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The latest in reconstructive techniques

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IDEAS AND RESOURCES FOR RECOVERY

RECONSTRUCTION REFINED

A new surgical option gains popularity

BY CARLY BERWICK

More and more women who choose reconstruction after mastectomy are opting for procedures that use their own tissue, which can feel and look more natural than an implant. A relatively new technique called DIEP flap reconstruction is slowly gaining favor because it lessens permanent muscle damage and leaves women almost as strong as they were before surgery.

Surgeons have generally used the TRAM (transverse rectus abdominus myocutaneous) flap procedure, tunneling skin, fat and the rectus muscle from the abdomen up to the chest to make the new breast. One of the challenges in using a patient's tissue is maintaining a blood supply to the transplanted tissue. With the TRAM flap, the tissue flap remains attached to the muscle and its blood supply. A modification of the TRAM flap, the free TRAM flap, uses a much smaller piece of abdominal muscle; blood is supplied through microsurgical dissection and transplant of blood vessels.

The DIEP (deep inferior epigastric perforator) flap procedure takes no muscle at all, relying instead on the most precise microsurgery to move tiny perforating blood vessels (often a millimeter or less) and then reattach them with sutures finer than human hairs. The procedure was pioneered in the United States by Robert Allen, MD, chief of plastic surgery at the Louisiana State University Medical Center. Dr. Allen says that after the first DIEP flap surgery he performed, in 1992, he knew he'd "never do another TRAM flap again."

Because the stomach's muscle walls are left virtually undisturbed, DIEP flap surgery offers greatly reduced incidence of subsequent hernia and of limited mobility and strength in the trunk, as well as a shorter postsurgical hospital stay. According to a 1997 study in the *British Journal of Plastic Surgery*, 5 percent of a group of free TRAM flap patients had hernias one year later, while none occurred among a comparable group of DIEP flap patients. More strikingly, 47 percent of the TRAM patients reported chronic lower abdominal pain, compared to 25 percent of the DIEP patients. TRAM patients' trunk flexibility was also markedly reduced after surgery, while DIEP patients could perform the same range of exercises they did preoperatively.

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Allen just recently completed a review of 87 perforator flap patients, and found the average hospital stay for the DIEP patients was shorter than the average stay for TRAM patients. Furthermore, the overall cost, to both hospital and patient, of DIEP flap surgery was lower than for TRAM. The availability of DIEP flap surgery, however, is limited since extensive training in microsurgery is a prerequisite. Currently, just an estimated 8 percent of U.S. surgeons regularly perform the DIEP *continued on page 76*

continued from page 75 procedure, according to Allen.

Stephen Colen, MD, an associate professor of surgery at New York University Medical Center, expressed some skepticism about the DIEP flap's superiority to the free TRAM flap. "Patients like the idea of no muscle, but it's a moot point if to get to the perforator vessel you have to cut through muscle anyway." Allen counters that the DIEP technique does little permanent damage to muscle "since the surgeon cuts in the same direction as the muscle fibers."

For Isabel Erney, who had a bilateral DIEP flap reconstruction in 1997, there is, as she put it, "no comparison." Erney had a saline implant for 16 years before she went to Alex Keller, MD, a Long Island surgeon who has been performing DIEP flap surgery for three years. "In the two years since, I've never noticed any problems," Erney says. "I have felt physically wonderful and emotionally stable."

Tina Witt Deliso also had DIEP flap reconstruction surgery performed by Dr. Keller. Deliso had a pre-existing history of hernia, and had already undergone surgery which had cut into her muscle, so she wanted to do all she could to avoid further trauma to her abdominal wall. In the end, she says, "not taking muscle is a big thing when it's your muscle." M