

TRAM FLAP BREAST RECONSTRUCTION (TRANSVERSE RECTUS ABDOMINIS MUSCULOCUTANEOUS FLAP)

A TRAM Flap is a method of reconstructing the breast using your own tissue, namely the redundant skin and fat below the belly button. This can be done at the time of mastectomy (immediate) or some time after (delayed). The skin and fat are transferred to the chest and stay connected to either the left or the right rectus abdominis muscle. Through the muscle travels the artery and vein that nourish the overlying skin and fat. Prior to the reconstruction, Dr. Pautler may recommend a “delay” procedure to augment the blood flow to the flap that will eventually make the breast. In this short procedure, the artery and vein that supply the muscle from below are divided. The blood flow that supplies the muscle from above dilates and becomes more reliable. The delay is usually done 7-14 days before the reconstruction, involves an intravenous sedation, and is an outpatient procedure. In some cases, such as obesity, a history of smoking, or where a particularly large breast needs to be made, the entire incision may be developed on the abdomen and then closed. The same “cuts” would be made at the reconstruction anyway, and by making them earlier, the blood supply to the flap is even more augmented. In some reconstructions, the nipple and areola can be made at the same time, but in others this may entail a small secondary procedure, usually about 3-6 months later. At The time of the TRAM, the opposite breast can either be reduced, lifted or augmented for symmetry.

The recovery after a TRAM is approximately 6 weeks, and most of the discomfort revolves around the abdominoplasty (the closure at the abdomen). The surgery on the abdomen is similar to a cosmetic tummy tuck, the only difference being that the incision is longer, the surgery is more involved and lengthy, and the muscle gets lifted out of its “sheath” and its far end brought up to the chest. The “near” end remains connected at the rib cage. A binder will need to be worn afterwards, there will be drains, and a bent posture in both walking and sleeping will need to be followed. The scars include the one at the pubic hairline, and the one around the belly button.

The surgery usually takes about 6 hours (up to 9 if both sides are involved) and involves general anesthesia. Before performing the surgery, Dr. Pautler will draw the skin excision pattern on you while you are standing, as well as any pattern on the opposite breast if needed..

After the surgery, you will need to sleep in a flexed “beach chair” position for several nights. You will also need to walk bent at the hips for the first week or so. This is because of tightness which will eventually loosen naturally as your skin and muscle layers relax. Pain and discomfort will be controlled with either oral (pills) or intravenous medication. Once you go home, only pills will be used. The drains are most often removed 1-3 weeks after surgery in Dr. Pautler’s office. Most sutures are absorbable and do not need to be removed.

BEFORE YOUR SURGERY

Before you undergo a TRAM reconstruction, Dr. Pautler will ask you to do the following:

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1. Modify your diet: About 3 days before your surgery, eat high protein nutritious foods. Please avoid lots of raw vegetables, cabbage, and other foods that bloat. Prunes are a good source of fiber that will help alleviate constipation without bloating.
2. STOP SMOKING: If you are a smoker, Dr. Pautler will strongly urge you to cease as soon as possible. In many cases, she will prescribe a smoking cessation medication called Zyban which is not always covered by insurance drug plans. It is important for you to try as hard as you can to stop smoking at least four weeks before and six weeks after your planned surgery. Cigarettes contain nicotine, a powerful substance that decreases blood circulation especially in the areas that need it the most: surgical wounds. Wound healing is slowed, infection risk is increased, and recovery from surgery may be prolonged. Nicotine containing chewing gums and patches are harmful as cigarettes so please try not to use them. If you absolutely cannot curb your smoking, Dr. Pautler asks that you be honest about it and let her know because she may need to alter her surgical plan for you.
3. Vitamin C: This vitamin is helpful for collagen synthesis which helps boost wound healing. It is available over the counter and is helpful to take two weeks before and two weeks after your surgery.
4. Stop taking aspirin, ibuprofen or other nonsteroidal anti-inflammatory medications: This category of drugs can increase your risk of a bleeding complication, so avoid them. Aleve, advil, motrin, naprosyn, bufferin, Anacin, Toradol and alka seltzer all belong to this group. It is best to run your list of medications by Dr. Pautler to see what you can and cannot take if you are in doubt. TYLENOL is OKAY to take, as are the pain medications that Dr. Pautler will prescribe for you after your surgery. If you are on any blood thinners such as plavix, lovenox, or coumadin, please let Dr. Pautler know as these will need to be stopped as well.
5. Mammogram: Dr. Pautler will need to see the results of your mammogram for your opposite breast.
6. Donate your blood: If time permits, Dr. Pautler will ask you to donate 2 units of your own blood.

AFTER YOUR SURGERY

After your surgery, there are several things to keep in mind. They are:

1. Refrain from aspirin and ibuprofen, as well as other nonsteroidal anti-inflammatory medications and blood thinners until at least two weeks after your surgery.
2. Diet: No restrictions, you can eat what you like provided you don't have an upset stomach from anesthesia.
3. Activity: Definitely refrain from any exercise or strenuous activity for the first two to three weeks after surgery. This includes housecleaning, vacuuming, and brisk walking. After about 10 days, it is okay to go out to dinner or a movie, or even a short trip to the store (but don't carry any heavy bags). In general, limit your lifting to no greater than 12 pounds. For those of you with

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small children, don't carry them, instead have someone else put them on your lap and you can hold them. By six weeks, for most patients, provided your incisions have healed, your restrictions are lifted and exercise can be resumed.

4. Compression: You should wear your compression garment daily and nightly at least for the first two weeks. Afterwards you will need to wear it for up to six weeks for the daytime and for any long trips where you'll do a lot of walking. After 6 weeks, the binder will need to be worn for exercise. .
5. Smoking: **NO SMOKING FOR AT LEAST 6 WEEKS AFTER SURGERY.** Dr. Pautler strongly advises that you stop smoking altogether for your overall health as well.
6. Bathing: It is okay to shower after you are discharged from the hospital. **NO BATHS OR SWIMMING** until your wounds are healed and it is okay with Dr. Pautler.
7. Scars: Once your incisions are healed, there are several options you have to try to improve the appearance of your scars. Inexpensive ones include cocoa butter and vitamin E oil. Mederma is a scar cream that is available over the counter but is a little pricier. Combined with massage, these emollients can help accelerate scar softening, fading, and maturation. Silicone preparations are also available, but costly, and more suitable for patients that have a known tendency to form poor scars. Bear in mind that the way you heal and the type of scar you form are dependent on your genetic make-up, and despite the best surgical technique and scar management, some patients will have poor scars.

RISKS

The following is a description of the possible complications that could occur with a TRAM flap reconstruction.

1. Numbness: There will be some numb areas most of which will regain sensation in a period of about two to four months. As nerves heal, it is normal to experience shooting pains or "pins and needles" type of sensations.
2. Asymmetry: Dr. Pautler will do her best to make your breasts and abdominal scar as symmetric as possible. Some asymmetries may appear as parts of your abdominoplasty heal at different rates. Most of these are cosmetically insignificant, but if not, a scar revision can be considered. As far as asymmetry between the reconstructed and native breast, these are almost expected. Gravity will alter the shape of the reconstruction and revisions may be needed.
3. Scars: These may be quite pink initially. With time, massage, and use of emollients they should improve and fade considerably. Although technique is important, scars are a function of the patient more so than the surgeon.
4. Tissue Loss: Rarely, due to some compromise of circulation (which can happen with smoking, diabetes, steroid use, excessive tension or infection) to the abdominal skin and fat there can be some tissue loss. This can occur at the abdomen, but more commonly it is seen at the reconstruction site. Some of the nonviable skin or tissue may need to be removed in the office and dressing

changes may need to be instituted. This is more of an inconvenience, requiring more time for healing. It may also mean that the scar may be somewhat wider and pinker and necessitate scar revision in the future, but overall the contour of the breast and/or abdomen should not be affected.

5. Dog ears: These are little cones of excess skin that can form at the end of the abdominal scar. They usually show up after settling and healing have finished. If bothersome to the patient, they can be removed.
6. Hematoma or seroma: Rarely does a collection of blood or body fluid become large enough to necessitate aspiration or surgical removal. If so, it needs to be done to prevent infection or wound healing problems. Small collections are watched carefully until they absorb on their own.
7. Belly button: With an abdominoplasty, the navel stays in the same place but comes through a new opening in the abdominal skin. In rare cases it may be slightly off center, heal poorly, or suffer tissue death. Sometimes the navel has an odd shape to begin with, and with the tummy tuck portion of the TRAM procedure, this oddness can be more seen than before the surgery. Revisional surgery of the belly button may need to be done.
8. Fullness in the lower abdomen: Some patients complain that even though they have a flatter and more toned abdomen, they have a hard time buttoning certain pants. This is because of swelling, especially in the lower abdomen and it seems to be most notable at the end of the day, least notable in the morning. With time, and re-establishment of lymph drainage, this fullness eventually goes away.
9. Blood clot in veins or in lungs: This is rare, but can happen with any surgical procedure that is over two hours long. It is treatable, but may require a prolonged stay in the hospital. Dr. Pautler tries to prevent this by using compression devices on your legs during and after surgery and encouraging early ambulation after the surgery.
10. Delayed wound healing: From swelling or tension, some incisions can undergo some gaping and “open” slightly. There may be some seepage, but with time, these areas will heal, but some dressing changes may need to be done.
11. Hernia: The surgery at the abdominal level is complex and involves several complicated layers. It is rare, but possible, to get a hernia in this area. Usually this involves a weakness in the abdominal wall rather than a true hernia, and a “bulge” develops with straining. Surgical repair would most likely need to be undertaken. Patients more prone to this are those that strain a lot: chronic constipation, smoker’s coughs, too early and too intense weight lifting.
12. Flap failure: It is possible, but rare, that a little, a lot, or a whole flap could not survive the transfer. It would not be apparent until a few days after the surgery. The reconstruction would end up being much smaller than needed. In this situation an implant, or another tissue reconstruction (like from the back) could be added to compensate for lost volume.
13. Need for medicinal leeches: Many patients abhor this thought, but in cases where the venous outflow from the reconstruction is somehow compromised, leeches are *extremely* effective. They help maintain the flow of circulation in

the flap until new venous channels open up. If they would be needed, they are absolutely painless. You would need to remain in the hospital during their use, and you may need a blood transfusion. Cases where they have been needed usually involve double reconstructions, or a reconstruction of a particularly large breast where maximum tissue survival is required

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