

While there can be many situations in which a mother’s milk production seems insufficient to feed her baby, a large percentage of those can be resolved with effective breastfeeding management, support for normal breastfeeding behaviors (such as assuring the mother that a newborn needs to nurse often in the early weeks), and, in some cases, interventions until mother and baby master the learning curve that is sometimes present. However, in cases of hypoplasia, the mother has insufficient glandular tissue in her breasts; her “milk factory” is either missing key parts to its assembly line or is absent altogether. How can a mother determine if she does, in fact, have hypoplasia? Is breastfeeding totally impossible for this mother? What can we do to recognize, support, and encourage mothers who lack glandular tissue in their breasts?
Recognizing Hypoplasia

The unfortunate reality of hypoplasia is that, although it is often easy to recognize in hindsight, the first clue that a mother has insufficient glandular tissue is usually primary lactation failure; her body simply does not produce milk. Even when everything else is in place for a good start to breastfeeding, the milk does not “come in” or is not enough to sustain her baby. The Breastfeeding Answer Book cites a 1999 estimate that 1 in 1000 mothers experience primary lactation failure, which can be due to hypoplasia or other causes. However, with an increasing number of mothers becoming pregnant and delivering healthy babies who previously could not, thanks to assisted fertility and hormonal support, more cases of hypoplasia are being encountered. This increase has occurred because many conditions that underlie problems achieving and sustaining a pregnancy coexist with insufficient breast development. Some of these red-flag conditions may give a mother or her health care providers clues to a future lactation failure if they are aware of them early in pregnancy.

What are the visual markers of hypoplastic breasts? In a study of 34 mothers by Kathleen Huggins, et al. (2000), the researchers found a correlation between the following physical characteristics and lower milk output:

 пу widely spaced breasts
 пу breast asymmetry (one breast is significantly larger than the other)
 пу presence of stretch marks on the breasts, in absence of breast growth, either during puberty or in pregnancy
 пу tubular breast shape (“empty sac” appearance)

Additional characteristics that may indicate hypoplasia are:

 пу disproportionately large or bulbous areolae
пу absence of breast changes in pregnancy, postpartum, or both

Hypoplastic breasts may be small or large. It is breast shape, placement, and asymmetry that indicate hypoplasia—not necessarily size. Normal-sized breasts that are lacking glandular tissue may be made up of fatty tissue that will sufficiently fill a bra cup.

Most of the existing medically documented literature on hypoplasia can be gleaned from the plastic surgery field, since women with hypoplasia, concerned with the appearance of their breasts, may seek surgical augmentation (implants) of their breasts. If these women go on to have babies and
attempt to breastfeed them, we may mistakenly assume that the presence of breast implants has caused milk production issues, when in reality the cause is the absence of glandular tissue that preceded the augmentation surgery. If a mother presents with milk production issues and has had breast augmentation surgery, it may be helpful to inquire about the shape of her breasts before she received her implants. She may offer to share “before” photos, which can also provide some insight. An excellent resource for mothers who have breast implants can be found here: http://www.bfar.org/possible-augmentation.php.

Without a lactation expert seeing or palpating a mother’s breasts during or before her pregnancy, it can be difficult to assess whether she may have trouble lactating. It is important to note that even mothers who display the above-mentioned physical characteristics of hypoplastic breasts could go on to produce a full milk supply for their babies; the only true indicator of whether a mother will not make enough milk is, unfortunately, insufficient milk despite proper breastfeeding management and breast stimulation in the early days and weeks. Additionally, breasts that look perfectly normal, even breasts that are large or pendulous, cannot be assessed for glandular tissue versus fatty breast tissue by visual measures alone; palpation of the breasts by a qualified and experienced health care professional may reveal more information.
Possible Causes and Contributing Factors of Hypoplasia

There is no conclusive information about exactly why some women do not develop breast tissue. A possible genetic component has been suggested by mothers who claim no one in their family was “able to” breastfeed her babies and by reports of similar breast appearance among female family members. Some published studies indicate that environmental contaminants may contribute to the increasing numbers of hypoplasia cases. We are exposed to contaminants that may bind to receptors in place of hormones; these contaminants, called endocrine disruptors, can affect bodily functions other than reproduction and lactation. These contaminants are most commonly found in pesticides and dioxins, which are the chemical byproducts of the manufacture and breakdown of chemicals and plastics that contain chlorine. The exposure to such endocrine disruptors, either in utero (while the mother was growing in her mother’s body) or in childhood, may be responsible for insufficient breast development in puberty.

Some conditions may coexist with mammary hypoplasia. Luteal phase defect, which is characterized by inadequate progesterone during the luteal phase of a woman’s menstrual cycle (after ovulation), is an under-diagnosed condition that can also be a red flag for insufficient glandular development. Progesterone levels should rise a bit after ovulation; then, if the woman becomes pregnant, the enormous increase in progesterone a mother’s body has to produce to sustain the pregnancy is partially responsible for the breast changes and growth reported during early pregnancy. Therefore, a mother who required progesterone supplements to maintain her pregnancy may also be at risk for poor glandular development during that pregnancy, unless the progesterone supplements are kept up until the placenta produces enough progesterone to keep the pregnancy vital, that is, kept up throughout the first trimester. One published account attributes more successful lactation after a second pregnancy to a mother’s use of supplemental progesterone for luteal phase defect throughout the first trimester.

While progesterone early in pregnancy helps prepare the breasts for lactation, for a mother’s milk to come in, her progesterone level must drop precipitously, which normally occurs after the delivery of the placenta. This is why mothers who experience a retained placenta (which means that part of the placenta remains inside the uterus) often do not produce milk until after the placental tissue has been discovered and removed. Supplemental progesterone during the early postpartum weeks will interfere with lactogenesis.

“Why is optimal breastfeeding management so vital to mothers at risk for hypoplasia?”
Most mothers with luteal phase defect who go on to carry a pregnancy to term do not have significant difficulty lactating. However, the presence of luteal phase defect can be a warning that the mother and baby need to be closely monitored and supported in the early postpartum days and weeks, or can be another clue that completes the puzzle when assessing insufficient milk supply (or milk production) in hindsight.

Polycystic ovarian syndrome (PCOS, also called Stein-Leventhal syndrome), which can have a similar impact on the endocrine system to that of type II diabetes, is a maternal condition that goes largely under-diagnosed but may be a red flag when considering breast composition. Although studies thus far have been inconclusive, some point to modest to marked improvements in lactation success in mothers who continued to use Metformin or Glucophage to regulate symptoms of PCOS during their pregnancies. Many mothers are wary of using medications during their pregnancies, but both of these interventions have been considered safe to use in pregnancy and can improve the chances for successful lactation. Giving the mother as much information as we can, and encouraging her to consult and dialogue with her endocrinologist and/or obstetrician-gynecologist as early as possible in pregnancy can be very beneficial.

Because PCOS is a syndrome and each woman will experience a set of markers or symptoms that are unique to her situation, the presence of PCOS alone cannot tell a mother whether she will make enough milk; in fact, it has been reported that one-third of mothers with PCOS actually experience oversupply, likely associated with the excessive prolactin production that is a marker for about 20 percent of mothers with PCOS. Knowing that a pregnant mother has PCOS is reason enough to encourage her to stay in close contact.
with her healthcare providers during the immediate postpartum days and weeks, so that any breastfeeding issues can be detected and managed early.

**Assisting Mothers Who May Have Hypoplasia**

Why is optimal breastfeeding management so vital to mothers at risk for hypoplasia?

As we are well aware, many factors can be “bumps in the road” for all mothers and babies as they work to establish their breastfeeding relationships. Complications or interventions in the birth process, hospital policies that do not preserve mother-baby togetherness, anatomical irregularities in the baby (such as tongue tie or other structural abnormalities in the baby’s mouth), or simple lack of awareness of how “normal” breastfed babies should behave can all contribute to difficulties in establishing a mother’s milk supply or in a baby transferring adequate amounts of milk from the breast. These factors, taken individually, are almost always overcome with support and information, but when compounded with hypoplasia, they can have a very significant negative impact on how much milk a mother will ultimately produce for her baby.

By offering information and support for optimal breastfeeding management—baby is fed on demand, mother and baby are comfortably positioned, the new family understands feeding cues and normal frequency of the need to feed in the early days and weeks, baby’s behavior and diaper output are being assessed, and the baby’s weight gain is satisfactory—we can be ready to assist if there doesn’t seem to be enough milk. We can help the mother ascertain whether her milk supply issue is real or perceived. Many mothers have felt that their milk production was inadequate because their babies wanted to “nurse all the time,” because their breasts didn’t get engorged, or because according to a pediatrician the baby gained weight slowly. We can help a mother recognize the difference between perceived and actual milk production issues if we are part of supporting good breastfeeding management.

As we support mothers, we may

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**Is your information up to date?**

Have you recently moved? retired? or changed your phone number? Help ensure that mothers are able to reach you for helping calls.

Please take a minute to call the LLLI office and verify your phone number. Call 1-847-519-7730 or 800-LALECHE (800-525-3243) press “4” for the Leader Locator and follow the prompts.

If any of your information is incorrect, please contact us at LLLI@llli.org or call the office and leave a voice message.

Thank you for all you do to help mothers and babies breastfeed.

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**Summer vacation reminder,**

If you are planning on being away, something you might want to consider:

Include on your voice mail message information to help mothers contact your co-Leader, a helpline number, or visit LLLI@llli.org for more information.
face an ethical dilemma when we encounter a mother, perhaps during her pregnancy, whose breastfeeding history or appearance raises red flags for possible hypoplasia. We may struggle with how, or even whether, to tell a mother that breastfeeding may be difficult for her or may take some extra work to get established. While we feel ethically bound to share any information we have, we never want to discourage a mother from breastfeeding before the baby is even born. Also, we remember that milk production issues caused by insufficient glandular tissue cannot be confirmed until there is an actual failure to produce enough milk. We can speculate, but even previous lactation failure is not a guarantee of future inability to bring in a milk supply, as multiparous mothers (mothers who have given birth two or more times) are highly likely to produce more milk after subsequent pregnancies than they did for their first baby, especially if they worked very hard to encourage lactation in the past, by pumping, using galactagogues (substances that can increase milk production), or taking other measures when things got off to a rocky start.

Do mothers want information about potential milk production difficulties? The answer to this question, according to an informal poll conducted among the members of the online community Mothers Overcoming Breastfeeding Issues (MOBI), is a resounding yes. Mothers definitely want, if at all possible, to be emotionally andlogistically prepared for any difficulties they might have with breastfeeding before they are faced with that reality. A key point to remember is that we provide, offer, and share information in a manner that does not cause fear. Spending adequate time, providing research-based reasons for our caution, and reminding a mother that there is always the chance her breastfeeding experience will be completely normal are all tactics we can use when sharing information.

Developing a Breastfeeding Plan

There are many benefits to telling a mother that she may have lactation difficulties as a result of possible glandular insufficiency in her breasts. As mentioned before, some medical and pharmacological interventions could help maximize a mother’s milk-making potential during pregnancy. While we seldom connect with such a mother before she gets pregnant the first time, a mother who experienced milk supply issues with her first baby may come to us for answers and a plan for how to make things different the next time around. A well-informed mother can
collaborate with her health care provider, prenatally and after the birth, about appropriate measures to maximize her milk-making potential. Emphasizing the need to have the best possible birth scenario and lots of support for breastfeeding in the early days fits within La Leche League’s philosophy and is especially vital for those who may experience milk production issues. Being aware of the possibility that she might not be able to bring in a full milk supply can help a mother prepare and set reasonable expectations. We can help her make plans by letting her know the options for supplementation, the methods and importance of nurturing her baby at the breast, the pumping protocols to increase breast stimulation, and the pharmacological or herbal galactagogues. With this information, the mother can prearrange the support she will need to optimize her experience in the postpartum period, which is often complicated enough without feeding issues to manage as well.

It may surprise mothers when we speak of “breastfeeding” and “lactation” as the separate concepts they are. Our society often uses the terms interchangeably and makes no distinction between the baby who feeds at the breast and the baby who receives breast milk from a bottle or other vessel. Many mothers with hypoplasia may feel as if they have lost everything if they will not be able to bring in a full milk supply, but all is not lost. The use of an at-breast supplementer can enable a mother to truly breastfeed her baby, whether she produces some or none of what her baby requires nutritionally. With these devices, which are essentially small storage vessels worn around the mother’s neck and connected to a thin tube that is taped beside her nipple, the baby learns to seek nourishment from his mother’s breast receiving all of what the mother is producing at each feeding, and continues to stimulate her breasts to make milk. Once a mother becomes skilled at using a nursing supplementer, she can go about her days as any breastfeeding mother does, leave her house, breastfeed her baby wherever they go together, and have a largely normal breastfeeding experience. She and her baby will benefit from any lactation she can accomplish. When deciding which supplementer might be the best fit for a particular mother, two online resources offer helpful comparisons between the two commercially available devices: http://www.lowmilksupply.org/abs.shtml and http://www.fourfriends.com/abrw/Darillyn%27s/supplementers.htm

When we’re discussing at-breast supplementers, mothers may ask what to put in the vessel. Artificial baby milks may be one solution for this purpose: to provide adequate nutrition to babies whose mothers are unable to feed them
or who can provide only some of what they need. Many mothers will not think twice about supplementing with these artificial milks once they have come to terms with being unable to exclusively breastfeed. On the other hand, many mothers do not want their babies to be fed anything other than human milk. Those mothers may ask you for information or advice on finding other lactating women who can serve as donors. La Leche League has a formal statement on Leaders’ roles concerning milk-sharing questions (see sidebar). Please refer to the full text of the LLLI policy on this page. It is extremely important to remember that under no circumstances should a Leader attempt to connect mothers with milk to donate with families in need of human milk donations.

Of course, helping a mother maximize her own milk production is a worthwhile endeavor. First and foremost, we can support optimal breastfeeding management and mother-baby togetherness as the best ways increase milk production. Secondly, we can keep in mind that no amount of extra stimulation can fully compensate for the lack of glandular tissue. Breast compressions can be useful for the mother who has some milk but not always enough to keep her baby interested. Compressing the breast tissue around the nipple to provide a “shot” of milk to the suckling baby can remind him to keep working to feed. Frequent use of a hospital-grade breast pump in the early weeks, especially if supplements are given from bottles or other devices that do not stimulate the breasts, can also make a significant difference in how much milk a mother will ultimately make. While La Leche League Leaders cannot prescribe or recommend pharmacological or herbal galactagogues, we can provide information about them to mothers, which they can take back to their health care providers to discuss as part of their plan to maximize lactation.

**Conclusion**

Hypoplasia can be a heartbreaking discovery for a mother and those who are supporting her efforts to breastfeed, but it does not necessarily mean the end of the breastfeeding relationship. With medical and emotional support and accurate information, mothers with hypoplasia can breastfeed their babies. We as La Leche League Leaders can reassure a mother that nurturing her baby at the breast carries benefits beyond the milk itself. We can remind a mother that her presence is as vital to her baby as her milk, and we can assist her in developing a breastfeeding and supplementing plan that is feasible for her. We can encourage a mother above all else to enjoy her baby and celebrate every drop of milk she is able to produce for him.
Milk Donations

LLLI Policy and Standing Rules Notebook  http://www.llli.org/leaderpages/PSRm.html#14

La Leche League International fully supports the use of human milk for babies. The first priority of LLLI is to help mothers breastfeed their babies. Babies benefit from human milk donated by other mothers when their own mother’s milk is unavailable.

When a mother contacts a Leader seeking donated human milk, the Leader shall respond with information and support. This shall include information about induced lactation and/or relactation. The Leader shall also suggest the mother dialogue with an appropriate, licensed health care provider and contact a licensed human milk bank or other regulated and medically supervised human milk collection center. The Leader shall inform any mother interested in using donated human milk for her baby, whether on an occasional or on a long term basis, of the documented risks and benefits connected with this form of infant feeding.

If a mother is interested in donating her milk, a Leader shall provide contact information for licensed human milk banks or other regulated and medically supervised collection centers. A Leader shall not ever pressure a mother to donate or to continue donating her breastmilk. A Leader shall maintain confidentiality of mothers’ information entrusted to her (relating to any potential donor or potential recipient). A Leader shall remind a potential donor mother that her own baby has a natural priority to her milk. A Leader shall inform a potential donor that: 1) the donor may request complete information from the milk bank or collection center about how her milk will be used; 2) the donor may inquire if she may restrict how her milk will be used; 3) she may make her decision about donation in the light of the information she receives from the milk bank or collection center.

A Leader shall not ever suggest an informal milk-donation arrangement, including wet-nursing or cross-nursing. If a mother wishes to discuss these options, the Leader’s role is to provide information about the risks and benefits so that the mother can make her own informed decision based on her situation.

(Aug 76; rev Oct 92, Mar 07)
Bio

Diana Cassar-Uhl is mother of Anna, born 12/2002; Simon, born 9/2004; and Gabriella, born 12/2007; and a La Leche League Leader and Area Professional Liaison in New York-East. She and her husband, Bryan, are both on active duty in the U.S. Army and are permanently stationed as members of the West Point Band on clarinet and trumpet. Diana’s interest in hypoplasia was piqued when two of her closest friends had difficulties breastfeeding their babies due to insufficient glandular tissue, and neither found much support from the medical or lactation support communities.

Bibliography


(The URL for this study, which contains the most significant research on hypoplasia, is here: http://www.sonic.net/~molly/igt/)


Online Resources

http://www.mobimotherhood.org

Mothers Overcoming Breastfeeding Issues – outstanding resource for mothers who are grieving breastfeeding experiences that didn’t go as expected or planned

http://www.007b.com/breast_size_breastfeeding.php

Web page with good summary of breast size and breastfeeding.