

# Breast Reduction Using Liposuction Alone

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## ABSTRACT

Liposuction alone as a treatment of breast hypertrophy has been mentioned in the literature for the past decade but has been limited in its application. Our experience in over 350 cases has shown that liposuction breast reduction is an excellent method of breast reduction when applied to the proper patient. The techniques involved in liposuction breast reduction mirror those used in standard liposuction cases, so most plastic surgeons will find the learning curve for this procedure to be very easy. Complications are infrequent and the recovery is rapid and easy. Liposuction breast reduction affords a rapid procedure with minimal complications and easy recovery and can provide a useful alternative to traditional breast reduction surgery in many patients.

**KEYWORDS:** Breast reduction, liposuction, breast hypertrophy

Liposuction has become the most common surgical procedure in plastic surgery over the past two decades.<sup>1</sup> The popularity of liposuction stems from its utility and efficacy. Prior to the advent of liposuction techniques, the only method of removing fatty deposits was open lipectomy, which is associated with potentially high blood loss and significant scars. Liposuction, however, has provided a safe and effective method of removing fatty deposits without scarring.

Intraoperative observation has shown that the breasts of many women with mammary hypertrophy are predominantly fatty in nature. Despite this realization, liposuction as a primary modality to reduce large breasts has been slow to evolve<sup>2</sup> and gain acceptance as a valid treatment option. The lag in liposuction use for breast hypertrophy lies predominantly in the preconceptions of plastic surgeons.

Plastic surgeons have been trained for decades that the reduction of large breasts must be accompanied by the tightening of the breast skin brassiere. This concept did make sense when the only method of breast reduction was open lipectomy. Today, however, liposuction affords the ability to reduce breasts without scars. In

addition, liposuction breast reduction (LBR) allows for a more rapid recovery with fewer complications.<sup>3</sup> LBR is not the treatment of choice in all patients, but an understanding of the strengths and weaknesses of LBR will allow for its successful use in a much larger number of patients than currently thought.

## PATIENT SELECTION

Patients with a chief complaint of excess breast weight and size are good candidates for LBR. Patients complaining of ptosis and ptosis-related issues should be counseled to undergo traditional excisional breast reduction techniques. Many patients have concerns with both weight and ptosis issues. These patients should be educated on the possibilities afforded by LBR and then make an educated decision. It is important to point out that LBR does not preclude a mastopexy at a later date so patients can choose a lift in the future if desired. Patients should also understand that breast ptosis will never increase after LBR despite the intuitive notion that by removing breast mass, ptosis will worsen. LBR does not create new skin so ptosis cannot increase. On the

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contrary, removal of breast weight will allow the skin envelope to shrink and retract thereby improving ptosis in the vast majority of patients.

Age, height, and weight serve as an excellent guide to success in LBR, though guarantees of size reduction cannot be made in advance due to the inability to gauge fat content exactly. Patients must understand that there is a possibility of treatment failure due to the presence of glandular breast tissue. This failure rate is inversely proportional to age and body mass index. This does not mean that young, thin patients fail LBR universally, but they do have an increased chance of treatment failure and must be aware of that fact prior to surgical intervention. Traditional breast reduction techniques are always an option for patients who fail LBR and patients must know their options prior to surgery.

Patients over 40 tend to have significantly fatty breasts. Older patients will have a surprisingly significant ptosis correction despite the fear that older skin has lost its elasticity and will not retract as well. Patients with asymmetry are also excellent candidates for LBR as treatment of the larger side will yield symmetry without adding scars to one side of the chest.

### PREOPERATIVE TESTING

Patients should undergo routine preoperative tests as needed. The only important additional test is a mammogram for all women age 40 and over and those 30 to 40 with a significant personal or family history for breast disease.

### TECHNIQUE

LBR is usually an outpatient operation similar to general liposuction. Patients are seen preoperatively and are marked for surgery. The patient is stood upright and a zone between the beginning of the breast tissue and the clavicle superiorly is marked (Fig. 1). This "danger zone" is usually one handbreadth wide and represents an area between the clavicle and beginning of the breast tissue, which should not be suctioned. This area contains large perforators<sup>4</sup> that can cause bleeding but does not contain significant breast tissue. In the supine position on the operating room table, however, patients will appear to have breast tissue in this upper area and the markings help keep the cannula from unnecessarily traversing the danger zone.

Markings should also be made to note breast asymmetry and the approximate percentage difference between the two breasts. During surgery, precise amounts can be removed to help decrease and eliminate asymmetry. Adjacent areas of excess fat such as the lateral chest region should also be marked at this time for inclusion in the suctioning process.



**Figure 1** Markings of upper chest "danger zone." This area is usually one handbreadth wide from the clavicle inferiorly.

Surgery can be performed under intravenous sedation or inhalational anesthesia depending on the surgeon's choice. Once the patient is on the operating room table, the breasts are prepped and draped as per standard protocol. A standard-sized liposuction access area is marked 2 cm above the inframammary crease at the anterior axillary line (Fig. 2) and local anesthesia is injected. A stab incision is made and the appropriate amount of tumescent solution is infiltrated. A super-wet technique suffices for LBR and full tumescence is not necessary. This generally yields an infiltration of 1 L per breast; however, a smaller breast will require significantly less and larger breasts may require up to 3 L per breast. The tumescent solution should be allowed to take effect for at least 10 minutes so the epinephrine can decrease bleeding maximally.

Liposuction is then performed in a standard fashion with care taken to suction all portions of the breast at all levels. A 4-mm cannula works well for most cases; however, in very large cases a 6-mm cannula may speed the operation without negative impact. Care



**Figure 2** Incision markings for cannula insertion.

should be taken to avoid the previously marked "danger zone." The end point of liposuction is similar to that of traditional liposuction techniques, namely, until no further fat is removed or the bloody component of the fluid increases.

The most sensitive area during liposuction and in the recovery period is the lateral chest region. It is advantageous not to leave this area for the end of the procedure since additional anesthetic medications may be necessary and the patient may then need additional time in the operating room for these medications to metabolize.

At the conclusion of the procedure, an absorbent pad is placed over the incision sites and the patient is placed into a bra. Sutures should not be placed as drainage of the extra tumescent fluid is advantageous. An abdominal binder is then placed over the bra to compress the area and the patient is sent to the recovery room.

In the recovery room the patient is examined every 15 to 30 minutes to monitor for hematoma formation and they are discharged when stable.

### POSTOPERATIVE CARE

Patients should change their absorbent pads as necessary after the surgery and should perform at least one change the night after surgery to prevent any kinking of the skin that may have taken place during the initial dressing. Such kinking can cause blisters and possibly even tissue necrosis, especially in smokers.

Patients are seen the next day and dressings are changed. Ecchymosis is usually noticeable at this time. Patients should expect the ecchymosis to worsen over the first week and then decrease and disappear over the following 3 weeks. Toward the end of the first postoperative month, patients will notice a lumpiness in their breasts, which represents bruising of the mammary glands. This is normal and will resolve fully in several months. Smokers' breasts will often take 6 to 9 months to fully return to normal; most patients take 3 months or less.

Patients can return to daily activities as tolerated and usually resume work in 3 to 5 days. Full exercise can be started at 2 weeks with proper support. It is important for patients to wear proper support over the 6-month healing period so that elastic tissue recoil and ptosis correction are maximized. Patients should be vigilant that once in a bra, their breasts are being supported and the nipples are facing forward or even upward, not plastered against the chest in a ptotic position.

### COMPLICATIONS

The most common complication in LBR is hematoma with a rate of 2 to 4%.<sup>3</sup> Bleeding always appears in the operating room or recovery area. Evacuation of the

hematoma and pressure to the bleeding area are the cornerstones of treatment. The bleeding area is usually in the upper chest area toward the clavicle and should be compressed with several rolled-gauze pads placed between the skin and the tightened abdominal binder. Manual expression of the hematoma through the incision site is crucial. If the hematoma cannot be expressed, the patient should be returned to the operating room for suctioning of the hematoma and redressing with compression pads and a tightened binder. Patient breasts will swell significantly due to their hematoma even after it is expressed. Patients will also have significantly more ecchymosis on the side of the hematoma and ecchymosis may spread to the upper arm on that side. Patients should be counseled that the final result once healing is completed will be symmetrical in both color and size. In patients with large breasts, the amount of blood potentially lost into a breast hematoma is significant and patients should be aware that they may be anemic and require oral iron therapy for several weeks. Transfusions have never been necessary in our experience.

As in standard liposuction cases, infection is a rare event. Redness suggestive of cellulitis should be treated with oral antibiotic therapy and any infection that progresses on oral antibiotics should be treated with intravenous medication as necessary.

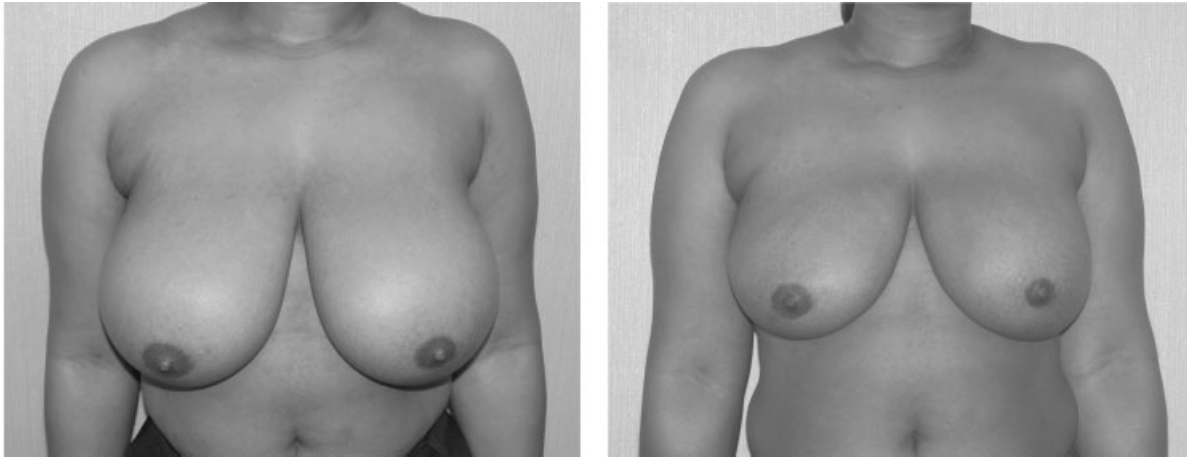
Limited skin necrosis (2 to 4 cm in diameter) has been seen in our practice in two heavy smokers who did not change their dressings after surgery. We believe that while the operation is safe in smokers, care should be taken not to insult the skin significantly during the operation and dressings should be changed postoperatively to prevent any kinking of the skin, which could further decrease perfusion.

### MAMMOGRAPHY

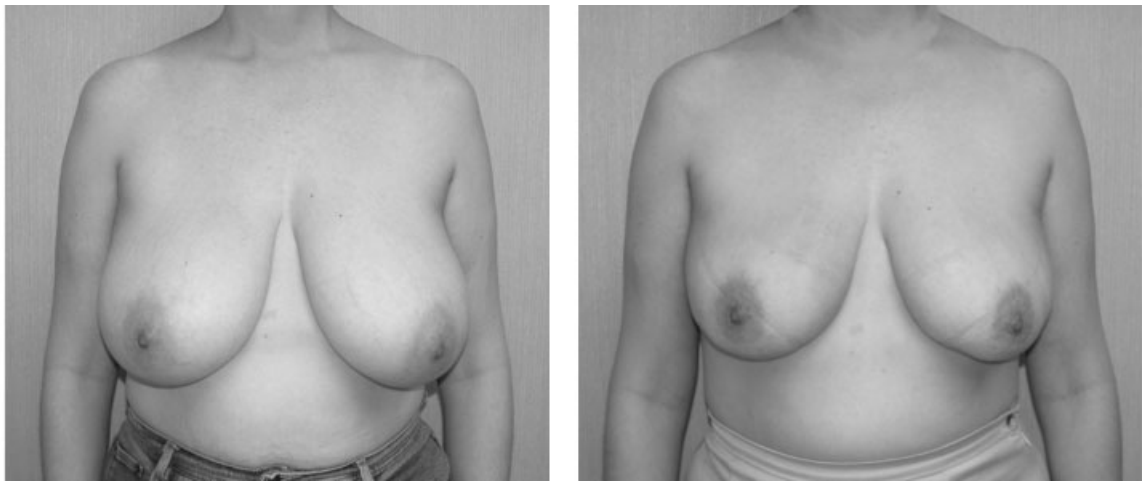
Four-year patient follow-up has shown that mammography is not adversely influenced by LBR. Some breasts will appear more dense on X-ray studies due to the decrease in their fatty component; others will have scarring in the dermal area similar to that seen after traditional breast reduction techniques. Both of these sequelae are easily distinguished from cancerous lesions by radiologists.

### DISCUSSION

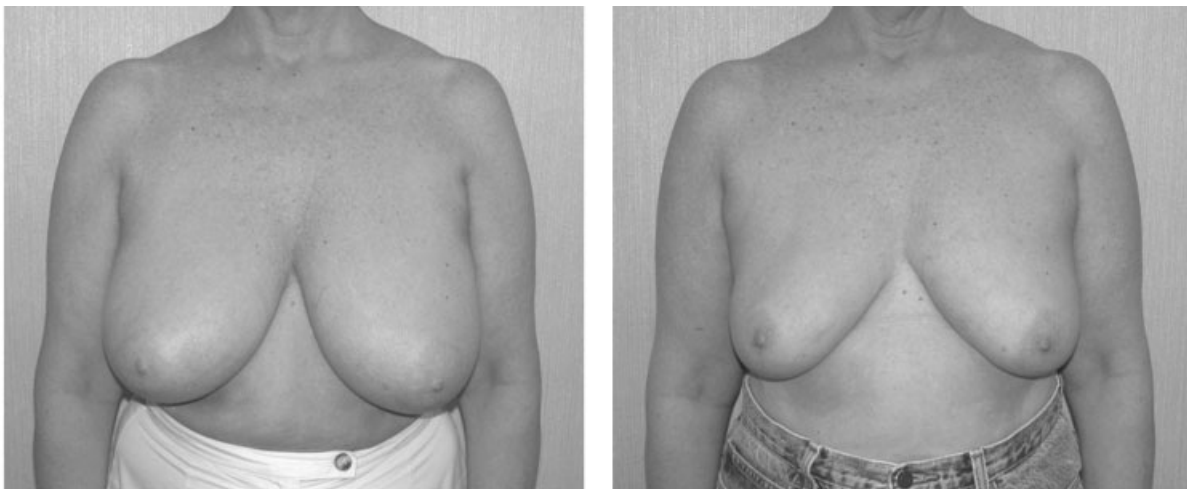
LBR is an excellent technique for treating breast hypertrophy (Figs. 3, 4, and 5) and its symptoms.<sup>3</sup> A major barrier to the implementation of LBR has been plastic surgeons' beliefs that patients will not tolerate smaller breasts with residual ptosis. In general, this is not true. There is a large patient population that desires a reduction in breast size but will not tolerate the invasiveness of



**Figure 3** (A) Preoperative view of a 25-year-old African-American female (5'1" tall, 140 pounds, 38DD cup bra). (B) Six-month postoperative view (38C cup bra). From each breast, 800 mL of fat was removed.



**Figure 4** (A) Preoperative view of a 36-year-old female (6' tall, 178 pounds, 38DDD bra). (B) Six-month postoperative view (38C cup bra). From each breast, 925 mL of fat was removed.



**Figure 5** (A) Preoperative view of a 55-year-old female, 5'3" tall, 133 pounds, 38DD cup bra. (B) Six-month postoperative view (36C cup bra). From each breast, 800 mL of fat was removed.

traditional breast reduction, the scars of the surgery, or both. LBR provides a logical addition to the plastic surgeon's armamentarium and should be an option presented to women contemplating breast reduction surgery.

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