

# Beauty and the DIEP: Improved Aesthetic Results with Autologous Fat Grafting to the Reconstructed Breast

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## **Abstract:**

**Background:** Breast reconstruction after mastectomy has changed dramatically over the last decade. With improvements in surgical technique and technology, both the expectation of the patients and surgeons has expanded to include not simply an acceptable reconstructed breast mound, but also a superior aesthetic result. The use of autologous fat has gained popularity since the early 1980s with its success in aesthetic and reconstructive applications to the face. Currently, autologous fat grafting (AFG) is being used in contouring of the reconstructed breast.

This study was designed to add to the growing literature of successful autologous fat grafting to the reconstructed breast and to demonstrate that autologous fat grafting allows for a better aesthetic result when used during second stage breast reconstruction after free flap reconstruction.

**Methods:** This is a retrospective review of 150 patients, 68 of which were treated with autologous fat grafting after previous perforator flap reconstruction between August 2010 and December 2011 by the senior author. All patients underwent AFG after either skin sparing mastectomy or modified radical mastectomy and free flap reconstruction with DIEP, SIEA, PAP, TUG or GAP flaps. Patient demographics, number of fat grafting sessions as well as quantity of fat grafted per session were reviewed. Patients were followed for twelve months with both clinical and photographic evaluation of the fat grafted reconstructed breast.

**Results:** All patients demonstrated improved clinical and photographic aesthetic results based upon symmetry, projection and patient satisfaction.

**Conclusion:** The improved aesthetic result provided by autologous fat grafting cannot be achieved with other surgical adjuncts. AFG allows the reconstructed breast to have a more natural appearance particularly assisting in providing adequate size and projection. Volumes as large as 250cc may be required to achieve the desired aesthetic result.

With great ease of procurement and transfer, autologous fat grafting is the ideal adjunct for ensuring a superior aesthetic result in the free flap reconstructed breast.

