

# Suction Assisted Lipectomy — The Blunt Technique

by

Robert A. Ersek.M.D.

For the plastic surgeon, as for all other members of our profession, there is no situation more frustrating than that of a patient who comes to us with a problem for which we have no satisfactory solution. Patients all too often fail to realize, though we ourselves are only too well aware, that there are many problems for which medicine still has no answers, despite the dramatic advances of the past few decades. It is always with a certain degree of exhilaration, then, that we welcome new and proven techniques for helping us deal with old perplexing problems. The blunt technique of suction assisted lipectomy is a case in point.

One of the more common problems the plastic surgeons sees, particularly among women, is that of localized fatty deposits which are not in proportion with the rest of the body. Until recently, the only means of removing these fatty deposits was by surgically removing the overlying or surrounding skin as well. No matter how skillfully this surgery was done, large scars were unavoidable, producing results which were often no more acceptable cosmetically than the problem they were meant to correct. The blunt technique has given us a simple new method of removing fatty deposits with minimal scarring.

## Suction Curettage

Attempts to remove localized deposits of subcutaneous fat by suction curettage can be traced back as far as the ill-fated effort of the famous French surgeon DuJarrier to remove fat from the knees of a well-known ballerina by uterine curette. That was in 1921. The ballerina lost her leg.

More sophisticated experiments in the use of curettage to remove fat were initiated in Europe in the mid-1960's. These efforts gained considerable popularity in Europe, culminating in the work of Meyer and Kesselring in 1976. They used the so-called "sharp" technique for removal of fat in the hips and upper thighs ("riding britches" deformity). It was called the sharp technique because it involved sharp undermining and scraping, followed by irrigation and removal of loosened particles of fat by suction. Complications were common with this and other similar sharp techniques, most notably uncontrolled bleeding. In addition, the separation of the skin from its attachments, nerves, and blood supply often left puckered areas and loose bags of skin where too much fat had been removed. As a result of these problems, the sharp technique gained little currency in the U.S.

## The Blunt Technique

Spurred by dissatisfaction with the sharp technique, the French surgeon Illouz (who trained in plastic surgery in New York) developed an alternative technique which has since come to bear his name. In this technique, a small incision is made remote from the area to be removed and a blunt cannula with a hole on one side somewhat proximal to the tip is passed under the skin into the fatty deposit. Fat cells are then removed by application of maximum amounts of suction. The cannula is passed in and out in multiple radial pathways until all desired fat cells have been removed.

The Illouz technique—which, for obvious reasons has also become known as the "blunt" technique—utilizes a cannula which may measure as small as 3 mm and as large as 8 mm in diameter. Not only is the tip blunt, but the suction hole also has blunt edges. The technique requires that the hole be facing away from the skin towards the underlying muscle fascia. At no time is the cannula passed from side to side in a windshield wiper motion. By moving it back and forth only, the cannula, as it is passed into the fatty deposit, tends to push nerves and vessels aside. Only the amorphous, rather fragile fat cells are ruptured and sucked into the cannula's blunt hole in small globs. Perforating vessels are not injured or distributed by the cannula and a diffuse network of tissue attachment remains, connecting the overlying skin to the underlying fascia.

The single most crucial factor in the success of the blunt technique is the maintenance of a very high level of suction. A suction pump capable of pulling nearly one atmosphere is essential. Removal of the fat through the cannula and into the suction reservoir is dependent upon negative pressures approaching the boiling point of tissue fluid at body temperature—approximately twenty torr (750 mm of mercury negative pressure at sea level).

When the suction lipectomy is first begun, the suction tubing contains a bright, clear yellow fat that is semi-fluid and flows gently and evenly up the tubing. Once an area has been "vacuumed clean" the effluent becomes pink-tinged and then red. This indicates that it is time to cease suction in that area. Once all desired fat cells have been removed, wounds are closed with absorbable subcuticular stitches and reinforced with steri-strips. No drains are required and hematomas are rare in the areas that have been treated with this technique.

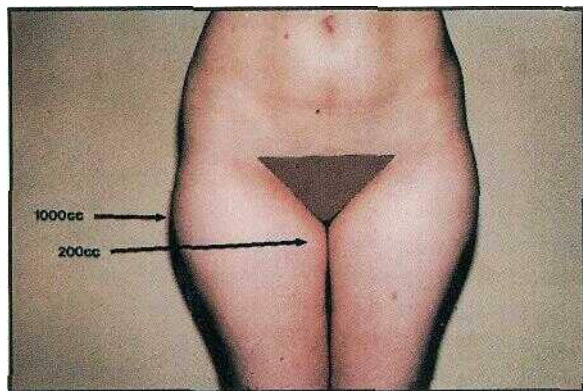
## Applications of the Blunt Technique

In January of 1983, the Ad Hoc Committee on New Procedures of the American Society of Plastic and Reconstructive Surgeons, after an intensive investigation, reported that, in the Illouz blunt technique of suction lipectomy, "It would appear that we now have a relatively satisfactory surgical method if utilized in the hands of appropriately trained and experienced surgeons for the treatment of disharmonious obesities or congenital steatorrheas (segmented genetic fat)." The committee concluded that the blunt technique is safe and effective not only for the removal of saddle bags (i.e.: riding britches), but also for "removal of fat from the abdomen, hips (love handles), medial thighs, larger saddle bag deformities, and can be extended to fat deposits of the knees, ankles, arms or lipomas."

Advantages of the blunt technique are that small areas of fat can be removed under local anesthesia and on an out-patient basis, while more extensive procedures require hospital stays of only one to three days. Pain is usually minimal and only one or two sutures are required to close the incision. Even the most extensive cases can return to normal activities within two weeks and to exercise within six to eight weeks.

The principal post-operative problem with this technique is a certain amount of contour waviness resulting from unequal removal of fat over the area of the lipectomy. Patients should not be led to expect too much of the procedure. It will not improve dimpling, or "cellulite," for example.

The blunt technique, it must be clearly emphasized, is not intended for generalized obesity but only for treatment of localized fat deposits. It is contraindicated in patients with bleeding tendencies or concurrent infectious disease processes. Hospitalization is indicated in cases where it is anticipated that more than about 3,000 cc of fat will be removed, and such patients should be typed and crossed for several units of blood. Older patients or those with pronounced skin laxity may not recontour their skin following removal of subcutaneous fat, and are thus not good candidates for this technique.



## Clinical Experience

We have used the blunt technique of suction lipectomy to date in over 1,000 patients, with satisfaction and no serious complications. Though we require all patients seeking suction lipectomy to donate a unit of blood to themselves ten days prior to the surgery, we have had no case of significant blood loss.

We have extended the procedure not only to those areas recommended by the ASPRS, but also to the cheeks, neck, scalp, mons veneris and buttocks, and have even used it to remove excess fat in the axillary folds and behind the border of the latissimus dorsi muscle into the back in breast reductions. This has allowed us to attain a more satisfactory cosmetic result in reductions than was previously possible.

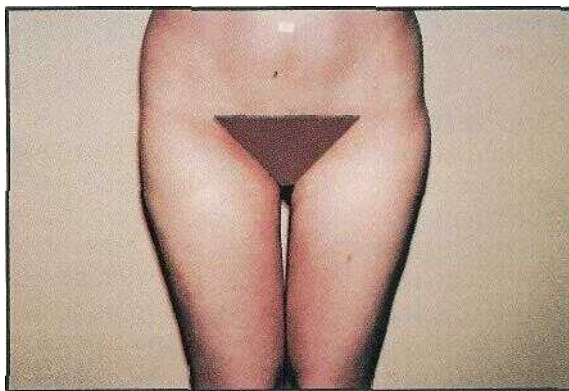
Suction lipectomy is also useful in removing fat from the edges and corners of larger wounds where other reconstructive procedures have been done. We have removed lipomas from the neck, back, arm, and thigh as large as 250 cc in volume, with a 3.0 mm remote scar. When releasing a large (10 x 25 cm) abdominal flap to cover a degloved hand, we were able to close the entire donor site primarily by sucking a liter of fat from each side of the waist. The patient in this case was a 19-year-old moderately obese female, who would have required a large skin graft without this additional "slack."

## Conclusion

Suction assisted lipectomy is a safe predictable procedure for the removal of localized fat deposits with minimal scars or risks. There are now 15 plastic and reconstructive surgeons in Austin, and we all use this new technique. Special equipment required is available at most Austin hospitals and at Bailey Square and St. David's out-patient-surgery centers.

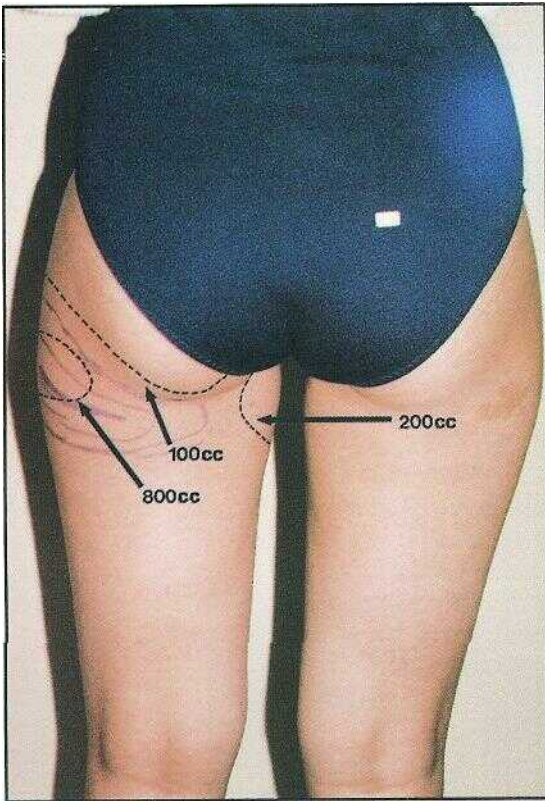
## Acknowledgements

The authors wish to thank Nancy Carson, R.N., Jane Dowling, R.N., and Denise DeLong for their assistance in the procedures described here. They also thank David R. Denton, Ph.D., for his assistance in editing this manuscript and Maxine Brown for assistance in preparing the manuscript.

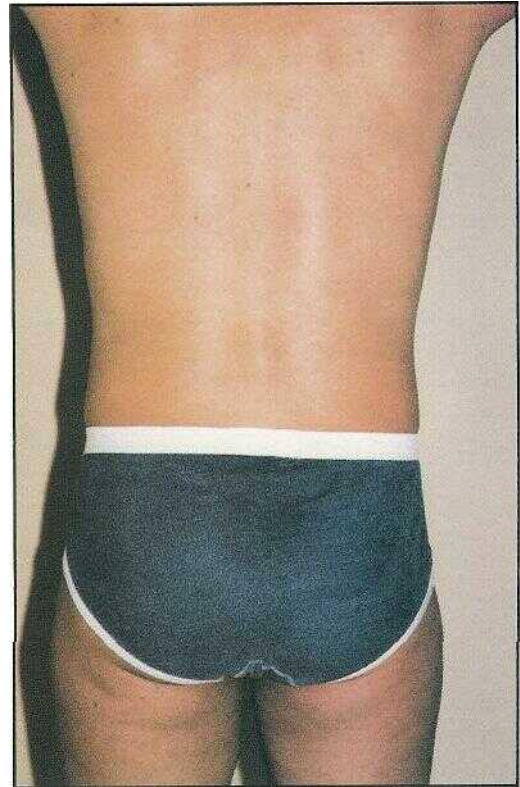
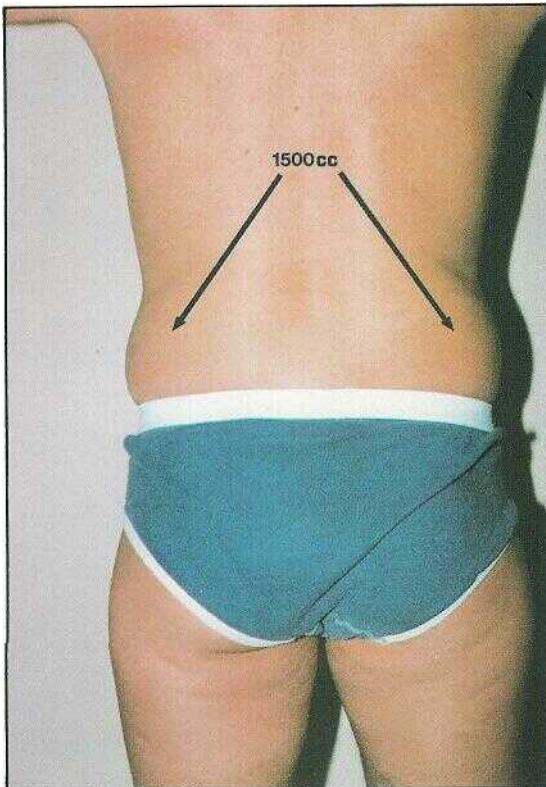


## Illustrations

Figures 1A (before) and 1B (after): Twenty-nine-year-old white female; 1200 cc. removed from medial and lateral thighs only.



Figures 2A (before) and 2B (after): Twenty-three-year-old white female; 1100 cc. removed from medial and lateral thighs and inferior gluteal crease.



Figures 3A (before) and 3B (after): Twenty-nine-year-old white male; 1500 cc. removed from waist ("love handles").