**DIEP—Breast Reconstruction Alternative**

Lorraine Steefel, RN, MSN, CTN  
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Women post-mastectomy have another surgical option for breast reconstruction than the transverse rectus abdominus myocutaneous (TRAM) flap or breast implants. The Deep Inferior Epigastric Perforator (DIEP) flap procedure, named for an abdominal artery and vein removed with the tissue, makes use of skin and fat typically from the abdomen to create a new breast.

**Benefits**

"One of the greatest benefits of the DIEP flap procedure for women is restoration of body image," says Linda Olewnick, RN, MS, nursing care coordinator, New York Eye and Ear Infirmary, N.Y., N.Y. Although surgery is longer (possibly eight hours) than the typical three-hour breast implant procedure and involves two OR teams for the simultaneous mastectomy and DIEP flap, women concerned with more natural looking breasts choose the DIEP flap procedure which, uses their own tissue for reconstruction.

Unlike the more common TRAM flap, where an abdominal muscle is removed along with the surrounding skin and fat, the DIEP flap doesn't sacrifice the muscle. The abdomen is often improved because of the tissue removed, much like a tummy tuck.

Because the abdominal muscles are spared, patients benefit by less postop pain and a shorter postop rehab, depending on the patient.

Whereas patients experience a marked reduction of trunk flexibility after the TRAM, DIEP patients perform the same range of exercises they did preoperatively, research has shown.

Typically, women lose sensation in the reconstructed breasts due to surgery. Olewnick explains that use of the Synovis Micro Companies Alliance, Neurorubt, a bioabsorbable nerve conduit sutured to the end of the nerve, holds promise, because it assists in the reconstruction of severed nerves. "As nerves regenerate, breast skin sensation slowly returns, but this varies by patient," Olewnick explains.

The benefits of the abdominal muscle-sparing flap procedure have led to a new training program of OR teams at Greenwich Hospital in Connecticut.

**More Info**

**DIEP Flap Provides Option for Breast Reconstruction**

At the New York Eye and Ear Infirmary and at Greenwich Hospital, CT, patients facing breast reconstruction may consider the DIEP flap instead of the traditional TRAM flap procedure or breast implants.

The DIEP flap spares abdominal muscles removed during the common TRAM flap surgery, and results in less pain and shorter rehab.

**Steps for the DIEP flap include:**

**Stage One**

- A slim incision along the bikini line (similar to a tummy tuck incision)
- Removal of patient's skin, soft tissue, and small blood vessels
- Microscopic matching of small blood vessels at mastectomy site and reattachment
- Reconstruction using skin and soft tissue to form the breast mound

**Stage Two**

A separate surgery performed 8 to 12 weeks after DIEP flap surgery and includes restoration of the nipple and areola under IV sedation.
candidates for a DIEP flap.

The procedure may also be used for women requiring additional breast tissue for reconstruction of defects from a congenital breast deficiency or defects from a lumpectomy or past breast implant.

DIEP flap procedure candidates must have enough tissue to harvest for the flap, which may make previous liposuction a contraindication. Women who do not have sufficient abdominal tissue to harvest may consider the inferior gluteal artery perforator (IGAP) flap that uses living tissue and fat from the crease of their lower buttocks.

Patients whose superficial inferior epigastric artery and vein aren't sufficient size and caliber may be candidates for the Superficial Inferior Epigastric Artery (SIEA) flap. The procedure is the same as the DIEP flap, but blood vessels just under the skin in the lower abdomen may be used as the feeding vessels for the required tissue.

Lorraine Steefel, RN, MSN, CTN, is a senior staff writer for Nursing Spectrum.
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