

# **PATIENT EVALUATION AND PLANNING, GUIDELINES, DOCUMENTATION & ARCHIEVING**

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## INTRODUCTION

Liposuction is one of the most commonly performed cosmetic procedures and is widely practiced by dermatologic surgeon. The tumescent technique of local anesthesia is one of the most important innovations in liposuction surgery. Liposuction performed with tumescent local anesthesia allows for removing of large volumes of fat, safety, rapid patient recovery, and low postoperative morbidity (1).

## PREOPERATIVE PREPARATION CONSULTATION

It is important to explain the procedure so the patient can obtain some initial information, to determine whether the patient is candidate for liposuction or not (2). During the first encounter with the patient, it is important for the physician to adjust the patient's expectations from the surgery to the realities of their body to the success of the liposuction (2,3).

Liposuction should be regarded not as a method of weight reduction or an alternative to diet and exercise, but as a body-contouring procedure (1,4), can create a more aesthetic figure and improve functionality (2). Patients need to realize that liposuction will not influence body weight (5). The ideal candidates are healthy patient near their ideal body weight who have disproportionate, localized adipose deposits resistant to diet and exercise (1,2,4). Weight is not candidate if morbidly obese and not a candidate if generally overweight but no areas are out of proportion. May be a candidate if moderately overweight but one or two areas are out of proportion (5).

Liposuction should be avoided in patients with unrealistic treatment goals and those with emotional or psychological instability (i.e., presence of an eating disorder or body dysmorphic disorders). A comprehensive preoperative consultation including a screening questionnaire is used to identify patients who are appropriate candidates, and focuses the consultation on issues that are crucial to the success of the liposuction (1,2). During the consultation, the risks, goals, anticipated results, and expected postoperative course are discussed (1).

Age is rarely a limiting factor (6). Age by itself does not exclude one as a candidate and does influence the condition of the skin (5).

The date of the operation is chosen preferably avoiding the menstrual cycle. Although it is not an absolute contraindication (4,7).



## PREOPERATIVE EVALUATION

The patient's general health, age, weight, and skin tone must be evaluated, as well as the location of the dysmorphic fat. While the patient is in a standing position, their body contour is evaluated; for its elasticity, tone, and redundancy. Stretch marks, scars, cellulite, dimpling, sagging, and muscle tone are best assessed by making the patient contract the underlying muscle (2,3). Skin elasticity; rubbery springy skin with thicker dermis will contract better post-op and produce a better end result than atrophic saggy skin. Thicker dermis (i.e. men) camouflage irregular fat removal (5). The procedure and expected results of the liposculpturing should be explained to the patient in detail (2,7).

The "pinch test" is used to evaluate a bulging mass or any area to be improved upon by liposuction if pinching the skin leads to a substantial amount of subcutaneous tissue being grasped between the fingers before liposuction, then liposuction may benefit the area. If the fingers can almost touch each other before the procedure, the visualized bulge may be caused by muscle flaccidity, bone protuberance, submuscular fat, or simply excess skin (2,3).

While the pinch test is being performed, the "muscle contraction test" can also be performed this test pulls away any muscle grasped by the pinch, leaving only subcutaneous fat and skin in the grasp. In this way, one can differentiate between muscle laxity and subcutaneous fat. The "lifting test" helps evaluate the effect that simple skin excess has on the body's dysmorphism (2,3).

## RISK AND PRECAUTIONS FOR LIPOSUCTION

### CONTRAINDICATIONS TO LIPOSUCTION

- Severe cardiovascular disease
- Severe coagulation disorders, including hemophilia
- Pregnancy (1)

### CONDITIONS THAT PUT PATIENTS AT RISK FOR COMPLICATIONS

- History of bleeding diathesis, thrombophlebitis, or emboli (fat or thrombotic)
- History of infectious disease (including hepatitis and HIV infection)
- Poor wound healing
- Diabetes mellitus
- Immunosuppression
- Prior extensive abdominal surgery
- Hepatic disease
- Renal disease
- Morbid obesity
- Underlying systemic disease with functional limitations
- Use of anticoagulant medications, vitamins, or herbal supplements
- Use of medications metabolized by cytochrome P450 3a4 enzyme system (1)

## MEDICAL HISTORY

As lidocaine is metabolized by the liver, be concerned about any patient with potential impairment of liver function such as hepatitis C, chronic active hepatitis B, alcoholic



liver disease, previous treatment with chemotherapy and antiretroviral therapy (for HIV). Don't take people with immunosuppression, such as those who are HIV positive, those with diabetes, or on chronic immunosuppressive medications, are at increased risk of infection. Patients are also screened for increased risk of thromboembolism as evidenced by a prior history of thrombophlebitis, deep venous thrombosis, or pulmonary embolism, protein C or protein S deficiency, high-dose estrogen therapy, and tobacco use (2).

#### MEDICATION HISTORY

Any medications that prolong bleeding time are contraindicated with liposuction, such as warfarin, clopidogrel bisulfate, aspirin, NSAIDS. The anti-platelet effects are irreversible (2). All anticoagulant medications (aspirin), including vitamins, and herbal supplements, should be discontinued 2 weeks before surgery (1,2,5,6) and 7-10 days on non steroidal anti-inflammatory drugs (NSAIDS) (2). Coumadin should be withheld for 3 days (6). Aspirin has an effect on the blood's ability to clot (5) and could increase the tendency to bleed at the time of surgery and during the postoperative period (5,8) and bruising (8).

Medications that are metabolized by the hepatic cytochrome P4503A4 enzyme system should be identified. These medications may interfere with the hepatic metabolism of lidocaine. Competitive inhibition can decrease the metabolism of lidocaine, causing an increase in blood levels of lidocaine which lead to the potential toxicity. They should be discontinued or tapered off 2 weeks before surgery if permitted by the prescribing physician (1,2). For patients who are unable to interrupt therapy, a lower maximum dose of lidocaine may be used (i.e., less than 35 mg/kg) (1). If you need a minor pain medication, please take acetaminophen or a non-aspirin medication (5). Do not take ibuprofen or any medication containing this drug for 2 weeks before surgery, this may promote bleeding and bruising (8). Herbal supplements that can prolong the bleeding time (2).

The medication history must be complete and the patient should be queried about hormone replacement, herbal supplements, over-the-counter medications as well as prescription drugs. High-dose estrogen can put a woman in a higher risk category for thromboembolism, particularly if she is a smoker, or is within the first year of therapy with high-dose estrogen. The history of oral contraceptives and the risk for venous thromboembolism (2).

#### MEDICAL ALLERGIES

In many practices patients are given a preoperative dose of antibiotics that have good coverage against *S.aureus*. If they are allergic to penicillin or cephalosporins, they are given clindamycin to start the night before the procedure (2).

Allergy to lidocaine is extremely rare and is a contraindication to the procedure. Most patients that claim allergy to lidocaine are actually allergic to the preservative methylparaben in the anesthetic. If the patient claims to be allergic to lidocaine we advocate referral to an allergist for testing. If the allergy is only to the preservative, preservative-free lidocaine is available in the form of Xylocaine-MPF (Astra USA Inc Westborough, MA) (2).



## SURGICAL HISTORY

The patient's history of surgical abdominal procedures is very important if they are being evaluated for abdominal liposuction. Special attention should be paid to any surgeries complicated by dehiscence, scars that may hide an incisional, hernia, infection, or subsequent adhesions that might leave an incomplete rectus abdominus muscle layer over the peritoneum. Other important information is the age of scars. Older scars are soft and can be suctioned through, but new scars should be suctioned around. Any history of keloids or hypertrophic scars should be discussed thoroughly as multiple incisions for cannula insertion are necessary (2).

If any doubts exist about hernias, a preoperative ultrasound or computed tomography (CT) examination.

Preoperative laboratory testing includes complete blood count with differential and hematocrit, platelet count, prothrombin time, partial thromboplastin time, liver function tests, and renal function tests, serologic testing for human immunodeficiency virus (1,2,3,6,8) and hepatitis B and C viruses (2,8); fibrinogen, TSH, T4 level (3) and serum pregnancy test (for female) (1,3). An electrocardiogram may be considered (1,2,3).

Most bleeding disorders and any medications that prolong bleeding time are a contraindication to liposuction (2,6). Continuous blood pressure monitoring, cardiac monitoring with pulse oximetry and the availability of supplemental oxygen should be in place for procedures removing more than 100 ml of aspirate (2).

All blood tests and x-rays are preferably requested together with medical clearance for the patient over 60 years old or with a cardiac history, history of hypertension, or diabetes (1,2,3,4,7).

## DIET AND EXERCISE

A combination of diet and exercise, will lose the most weight then the exercise only or diet only. Diets that are very low in calories and fat have a low rate of success in maintenance as they can cause the metabolism to slow down to conserve energy, leaving the dieter hungry all the time. When the dieter returns to eating normally, regain of the weight can be very quick. Diets with high protein and fat, and low carbohydrates, push the body into burning the fat rather than carbohydrates for energy (2).

The exercise history is important as it affects basal metabolic rate, maintenance of weight loss, and overall health of the patient. Additionally muscle tone impacts on body contour in a number of areas where they perform liposuction (2).

## EXPECTATION

They usually have realistic expectations. Liposuction is not a weight-loss procedure. Good candidates are not seeking to lose weight, but to create a more aesthetic figure, and improve functionality and glucose control at their current weight (2). The patient must be made aware that the procedure will improve contours, not perfection, but not decrease weight (3,5). Inches will be lost, but liposuction will not remove cellulite, stretching, or dimpling (3).



Skin irregularities, lumpiness, hardness and dimpling may appear post operatively. Most of these irregularities disappear with time and massage, but localized irregularities may persist permanently. If loose skin is present in the treated area, it may or may not shrink back to conform to your new contour (5). As with any cosmetic procedure, realistic patient expectation and detailed informed consent are key (6).

Although cellulite sometimes does get better using superficial liposuction with small instruments, this should not be the goal of the treatment. Very rarely does cellulite get worse. Anterior thighs and upper inner thighs are exceptions, however (5). All these observations should be well documented (2,3).

The great majority of patients are satisfied with their results. Most of the patients who are dissatisfied wish that more had been removed. This is easily taken care of in a small touch-up procedure after healing is complete in 6 to 12 months (6).

#### DOCUMENTATION

Several pictures should be taken : before and after surgery from front and back view especially. The possible future results should be drawn with a green marking pen. New photos should be taken of the whole body and of the regions to be operated on : front and back, lateral and oblique (4,7).

Photograph should be obtained during physical examination of the consultation to document the patient's preoperative appearance and postoperative photographs should also be obtained to document the final result of the procedure (2). The final result photos cannot be taken before 6 months and sometimes more (9).

The informed consent should be discussed and signed (3,4,5,7,8). Fournier : this consent must be written by the patient so that they cannot claim having signed it without reading it (10).

Results are excellent immediately but it will take at least 2 to 4 months or even 6 months to see the final results (4,9) Any possible touch-up should also be done after this date (9).

#### PRE-OPERATIVE INSTRUCTIONS

1. No smoking for one week prior to and two weeks after surgery. It decrease circulation and slow down healing time (3,5,11).
2. Do not take aspirin or aspirin containing products for 10 days prior to surgery. These medications interfere with the body's normal blood clotting and could result bleeding (3,5,11).
3. Stop the use of birth control pills 30 days prior to the surgery and start them 15 days following surgery (11).
4. Do not drink alcoholic beverages for 48 hours prior to surgery. Excessive drinking may create complications and increase bruising (3,5,8,11).
5. Please shower with hibiclens soap or antibacterial dial the day before the morning of surgery (5,11). Hibiclens is a very drying soap and is not recommended after the day of surgery. Males may want to shave their abdomen and flanks. Female may want to shave their pubic areas below the hair line (5).



6. We recommended you eat a light to moderate meal for breakfast and/ or lunch the day of surgery (5,8), but avoid excessive amounts of caffeine (8).
7. Supplied to you antibiotic (5,8) (cephalexin 1000 mg) and should be taken the morning of surgery with breakfast and 10-15 mg valium/ diazepam should be taken 30-60 minutes prior to arriving for surgery (pre-operative) (5).
8. The following are given 20-30 minutes before numbing begins; 50 mg demerol IM, 25 mg phenergan IM, 5 mg versed IM (5).
9. Wear loose comfortable, dark clothing the day of your liposuction (5,8,10). Old sweatshirts and sweatpants are preferred because of probable drainage that will occur. Slip on shoes are helpful with dark socks. Please remember to prepare your car seat and bedding for the drainage. Shower curtain liners work well under old towels or sheets (5,10).
10. Please leave your jewelry at home. A little eye makeup is fine. No facial makeup, moisturizers or body moisturizers (4,5,8,10).
11. Please keep in mind we are estimating the amount of time we need for your surgery. You may be at our office longer than anticipated. Please keep this in mind arranging your ride to and from our office (5).
12. Please make arrangements for a friend or family member to bring you to the office and also drive you home. It is very important to have someone with you the first 24 hours after surgery (5,8). Do not drive before or after surgery (4).
13. During the numbing process, reactions may vary. At times, you may experience a stinging and burning sensation from the injection of the local anesthetic. Please expect intermittent discomfort similar to a pinching feeling and pressure for the duration of the numbing process. During the suctioning expect to feel pressure and movement. Most pain can be relieved with the injection of more anesthetic, so it is important to communicate this to the nurse or doctor (5).  
Once the surgery begins you cannot get up to use the restroom. If you need to use the restroom, a nurse will help you with a bedpan (5)
14. Rest for the first 12 hours. Take it easy for the first week. You may resume normal activities as tolerated (11).
15. Therapeutic massage is very helpful to speed the healing process. Massage may be done as often as every other day as hard as you can tolerate (11).
16. Avoid tanning for 2 to 3 weeks until all bruising disappears (4,11).
17. Do not apply heat or ice to the surgical areas (11).