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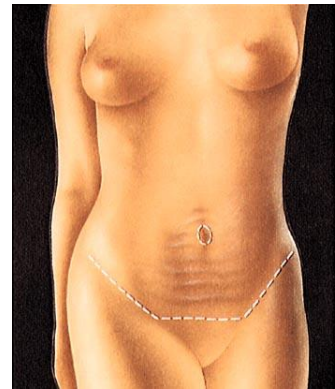
## ABDOMINOPLASTY

Abdominoplasty (abdominal dermolipectomy), commonly known as a “tummy tuck”, is a procedure that can yield stunning results in most individuals. It involves the excision of excess fat and skin to create a flatter, more youthful abdomen. A form of abdominoplasty was first described back in 1890, but subsequently it has undergone multiple modifications to arrive at the present day aesthetic abdominoplasty.

Most men and women seeking a tummy tuck require a major abdominoplasty as opposed to a mini abdominoplasty. Those seeking abdominoplasty have what is known as a postpartum pot belly deformity or a stretched out ‘poochy’ abdomen.

Still there are those individuals who have never had children and yet will benefit from an abdominoplasty. The best candidate for an abdominoplasty is one who is well motivated to improve upon his or her present condition who has maintained a stable weight appropriate for their body habitus and who have excess abdominal skin, fat and muscle laxity of the lower abdominal wall, also known as diastasis recti.

The problems of excess abdominal skin, fat, musculofascial laxity and striae gravidarum (stretch marks) are typically the result of pregnancy and especially multiple pregnancies. As the abdomen expands over the course of gestation, room is made by stretching the tissues. In particular, not only is the skin and fat stretched in this area, but the midline fascial layer between the two rectus abdominis muscle bellies is also and significantly stretched. This is known as the linea alba. Generally this does not return to its prepuerperal or pre-pregnancy state. The abdomen, as a result, is quite pronounced with excess skin, fat and stretch marks. Many people seeking enhancement through abdominoplasty learn very quickly that, despite intense exercise and dieting, the lower abdomen does not change despite a marked improvement in the rest of their body. This is because of the irreparably stretched out tissues of the abdominal wall and skin. Because of this, correction is obtained only through aesthetic surgery.



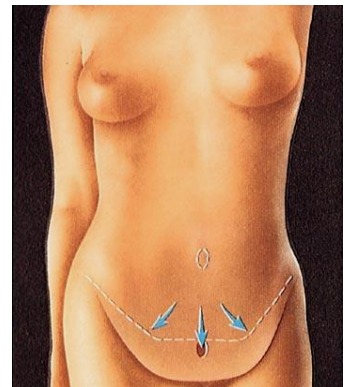
### **SURGERY:**

Once a patient has undergone a thorough preoperative evaluation in conjunction with their initial consultation including a thorough history and physical examination, the patient is then guided towards a surgical date. In the initial work up, safety becomes a very important issue. This is why a thorough evaluation of the patient’s past medical history is undertaken. We will discuss with you

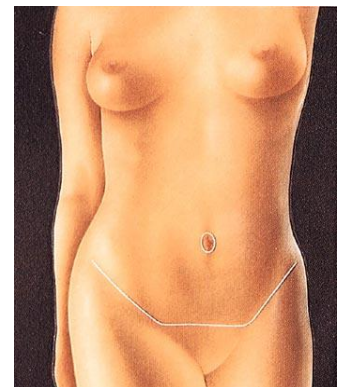
any allergies to medications that you may have, as well as any medications that you may be taking. Additionally, a review of any medical problems that may exist, as well as the previous operations will also be evaluated. In some cases, it may require that a patient obtain various blood studies or even an EKG, chest x-ray, or otherwise. Occasionally, it is necessary for the patient to visit with their primary care physician or medical specialist prior to undergoing surgery. Again, this is to ensure that every possible aspect of that patient's health has been evaluated as best possible prior to surgery so that it will be as safe as possible thereby minimizing the potential for complications. Even then some complications will just happen.

The tummy tuck operation involves making an incision that falls, typically, along the natural skin creases of the lower abdomen, usually correlating with the bikini line. Of course, this varies from patient to patient based upon their anatomy and wishes. Once the incision is made, it is taken down through the skin and fat, creating a flap of tissue. The abdominal wall fascia and rectus muscles are identified. This flap is then dissected off of the abdominal wall up to the rib cage, generally.

Variation of surgical approach does occur and are at times necessary. A small incision is made around the umbilicus (belly button) and the umbilical stalk is preserved. Once the flap is elevated, it becomes apparent just how much of the abdominal wall laxity is present, the diastasis recti. This can then be reduced to its prepregnancy condition by a technique called abdominal wall plication. This involves placing stitches in the external abdominal fascia from the xyphoid process (sternum) down to the pubic crest. This musculofascial plication is carried out from the ribs at the midline all the way down to the pubic bone. This draws the tissue in from either side, folding it in on itself, and burying it below. It brings the muscle bellies of the rectus abdominis muscles back into their paramedian or near midline position as they were prior to pregnancy. This obliterates the large stretched out fascial area between them. The result is a nice, flat abdomen. The umbilicus is preserved.



The patient is then put into a flexed position, the abdominal skin and fat flap is then drawn down, and the excess is removed. A new site for the belly button is identified in the midline of the flap of tissue. Through this, the umbilicus on its stalk is brought out and sutured into position. I take time to dissect the fat from the undersurface of the new umbilical site so as to permit an inward depression of the new belly button, giving it a more youthful look. Hooding is also frequently achieved using a modified vertical mattress stitch.



Once the wound is closed, the patient is left in a jack knifed position until skin flap relaxation can occur. Since a significant amount of skin is typically resected, it is necessary to keep the patient bent so as to permit closure of the wound. Ultimately the skin relaxes or stretches and the patient is able to stand in an upright position by about one week postoperatively. Drains are placed underneath the abdominal flap and brought out through the pubic escutcheon at the time of surgery. These drains will typically be removed at seven to ten days postoperatively, although some may take longer depending upon the amount of output. The patient is kept in the hospital or surgery suite overnight for safety

purposes and for the comfort of the patient. Once deemed ready for discharge, the patient is then released.

### **POSTOPERATIVE COURSE:**

Postoperatively, the patient will be in the care of her family or friends. She will need to wear her compression garment, record the drainage that is collected in the drain bowls, and remain in a jack knifed position as she walks frequently, three to four times a day. By about one week postoperatively, the patient is able to stand in an upright position. At about two weeks, the patient is able to return to sedentary work activities without any type of lifting or stress. Some may take up to three weeks to get up to this point. I begin the patient, at six to eight weeks, on a program that gets them back to normal activity so that by about three months postoperatively they are back to their normal activities. It is important to stress that the patient is restricted from excessive activity until about eight weeks postoperatively in order to permit the myofascial plication of the abdominal wall to heal adequately so that it will not break open and become lax again. Initially, only the sutures are holding it together, which can be overcome by excessive stress exerted by the patient. This is the reason for the six to eight week postoperative restriction on activity.

Two important points need to be made about abdominoplasty. First is that this is typically not a weight reduction procedure. Rather, it is a body contouring procedure. This is why it is important that a patient be at their stable weight for their body habitus prior to surgery. To treat a patient for morbid obesity with an abdominoplasty may help the medical problem of obesity, but it will not result in an aesthetic outcome. As a result, it may be necessary for someone to undergo a vigorous exercise program or dieting program prior to their surgery. Occasionally it may be necessary for an individual to consult with a gastric bypass specialist who will help them through a program of weight loss. This may even require a visit to an endocrinologist or a metabolic specialist. Again, it is important that a patient's weight be stable and appropriate for their habitus prior to abdominoplasty to get the best results. Again, this can be determined at the time of consultation and it varies from individual to individual.

Second, the contraindications to abdominoplasty surgery are, primarily, planned future pregnancies and medical conditions that may make the procedure unsafe. It is implied and understood that when one undergoes abdominoplasty they are through having children or being pregnant. As far as medical conditions that may make surgery unsafe, these can be determined at the time of consultation. Also of note, abdominoplasty can be combined with other medical procedures, such as a hysterectomy, hernia repair, augmentation and liposuction to list a few. Combined procedures tend to have a slightly higher incidence of complications.

### **COMPLICATIONS:**

Abdominoplasty surgery is associated with potential complications, as with any surgery that is performed. Some common complications are listed below:

**Infection:** Infection is uncommon. When it does occur, there is about a 1% to 2% incidence of infection, unless is combined with another procedure, such as a hysterectomy, then the incidence

goes up to around 6% to 9%. Most infections clear with aggressive antibiotic treatment and wound care, although sometimes it may extend and become more problematic requiring more surgery. Coverage for subsequent medical costs associated with your cosmetic surgery by your insurance company is the exception, not the rule. If a complication occurs and it requires medical treatment it is almost a given that your insurance company will not pay for it and that you will be responsible for that bill.

**Hematoma:** A postoperative collection of blood in the area of dissection is one of the more common complications. If a hematoma does occur, it is usually because one of the blood vessels that was either cauterized or ligated during surgery has opened up and begun to either ooze or flow. Occasionally, a hematoma will become significant enough that it will require an immediate return to the operating room for evacuation and control.

**Seroma:** Drains are placed at the time of surgery to drain the excess fluid that will occur because of a large area of dissection. These drains are typically removed at a point when the output is low enough that they can be safely removed so as to avoid an excess fluid build up underneath the flap, known as a seroma. If a seroma does occur, then it will require aggressive post operative aspiration. That is, the patient will come back frequently, sometimes as frequently as every other day, where a device is used to remove the excess fluid from underneath the skin flap. At that time, increased pressure will be applied underneath the compression garment so as to obliterate the space until it heals. If that is unsuccessful and the fluid does collect, then it can develop what is called a bursa or a lined space that sometimes need a reoperation to get rid of it. Fortunately, bursa formation is uncommon.

**Skin slough:** Skin slough is perhaps one of the most concerning complications. Fortunately, it is very rare, but it does occur. When an abdominal wall flap is created at the time of surgery, its blood supply by definition is decreased. If, for some reason, blood supply to the flap is inadequate or too little, then the skin will slough (die). Conditions that predispose to skin slough are previous abdominal surgery with the retained scars falling within the skin flap, history of smoking, failure to maintain a jack knifed position postoperatively thereby creating excess abdominal wall tension on the closure, infection and hematoma, etc.. If skin slough does occur, then it may require a return to the operating room for debridement and care of the wound. It may require re-advancement of the flap and other techniques to get it closed. Several operations may be required.

**Scar formation:** Abdominoplasty implies that there will be a long scar that can run from hip down through the mons pubis area up to the other hip. This represents the area of flap excision. Generally the scars heal well, but occasionally they can become hypertrophic, leading to tender, elevated, irritated and red scarring. It should be noted that most scars can take between one to two years for complete healing to occur. If the scar is large, widened, elevated, or unacceptable, it can be taken back for revision at a later date. There will always be a scar postoperatively, since anytime an incision is made in the skin there is a scar as a result. There are techniques that will be employed postoperatively to help minimize that scar, such as application of vitamin E oil, intraoperative application of dermabond glue, massage and the application of silicone sheeting. These can be discussed at that time.

**Bowel perforation:** When abdominal wall plication is undertaken, it involves suturing the outer layers of the musculofascial layer of the abdominal wall so as to plicate and roll the lax diastasis inward. It is possible that the bowel can be injured at this point, especially in patients who have had previous surgery where the bowel may be stuck up against the abdominal wall in a thinned area in any unnatural manner. This is rare.

**Pulmonary embolism:** Pulmonary embolism can be a serious complication. It occurs when blood clots develop in the lower extremities during or after surgery which subsequently dislodge and travel to the lungs where they can block oxygenation of blood and possibly lead to death. To minimize this potential complication, patients are placed in compression boots preoperatively. They are also monitored during surgery for position and adjusted accordingly. They are engaged in early ambulation following surgery, as well as exercises in the bed to help increased blood flow in the venous system. A history of pulmonary embolus, a history of smoking, or obesity all increases this risk. You may be given a prescription for lovenox – A specialized blood thinner

**“Dog Ears” (Cutaneous Deformity):** Frequent occurrence at the lateral edges of the incision that may need to be excised later. Occasionally some dog ears will need a belt lipectomy to fully remove the patients fat.

**Umbilical malposition:** Occasionally the umbilicus or belly button which is often naturally off center pre-operatively, will be off midline postoperatively. If this occurs, correction may be attempted at a later date. Such correction may be a simple in-office procedure or a more complex situation where the patient needs to undergo general anesthesia once again.

## **CONCLUSION:**

Abdominoplasty or tummy tuck is a very successful procedure at addressing the problems of a pot belly and excessively lax lower abdominal wall, typically as a consequence of pregnancy. It can yield stunning results. It is a major operation and it requires a thorough preoperative work up to ensure a safe outcome, as well as a good outcome. There are different approaches to this. Various incisions are used by plastic surgeons. My philosophy is to follow the natural skin crease of the lower abdomen and to place that incision line as best as possible within the individual’s bikini line. It is possible to tailor that incision to a patient’s needs or wants. Also, I believe in placing deep stitches within the superficial fascial system so as to help take tension off of the skin which, consequently, decreases scarring of the skin incision line. Additionally, the umbilicus is a very key part of this operation. I think that it is very important to attempt to create a very youthful looking umbilicus, which requires subumbilical defatting and appropriately placed stitches to draw the belly button down to create a youthful “innie”, with hooding. Again, it is an excellent operation that has made many patients very happy. If you are a well-motivated individual who fits the criteria and who does not have any major medical contraindications, that is medical problems that would make it unsafe, then it is appropriate to proceed.