The male abdominoplasty

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Abdominal liposuction is one of the most frequently requested regions of liposuction in male patients. Indeed, there are few anatomic areas in men that cause the same degree of consternation as the abdomen. Abdominal girth and waistline measurement are constant sources of anxiety and reflection, and they become more disconcerting with advancing age. In fact, many men, as well as women, judge their health, fitness, senescence, and sexuality by the appearance of their abdomen. Studies documenting the association of central obesity—“apple” or android adipose accumulation—with an increased risk of coronary heart disease have only served to underscore the importance of this region.

Hence, though perhaps unwittingly, patients seeking surgical remediation have a multitude of aesthetic and functional concerns. In view of these overlapping issues, the importance of interrelated concerns such as proper diet and nutrition, exercise, stress management, and lifestyle cannot be overemphasized. Before undertaking any surgical procedure, patients should understand the role and limitations of surgery. In particular, areas that influence the appearance of the abdomen and are not altered with abdominal contour surgery (eg, intra-abdominal obesity and skeletal anomalies [more common in females]) should be identified, and the inability to alter these areas should be conveyed to the patient. Postoperative satisfaction hinges on properly managed expectations.

Causes of the abdominal deformity

- Aging
- Hormones (intrinsic and extrinsic)
- Weight gains/fluctuations
- Diastasis of the rectus muscle/Abdominal wall relaxation
- Surgical incisions
- Hernias
- Lifestyle
- Genetics
- Medications (eg, antiandrogens)

Goals

The goals of abdominal contour surgery in males are (1) to reduce excessive skin, (2) to decrease subcutaneous adipose tissue, and (3) to repair the muscular diastasis, through the least conspicuous incision and with a minimum risk of morbidity and mortality.

Distinguishing anatomic features of the male patient

Male anatomy and concerns differ in numerous ways from those of women.

They present at an older age and higher weight for abdominal contour surgery. Their interest is often in an isolated region (versus the multiple sites that women request treated). They rarely are concerned with dorsal back rolls, which are a frequent area of inquiry in women considering abdominal contour surgery. Body fat distribution—subcutaneous and visceral—differs in the two sexes, as does the impact that liposuction has on total fat (Table 1).

Technical positioning on the operating room table often requires alterations from the purely

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supine (used with females) to lateral decubitus or prone position and multiple access incisions for suction assisted lipectomy (SAL).

There are various anatomic differences in the treatable soft tissue layers (see further discussion).

Perhaps the most strikingly different characteristic of men is the absence of an hourglass figure accentuated by a narrow waistline, which is typically observed in females. Males have a more uniform silhouette with a natural tendency toward fat deposition in the flanks (“love handles” or lumbar roll), which is the most common reason men request surgery of the abdomen. This is a genetically predisposed roll in males that extends from L2 to L4 in the posterior lateral flank below the dorsal back rolls. It adheres to the iliac crest, which contributes to the overhang seen in this region (Fig. 1). Furthermore, from their 30s on, men’s physique and body composition change discernibly even in the presence of stable weight patterns.

Differences exist between men and women in all three of the treatable soft tissue layers of the abdomen: skin, fat, and muscle (see Table 1).

**Skin**

The male integument is less prone to overstretching and laxity than in females, perhaps as a result of its thickness and its not being influenced by pregnancy or a preponderance of female hormones. Consequently, excessive skin redundancy in males is generally observed only in those patients who have undergone significant weight loss or fluctuations.

**Adipose tissue**

With advancing age, male fat patterning changes: there is an “internalization” of fat, with an increase in intra-abdominal fat and a corresponding decrease in subcutaneous fat, as well as infiltration to and between muscles. This change has the greatest impact on the appearance of the abdomen and is an essential object of patient education. Overall, there is a decline in lean body mass and a fat redistribution, which is reflected in an increase in the body mass index. The waist–hip ratio and triceps skin-fold thickness (which correlates with visceral abdominal fat) are valid measurement indices of these changes.

Men have a tendency to diet and seek treatment (liposuction or other procedures) at higher weights than do women. Despite this difference and the differences in fat distribution, the proportion of subcutaneous to visceral fat aspirated in men is similar to that in women and correlates with BMI figures. Both the visceral adipose tissue and subcutaneous adipose tissue correlate with morbid medical risk factors; however, it is unclear whether subcutaneous fat is an independent factor. Finally, though subcutaneous fat is more metabolically active, this does not necessarily correlate with the ability to lose weight.

In one study performed on fit male runners who were followed from their 20s to their 50s, the men gained 3.3 lbs and .75 in on their waistline per decade. To maintain themselves at the earlier weight, runners would have to increase their output from 20 to 50 miles per week.

### Table 1

Male/Female differences in the soft tissues of the abdomen

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Skin</td>
<td>Thicker</td>
<td>Thinner, with a tendency toward laxity and striations</td>
</tr>
<tr>
<td>II. Muscle</td>
<td>Wide upper rectus muscle diastasis ± lower rectus diastasis</td>
<td>Lower rectus muscle diastasis ± upper rectus diastasis</td>
</tr>
<tr>
<td>III. Fat</td>
<td>(1) Visceral adipose tissue&lt;sup&gt;a&lt;/sup&gt;</td>
<td>(1) Visceral adipose tissue&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Intraabdominal accumulation from late 20s on.</td>
<td>Intraabdominal accumulation more common after menopause</td>
</tr>
<tr>
<td></td>
<td>(2) Subcutaneous&lt;sup&gt;b&lt;/sup&gt;</td>
<td>(2) Subcutaneous&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Flank accumulation</td>
<td>Thicker layer with different distribution, eg located peripherally below iliac crest</td>
</tr>
<tr>
<td></td>
<td>Thinner layer with more distribution centrally</td>
<td>90% subcutaneous fat; more relative to visceral adipose tissue (less lean body mass) (“girls are just soft boys”).</td>
</tr>
<tr>
<td></td>
<td>80% subcutaneous fat; more intra-abdominal fat</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Correlates with waist circumference and the ratio of waist–hip (measured by CT and MRI or sagittal abdominal diameter).

<sup>b</sup> Subcutaneous fat demonstrates the regional differences in metabolism, and metabolic differences in gender, based on location.
Muscle layer

Differences between the genders exist in the muscular layer as well. Women often present with a lower abdominal rectus muscle diastasis, creating a visible umbilical to pubic “bulge.” In contrast, men often have a rectus diastasis in the upper abdomen, which contributes along with intra-abdominal fat to a “beer-belly” appearance. This combination of intra-abdominal fat accumulation and upper rectus muscle diastasis results in the characteristic waist and abdomen disproportion seen in males. This disproportion is the most frequently observed source of dissatisfaction and frustration—even in patients with stable weight patterns.

Men have fewer variations in their anatomic presentation than women. Hence the necessity for a variety of surgical procedures is less in men; typically, liposuction or a full abdominoplasty or a panniculectomy with liposuction is sufficient, in contrast to the wider range of procedures performed on women. In both genders, however, the goals of abdominal contouring remain the same.

Muscle mass peaks in men at age 25 and decreases 4% per decade to age 50 and 10% per decade thereafter. Testosterone, an essential mediator of muscle mass and adipose tissue also declines. After age 30, total testosterone and biologically active free testosterone decrease 1–2% per year.

Patient examination and diagnosis

The circumferential aesthetic unit of the abdomen should be examined with the patient in a standing, sitting, supine, and lateral hip flexed (diver’s) position. Differences in intrinsic anatomy, body proportions, umbilical variations, location of scars or hernias, and the status of the treatable soft tissue layers (skin, fat, and muscle) are noted. Findings regarding the condition of the skin, the degree of fat accumulation, and the extent of the muscular diastasis or weakness are discussed with the patient in the presence of a three-way mirror. A discussion with the patient regarding the potential for improvement from the various surgical procedures ensues. Individual tolerance for potential complications, types of incisions, and length of recovery are some issues in the decision-making process. After the patient and surgeon reconcile these issues, the patient is “staged” to an appropriate level of treatment, according to the abdominolipoplasty system of classification and treatment [1–5].

Patient classification

In the past, an abdominoplasty was a relatively uniform procedure that was performed through variations of a low, transverse hip-to-hip skin incision [6–8]. With the application of liposuction to body contouring surgery, a new dimension of abdominal contouring evolved (Fig. 2). The term abdominolipoplasty as a system of classification and treatment was
developed to reflect this evolution and has been discussed in great detail. Salient points of patient evaluation, categorization, and treatment are noted in Tables 2 and 3.

Thus, where as recently as the previous two decades surgeons had one operative approach for all patients, now they have a range of seven choices based on variations in patients' anatomies. Despite these possibilities, because of the nature of the male anatomy, male abdominal contour is largely limited to abdominal liposuction, a full abdominoplasty, or a panniculectomy with liposuction (Figs. 3 and 4).

**Indications and techniques**

Tables 2 and 3 outline the variety of options available for abdominal contour surgery in men and women. Recent statistics reported by the American Society of Aesthetic Plastic Surgery [9] indicate that men

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**Table 2**

Abdominoplasty classification system of evaluating the treatable soft-tissue layers of the abdomen

<table>
<thead>
<tr>
<th>Category</th>
<th>Skin</th>
<th>Fat</th>
<th>Musculofascial system</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I</td>
<td>Minimal laxity</td>
<td>Variable</td>
<td>Minimal flaccidity</td>
<td>SAL</td>
</tr>
<tr>
<td>Type II</td>
<td>Mild laxity</td>
<td>Variable</td>
<td>Mild lower abdominal flaccidity</td>
<td>Miniabdominoplasty</td>
</tr>
<tr>
<td>Type III</td>
<td>Moderate laxity</td>
<td>Variable</td>
<td>Moderate lower and/or upper abdominal flaccidity</td>
<td>Modified abdominoplasty</td>
</tr>
<tr>
<td>Type IV</td>
<td>Severe laxity</td>
<td>Variable</td>
<td>Significant lower and/or upper abdominal flaccidity</td>
<td>Standard abdominoplasty with-without SAL</td>
</tr>
</tbody>
</table>
account for over 1 million cosmetic procedures. There were 43% and 25% increases in the number of men undergoing abdominoplasty and liposuction since the previous year, respectively. Our statistics reveal that males account for 16% or more of all abdominal contour surgery patients. With the increase in successful bariatric surgery, these numbers are likely to rise for both genders. This development will certainly also raise issues of the responsibility for third party reimbursement for the dermatolipectomy procedures.

Based on the unique characteristics of men (already described) and on their often-expressed preference for a less invasive procedure and a rapid recovery period, the following procedures are the most common ones performed on them:

### Operative procedures

#### Type I liposuction and Subtype 1a extended liposuction

**Indications**

Suction-assisted lipectomy (Type I) is indicated in patients who have minimal skin laxity and flaccidity of the musculofascial system and variable amounts of subcutaneous fat, who can be expected to adapt to the contour change that results from liposuction. Classically these patients have good skin tone and excess fat in a wide belt-like fashion across the abdomen to the flanks.

Extended liposuction (Subtype 1a) (see Table 3) is a more extensive form of liposuction and is a frequent procedure in males. It is based on a greater degree (multiple aesthetic units being treated), extent (deep- and superficial-layer fat removal), and volume of aspirate (a “pure” fat fraction exceeding the usual 1500-mL “large volume” parameters) than in traditional liposuction. While the amount of subcutaneous fat accumulation varies from patient to patient, males consider extended liposuction to be the procedure of choice because their skin tone is often better than that of females, and there may be less of a rectus muscle diastasis. The impact of intra-abdominal fat and the impossibility of altering this feature through a routine procedure must be conveyed to all patients, males in particular.

When considering all of the issues involved (eg, healing, risk factors, complications, and personal preferences), men, like women, prefer a less invasive operation if possible. However, the biggest issue with “less invasive” procedures is the potential failure to achieve patient satisfaction. Because these different abdominal contour procedures are not interchangeable, it is imperative that patients recognize what each operation is intended to achieve.

Moreover, certain patients may be “downstaged” from a “higher” category of treatment to a less extensive alternative because of risk factors such as scars, medical illness, and nicotine exposure. The most frequent example of this is when a patient is downstaged from an “open” procedure to extended liposuction [5].

#### Technique

When possible, patients are marked in the presence of a three-way mirror to verify the treatment sites. The affected aesthetic units of the circumferential abdomen (Fig. 5) are demarcated; a minimum of five stab-wound incisions is often necessary. The previously outlined preoperative measures are instituted, and anesthesia is induced with the patient on the stretcher in the supine position. The anterior abdomen is then infused with superwet local anesthesia consisting of 1 L of Ringers lactate, 20 mL of 1% lidocaine, and 1 mL of 1:1000 epinephrine. The patient is turned to the prone position on the operating room table, and the remaining premarked areas are infiltrated with local anesthesia. Three-holed, Mercedes-type cannulae ranging from 3.2 mm to 5.4 mm in internal diameter are used. Machine-driven suction lipectomy commences through the same stab incisions that were used for the introduction of local anesthesia. Suction progresses in each aesthetic unit, from deep to superficial, in a multidirectional, crisscross fashion. The sites are evaluated, using pinch, panel-beater, and skin lifting tests. The crease of the lumbar roll adjacent to the anterior superior iliac spine is disinserted by bluntly undermining with the

### Table 3

<table>
<thead>
<tr>
<th>Category</th>
<th>Skin</th>
<th>Fat</th>
<th>Musculofascial System</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1a</td>
<td>Minimal laxity</td>
<td>Excess fat</td>
<td>Minimal flaccidity</td>
<td>Extended SAL</td>
</tr>
<tr>
<td>Type 2a</td>
<td>Mild laxity (vertical scar)</td>
<td>Variable</td>
<td>Mild lower abdominal flaccidity</td>
<td>“Open mini”</td>
</tr>
<tr>
<td>Type 3a</td>
<td>Minimum laxity</td>
<td>Variable</td>
<td>Lower/Upper abdominal flaccidity</td>
<td>Endoscopic muscle access</td>
</tr>
</tbody>
</table>

Bold columns distinguish these subtypes from their precursors in Table 2.
cannula below the hip crease that it forms with the iliac crest, in an attempt to allow the tissue to redrape [10]. This is similar to the action used with the inframammary crease in gynecomastia surgery. The anatomic configuration of the lumbar roll and excess loose skin often preclude the attainment of the completely uniform or “V” configuration that men desire. Patients should be made aware of this limitation preoperatively, to avoid dissatisfaction or a need for secondary surgery.

The patient is then turned to the supine position, and the anterior abdomen is treated in quadrants, with comparison of volumes and outcomes. It is useful to reverse-jackknife the operating room table when treating the anterior abdomen to allow tangential introduction of the wetting solution and even plane of liposuction, thereby reducing the possibility of intra-abdominal penetration with the instrument. The fat in the epigastric area, like that in the flanks, is often more fibrotic and more difficult to remove.

Fig. 3. In a series of female patients, approximately half had open surgical procedures and half had closed (ie, suction-assisted liposuction) procedures. “Other” includes limited abdominoplasties and minimally invasive subtypes of abdominoplasty.

Fig. 4. In males the vast majority of abdominal procedures were closed, liposuction cases. Of the 16% “open” abdominoplasties, all but one was a full abdominoplasty.
From this position the surgeon treats the flank area again, overlapping the portions that were addressed while the patient was prone. The periumbilical and mons pubis area are evaluated independently and suctioned in proportion to the surrounding areas. Final contouring is performed until symmetry is obtained. The incision sites are milked of any excess injectate, and the wounds are closed with staples or sutures. A compression garment can be used at the discretion of the patient and surgeon (Figs. 6 and 7).

**Power-assisted liposuction**

Power-assisted liposuction (PAL) is a beneficial technique in liposuction in general and for males in particular. The rapidly reciprocating cannula facilitates fat removal and is useful in treatment of men with fibrotic fat deposits. The technique is not altered as a result of the instrumentation.

**Type IV full abdominoplasty with or without liposuction**

**Indications**

A full abdominoplasty is ideal for patients with severe skin laxity and considerable upper and lower flaccidity of the musculofascial system. Concomitant, supplemental liposuction is performed when indicated. However, if extensive amounts of liposuction are required, the two operations (abdominoplasty and liposuction) should be staged or performed separately, with the second delayed until sufficient wound healing and skin contraction have occurred.

**Technique**

Patients are marked for surgery wearing their preferred clothing styles, which are reviewed together...
Fig. 6. Lateral view of pre- and postoperative liposuction.

Fig. 7. (A) A 44-year-old man preoperatively in 1998. (B) 1 year following liposuction of the aesthetic units of the abdomen. 2700 mL of superwet solution were injected. 1750 mL were aspirated, of which 800 mL of fluid settled in the infranatant. (C) Same patient 5 years later (2003). (D) Following secondary suctioning using power assisted liposuction. 1100cc was suctioned. (E) Same patient preoperatively in 2003 after first liposuction. (F) Following secondary liposuction. Note the presence of unchanged intraabdominal fat.
with them. Although brief clothing styles are a concern for males, their parameters for incision placement are often more flexible than for females. While the patient flexes, the proposed elliptical skin incision between the umbilicus and mons pubis is grasped to determine the feasibility of closure and the lateral extent of the incision. The lower skin incision marking is then placed, while the patient grasps and pulls the skin flap upward to a position slightly below the predetermined level while curving toward the anterior superior iliac spine, terminating at the skin creases.

This position accounts for subsequent upward wound migration and scar contracture. The incision should not cross the inguinal creases. The upper incision is designed like a handle-bar moustache [11], slightly arched at the most lateral aspects, which helps minimize any subsequent dog-ear formation at the time of wound closure.

The patient is then placed on the operating room table with the arms on padded arm boards, at symmetric positions and secured with a gauze wrapping. While the patient is awake, the table is maximally

Fig. 7 (continued).
flexed to a “jackknife” position, mimicking the final intraoperative position that is required for wound closure, to ascertain the ability of the table to do so and to assure the patient’s comfort. Venous compression pumps are placed on the patient’s legs or feet. General anesthesia is then induced, and the field is evenly infiltrated with superwet anesthesia. Large volumes of local anesthesia are unnecessary: they impede electrocoagulation, and smaller volumes provide a sufficient reserve to be used for any adjacent sites to be liposuctioned without exceeding safe lidocaine and epinephrine doses. A 2-0 silk marking suture on a Keith needle is placed at the xyphoid and pubis, overlapped, clamped, and used to compare the wound markings and verify symmetry.

Surgery begins with liposuction in the premarked areas according to suction areas (SA 1–4) (see Fig. 8). The umbilicus is circumscribed, freeing it from the skin while preserving some surrounding fat. The upper skin incision is made and the flap is undermined in an inverted “V”-type fashion to preserve the maximum amount of lateral intercostal blood supply, which becomes the dominant blood supply after the flap is elevated. Elevation continues to the xyphoid process centrally and laterally by blunt dissection to the costal margins, only as necessary to achieve wound closure without tension. The table is flexed and the upper flap redraped over the lower abdominal pannus in a “vest-over-pants” fashion, as described by Planas [12], for the contingency of wound closure. The advantage of this maneuver is that by leaving the pannus in place it preserves blood, maintains body temperature, and takes less time. The pannus is then excised en-bloc, while the assistant surgeon identifies and electrocoagulates the vascular perforators. The table is unflexed, and the rectus muscle is then vertically imbricated from xyphoid to pubis with 2-0 neurolon sutures and a 0-nylon loop suture. The sheath can be injected with 0.25% marcaine with epinephrine for pain management. A temporary plastic button is secured to the umbilicus for subsequent identification through the abdominal wall.

The table is reflexed, and the flap is advanced and sutured to the mons pubis in the midline. The amount of liposuction, tension on wound closure, and extent of undermining must be reconciled to reduce the likelihood of ischemia. The endotracheal tube must be secure prior to “beach-chairing” the table and the vital signs monitored while altering the position. The deep layer of the wound is closed with long-acting absorbable sutures, beginning on each side and progressing from lateral to medial, while the assistant surgeon adjusts the skin edges to advance the “dog ears” toward the midline. Liposuction can be performed on the mons pubis. If the mons pubis is redundant it can be unfurled and secured by placing absorbable sutures to the rectus fascia to stabilize it and prevent upward migration [13,14]. Two Jackson Pratt drains are brought out through the incision and sutured to the wound. The dermal layer is closed with absorbable sutures. The skin is closed with staples.

The umbilical button is palpated while verifying the position of the new umbilical site. A 2.5-cm curvilinear incision centered in the midline with the aid of a suture from the xyphoid is made in the subcutaneous fat. Electrocautery is used to expose the button completely, and a wedge of adipose tissue from the upper and lower half of the flap is removed. In individuals with a thin abdominal flap, closure of the umbilical stalk to the skin incorporates the fascia at 6 o’clock, with half-buried mattress suture. In others, the half-buried suture is only used at the 6 o’clock position, or not at all. The remaining areas are closed with interrupted sutures. The umbilical cavity is packed with a strip of Xeroform gauze (Integrity Medical Devices, Inc., Elwood,

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Fig. 8. Suction areas 1–4 demarcate potential zones for liposuction in conjunction with a full abdominoplasty.
NJ). A single layer of Telfa dressing (Tyco Healthcare Group LP, Mansfield, MA) is applied to the incisions. An abdominal binder is applied and the patient is transferred to a flexed hospital bed (Figs. 9 and 10).

**Pannilectomy with extensive liposuction**

Another alternative, particularly in the recalcitrantly obese patient or in massive weight loss patients, is extensive liposuction with wedge excision.
of the excess skin pannus. This procedure can be performed without umbilical circumcision or with it. (The latter allows for more skin excision, but because the flap is not undermined it necessitates a slit closure of the old umbilical site.) Among the advantages of this technique are

The skin is not undermined. Hence there are fewer complications related to flap elevation (eg, ischemia, necrosis, fluid collections).
It allows relatively unrestricted liposuction, again because the flap is not undermined.
No rectus muscle closure is performed. In these patients excess intra-abdominal fat rectus plication would only force the intra-abdominal fat further “in,” creating a “wider” waistline (Fig. 11).
A flexed postoperative position is unnecessary, which reduces problems associated with that position.
Overall there are fewer potential complications than in a full abdominoplasty. (For instance, there is earlier ambulation, with less pain and other factors that might contribute to complications.)

For all these procedures, principles of pre- and postoperative patient management are summarized in Box 1.

Complications

The complications that can be encountered in the most frequently performed operations in male liposuction (Type I), extended liposuction (SAL Type 1a), and full abdominoplasty with or without liposuction (Type IV) are similar to those reported elsewhere [15–17] and do not vary according to gender.

Anesthesia

All “closed” abdominal contour procedures (eg, suction-assisted liposuction) are performed with monitored intravenous sedation anesthesia or spontaneous ventilation general anesthesia. The author prefers general anesthesia for all “open” procedures. Systemic anesthesia is supplemented with the infiltration of “tumescent” fluid in this superwet dosage range.
(approximately 1–2 mL of injectate per mL of aspirate), evenly dispersed in the subcutaneous adipose tissue. The solution administered maintains lidocaine levels below 35 mg/kg [18] and epinephrine levels below 0.7 mg/kg.

At the completion of surgery, the aspirate is set aside and allowed to fractionate. Typically, it aver-
ages approximately 20% fluid and 80% fat, or a ratio of 1:1 “pure” fat to fluid “injectate.” Fluid replacement by hypodermoclysis is supplemented with intravenous hydration and oral intake to a total of approximately 2 mL to 3 mL of fluid per mL of fat aspirate during the first 24 hours. This measure necessitates alerting the anesthesiologist to an alteration in conventional considerations for liposuction fluid replacement. The formula accounts for replacement and maintenance fluid requirements.

Summary

Men have a larger body surface area, distinguishing physical characteristics, and unique aesthetic concerns that present a different therapeutic challenge from women. Typically, men also arrive with a different perspective from women and are less inclined to pursue minor anomalies or to return regularly for follow-up care. The primary area of disappointment in males is the inability to alter the intra-abdominal submuscular fat compartment where fat redistributes with advancing age, resulting in enlarged abdominal girth (Fig. 12). The alteration in fat patterning in the submuscular intra-abdominal location has a significant impact on the appearance of the abdomen in men and women as they age. Conveying the significance of the relationship of subcutaneous to submuscular fat and of the age-related change in fat patterning is one of the more challenging aspects of patient education. In general, men who have not experienced large weight fluctuations present with skin of good quality and tone and can benefit from liposuction surgery; those who have poor skin tone, with or without rectus muscle diastasis, may be candidates for a full abdominoplasty or a pannilectomy with liposuction. These procedures represent the overwhelming majority of abdominal contour operations performed in males.

Further readings


Fig. 12. (A,B) Example of an aging male with excessive intra-abdominal adiposity contributing significantly to his appearance.


References