

Breastfeeding After Cosmetic Breast Surgery

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Reduction Surgery
Vertical technique – note
no horizontal incision

Photos: © Gina Weissman

Let's start with the bottom line: in principle, all breast surgery is likely to affect a woman's ability to breastfeed. Breast reduction surgery has more of an impact than augmentation but lifts, augmentation and other surgeries may also affect a woman's milk supply and ability to breastfeed. The question we should be asking however is not: if a woman is able to breastfeed after surgery or not, but rather: to what extent a woman will be able to breastfeed. Almost every woman who has undergone breast surgery can produce something. (Harris et al., 1992)

While full and exclusive breastfeeding are not always possible after surgery, as in any situation where the mother's milk supply is insufficient to meet the baby's needs, the mother can often partially breastfeed and supplement with formula. Thus, both mother and baby benefit from the breastfeeding experience.

What is hiding behind the scar? The factors that affect postoperative milk production.

The extent of the effects of breast surgery on breast feeding depend on a few different factors such as, preoperative mammary gland function; types of incisions; degree of removal or destruction of the glandular tissue; the extent of the nerve damage; time elapsed between surgery and breastfeeding; if there were breastfeeding experiences or attempts between the surgery and the current breastfeeding; and most importantly the way breastfeeding is conducted and the mother's attitude toward breastfeeding - as with every mother.

Types of incisions

The location, nature, and length of the incisions in the surgery may affect breast feeding/milk production due to the damage to the glandular tissue and areolar nerves. An incision near or above the areola, especial-

ly in the lower quadrant, may damage the fourth intercostal nerve that plays a crucial role in breastfeeding and the milk ejection reflex affecting the amount of milk that the baby will receive. Stretching the nerve, not just cutting it, can also impair function. (Neifert 1992)

Breast augmentation

There are many reasons for breast augmentation surgery, usually related to the woman's self-image and may include things such as asymmetry which may mean surgery on a single side. When breast milk production is assessed, the condition of the breasts before surgery is a crucial component to be considered even before examining the effect of surgery. Although a small breast does not necessarily predict difficulty in breastfeeding, there are certain breast structures that may indicate difficulty in producing milk. Lack of breast tissue (hypoplasia), >



Photo 1: Augmentation with the PeriAreolar technique. Silicone leak-causing capsular contracture

› cone-shaped breasts, breasts very far apart; Lack of development or asymmetry. Women who choose augmentation in these cases usually receive information that they lack breast tissue or that enlargement may harm breastfeeding. In addition, they are sometimes mistakenly told that they can breastfeed normally from the breast that did not undergo surgery. (Didie and Sarwer 2003)

There are various implant insertion methods designed to reduce scars and create a natural appearance. The fold of the breast is the most common position, and today the implant is most often inserted under the muscle which allows the surgeon to release the muscle without damaging the mammary glands, preserving the nerves and blood vessels of the nipple-areola complex. This is good news for mothers who want to breastfeed. (*see photo 1*)

Revision

It is important to note that despite precise incision and location of the implant, breast augmentation surgery revised on average every 7 years (Spears et al., 2003). This is often due to breast prolapse, a desire to resize, hematomas, infections and other complications. (*photo 1*) This may cause nerve damage, affect the milk production system, and reduce the chances of breastfeeding. (Strom 1997, Michalopoulos, 2007)

Silicon and its implications on breastfeeding

In recent years, concerns have been raised about the transference of silicon to the milk. The silicone used in modern implants is a high viscosity silicone gel, this significantly reduces the risk of leakage from the implant.

In 2001, the AAP Drug Committee determined: „The levels of silicone in the blood and milk of breastfeeding women with silicone implants are similar to those in milk of women without implants (Semple et al., 1998). In addition, the levels of silicon in cow's milk has been found to be 10 times higher than that of the milk of women with implants and even higher in formula.“

In another study, „Silicon is found in a simplified form in the environment and it is difficult to prevent ingestion.“ The study concluded: „There is no reason why women with silicone breast implants should not breastfeed.“ (Berlin 1994)

Silicon is considered to be inert, and it is unlikely to be absorbed into the baby's digestive system (Hale, 2008). From 1994-2006, the Food and Drug Administration (FDA) banned the use of silicone because of suspected increased risk of breast cancer. It later retracted the ban when it became clear that not only does silicone not increase the risk of breast cancer, but may, to some extent reduce the risk of breast cancer. It is hypothesized that this can be

attributed to the localized pressure of the implants which reduces the blood supply that tumors need to thrive or perhaps the body's immune system's response to implants reduces the risk of developing cancer in the region. (Breast Implant Surveillance Reports to the U.S. Food and Drug Administration: Maternal-Child Health Problems

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Breast reduction surgery

There are many physical and psychological reasons that lead women with large breasts (breast hypertrophy) to undergo breast reduction surgery. They suffer greatly from their condition and in the end just want to be like everyone else and are not necessarily concerned with breast function and the ability breastfeed in the future. The effect of surgery on breastfeeding depends on the amount of tissue removed, the location of the removal and the extent of damage to the remaining tissue. There are many methods to perform breast reduction surgery and the one chosen is dependent on the woman's breast structure, surgeon's preferences, experience and the purpose of the surgery. Even standard methods vary between surgeons, and all of them can impair milk production.

The surgeries that most moderately affect milk production are the operations where the nipple-areola complex is not completely cut, but only shifted and



Photo 2a: Reduction surgery – vertical technique 4 weeks pp; second birth, fully breastfeeding

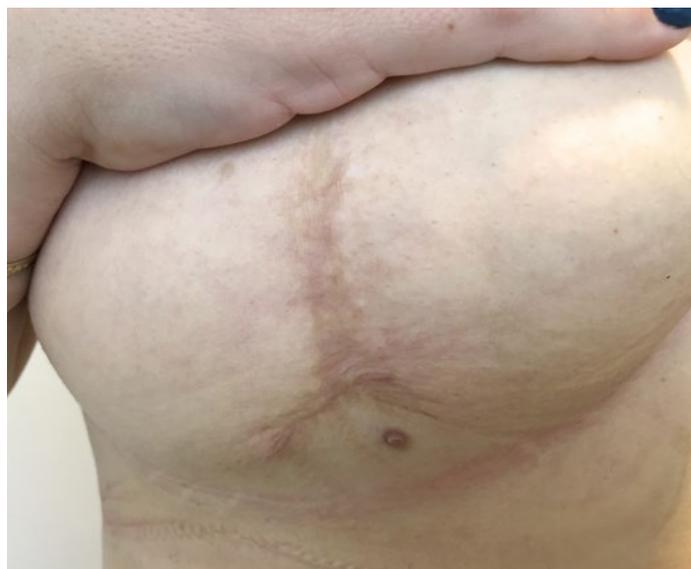


Photo 2b: Reduction Surgery Vertical technique – note no horizontal incision

the lower part of the breast attached to the nipple-areola complex remains intact (Sandsmark, M., et al 1992). (photo on page 15, photos 2a and 2b) This connection is called a pedicle and contains ducts, nerves and blood supply that are still attached to their relative systems. The pedicle can be in different areas of the breast and the scar position will be according to the placement of the pedicle. The use of the lower pedicle, which means that the blood vessels and nerves are in the area below the nipple-areola complex, best preserves the ability to produce milk.

Other methods include: the free implant method in which the nipple-areola complex is completely severed from the breast and then re-connected; the vertical incision method, most common in Israel and the United States in recent years as it requires a shorter surgery. This is more aesthetic but more harmful to milk production because the tissue is removed from the lower part of the breast and usually involves cutting the fourth intercostal nerve; a Bellini cut is a cut made around the areola and then liposuction is performed, this technique is usually used for minimal reductions or in addition to other methods.

Many researchers have tried to determine the effect of breast reduction surgery on breastfeeding, and have reached different conclusions about the success of safe breastfeeding, between 70% and

0%, depending on the type of surgery performed. The large range reflects the lack of uniformity in the criteria for evaluating breastfeeding. It is also important to consider that additional health background factors also influence success in breastfeeding. Women who undergo reductions, are often also overweight, this is a risk factor for successful breastfeeding. They may also suffer from hormonal effects that contribute to obesity and may affect breastfeeding as well, such as polycystic ovaries, diabetes, or hypothyroidism. With such a background, some difficulty as a result of the surgery itself can even further challenge breastfeeding.

The body's amazing repair process post surgery:

Recanalization is an important physiological phenomenon in women who have undergone breast surgery. In this process, breast tissue is re-grown, cut-off milk duct reconnects and new duct develop. The process is greatly enhanced as a direct result of breastfeeding, which encourages the milk production system to create new ducts. In addition, branches of new ducts and fistures are generated in small amounts in response to hormones released with each menstrual cycle. The more the mother has breastfed in the past, and the more cycles she has undergone since the surgery, the more recanalization may occur. So, with her first baby after the surgery she may

not reach full milk supply, but with the second she will have more milk and perhaps enough to exclusively supply the baby's needs.

Reinervation is the process in which nerve cells may be regenerated and reconnected.

The fourth intercostal nerve is the main messenger to the brain from the breast, it's lateral section innervates the nipple-areola complex and is located at around 4 o'clock on the left breast and 8 o'clock on the right breast. Its stimulation results in the release of oxytocin triggering the milk ejection reflex and prolactin for the production of milk. Regeneration of this neural-system is an important key to milk production. The degree of renewal does not depend on the previous breastfeeding experience, but mainly on the location of the cut and degree of damage to the nerve.

Severed nerves will regrow at a rate of about 1 mm per month and may take 6 months to a year to regrow (Shaw et al., 1997). When women show sensitivity to heat and touch, it indicates a functioning nerve and will communicate the appropriate sensations to the pituitary gland to produce prolactin and oxytocin. The ability of the breast to function depends on the condition of the glands and the ducts, but the more time has passed after the surgery, the more it is likely for the nerves crucial for breastfeeding have resumed function. >



Photo 3: Reduction surgery – Vertical technique engorgement 4 days pp, first birth.

› **Breastfeeding challenges that mothers may face after breast surgery**

Nipple pain:

Technique is a very important part of a pleasant and effective breastfeeding experience for all women. All the more so for women after breast surgery. It is therefore crucial to emphasize the importance of technique of a good latch to the breast from the first breast feeding in order to avoid nipple pain.

Women who have undergone breast surgery may sometimes experience conditions which are rare in women who have not had surgery, such as vasospasm, which causes the nipple to blanch after breastfeeding and can be accompanied by pain. Preventing any rubbing of the nipple with the tongue as a result of improper latch to the breast during breastfeeding may reduce this phenomenon.

Some babies may have difficulty latching and extracting milk because the nipple-areola complex may be incomplete due to surgical changes. A deep, asymmetric latch will increase the possibility of milk flow, it is also recommended to experiment with different positions. In addition, there are various techniques to help make the nipple more prominent when latching the baby to the breast, such as Dianne West's "Nipple Nudge" which can make it easier for them.

Engorgement

Women who have undergone breast surgery tend to experience more engorgement. If the breast produces milk and it is not used the cells begin the process of apoptosis (degeneration) this occurs in the cells connected to the severed ducts. It is important to pump to express the milk from those cells whose ducts have not been cut so as not to lose this critical active tissue mass. The faster the engorgement is relieved, the less it is likely to affect the functional cells and impair milk production. It is important to evaluate the efficiency of breastfeeding and consider pumping after each feeding, especially in the early days. Sometimes mothers experience a different degree of engorgement in each breast and some will experience engorgement only in certain areas of the breast.

After augmentation surgery, the implant sometimes presses the gland, making it difficult to remove the lymphatic fluid, thus increasing engorgement. If the mother's breasts were relatively small before the enlargement surgery, and in addition she experienced engorgement, she could lose quite a lot of her mammary gland function.

The engorgement experienced by most women who have undergone breast reduction surgery may increase from birth to birth. (photo 3) This is a result of additional regrowth and recanalization occurring with each pregnancy. Engorgement can be

directly correlated with the duration of the lactation period in previous births.

Lack of fullness among mothers who undergo augmentation due lack of breast development

Postpartum mothers should to feel a change in their breasts that will manifest as a sense of fullness. If the mother does not experience fullness in the lactogenesis 2 phase, they need to be assessed by a doctor as she may have low prolactin levels, resulting in insufficient prolactin to affect milk production. She also may not have enough active mammary glands. The good news is that there is usually something that can be done to improve this.

Lack of milk ejection reflex (MER):

Absence of or partial sensation in the nipple may indicate nerve damage that may interfere with milk extraction and may adversely affect milk supply. Frequent breastfeeding and extra milk extraction by manual expression and pumping with a good pump in the first few weeks will ensure that the breasts produce as many prolactin receptors as possible, and the milk supply will reach its maximum potential. (photos 4 and 5)

Helping postoperative mothers to maximise their breastfeeding potential

If a mother who has undergone breast surgery seeks help before she gives birth her



Photo 4: Engorgement after augmentation The incision location prevented MER.



Photo 5 Manual expression helped milk removal in the lack of MER due to large incision.

chances of achieving a successful breastfeeding experience are higher. There are many proactive steps that she can take and factors that will contribute to her success such as, document breast changes in pregnancy in order to predict breastfeeding ability; considering birth approaches that minimize interventions; AME: Antenatal Manual Expression.

What to do once the baby is born:

Early and frequent extraction of milk from the breast

Unless the duct in nipple-areola complex are completely severed by the free implant method, it is reasonable to assume that a mother who has undergone breast surgery can provide at least a little colostrum for her baby in the first few days. As with all new mothers the first hour and then the first 24 hours can have a huge effect on the amount of milk produced. The Parker Study shows that mothers who breastfeed or express milk in the first hour and then breastfeed or express at frequent intervals in the first 24 hours have significantly more milk 2-3 days later when lactogenesis 2 occurs.

Ensure Effective Technique

An effective latch is an important part of any comfortable and successful breastfeeding experience - for the postoperative mother even more so. Ensuring an effective latch is an important part of the pro-

cess to maximise a mother's breastfeeding ability and avoiding possible complications such as engorgement and nipple pain.

Treat engorgement as quickly as possible

Engorgement signals to the body that the milk it has produced is not required and this triggers the process of shutting down the system and mammary glands that produced it, apoptosis. In the case of a mother with many branches of mammary glands the shutting down of a few of them may not affect her breastfeeding experience in any significant way. In a postoperative mother who is likely to have fewer functioning branches of mammary glands it is critical to avoid engorgement as the loss of even a few could greatly reduce her ability to produce milk.

Monitor

It is very important to monitor the baby's stool and urine output and weight. It is possible that in the first few days the baby will gain weight well and will not need supplementation, but later weight gain may be reversed and it will be necessary to reevaluate the need for formula supplements.

Support

Studies have shown the importance of a supportive medical staff with knowledge of successful breastfeeding after breast surgery. In addition, it is recommended

to refer to sources of information and support for breastfeeding after breast surgery such as:

- > Clinics in Human Lactation: Breastfeeding after Breast and Nipple surgeries by Diana West, IBCLC, and Dr. Elliot Hirsch, MD
- > The BFAR book: Defining your Own Success: Breastfeeding After Breast Reduction Surgery by Diana West, IBCLC
- > www.bfar.org



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