

High-definition abdominal liposculpture

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Summary

The new concept of high-definition Liposculpture is a result of the desire for belly muscular definition. New medical devices have allowed surgeons to make liposuction easier, safer, and better at producing enhanced, more desirable results. Muscular definition must be in harmony with the natural movement of the underlying muscles to provide a muscular, athletic, and natural look. Several techniques for a successful result are noted in this chapter, such as an extensive preoperative marking discussion that includes tips for “stealth incisions” and tips for dealing with the obese patient.

Keywords: liposuction, lipoplasty, Liposculpture, stealth incisions, rectus abdominis, fat resection, framing, pectoralis–latissimus dorsi triangle, pectoralis–rectus triangle, subcostal and semilunaris triangle, suboblique triangle, negative spaces, infiltration, emulsification, extraction, midline, intermediate layer

Introduction

Since the advent of liposuction, many improvements to the original technique have been described through medical literature. In fact, the original procedure just focused on removing adipose tissue from undesirable zones and to avoid the many different complications related to the use of possible harming instruments in the abdomen. However, since the advent of high-definition Liposculpture (described by this chapter’s author), a new concept was conducted

to understand the difference between a natural, slim, and athletic appearance rather than plastic and unexpected one.

Although gym, fitness clubs, and other sport centers have aroused economically in the last half-decade, due to people’s more frequent visits, a very few people have the habits, diet, and lifestyle to get the desired six-pack abs. New standards of beauty have risen in the recent year, the influence of global communication and social media also influences the way that we see a fit body. That’s the reason why many people do visit us at our office asking for a belly muscular definition.

The use of new medical devices and technologies has allowed aesthetic surgeons to enhance results and make the liposuction procedure easier, safer producing better outcomes. However, as each surgeon has his or her own technique and preferable device, there have to be some premises and features that need to be followed in order to get optimal postoperative effects. The muscular definition perception has to be adapted, not only by how in rest the appearance must be, but also in harmony with the natural movement of the underlying muscles. In our experience, we benefit from the advantages offered by third-generation ultrasound technology to improve the Liposculpture technique in the superficial and deep approach, by facilitating the extraction of the adipose tissue, while diminishing the blood loss. The use of specific instruments and a correct technique will let us shape the body the way we want: a muscular, athletic, and natural look, like artists do with sculptures. We will try to expose

in the next section how this concept has been reached and the different tips that the surgeon has to understand in order to perform an optimal abdominal body contouring surgery in the male patient.

The all or nothing lipoplasty

One important goal to obtain the best results is the number of muscular groups that will be contoured. The more the muscular groups, the more natural the patient will look. If we contour only the anterior abdomen for example, leaving the pectoral area, the oblique muscles and the flanks untouched, the patient will look very awkward. The ideal is to perform the pectoral area, the arms, and the torso in 360 degrees including the flanks and back to obtain the best outcomes.

Physical evaluation

It is important to do the proper patient selection when performing these specific procedures.

- Body mass index (BMI) within the normal range is ideal.

- Usually patients who are underweight might benefit of this procedure in selected cases.
- The obese patient might be a good candidate for high-definition liposuction. However, it is important to address how much of this fat, specifically anterior abdomen, belongs to the intra-abdominal area (**Fig. 27.1**). These patients will need, besides surgery, a proper dietary counseling to reduce the intra-abdominal fat.
- Patients with previous liposuction are usually poor candidates for definition.

Patient selection

- Patients whose BMI is greater than 34.
- Massive weight loss patients.
- Patients who had previous bariatric surgery.

It is also important to address the presence and physical examination of the following:

- Hernias.
- Irregularities due to trauma.
- Asymmetries due to bone structure (scoliosis, rib cage asymmetries).
- Muscular deformities or asymmetries due to training, complexion, or overtraining (e.g., a tennis player).

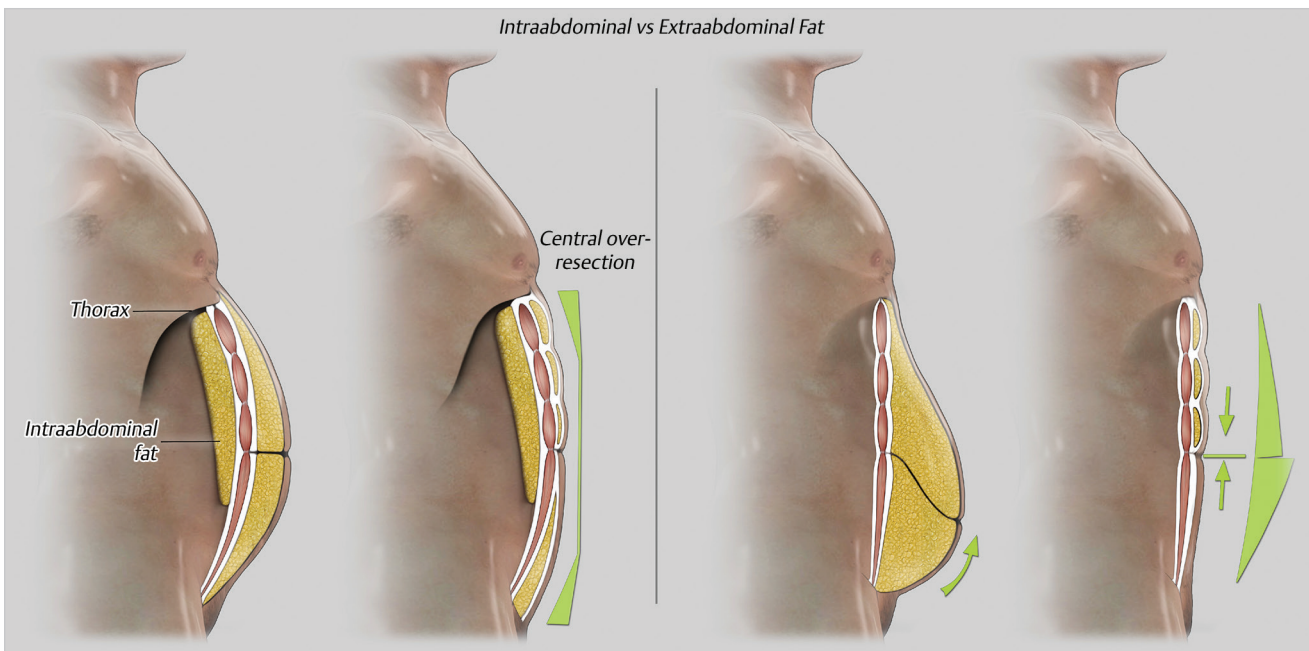


Fig. 27.1 Intra- versus extra-abdominal fat. Determining the presence of intra-abdominal fat leads the objectives in liposuction. Central resection must be made in order to achieve a natural result. The extra-abdominal fat can be easily removed, while it might be difficult to mark the rectus abdominis limits, due to abundant fat flap. However, maneuvers should be done to get a correct marking.

Steps for high-definition liposculpture

Stealth incisions

Numerous incisions are required in order to perform high-definition lipoplasty. Consideration must be given to the location of these incisions. As surgeons, the balance lies between operating comfortably from easy access sites that leave visible scars and hiding incisions in concealed folds or creases, at the cost of working from awkward positions that may necessitate special design of tools to reach all the areas to be contoured.

Even small incisions can leave conspicuous scars, particularly if they are hyperpigmented or hypertrophic. Various factors influence the healing process, including age, race, presence of body hair in men, and the suturing method.

When closure is indicated, the author recommends subdermal continuous sutures. The ideal access points should not leave visible scars over the abdomen or the back and should be hidden in the underwear or in the natural folds of the skin. This avoids stigmata of lipoplasty surgery, such as visible or symmetric linear scars. Even with good contouring results, some patients are reluctant to wear a bikini or sunbathe if noticeable scars are present. We have to remember that the signature of the surgeon is the invisibility of the scars; the better surgeons we become the more invisible they should be.

The author has perfected the use of hidden or “stealth” incisions. For this purpose, we developed various cannula designs to easily access the entire anatomy.

In men, the ideal incision points should be the following (**Fig. 27.2**)



Fig. 27.2 Stealth incisions. They are located in the pubis (a), the umbilicus (b), the anterior axillary fold (a), and the nipple crease (a). Additional ones could be done for horizontal framing of the rectus bellies. Note the asymmetrical fashion to avoid scar stigma. Other additional can be made in the posterior axillary fold and the intergluteal crease to reach the posterior abdomen and torso.

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- Pubis: below the hairline, two incisions in line with the semilunar lines (lateral rectus abdominis). These provide access to most of the abdominal area, including the flanks and waistline, and the rectus abdominis bellies.
- Umbilical: provides access to the inferior abdominal area, vertical midline above the umbilicus, and central supraumbilical abdomen.
- Nipple crease: In men this incision is the most hidden one, providing access to the pectoral area, the upper abdomen and the superior flank, and axillary areas.
- Anterior axillary fold: provides access to the arm, pectoral area, and lateral chest. This site is essential for fat grafting in pectoralis major and minor and gynecomastia removal.

Surgical marking

In the abdominal area, stealth incisions are always preferable. In men, it is often difficult to avoid abdominal incisions, which is preferable since they are very visible. However, if additional access sites are necessary to define the horizontal tendinous intersections of rectus abdominis, asymmetric incisions can be placed along the abdomen, ideally mimicking cholecystectomy incisions.

The preoperative markings are done in three steps with the patient in the standing position. It is recommended to use different color markers for different stages.

Deep markings

First, the typical liposuction markings are made in the areas where extra fat is located: usually on the abdominal area, mostly infraumbilical, the “love handles,” the flanks, the pectoral area, and lateral to it toward the axilla (**Fig. 27.3**).

Framing

The framing is the marking that represents the actual position of the muscles and other superficial anatomical landmarks. The location of these landmarks might be defined by palpation with the patient at rest and may require the patient to contract the muscles in specific areas and positions. Sonographic guidance is particularly useful in obese patients, not only to find the muscles but also to evaluate the amount of



Fig. 27.3 Preoperative markings: Blue zones are marked where extra fat deposits are present. Notice that the whole body contour must be marked.

intra-abdominal fat (which is not treatable by liposuction), so it is better to have an echography machine at hand in these cases.

The initial assessment of the position of the muscles and tone has to be done with the patient in the standing position.

- Ask the patient to inhale deeply until the costal margin is visible. Mark the costal margin bilaterally to define the thoracic arch.
- Palpate and mark the linea alba in the midline from the supraumbilical area to just below the xiphoid process. Remember that no midline should be marked below the umbilicus (**Fig. 27.4**).
- Feel for the lateral borders of rectus abdominis. If possible, try also to locate the transverse tendinous intersections by carefully palpating with the tips of the fingers. Ask the patient in the standing position to contract the abdominal muscles to find the grooves between the muscle bellies. This is usually possible in thin and athletic patients but may be more challenging in patients who are

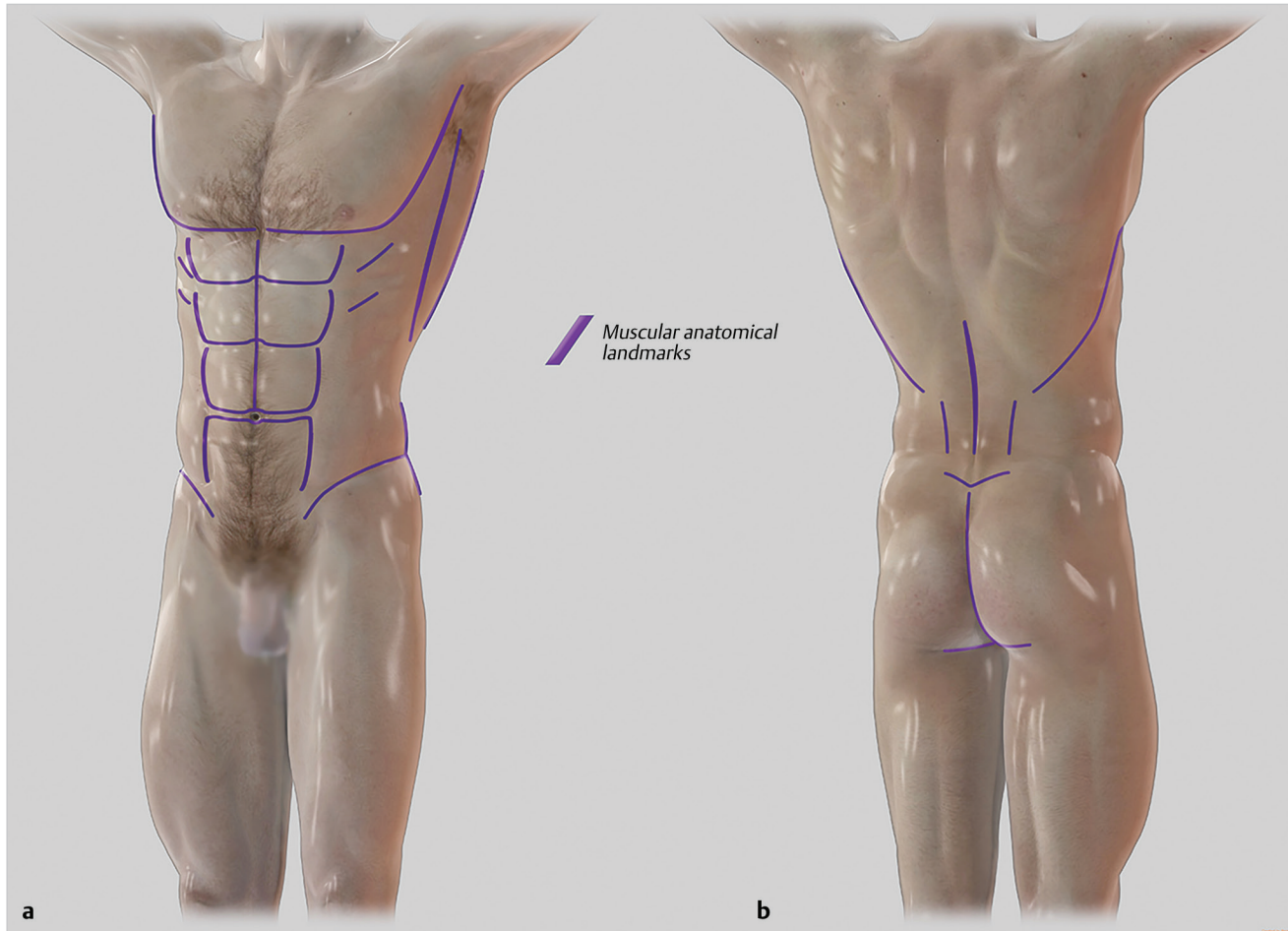


Fig. 27.4 (a, b) After marking extra fat zones, we must draw the underlying muscular anatomy in order to check the limits for definition.

overweight or obese. Later we will discuss how to find them in obese patients.

- Locate and mark the borders of the transverse and oblique muscles bilaterally. Ask the patient to push out the abdomen as much as possible. This maneuver reveals the shape of the muscles, particularly in patients with more intra-abdominal fat.
- Sit in front of the patient at an angle of 45 degrees, ask him to place his hand on your shoulder, and then push your shoulder downward. The large latissimus dorsi, the anterior bundles of serratus muscle, and the upper portion of the oblique muscles are easily visible and marked as they contract (**Fig. 27.4**).

Markings in the obese patient

In the obese patient, marking the anterior abdomen for high definition can be challenging. There are two main scenarios in obese patients:

1. **Predominantly intra-abdominal fat content:** while this kind of patient is more challenging in terms of results, the markings are straightforward. The anatomical position of the rectus abdominis might be distorted by the intra-abdominal contents (rectus diastasis), but the position of the abdominal bellies is easy to pinpoint.
2. **Predominantly extra-abdominal fat content:** this is the most challenging patient to mark and to obtain good results. While the pectoralis markings are never a problem, excessive fat obscures the rectus abdominis landmarks. There are additional positions to mark rectus:
 - a. In the supine position, ask the patient to perform an upper abdominal crunch and mark the lateral borders of the rectus during contraction. The upper tendinous intersections are often also palpable in this position.

- b. Next, in a sitting position, ask the patient to do a lower abdominal crunch while raising the legs. During this maneuver, the lower insertions of rectus abdominis should be palpable or even visible.

The main fat extraction in male obese patients varies according to the presence of intra-abdominal versus extra-abdominal fat. In patients with extra-abdominal fat, the resection is focused on the lower abdomen, and retraction is highly encouraged by performing thorough superficial fat resection (**Fig. 27.1**).

In patients with mostly intra-abdominal fat, fat resection is focused more thoroughly over the central abdomen in order to diminish the curvature of the anterior abdomen. As the intra-abdominal fat cannot be reached by liposuction, a strict high-protein and low-carbohydrate

diet after the surgery should be followed to reduce body fat.

The Negative spaces

The negative spaces represent the areas that form the shadows of the superficial anatomy, as we have already marked the areas of superficial (framing) and deep lipoplasty, connecting these two layers would make this an intermediate layer of markings. The negative spaces are specific areas as follows (**Fig. 27.5**):

- A large triangular area between the lateral border of pectoralis major and the lateral aspect of latissimus dorsi (pectoralis–latissimus dorsi triangle).
- A triangular-shaped area between the superolateral border of rectus abdominis

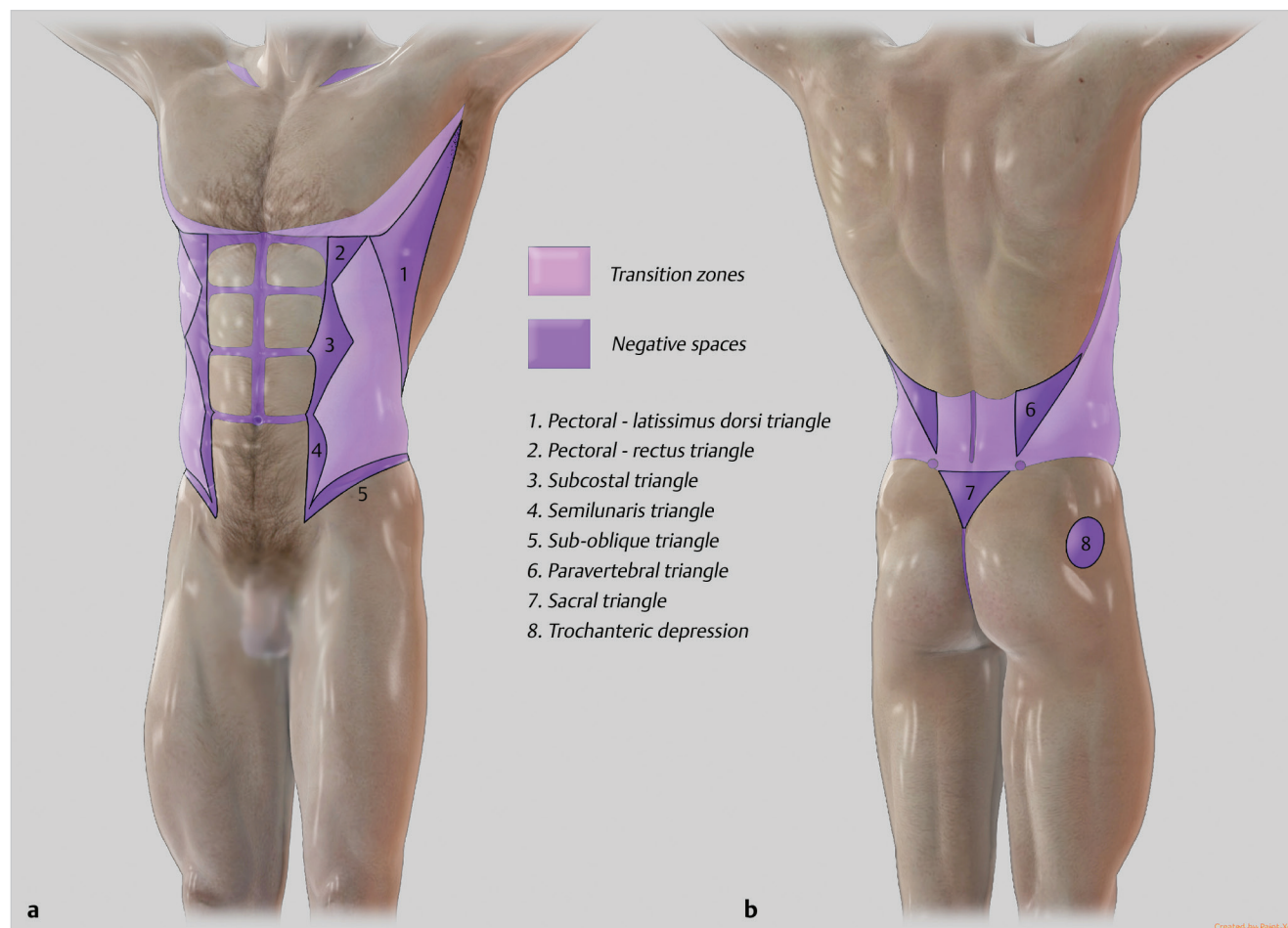


Fig. 27.5 (a, b) Negative spaces. Triangles defined by zones where careful liposuction must be done to improve shadows (*purple*). Triangles 1 through 5 are described in the text. However, additional negative spaces can be defined for posterior definition (trochanteric depression, paravertebral and sacral triangles). Also, smooth liposuction zones are defined as transition zones, where smooth liposuction must be performed.

and the lower border of pectoralis major (pectoralis–rectus triangle).

- Areas between the transverse inscriptions of the rectus muscle, small triangles following the lateral border of the indentations (subcostal and semilunaris triangle).
- Area below the external oblique and transverse muscles (suboblique triangle).
- Area below the rib cage.
- Supraumbilical area following the midline.

High-definition liposculpting

The procedure initiates with the infiltration. When we use general anesthesia, the solution consists of 1,000-cc Ringer's lactate and 1:100,000 epinephrine, and lidocaine 20 cc of 1% solution.

Infiltration

Following a 2:1 ratio, the idea is to infiltrate half of the volume in the superficial layer and half in the deep layer. Infiltration should begin in the deep layer and then proceed to the superficial layer. The rationale for infiltrating the superficial layer last is to ensure that there is wetting solution in this layer during ultrasound delivery. If the superficial layer is infiltrated first, migration into deeper layers may leave the skin unprotected from the VASER probe energy as time elapses.

Emulsification

The emulsification begins in the superficial layer and later moves to the deep layer. Although it is important to wait at least 5 to 10 minutes for the epinephrine to cause adequate vasoconstriction, prolonged delay should be avoided to prevent the migration of fluid to the inferior layers. The probe movement is smooth, and the VASER system is tuned to pulsed mode to prevent excessive heat generation. Additional VASER time may be applied to the framing areas and the marked areas of negative spaces.

Once the superficial layer has been fully treated, proceed to the deep layer. Begin with the deepest areas to ensure full emulsification, rubbing the probe against the muscular layer. This will ensure to emulsify almost all of the fat in this layer. Once there is loss of resistance in the deeper layers, the probe moves again

toward the superficial layer until all layers are treated adequately.

Extraction

Deep extraction

Start with the deep layer focusing on the infra-umbilical area and the flanks. Once this area is complete, start with the deep layer in the supraumbilical anterior abdomen. Determine first how much of the fat is actually extra-abdominal versus intra-abdominal fat. It is important to remember that most of the thickness in the upper abdomen is superficial fat, so the extraction should be performed using small cannula. Start using a 3.7- or 4-mm cannula in the deep layer and do not overextract in this area. When suctioning the central abdomen, use smooth, non-forced crisscrossing movements, and try not to use a pinch maneuver. A 1-cm flap should remain.

Proceed next to the pectoral area. Remove the deep fat over the pectoral muscles, including glandular tissue if the patient has gynecomastia. However, the upper poles should not be over-resected. Then, empty the deep fat of the pectoralis–latissimus triangle from the nipple and axillary fold incisions. For safety reasons, try to avoid resecting the upper abdominal fat from the lower incisions. When working in the upper abdomen, the upper flanks and the rib cage, use the incisions placed in the nipple crease.

Superficial framing

Try to empty the whole anterior abdomen until only a 1-cm thickness flap remains. Proceed with the deep area of the flanks, this time leaving a flap of just 0.5 cm. Later initiate the process of superficial framing by defining rectus abdominis in the lower abdomen. Here you can pinch the skin and use the cannula between your fingers to thin the flap and obtain a ridge or indentation. Use a 3-mm cannula for this maneuver.

Use the 3-mm cannula and work over the transverse–oblique muscle line. You can also try pinching maneuver and work very superficially here to create a flap as thin as possible.

Superficial framing continues from the nipple crease incisions. Using a 3.7-mm cannula, the

lateral border of rectus abdominis is defined by suctioning superficially exactly below the preoperative markings. Since this area is very sensitive to liposuction, it is important to stop and check the appearance of the tissues frequently to avoid overdoing the resection. Remember that the lateral lines of the rectus, especially on the upper abdomen, follow the curvature of each indentation of the muscle, hence the linea semilunaris is not a straight line. Follow the real curvature of the rectus to ensure a realistic and natural result.

Performing the definition pectoralis major and latissimus dorsi is achieved by emptying the triangular space between the two muscles. The inferior and lateral borders of pectoralis major are defined first by suctioning superficially using a 3-mm cannula from the anterior axillary incision, followed by a 3.7-mm cannula. Use the same incision for marking the line of the latissimus dorsi. Empty the triangle again in a superficial way. The sub-nipple access site is used to further define the pectoralis line between the inferior margin of pectoralis major and rectus abdominis.

Defining rectus abdominis

This is the most rewarding, and also the most challenging, area to work. The horizontal inscriptions are created to define the horizontal tendinous intersections of rectus abdominis muscle. There are three main ways to create the horizontal inscriptions:

1. Directly, parallel to the incision point. This requires an incision at every level in line with the horizontal inscription. For most patients, this requires at least three incisions.
2. Directly, using curved cannula. This obviates the need for incisions at every level of inscription (**Fig. 27.2**).
3. Indirectly, by creating the inscription perpendicular to the incision point. Using compression over the marked tendinous intersections, the linear depressions are gradually formed by repeatedly passing the 3-mm cannula below the focally compressed tissue. This is more difficult than the other techniques and may be used alone or as an adjunct to the other methods.

Always start with a small cannula (3 mm), either straight or curved. Begin from the umbilical incision. Start in the very superficial layer and later proceed more deeply until the groove is formed. Once the lower inscription is created, proceed to the upper ones. They can usually be completed through the nipple incisions. If not, an extra incision can be made over the line of the lower second horizontal inscription.

If a further incision is required for access over the third horizontal inscription, it is better to place this incision on a lateral point rather than in the midline. Visible incisions should always be placed asymmetrically to avoid leaving the patient with obvious signs of having had aesthetic surgery. In order to produce a natural, rounded depression, the inscriptions should be sculpted from several access points. Crisscrossing from three access sites produces a natural tonal progression from the grooves to the convex surfaces of the rectus abdominis bellies.

The Midline

Always leave the midline for last. The horizontal inscriptions should be completed first before defining the linea alba. From the umbilical incision initially, a 3-mm cannula is used to define the midline. The groove is then deepened using the 3.7-mm cannula and rounded by further suctioning and crisscrossing from the superior access incisions.

The intermediate layer

The secret of an exceptional result in high-definition lipoplasty belongs in this step of the surgery. The artistry of transforming carved fat into shapes that look and feel natural takes its origins in the interaction of light and form (see **Case Examples**).

Start with the lower negative space, just below the line of the oblique–transverse muscle. Start every negative space with a full extraction just next to the line, and make it smoother as you go further distally from the line.

Proceed with the semilunar lines, and pass from the upper incisions to meet the lower semilunar lines. Remember that the lateral borders of rectus abdominis form curves, not straight lines along the way.

The negative space in the subcostal region is created by suctioning inferior to the costal

margin from the sub-nipple incisions. This area always moves from the standing position to the supine position, so be guided by the previous markings made with the patient standing.

From the nipple and anterior axillary incisions, proceed to the space below pectoralis major. Depending on the anatomy, this space may appear as a linear groove or as a broader triangle between the upper bellies of rectus abdominis and pectoralis major.

Lastly, the triangular negative space between pectoralis major and the anterior border of latissimus dorsi is deepened (see **Case Examples**).

Before completion, the definition is assessed by careful inspection. The negative spaces and controlled irregularities can be deepened at this stage using a 3-mm cannula if more definition is required. However, it is important not to be excessively aggressive in the subdermal layer to prevent seromas, unwanted irregularities, and damaging the subdermal vascular plexus.

The superior incisions may be closed using subdermal sutures. Drains should be placed in the lower dependent incisions. The drains can be left open or closed. A compression foam vest and garment are applied immediately.

Postoperative care

The most common adverse sequelae of lipoplasty procedures in the postoperative period include swelling, bruising, and pain. These arise following the accumulation of excessive fluid and blood in the extracellular space. Liposuction edema and ecchymosis occur when there is a mechanical disruption of capillaries and lymphatics, increased capillary hydrostatic pressure, and extravasation of blood, water, and large-molecular-weight substances into the interstitium, resulting in an increase in the extravascular osmotic pressure. These pathophysiological processes are exacerbated by closing incisions and trapping pooled interstitial fluid, injudicious intravenous fluid administration, and excessive, prolonged postoperative compression.

The three pillars of the postoperative care are as follows:

1. Use of drains.
2. Use of compression garments.
3. Lymphatic drainage massage.

The use of drains

Open or closed drains are encouraged to reduce postoperative swelling and pain and the systemic absorption of lidocaine where the concentration in tumescent fluid is high. Silicone drains are placed in dependent sites such as the pubic and sacral incisions to keep them patent for the duration of the drainage postoperatively. In the anterior abdomen, the drain tubing is conveniently placed along the gully that defines the linea semilunaris. Alternatively, small incisions may be placed in dependent areas using a 1.5- or 2-mm biopsy punch. These remain open longer than slit incisions that tend to heal quickly and impede drainage. Closed drains (e.g., Jackson-Pratt) get large drainage volumes that require frequent emptying. With open drainage, superabsorbent pads are placed over the drain to improve patient comfort and protect against messy leakage of blood-tinged tumescent fluid. Absorbent pads or sponges are also designed to evenly distribute the compressive force of the overlying vest or garment. Drains following high-definition body sculpting usually can be removed after 3 to 5 days at which time the open drain can be removed.

Compression

At the end of the lipoplasty procedure, a compression garment is applied in order to reduce liposuction edema, provide hemostasis, close potential spaces, provide patient comfort, and facilitate smooth even skin redraping and retraction. Adherent foam dressings have been used extensively under the compression garment to distribute the compressive force of the garment, overcome capillary pressure, and stabilize the skin. In the past, Reston foam has been recommended to significantly reduce postoperative ecchymosis and swelling. These adherent foam sheets are cut into the required shapes to fit the body contours and placed directly on the skin. Significant problems have arisen as a result of crimping of the dermis, including avascular bullae and postinflammatory hyperpigmentation. Silicone foams such as Epi-foam (Biodermis Inc., Henderson, NV) and TopiFoam (Byron Medial Inc., Tucson, AZ) have been designed specifically for lipoplasty patients to ameliorate excessive pressure on the dermal capillaries. The problems resulting from foam directly

adhering to the skin have been overcome by incorporating foam into material vests.

The compression garment and vest are removed after 24 hours to change the dressings, check the condition of the skin, and gently massage trapped subcutaneous fluid toward the drains or open incisions. The patient is allowed to sponge bathe, and the compression garments are reapplied. The patient is reviewed daily until the drains, if present, are removed.

Lymphatic drainage massage

The CARE system (*cosmetic active recovery*) is designed to accelerate the recovery of the tissue, to reduce the recovery time. There are many treatments, but the combination of these in a specific sequence is what gives us the results we want.

It is a therapeutic method used after surgery to reduce swelling, bruising, pain, and reduce the recovery time. It is sometimes used before surgery to prepare the tissue for intervention.

Some general effects are as follows:

- Activate the lymph and lymphatic circulation.
- Improve blood circulation.
- Enhance immune system function.
- Stimulating the parasympathetic nervous system (relaxation effect).
- Help the healing process (effects against hypertrophic scars or keloids).
- Reduce fibrosis after liposuction.

Posttreatment protocol

- Lymphatic drainage.
- External ultrasound.
- Pressotherapy.
- Diathermy.
- Radiofrequency.
- Wet heat.

The purpose of a thorough postoperative care regimen in patients undergoing high-definition body sculpting is to avoid complications and optimize the aesthetic result. In the immediate

postoperative phase, blood-tinged tumescent fluid is evacuated by compression and open drainage. Bimodal compression, using specialized foam and garments, reduces swelling, ecchymoses, and liposuction edema. After 2 to 3 days, manual lymphatic drainage commences in order to accelerate healing. External ultrasound is added after 1 week to soften tissues and reduce edema further. Various other energy-based modalities, including radiofrequency and radial extracorporeal shockwave therapy, are useful adjuncts after 4 to 6 weeks, particularly if there is any fibrosis, reduced skin tone, or cellulite.

Prevention and management of complications

Effective high-definition body sculpting employs advanced techniques and extensive superficial lipoplasty and should not be attempted by beginners. If the procedure is not planned and performed with great attention to detail and with proper postoperative care, the complication rate will be higher. The patient should be made aware during informed consent that high-definition lipoplasty is different to conventional lipoplasty. During the procedure, controlled irregularities are deliberately created to enhance definition. Patients who may not be motivated to attend frequent postoperative visits should be excluded, since postoperative therapies play an important role in optimizing results and minimizing complications. The patient must also understand the importance of constant compression with foam vests and garments in the postoperative period. Most of the complications associated with high-definition body sculpting can also arise following conventional lipoplasty techniques. The use of third-generation ultrasound-assisted lipoplasty (VASER) technology is important for successful high-definition lipoplasty and may also reduce excessive blood loss, prolonged edema, as well as stimulate skin retraction.

Case examples

Case no. 1: High-definition liposculpture (Fig. 27.6).



Fig. 27.6 A 45-year-old man who underwent abdominal high-definition Liposculpture. (a, c, e) Preoperative and (b, d, f) 2 months postoperative. Note the natural but optimal definition of the rectus abdominis bellies. Pectoral and gluteal definition was also done. A new athletic and muscular appearance is achieved.

Case no. 2: High-definition dynamic liposculpture (Fig. 27.7).

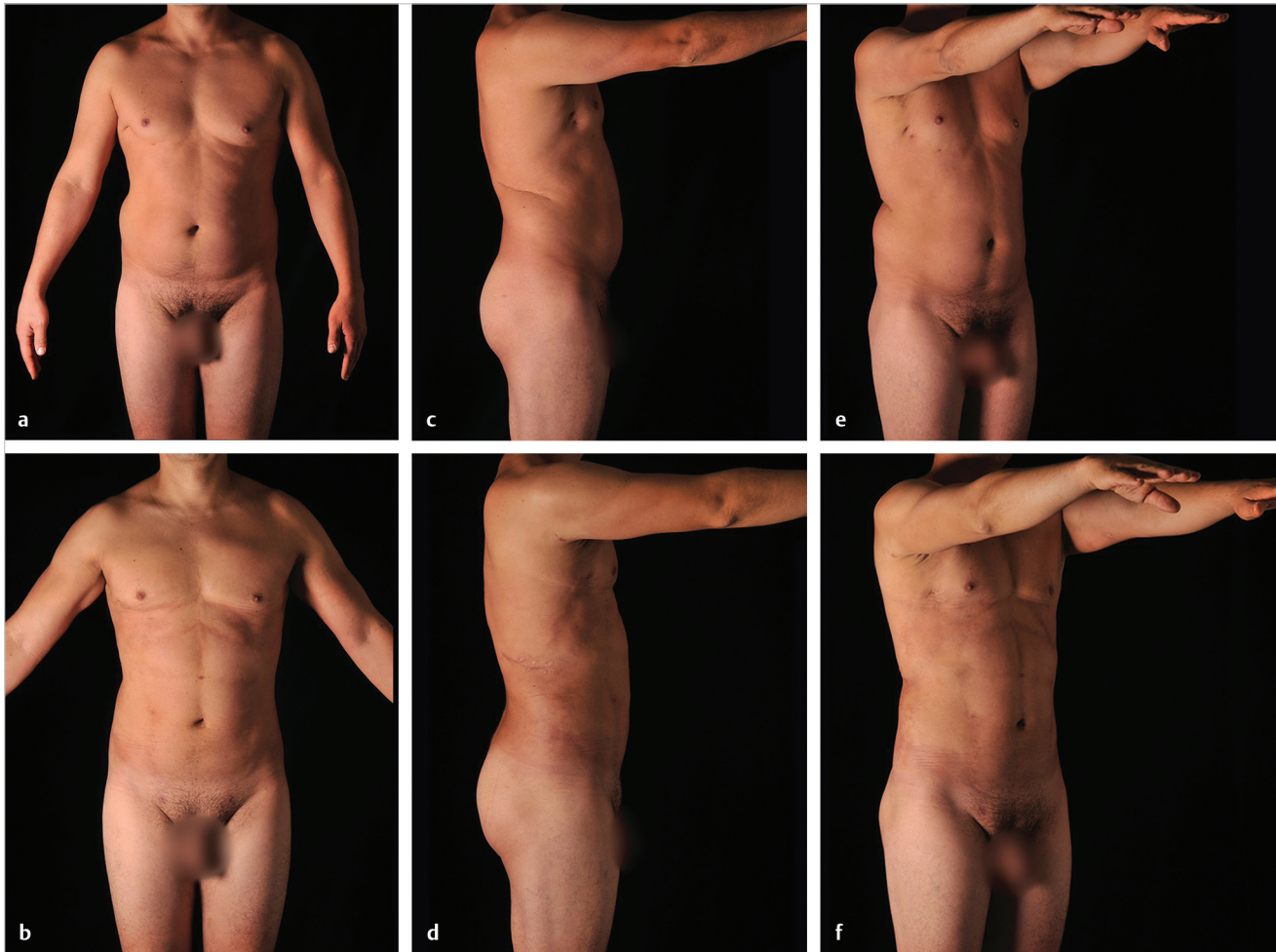


Fig. 27.7 A 38-year-old man to whom abdominal high-definition Liposculpture was performed. (a, c, e) Preoperative and (b, d, f) 2 months postoperative. You can notice the abundant extra-abdominal fat that was fully removed with a new muscular look. A full dynamic liposculpture was also done in this patient; note the arm, torso, pectoral and gluteal definition in the postoperative pictures.

Case no. 3: High-definition liposculpture with pectoral fat grafting (Fig. 27.8).

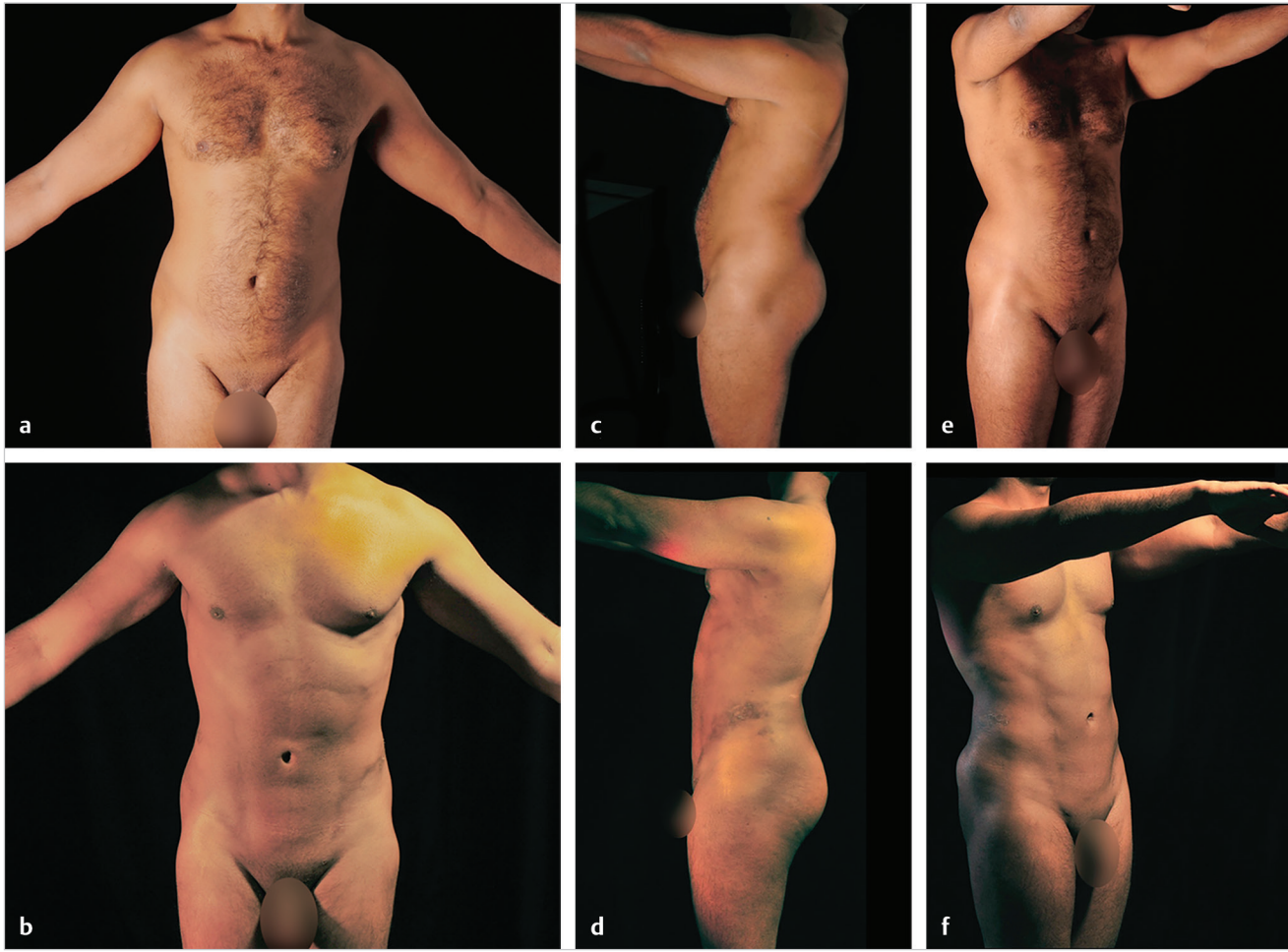


Fig. 27.8 A 36-year-old man who was taken for abdominal high-definition surgery. The preoperative images (a, c, e) show such intra- and extra-abdominal fat deposits. Note the 1-month postoperative pictures (b, d, f) with a natural and defined abdominal contour. Pectoral fat grafting was performed to improve pectoral projection.

Pearls and pitfalls

- It's important to understand the difference between a natural, slim and athletic appearance.
- The muscular definition perception has to be adapted, not only by how in rest the appearance must be, but also in harmony with the natural movement of the underlying muscles.
- To obtain the best outcome, contour the pectoral area, the arms, and the torso in 360 degrees including the flanks and back.
- Obese patients need extra attention. Assess how much fat in the anterior abdomen belongs to the intra-abdominal area.
- Patients with previous liposuction are usually poor candidates for definition.
- Ideal patients are those with BMI of 35 or higher, those who have experienced massive weight loss, and those who had previous bariatric surgery.
- While it might be difficult to mark the rectus abdominis limits due to abundant fat flap, maneuvers should be done to get a correct marking.
- Special design tools may be required to reach all areas for contour.
- Even small incisions can leave conspicuous scars, particularly in hyperpigmented or hypertrophic patients. Stealth incisions can alleviate noticeable scarring.
- Age, race, presence of body hair, and the suturing method all influence healing.
- Sonographic guidance may be useful in noting superficial anatomical landmarks in obese patients.
- Assessment of the patient for the position of muscles and tone must be done with the patient standing.
- Main fat extraction in male obese patients varies according to the presence of intra-abdominal versus extra-abdominal fat.
- Defining the rectus abdominis can be challenging. Visible incisions should always be placed asymmetrically to avoid leaving the patient with obvious signs of having had aesthetic surgery.
- Always leave the midline for last.
- The art of transforming carved fat into shapes that look and feel natural is the secret of successful high-definition lipoplasty.
- The most common postoperative complaints include swelling, bruising, and pain and are exacerbated by closing incisions and trapping pooled interstitial fluid, injudicious intra-venous fluid administration, and excessive, prolonged postoperative compression.
- Combat postoperative swelling, bruising, and pain by the use of drains, compression garments, and lymphatic drainage massage.

Steps for high-definition liposculpting

1. Preoperative marking for stealth incisions.
 - a. Deep.
 - b. Framing.
 - c. Negative spaces.
2. Infiltration.
3. Emulsification.
4. Extraction.
 - a. Deep.
 - b. Superficial framing.
 - c. Defining the rectus abdominis.
 - d. The middle.
 - e. The immediate layer.

Further reading

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