



A Fine Balance

by Joseph P. Niamtu III, DMD

Liposuction of the neck and jaw can give excellent results. But don't overdo it or try to substitute it for a lift

Fat is the bane of aesthetic surgery. There is usually too much or not enough of it, and we make our diagnoses and treatment plans based on this. There is a condition in which the fat is just right. We call that youth!

Fat management has a long history in aesthetic surgery, dating to a century ago. Most of us spend much of our professional time taking fat from some places and putting it back in others. This article is limited to the head and neck, and deals with removal and recontouring of fat.

Those of us who have performed aesthetic facial surgery over the past several decades have seen many changes with facial and neck fat management. Most of us have textbooks on our shelves that describe en bloc submental fat excision with rhytidectomy. Although this technique is still performed by some practitioners, the introduction of tumescent liposuction changed all the rules in head and neck aesthetic surgery to become the simple, safe, and effective answer to fat management.

Head and Neck Adipose Anatomy

Fat is abundant in the head and neck. It has a generalized distribution in the subcutaneous tissue as well as distinct localized collections that define youth and aging. The buccal and malar fat pads provide youthful contours in the younger face. As we age, these structures descend and contribute to jowl formation (Figure 1).^{1,2}

The submental area also undergoes many age-related changes. Most patients gain weight as they age, and the submental area becomes a repository for the accumulation of adipose tissue. Other changes in this area include sagging skin and changes in the hyoid position.

The hallmark of lower facial aging occurs when patients lose definition of the jawline, develop pronounced jowls, and accumulate submental fat associated with excess skin (Figure 2, page 22). Remote fat deposits, such as the deeper subplatysmal fat and the thick fat that frequently overlies the posterior platysmal border, also contribute to the aging face and can be manipulated for rejuvenation.

In the early days of suction lipolysis, the goal was to simply remove fat. Contemporary treatment is termed "liposculpture" because it is truly a sculpturing technique. Watching an experienced liposuctionist at work is a beautiful thing and is comparable to an artist with a canvas.

The more experience a practitioner gains with liposuction, the better and more artistically he or she can manipulate the underlying tissues. Gifted surgeons truly develop a tactile sense, and a feel for what needs to be evacuated and what needs to stay. With experience, one develops a "gestalt" as to the end point of fat removal and can probably perform it blindfolded. A practitioner who develops this ability can make great things happen with a simple cannula and suction source.

Do Less, Get More

Although liposuction is a relatively simple procedure, it represents a common area of litigation. The most typical problems associated with liposuction are undercorrection and overcorrection.

Not removing enough fat is much more easily addressed than overcorrection. When teaching residents liposuction (or blepharoplasty), one of the biggest hurdles for the surgeon is to instill the notion that fat is not the "enemy." Astute

surgeons understand the importance of the cushioning and contouring effects of subcutaneous fat.

Some of the worst aesthetic complications can occur from overoperating on the submental region. Excessive removal of fat, especially the intimate subdermal fat, can cause the dermis to scar down on the platysma muscle with very unsightly adhesions that are difficult to repair. This is a common novice mistake; I, like many other practitioners, have had to repair problems left by overzealous surgeons.

Other pitfalls include suctioning too superficially or suctioning with the cannula orifice facing the dermis, which can cause permanent grooves that are visible through the skin. Overly aggressive suction in the



Figure 1. When Hollywood special-effects experts need to "make fat," they mimic nature's storehouses of excess adipose tissue, as can be seen on this latex prosthesis. Photo courtesy of edwardfrench.com.

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jowl area can cause a depression defect that ironically requires replacing the fat via fat transfer.

A surgeon truly understands the science of liposculpture when he or she understands the amount of subdermal fat required to hide underlying contours. If you place a tennis ball under your sheet, you will clearly see its outline. If you place it under your down comforter, you might not see it at all.

Another common pitfall is performing the incorrect operation on the submental and neck regions. It is not uncommon for novice surgeons to learn liposuction and platysmaplasty early in their careers. After all, these two procedures are relatively simple and, alone, can provide dramatic results. Performing either procedure alone or in combination can truly enhance the neck and submental area in younger patients with congenital fat deposits and minimally ptotic skin.



Figure 2. Typical fat accumulation in the jowl and submental areas. These deposits are readily accessible and are commonly addressed in various rejuvenative procedures.

Beware the Skin

The problem arises in patients who have significant submental and cervical skin excess and need a traditional rhytidectomy. It is important at this point to reiterate that as much as patients, the popular media, and surgeons desire to find a shortcut procedure to the senescent neck, facelift surgery has stood the test of time for more than a century to correct this problem. Purely and simply, excess neck skin must be excised.

Even the popular minimally invasive “short-scar” procedures frequently fall short in this area. It is not uncommon for a classical rhytidectomy candidate to have had a surgeon attempt to correct the ptotic submental and neck skin with liposuction and platysmaplasty.

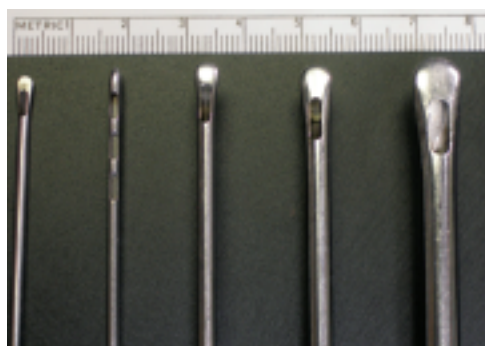


Figure 4. Small cannulas can make powerful changes when used correctly. Cannulas with 1-, 2-, and 3-mm orifices and slightly larger spatulated tips are excellent for facial applications.

Please do not misinterpret this statement. Some patients can obtain impressive rejuvenation from these procedures, but if you perform the combination on a patient who truly requires a rhytidectomy, you are inviting potentially disastrous results.

Figure 3 shows a patient who was given the incorrect operation. This patient clearly was a facelift candidate but was instead treated with liposuction and platysmaplasty and, needless to say, was not only unhappy, but had to have the facelift to correct the correction! A prime rule to remember, especially for the inexperienced surgeon, is that liposuction can cause the skin to shrink, but certainly within limits.

Another serious mistake made on this patient was that the surgeon improperly bandaged the surgical site. Instead of a smooth, flat compression dressing, an elastic bandage was used and the excess skin protruded between the wrap. Edema and hematoma organized beneath the skin over a several-day period and left the patient with firm corrugated folds of skin that healed with gross irregularities.

When you perform significant liposuction, the fat removal potentially leaves space where blood, serum, and particulate fat can accumulate and cause an irregular healing surface. It is therefore important to compress this potential space to allow healing to occur over a smooth surface that approximates the natural curvature of the area.

I prefer a highly absorbent abdominal pad with an elastic “jaw bra” type of dressing. The pad is removed the next day, and the patient is encouraged to wear the compression garment around the clock for the first 5 days and at night for another



Figure 3. This patient was improperly diagnosed and treated with liposuction instead of rhytidectomy. In addition, improper postliposuction bandaging created more problems. Rhytidectomy with redraping of the skin corrected the problems.

week. In patients with minimal fat and tight skin, this is less important, but in patients with significant submental fat and ptotic skin, postliposuction compression can be critical.

The simultaneous placement of silicone rubber chin implants can also greatly enhance submental aesthetics. It is not uncommon to see patients who have submental obliquity as a result of microgenia or mandibular retrognathia. Although submental liposuction can enhance these aesthetics, adding a simple chin implant can make an average result spectacular.

Liposuction Technique

In the typical head-and-neck aesthetic practice, cervicofacial liposuction is performed as a stand-alone procedure or in conjunction with procedures such as platysmaplasty or chin implants—and always with facelift surgery. Using tumescent anesthesia is the single most important aspect of successful liposculpture.²

For head and neck cases, there is little worry about systemic toxicity because the tumesced areas are usually small. As a result, a more concentrated admixture may be used. I generally use the standard 0.1% lidocaine with 1:1,000,000

Before & After



This 37-year-old patient was treated only with submental and jowl liposuction. The youthful skin contracted very well after fat removal. She is shown 6 months postsurgery. For additional patient photos, see this article on PlasticSurgeryProductsOnline.com.

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epinephrine. Some practitioners also use sodium bicarbonate at 10 mg/L, which significantly eliminates the burning, stinging pain associated with the acidic pH of commercially available lidocaine preparations. Bicarbonate has also been shown to greatly enhance the antibacterial action of lidocaine.

Adding 10 mg/L of triamcinolone to the anesthetic solution decreases postoperative inflammation and soreness in many cases.³ The fundamental premise of

the tumescent technique is the injection of large volumes of the solution until the tissue is truly tumescent—that is, as firm as wood.⁴ Only in this manner can profound and enduring local anesthesia and vasoconstriction be achieved.

Depending upon the nature of the individual surgeon's practice, most facial liposuction can be performed on the awake patient. This requires very slow infiltration of the anesthetic solution in small increments. For surgeons who use supplemen-

tal intravenous or general anesthesia, a Klein pump set at high volume greatly hastens the procedure and enhances the potential amount of hydrodissection.

It is also important to wait long enough for the tumescent medications to take effect. A visible blanching of the overlying tissue is the sign to begin. For uncomplicated submental liposculpture, 50 to 100 mL of tumescent solution is infiltrated in the area to be treated. This is first determined by marking the awake patient in the upright position to delineate to areas of lipodystrophy. Failure to accurately identify the areas of fat collection can lead to an untoward treatment result.

When the patient is supine, sedated, and tumesced, the markings are a welcome guide to the specific treatment areas. For the average neck, the treated area is delineated as follows: The superior border is the inferior border of the mandible, the inferior border is the thyroid cartilage area, and the lateral borders are the sternocleidomastoid muscles. Experienced surgeons have few, if any, boundaries, but the external jugular vein, greater auricular nerve, and marginal mandibular nerve can be injured with overly aggressive treatment.

Although I own a top-of-the-line liposuction aspirator, I use my surgical wall suction almost exclusively for facial procedures. I believe that the correct cannula combination is more critical to successful outcomes and that low wall suction is more than enough vacuum to evacuate the morselized fat and causes less localized trauma and bleeding.

A stab incision is made in the submental crease (or inferior to the crease if a chin implant is to be placed), and the subcutaneous plane is identified with a hemostat. I usually use graduated cannulas, beginning with a 1-mm multiport (Figure 4, page 22). Although this appears to be a minor instrument, it is in fact relatively aggressive and the small blunt tip (or spatulated tip) makes initial lipodissection effortless.

I use this cannula to define the borders of the area to be treated, and probably 40% of the total fat harvest is performed with this small cannula. Next, I begin using spatulated 2- or 3-mm flat

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ASSI•ABR 13726
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scope sheath,
single stop-cock

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with 10mm endoscopic
scope sheath,
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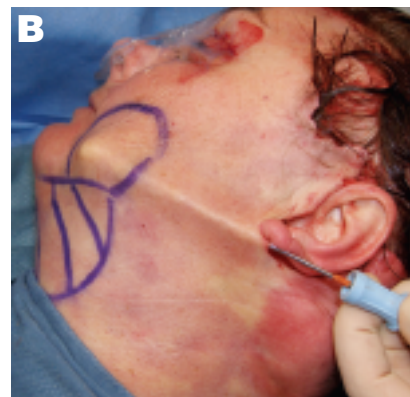
See also "Versatile and Adaptable" by Joseph P. Niamtu III, DMD, in the May 2007 issue of *PSP*. Go to PlasticSurgeryProductsOnline.com and click on "Archives."



Figure 5. Continual tactile assessment of the thickness of the skin can guide the surgeon to symmetric, homogeneous fat removal.



Figure 6. A: The jowl addressed from the submental incision. It is possible to damage the marginal mandibular nerve by compression of the cannula over the mandibular border. **B:** An additional means of providing liposuction access to the jowl is from a stab incision at the earlobe attachment.



cannulae to complete the sculpture. If there is significant fat, I move up to the 3-mm size and keep in tight on the platysma. If there is less fat, I may stop at the 2-mm size.

Through Thick and Thin

It is paramount to continually assess the skin thickness throughout the procedure to ensure symmetric removal of fat, and, more importantly, to maintain adequate skin-fat thickness. By pinching the skin over the cannula tip while suctioning, the surgeon can judge when the end point is reached (Figure 5). If fat remains, the skin feels thick and doughy, and the definition of the

cannula through the skin is less apparent when the skin is lifted with the cannula.

When the proper end point is reached, the skin is not doughy and the cannula outline is quite visible when lifting the skin. Finally, I revert to the 1-mm cannula and “ride” the mandibular border on each side to provide further definition. Some practitioners advocate poking the cannula through the platysma to remove the deeper subplatysmal fat. However, I rarely find this necessary and have seen injuries result from this approach.

The jowl can be addressed with several approaches. Many practitioners are hesitant to approach the jowl from a submental incision because the marginal mandibular nerve can be superficial in some patients as it courses to the commissure. Theoretically, the cannula can be easily levered over the mandibular border and compress or injure this nerve (Figure 6A). The alternative approach to the jowl areas is from an earlobe incision (Figure 6B).

A stab incision is made at the earlobe attachment, and the small cannula is kept in the subcutaneous plane to treat the jowl. I always use small cannulas in this area and always remove less fat than I think I need to. Not all of the jowl contains fat; much of the bulge is from ptotic tissue. Over-resection in this area can cause a very noticeable depression, as mentioned earlier.

In theory, a surgeon can liposuction anywhere in the head and neck where there is fat in the subcutaneous plane. Many experienced practitioners will not only perform submental and jowl liposuction, but will also sculpture the lateral neck. Liposuction of the abundant adipose tissue over the posterior platysma is an important part of facelift surgery and is usually performed in an “open” manner through the facelift flap. This can also be done in a conventional closed manner, but only by an experienced surgeon.

Face and neck liposuction is a relatively simple procedure to learn, but a more challenging one to master. Most practitioners who frequently perform liposuction will admit that their current patient outcomes have been greatly enhanced by experience.

The key to successful cervicofacial liposuction is not only what you take away, but also what you leave behind. Areas of the body that are covered by clothing are more forgiving because they are hidden, but the face and neck make your patient a walking advertisement. You want it to be a good one! **PSP**

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References

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Before & After



This 40-year-old patient was treated with submental liposuction and a silicone rubber chin implant. She is shown 3 months postsurgery.

Before & After



This 42-year-old patient was treated with submental liposuction and is shown 6 months after the procedure.