



Study: Puregraft Closed System Outperforms Centrifuge for Fat Graft Retention

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Researchers have long tried to identify the most optimal methods for increased retention rates for autologous fat transfer, which is considered an important measure of fat grafting success. Among other factors, variables include the age of the patient, harvesting methods used, and the precise steps taken to clean the tissue prior to re-injection.

In a new [study](#) published in the July 2014 issue of *Aesthetic Surgery Journal*, investigators compared the retention rate of grafts prepared with the [Puregraft](#) filtration technology (Puregraft LLC, San Diego) to a historical study of centrifuge processed fat grafts conducted by the same authors. The study included 26 patients, or 52 hemifaces. The mean follow-up period was 17 months, and the mean amount of fat injected into the treated areas was 8.88 mL. The authors reported that the mean retention rate found in the Puregraft population (41.2%) was statistically significantly higher than that found in the centrifuge processed samples (31.8%).

In addition, the mean retention of the patient group who received the filtration-based fat graft was significantly higher (53%) in patients younger than 55 years of age. The same age group in the centrifuge cohort did not demonstrate the same trend. Retention rates were measured volumetrically using a 3D camera and software system.

“Fat grafting has long been criticized for its unpredictable rates of retention,” explains study author Mark Glasgold, MD, FACS, a facial plastic surgeon from Highland Park, NJ. “Closed system processing on the sterile field makes fat grafting safer and cleaner by containing tissues and fluids to minimize risk of infection. The closed design also protects tissue viability by minimizing exposure.”

