



AMERICAN SOCIETY OF
PLASTIC SURGEONS

Practice Parameter for Abdominoplasty and Panniculectomy Unrelated to Obesity or Massive Weight Loss

I. BACKGROUND

Surgical removal of fat and skin of the abdomen has been performed since the turn of the century. In the United States, Kelly called attention to this procedure and its positive outcomes in his 1910 publication which reported weight reduction, personal comfort, convenience in dressing, better posture in standing and walking, increasing activity, and greater ease in hygiene.¹

Abdominoplasty was performed using a vertical incision until the end of the 1950's. In the 1960's the fashion industry prompted the development of modern abdominoplasty techniques of a low transverse scar designed to hide scars under clothing. In the 1980's the introduction of suction lipectomy added a new focus on abdominal contouring which combined suction assisted lipectomy with abdominoplasty.

ANATOMY

The anterolateral abdominal wall is largely composed of muscular layers and aponeurotic sheaths with overlying subcutaneous fat and skin. It consists of two strap muscles in front (the rectus abdominis and pyramidalis), and three muscles anterolaterally (the external oblique, internal oblique, and transversus abdominis). The rectus sheath fuses medially with the linea alba and laterally with the fascia of the three anterolateral abdominal wall muscles. Incomplete medial fusion is the etiology of rectus muscle diastasis. Also, this midline fusion can be stretched with intra abdominal weight gain as in pregnancy or obesity. In turn the internal oblique and the transverse abdominis fuse to the anterior and middle layers of the lumbar fascia (lumbodorsal fascia).

Abdominal wall muscle pathophysiology involves weakness or laxity of the abdominal wall musculature. This prevents maximum force generation with contraction and weakens the support of the lumbar dorsal fascia with resultant back pain. An excess of ten pounds of adipose tissue in the abdominal wall adds 100 pounds of strain on the disks of the lower back by exaggeration of the normal S curve of the spine.² Pregnancy may result in diastasis recti which decreases the efficiency of the abdominal wall musculature. Both genders may experience ventral hernias and weakness of the torso musculature, secondary to abdominal surgical incisions.

II. INDICATIONS

Contemporary patients seek abdominoplasty and/or panniculectomy for a variety of reasons. Aesthetic indications are the most common reason patients undergo these procedures and include unacceptable appearance due to fat maldistribution or contour deformities caused by pregnancy, stretch marks, contracted scars and loose hanging skin after weight loss. There are however, reconstructive indications such as abdominal wall defects, irregularities or pain due to previous pelvic or lower abdominal surgery, umbilical hernias, intertriginous skin conditions, and scarring.³ An abdominoplasty or panniculectomy may be

utilized to treat a wide range of abdominal defects, from purely cosmetic indications to more involved conditions such as the treatment of excess skin following massive weight loss. The range in indications corresponds with a wide variance in the surgical complexity and involvement of the procedure.

III. DEFINITIONS

There are similarities between an abdominoplasty and a panniculectomy procedure as both procedures remove varying amounts of abdominal wall skin and fat. Even though these procedures are different in scope and are utilized to treat different conditions, the two procedures historically shared the same CPT code (15831). Beginning in CPT 2007, two new codes are available to distinguish the two procedures. One code, CPT 15830 for panniculectomy, can be billed to insurance when appropriate; the other code, CPT 15847 for abdominoplasty, describes a cosmetic procedure. An additional code (17999) is available to describe a cosmetic mini abdominoplasty as defined below. (See Coding for additional details). To clarify the difference in the procedures the following definitions should be used:

- A. Abdominoplasty, typically performed for cosmetic purposes, involves the removal of excess skin and fat from the pubis to the umbilicus or above, and may include fascial plication of the rectus muscle diastasis and a neoumbilicoplasty.
- B. Mini or modified abdominoplasties are typically performed on patients with a minimal to moderate defect as well as mild to moderate skin laxity and muscle flaccidity and do not usually involve muscle plication above the umbilical level or neoumbilicoplasty.
- C. Panniculectomy involves the removal of hanging excess skin/fat in a transverse or vertical wedge but does **not** include muscle plication, neoumbilicoplasty or flap elevation. A cosmetic abdominoplasty is sometimes performed at the time of a functional panniculectomy.

Obese patients with a very large pannus or massive weight loss patients that require retraction of excessive skin may require more time consuming and involved procedures due to the severity of the defect. Additional terms have been developed for these procedures and include belt lipectomy, torsoplasty, and circumferential lipectomy. These procedures are described in more detail in the *ASPS Practice Parameter for Surgical Treatment of Skin Redundancy for Obese and Massive Weight Loss Patients*.

IV. MANAGEMENT

NONOPERATIVE TREATMENT

For those patients who are not surgical candidates, there are very few treatment options. Weight reduction may be beneficial for some.

Physical therapy or use of a back brace may provide limited relief to others.

PREOPERATIVE EVALUATION

Preoperative preparation for abdominoplasty or panniculectomy should include a history and physical examination. The patient's overall health should be assessed at this time. Diseases such as diabetes, cancer, cardiac and/or respiratory conditions which might affect postoperative recovery should be evaluated. Laboratory or diagnostic tests that are often ordered include: CBC, SMA-18, chest x ray when there is a history of smoking or multiple procedures are planned, and EKG for patients over age 40, 50 or when the patient has a history of hypertension or cardiac disease. When indicated, medical clearance by the patient's family physician may be obtained. Orthopedic, gynecological or neurosurgical consultation for backache may be ordered if indicated.

Directed examination of the abdomen should include both standing and supine examinations. In the standing position the physician can check for the presence of striae, hanging and loose skin, scars and asymmetrical landmarks. In the supine position the degree of rectus muscle diastasis can be determined. At this time any weakness or herniation in the abdominal wall can be detected as well. In addition, the contour of the abdomen should be noted. Those with a scaphoid abdomen can expect good flattening following surgery. Those that are still convex secondary to intra abdominal fat will not achieve a flat contour postoperatively.

Healthy patients that use prophylactic aspirin therapy should be instructed to stop the use of aspirin before elective surgery. Ideally smokers should be instructed to stop smoking prior to surgery as studies indicate smoking has an adverse effect on postoperative wound healing as well as increasing pulmonary complications.

Patients must be informed that future pregnancy may cause recurrence of redundant skin and rectus diastasis. Thorough informed consent must be obtained and documented preoperatively. Informed consent should include a frank discussion of the risks, both common and rare. Full trunk photographs are usually taken preoperatively.

OPERATIVE TREATMENT

Three fundamental defects of the abdominal wall must be addressed during an abdominoplasty including redundant skin, excess fat and musculofascial laxity.³ To correct these defects a standard abdominoplasty typically includes a transverse lower abdominal incision, wide undermining to the costal margins, tightening of the abdominal musculature, resection of the redundant abdominal flap with the maximum resection centrally, umbilical transposition, and skin closure with hips flexed.⁵

A limited number of patients with less severe defects may be candidates for more minimally invasive procedures such as mini-abdominoplasty or plication of the fascia endoscopically. These procedures can be performed alone or in combination with suction-assisted lipectomy. The benefits of less invasive procedures include improved abdominal skin vascularity and decreased scarring.³

An abdominoplasty may be performed in a variety of settings including a hospital, an ambulatory surgery center and an office-based surgery facility. The facility should be accredited and fully equipped to provide adequate monitoring and life support techniques. The surgery is

frequently performed under general anesthesia but may be performed with conscious sedation. Depending on the length of the procedure, a foley catheter may be used. Prophylactic intravenous antibiotics and deep vein thrombosis prophylaxis should be used. There are differences of opinion regarding the use of postoperative compression wear. Some surgeons believe it helps to prevent seroma development while others do not order compression due to concerns that it may compromise tissue perfusion.

Most abdominoplasty procedures last about 1-4 hours and may require overnight monitoring. However, with advances in surgical technique, most notably the introduction of liposuction in the early 1980's, many patients are able to have less invasive procedures and may be candidates for day surgery.

TREATMENT SIDE EFFECTS^{6,7}

Minor complications and major complications are more frequently observed in those patients who are obese.⁸ One study indicated that 80 percent of obese patients had complications following an abdominoplasty compared with the borderline and non obese patients, who had complications rates of 33 percent and 32.5 percent respectively.⁹

Two studies in the 1980's have indicated an increased incidence of pulmonary emboli and need for blood transfusion when abdominoplasty was combined with gynecological procedures. However, additional studies indicated that obesity and not the combination of procedures was found to be a more important factor. Recent studies indicate that abdominoplasty combined with gynecological procedures is safe when appropriate patient selection is practiced.¹⁰

Since liposuction is often part of an abdominoplasty, some patients desire to have liposuction performed on other areas of the body at the same time as the abdominal liposuction. While this can be done safely, it must be noted that the incidence of complications increases relative to the number of sites and volume of liposuction. In certain cases, it may be best to perform such procedures serially.⁸

Possible Side Effects:

Wound infection and/or dehiscence

Hematoma

Seroma

Residual localized fat and/or fat necrosis leading to contour

irregularities or asymmetries

Temporary or permanent numbness

Unattractive or hypertrophic scarring

Malposition or necrosis of the umbilicus

Deep vein thrombosis/pulmonary embolus

POSTOPERATIVE TREATMENT

The patient is usually seen early in the postoperative period for drain removal, suture removal and examination of the wound. Examination of the wound and abdominal flap may continue for several weeks. Patients gradually return to full activities over several weeks. Weight lifting restrictions are important especially if muscle plication has been performed. Sufficient time for adequate scar strength must be established beyond that provided by the suture alone. Patient satisfaction is generally high because of improvement in activity level, hygiene, appearance, alleviation of back pain and change in abdominal girth.¹¹

V. PROVIDER QUALIFICATIONS

The individual performing this procedure, regardless of the location of the surgical facility, should have fully approved hospital privileges for this procedure and be qualified for examination or be certified by a surgical Board recognized by the American Board of Medical Specialties, such as the American Board of Plastic Surgery.

VI. DISCLAIMER

Patient care parameters are strategies for patient management, developed to assist physicians in clinical decision making. This patient care parameter, based on a thorough evaluation of the scientific literature and relevant clinical experience, describes a range of generally acceptable approaches to diagnosis, management, or prevent specific diseases or conditions. This patient care parameter attempts to define principles of practice that should generally meet the needs of most patients in most circumstances.

However, this patient care parameter should not be construed as a rule, nor should it be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the appropriate results. It is anticipated that it will be necessary to approach some patients' needs in different ways. The ultimate judgment regarding the care of a particular patient must be made by the physician in light of all the circumstances presented by the patient, the diagnostic and treatment options available and available resources.

This patient care parameter is not intended to define or serve as the standard of medical care. Standards of medical care are determined on the basis of all the facts or circumstances involved in an individual case and are subject to change as scientific knowledge and technology advance, and as practice patterns evolve. This patient care parameter reflects the state of knowledge current at the time of publication. Given the inevitable changes in the state of scientific information and technology, periodic review, updating and revision will be done.

VII. CODING

This coding is provided as a guideline for the physician and is not meant to be exclusive of other possible codes. Other codes may be acceptable depending on the nature of any given procedure. Indications may vary, depending on the cause of abdominal wall laxity and/or disfigurement, however certain conditions are associated with abdominoplasty and/or panniculectomy:

<u>Diagnosis</u>	<u>ICD-9 Code</u>
<u>Cosmetic abdominoplasty or cosmetic panniculectomy</u> Plastic surgery for unacceptable cosmetic appearance	V50.1
<u>Functional Panniculectomy</u>	
Intertrigo	695.89
Lumbago	724.2
Panniculitis	729.39

<u>Procedure</u>	<u>CPT Code</u>
<u>Panniculectomy (Functional or Cosmetic)</u> Excision, excessive skin and subcutaneous tissue (includes lipectomy); abdomen, infraumbilical panniculectomy	15830

<u>Abdominoplasty (Cosmetic)</u> Excision, excessive skin and subcutaneous tissue (includes lipectomy), abdomen (eg, abdominoplasty) (includes umbilical transposition and fascial plication) (List separately in addition to code for primary procedure) (Use 15847 in conjunction with 15830) (For abdominal wall hernia repair, see 49491-49587) (To report other abdominoplasty, use 17999)	+15847
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<u>Mini or Modified Abdominoplasty (Cosmetic)</u> Unlisted procedure, skin, mucous membrane and subcutaneous tissue	17999
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CODING HERNIA REPAIRS

In rare circumstances plastic surgeons may perform a hernia repair in conjunction with an abdominoplasty or panniculectomy. A true hernia repair involves opening fascia and/or dissection of a hernia sac with return of intraperitoneal contents back to the peritoneal cavity.¹² A true hernia repair should not be confused with diastasis recti repair, which is part of a standard abdominoplasty. When a true hernia repair is performed, the following distinct codes, separate from the abdominoplasty/panniculectomy, may be utilized.

<u>Diagnosis Codes</u>	<u>ICD-9 Code</u>
Umbilical hernia	553.1
Ventral, unspecified	553.20
Incisional	553.21

<u>Procedure Codes</u>	<u>CPT Code</u>
Repair initial incisional or ventral hernia; reducible	49560
incarcerated or strangulated	49561
Repair recurrent incisional or ventral hernia; reducible	49565
incarcerated or strangulated	49566
Implantation of mesh or other prosthesis for incisional or ventral hernia repair (List separately in addition to code for the incisional or ventral hernia repair)	+49568
Repair epigastric hernia (eg, preperitoneal fat); reducible	49570
incarcerated or strangulated	49572
Repair umbilical hernia, age 5 or over; reducible	49585
incarcerated or strangulated	49587

VIII. REFERENCES

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