

Free-flap microsurgery breast reconstruction offers dramatic advantages



Free-flap microsurgery — transferring a patient's own tissues at the time of mastectomy with minimal or no muscle loss — is the most significant recent advancement in breast reconstruction. New microsurgical techniques being used by specially trained plastic surgeons at institutions like UCLA — where breast microsurgery is performed in high volume — have dramatically reduced morbidity and have led to success rates that are as high as 99 percent.

What is free-flap microsurgery?

The procedure involves completely detaching skin, fat and blood vessels — the flap — from one part of the body and moving them to the site of the mastectomy. There, they are reattached, with the artery and veins of the flap reconnected under magnification to the blood supply found in the mastectomy pocket and the skin and the fat shaped into a new breast. The free-flap has become the predominant breast-reconstruction technique at the Revlon/UCLA Breast Center, using the patient's own tissue from the lower abdomen or buttocks at the time of the mastectomy.

Microsurgical experience

Microsurgical breast reconstruction requires special expertise and subspecialty training. There is a growing demand for such procedures at high-volume centers, increasing the need for more surgeons who are trained in this subspecialty. UCLA performs 200-250 of these procedures each year, which is among the highest number of microsurgical breast-reconstructions performed anywhere in the nation.



What are the advantages of free-flap microsurgery?

Older techniques for autologous (using the patient's own tissue) breast reconstruction using pedicle flaps (taking some of the patient's muscle) resulted in diminished abdominal-muscle function or abdominal weakness when some muscle was taken along with the skin, fat and blood vessels from the lower abdomen. As well, the incidence of fat necrosis in such surgery was significant. When this occurs, part of the fat in the flap needed for shaping the new breast does not survive, shrinking away and turning to scar tissue.

The newest free-flap microsurgical procedure uses perforator flaps – skin and fat with attached vein and artery, but without any muscle. This is also called the DIEP (deep inferior epigastric perforator) flap when it is taken from the lower abdomen or “tummy tuck” area. Perforator flaps have significantly improved breast-reconstruction results, sparing maximal amounts of abdominal muscle, offering minimal risk and low morbidity. Transfusions or autologous blood banking is no longer required, and hospital stays are shorter because patients have less pain.

The same technology can be used to form a gluteal flap (SGAP or IGAP — superior or inferior gluteal artery perforator flap), a less-morbid procedure that will be particularly important for the increasing number of women who require bilateral reconstructions, or for thinner women who may not have enough fat in the lower abdomen area to make a new breast.

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