

From harvesting to injecting, without centrifuge

Fat transfer expedited with filter chamber

Quick read

LipiVage, a newer disposable filtration device, expedites fat transfer procedures by eliminating the need for a centrifuge step. Fat can be harvested and made ready for injection within seconds. Use of the device helps to protect fat cell integrity and contain procedure costs.

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Chicago — Eliminating the need for centrifuging harvested fat cells during the fat transfer process can save time in the operating room and improve the viability of fat cells.

This appears to be possible with a newer, disposable, closed-system device that harvests, filters, washes and transfers autologous fat cells.

According to Stephen E. Metzinger, M.D., F.A.C.S., the closed system design of the device — called LipiVage (Genesis Biosystems) — also should theoretically lower the risk of infection, although clinical studies have not yet demonstrated this.

“You go directly from liposuctioning the patient to the injection syringe,” says Dr. Metzinger, clinical assistant professor of plastic surgery at Tulane University Health Sciences Center in New Orleans and a private practitioner in Metairie, La. and Gulf Shores, Ala. He has used the LipiVage device for nearly one year, primarily on larger cases or patients requiring multiple procedures.

sure on the plunger pushes the plunger tip through the filter chamber to wipe fat cells from the filter’s interior walls into the injection syringe.

Better fat cells

LipiVage is designed to produce more viable

fat cells and minimize the cell damage that is typically associated with traditional fat transfer. Because the system uses low vacuum pressure from a controlled source (wall suction) during harvesting, damage to fat cells is kept to a minimum.

Dr. Metzinger says the liposuction machine to which LipiVage is attached must have a variable suction control, and he typically reduces the machine to 50 percent to prevent fat cell destruction.

Without the need for a centrifuge, fat cells are protected from intense g-forces that could damage them. Oil and fluids do not need to be poured off afterwards. Because fat is ready for injection almost immediately after harvesting, the quality of fat cells is sustained. And the closed system should reduce the chance for infection.

In the time he has used the device, Dr. Metzinger has found that the post-operative reliability of the fat has been good — just as good as after traditional methods of fat transfer.

“It is too early to get a conclusive picture, but it appears that the volume is comparable to what we were doing before using a centrifuge system,” he reports. “We need much longer follow-up to see if the fat remains viable.”

Time and money

Because fat is harvested and quickly made ready for injection, Dr. Metzinger says the duration of some procedures can be shortened with LipiVage. That makes the device perfectly suited to expedite larger procedures, such as gluteal augmentation, correction of contour irregularities from previous liposuction procedures and defects in arms and thighs.

“LipiVage saves time and money. Time spent doing less centrifuging leads to less operating room time (and associated charges). If it saves time, it saves money.”

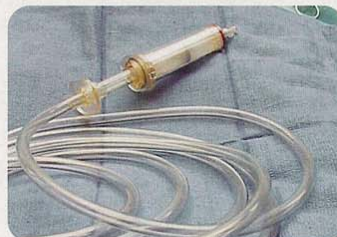
Dr. Metzinger says the learning curve is not all that steep, but care must be taken to protect the filter from excessive suction. Also, the device could be damaged if the vacuum is not released before transferring fat into the injection syringes.

He tells new users to first observe another doctor using LipiVage or ask a representative from the manufacturer to be present during the initial use — or both. **CST**

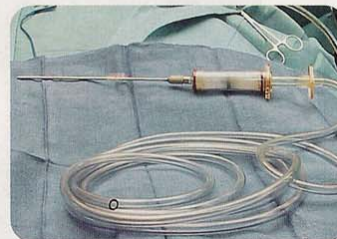
Disclosure: Dr. Metzinger reports no financial relationship with Genesis Biosystems.



Quality of fat can be observed.



LipiVage with harvesting cannula.



Harvest via umbilicus.



Fat after one minute of harvesting.



Transfer of fat to injecting syringe.



Patient before (left) and after (right) undergoing fat transfer procedure.

Photos: Stephen E. Metzinger, M.D.

How it is used

The LipiVage syringe attaches to a tubing set that is connected to a controlled vacuum source, such as wall suction. Fat is harvested through an appropriate cannula and enters the syringe chamber for filtering. Inside the chamber, fat cells are gently cleaned by the accompanying tumescent fluid.

Fat cells collect along the inside walls of the filter, and unusable fluids and oils wash through and drain behind a plunger tip. Suction in the tubing set carries away the waste to a receptacle. For every one minute of harvesting, the filtering and draining process requires just a few seconds.

After draining, the fat cells, which have been cleaned and concentrated, are ready for injection. An injection syringe is attached to the chamber, and gentle pres-