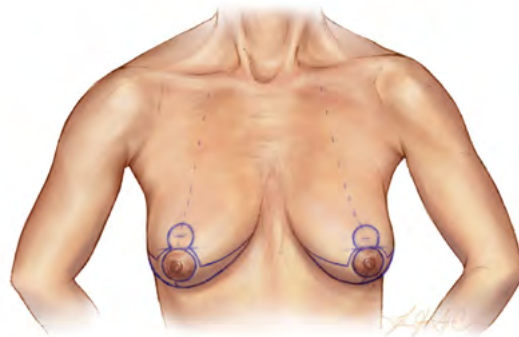
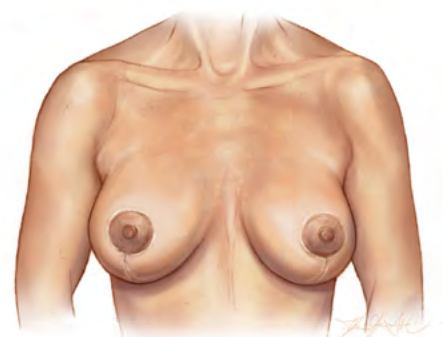


Breast Lift with Augmentation and Fat Grafting the Breast

Sagging and loss of fullness of the breasts is one of the most common reasons women seek plastic surgery. As an important aspect of a woman's sense of femininity, breast emptiness and droop may cause significant distress. The natural shape of the breast gradually changes with time. Some women become dissatisfied more with the shape of their breasts than the volume (size) and want to restore or even improve upon their youthful shape. This may involve breast lifts, lift with implants, or even lifts with transfer of fat obtained by liposuction.



Pre-op Markings



Post-Operation

ANATOMY

Breasts have complex, three dimensional shapes, which vary infinitely, and even from the other in each pair. Many times women have repeated the phrase, "they are sisters, not twins". It is easier to understand breast lift surgery with a little relevant anatomy.

Breasts are really specialized skin glands, not differing that much from sweat glands under a microscope. But they are specialized to the production of milk. They rapidly begin to grow at puberty, from a small button of gland which has been present under the nipple since birth. As the gland grows, the surrounding fat grows, blood vessels multiply and expand, and this rapid growth expands the overlying skin. Initially, this gives a cone-shape with the nipple at the peak, but very quickly the skin continues to expand under the weight of the gland and a relatively tear-drop profile develops.

With pregnancy and nursing, further changes occur. The gland enlarges rapidly, putting (sometimes painful) stretch on the skin and underlying tissues; often this is great enough and rapid enough to cause damage to the elastic fibres of the skin (causing stretch marks) Later, the gland shrinks to its original size or may be significantly smaller, leaving an expanded skin covering.

Plastic surgeons like to think of the breast as a gland which is supported by the brassiere-like overlying skin. As the skin is expanded, or the gland shrinks, or both occur, the gland drops to the bottom of the bra (skin envelope). The breast is only loosely attached to the underlying chest (pectoral) muscle, and doing exercises to try to tighten the breast have little or no benefit. This is disappointing to patients, and often they come in having tried everything prior to a surgical consultation.

There are several different ways plastic surgeons evaluate droop, and whether it is present enough to justify a breast lift.

The thinking tends to be along two questions:

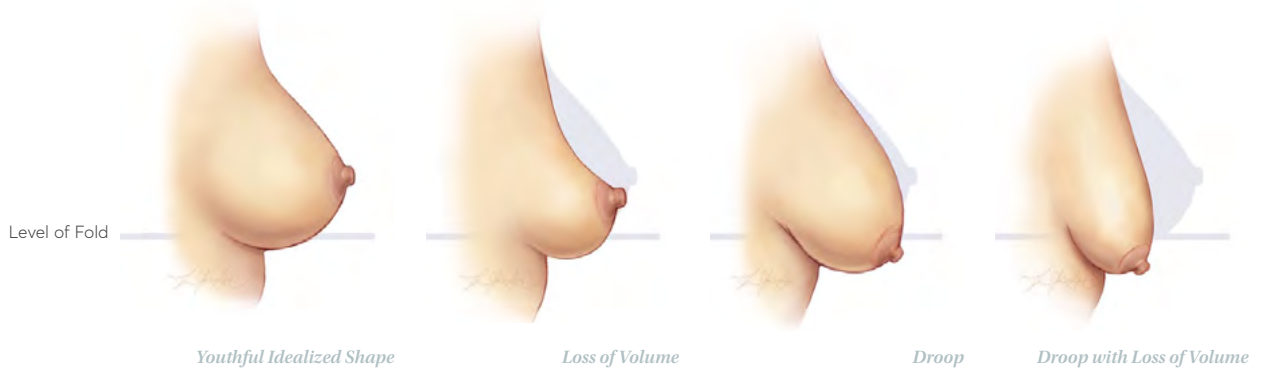
- First, do you like the overall size of your breasts? If you wear a bra, do you feel as full as you would like to be? If your breasts are larger than you would like, we can reduce them in volume but one of the most difficult situations can be if a woman ends up larger than she feels comfortable. The aim of cosmetic surgery is to make the patient feel more confident and if she is too big she will wear bulky clothing to conceal herself and this is the very opposite from the intention. Padding up is easy, going the other way isn't.
- Second—and this is what the plastic surgeon asks himself or herself, if I was to do a breast augmentation on this patient—would she look worse after, with implants high on the chest and the breast cascading off and still low?

If the answer to the second question is Yes—a lift is needed. The decision about this is often a matter of measurement, balancing the shape of the breast, and the position of the nipple on the torso. And naturally, many have tried to measure this out and give a mathematical approach to diagnosis and treatment.

Again, the best approach to this is not one method or another, but combining wisdom of many approaches. I look at the most commonly used criteria, measurement of the distance from the top of the breastbone to the nipple, and the position of the nipple relative to the crease under the breast, but I believe there are many other factors that play a role, and I use multiple thought processes in deciding where to place the nipple. One maneuver I have been using frequently in recent consultations is to hold the nipple and areola portion of the breast in a position that "looks right" to both me and the patient, holding a marking pen at this position and then marking where the nipple would have been on the patients upper breast skin to show the planning of the new location of the centre of the breast.

Some patients feel they have developed droop but the nipple and areola are still above the level of the fold. Usually, this is loss of breast volume alone and placement of an implant is the usual recommended treatment:

Generally, the degree of drooping is described by how far the breast and the nipple/areola have dropped below the level of the fold under the breast.



In most patients with true droop—in contrast—the nipple and areola are below the level of the fold (with the patient standing). Mild droop is within one centimetre of the fold, moderate from one to two centimeters, and more severe droop is when the nipple/ areola is three centimeters or more below the level of the fold.

Other factors which may play a role in how the surgery is planned, include how much breast tissue is present. A large, dense breast gland will respond differently to skin tightening procedures compared to a loose, small breast which has both drooped and lost volume.

TECHNICAL DETAILS

The surgeon must reduce the size of the “skin-brassiere”, increase the size of the gland (either with fat or an implant), or do a procedure which in some way combines both. Furthermore, the shape of the breast is a complex one, and a successful lift requires a three dimensional approach to re-shaping.

Many procedures have been devised to try to reduce the surgical scars resulting from lifts. The traditional techniques involve removing skin in vertical and horizontal dimensions below and around the nipple and areola, and moving the nipple areolar complex up to a pre-determined level. The surgeon usually starts by marking the skin with a surgical marking pen, with the patient awake and either sitting or standing. These marks are used to guide incisions and nipple placement during the operation when the patient is lying down and dimensions are distorted. Sometimes the patient is sat up during the operation while under anesthesia, to check the accuracy of nipple placement before the completion of surgery.

Incisions and Scars

The extent of the incisions will depend on the degree of drooping and the technique employed. Because the treatment of moderate to severe degrees of drooping has traditionally involved fairly extensive incisions, many techniques have

been tried to reduce the length of incisions, while trying to maintain the three dimensional effective lift of traditional techniques. This has met with varying success, depending on the size of the breasts being lifted, and the quality of the patient's skin.

Some surgeons believe mild droop can be treated by removing a doughnut-shaped area of skin from around the areola, and tightening the skin concentrically (like a purse-string) around the areola. This “peri-areolar mastopexy” enjoyed a significant popularity for a while, but my experience seems to correlate with the experience of many of my colleagues, and we seem to concur this is a procedure we don't support. Unfortunately, the outcomes from short scar techniques are often disappointing, and I have re-operated on many of these cases over the years.

I believe for a three dimensional re-shaping of the breasts to occur, most of the time it requires tightening the breast skin three dimensionally,

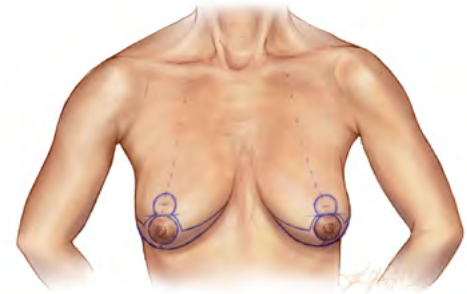
with skin removal in both a vertical and horizontal direction. It is only in occasional patients that I can get the results my patients want with a so called "lollipop incision". Most breast re-shaping I do involves an incision around the areola, a vertical incision, and a horizontal incision, which is concealed as much as possible in the fold. Excess skin is removed in both a vertical and a horizontal "dart" much as a tailor will "take in" a garment.

The aim is to have a roughly equilateral triangle formed between the nipples and the top of the breast bone.

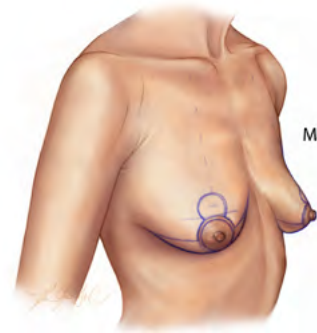
The nipple is repositioned upwards, while still attached to underlying breast tissue through which nerves and blood vessels can pass. The remaining breast is then wrapped around the central breast and nipple, and the incisions are closed.

For many patients, because the droop has occurred simultaneously with significant loss of breast size, an augmentation is desirable. Fullness of the upper half of the breast can usually be achieved and maintained with an implant. But using an implant may make the breast too big overall, and many times we increase with an implant while removing some breast tissue from the bottom of the breast, so that the actual increase in breast volume is minimized and yet we achieve the increase to the "upper pole" where it is most desired (a "plus-minus").

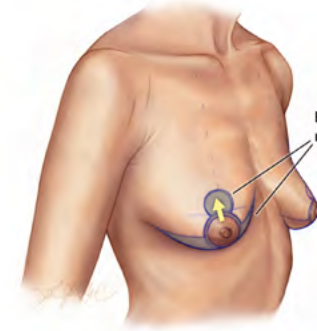
Sometimes, instead of using implants, we use fat "harvested" by liposuction to graft the upper and inner regions of the breasts. This puts the extra fullness where patients most want it. "Autogenous fat grafting" has become very common in the past few years. Patients for this need to be open to the possibility of multiple grafting procedures to get the degree of volume increase they desire.



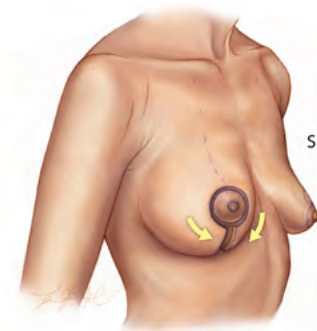
Pre-OP Markings



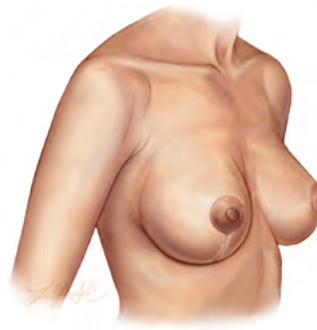
Markings



Excess removed and nipple/areola shifted



Skin Closure



Post-Op: Showing Incisions

RISKS & POSSIBLE COMPLICATIONS

Complications are unusual, and usually can be managed to a satisfactory outcome.

Infection and Bleeding

As with any surgical procedure, breast lift can result in infection, bleeding, and delayed healing. The risk of these occurring is quite small. Generally, the risk of infection in clean, elective surgical procedures is about 1%, and that of significant post-operative bleeding is about the same. In my experience infection and post op bleeding are significantly lower than 1%: If we are careful to avoid operating on patients with untreated high blood pressure, or those taking blood thinning medications including anti-inflammatories like aspirin, the risk of bleeding is probably even less. Massive bleeding requiring transfusion is exceedingly rare. I have never had to transfuse a breast lift patient. Even in breast reduction, a somewhat similar operation, transfusion has become quite unusual.

Nipple Necrosis

The blood supply to the nipple can be compromised in a lift, resulting in partial or even complete loss of the nipple, but this complication, which is unusual in breast reduction, is extremely rare in lift procedures. This is one of the most important times when smoking can really cause a major problem. **DO NOT SMOKE IF YOU ARE HAVING COSMETIC SURGERY.**

Capsular contracture of the implants

Please see Breast Augmentation.

Loss of Feeling

Long-term loss of feeling to the nipple can also occur, but is less common in lifts than in reduction mammoplasty.

Aesthetic Dissatisfaction

Perfection is rare in cosmetic surgery. Some degree of asymmetry prior to surgery is almost always present and it is best if the differences are pointed out by the surgeon in advance, as patients will look at their healing breasts more closely after than they ever have before surgery. Asymmetry, and modest degrees of unsatisfactory shape are common, especially early on. Most of the significant asymmetries will resolve or become less with time. Occasionally after a suitable waiting period, small revision surgery is needed, and even less commonly a return to the operating room for a more significant revision is required.

Drooping gradually or occasionally rapidly, recurs. Skin with poor tone and elasticity prior to the surgery will be more prone to recurrence than thicker, more elastic skin. Most women with significant droop have either thin and poorly elastic skin to begin with, or went through pronounced engorgement and enlargement with pregnancy. In the former type of patient, she must be satisfied with more modest results of the operation and must understand that some early recurrence will occur.

High Nipple and Areola

If the nipple is placed too high, it will be difficult for the patient to wear low cut clothing, and brassieres and bathing suits will similarly be awkward. Generally, if this occurs, the best treatment is to wait until the skin below the nipple stretches and then to tighten this with a horizontal tightening, which will effectively lower the nipple and areola. Similarly, asymmetry is best treated after a cautious period of waiting.



Other Forms of Breast Re-shaping

For patients who have breasts with developmental shape issues, such as commonly referred to as "tubular" breasts, a modification of basic breast re-shaping principles will often be very effective. Sometimes this is done with

implants, with or without fat grafting, release of tight fibrous tissues, and sometimes combinations of many maneuvers. The ultimate outcomes from these cases can sometimes be remarkable, and they may be very gratifying cases to treat.

SUMMARY

Breast lift procedures are done for many reasons and in many ways. After a discussion of the available options, with careful planning and execution of surgery, patients and surgeons can be rewarded with truly gratifying outcomes.