

Structural Fat Grafting

The site selected to harvest the fat does not seem to affect the outcome; therefore I let the patients choose, or I use whatever site is most convenient.

A 2-mm diameter (15 or 23 cm length) blunt cobra cannula is used so the fat is harvested in small parcels, as globules—with the idea that it will fit through the aperture of a 10-mL Luer-Lok® syringe (Becton/Dickerson [B-D®], Franklin, NJ). Fat harvested with a large cannula (eg, 9 mm) may not survive the mechanical trauma of being forced through the lumen of a small cannula during placement.

Some surgeons use a syringe that results in a very high harvest pressure. I just pull back the 1-mL marker on the 10-mL syringe and maintain gentle suction as fat accumulates.

I almost always use epidural or local anesthesia for harvesting. The local area is infiltrated with Ringer's lactate, 1:400,000 epinephrine. When using local anesthetic alone, I use 0.5% lidocaine with 1:200,000 epinephrine, infiltrated at a ratio of 1 to 1 for the planned harvest. Regional blocks and local infiltration are used for the recipient site. Because of distortion in the recipient area, I try to plan the volume and depth of fat injection before the local anesthetic is infiltrated.

In my opinion, washing fat is a bad idea because such manipulation can disrupt the fat parcels. As soon as the fat is harvested, I put the syringe on the back table to layer out and determine whether there is a significant amount of fluid. It is then centrifuged at 3000 rpm for 3 minutes. The oil is decanted and the blood and fluid are expressed from the syringe. Nasal packing is placed in the syringe to wick away the remaining oil on the top.

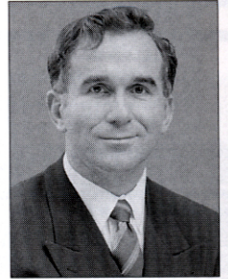
Every effort is made not to expose the fat to air. Ten milliliters of harvested fat usually will provide 4 to 6 mL of "refined" fat suitable for grafting. This fat is loaded into a 1-mL Luer-Lok® syringe, care being taken to avoid air bubbles.

My technique of injection enables me to infiltrate larger volumes because the fat is injected slowly with a blunt cannula and 1-mL syringes. I never use a spring-loaded syringe.

I inject at different tissue levels depending on what I'm doing. If I'm trying to minimize wrinkles or correct acne scarring, the fat is put immediately beneath the skin so that it changes the texture and gives great support. A dissector placed under the really difficult ice pick-type scars, followed by fat injection, can smooth scars remarkably without the long recovery time of lasers or chemical peels. If I'm trying to make a structural change and create support, such as augmenting the malar region or augmenting the mandible, the fat is placed against the bone. When placed against bone or cartilage, the fat feels very much like bone or cartilage. If I'm trying to augment an area, I'll put the fat into the muscle or the subcutaneous fat.

I frequently inject fat in the periorbital region. The fat must be placed immediately beneath the skin in tiny quantities with each pass, so that it's barely visible to the eye. I rarely make fewer than 30 passes with 1 mL of fat, so that I'm putting in 1/30 mL of fat with each pass.

I only overcorrect around 5% or so to account for the free oil and maybe as much as 5% for fat that is not



Sydney R. Coleman, MD, New York, NY, is a board-certified plastic surgeon and an ASAPS member.

"My technique of injection enables me to infiltrate larger volumes because the fat is injected slowly with a blunt cannula and 1-mL syringes."

Continued on page 388