Surgical Aesthetics The business of cosmetic plastic surgery

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Fillers, fat or implant?

Restoring volume in the face

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IN THE MODERN ART of facial plastic surgery, doctors have a growing array of tools to help them achieve the naturallooking, youthful face that patients desire. Dermal fillers, fat grafts and implants help surgeons create a custom look to meet the needs of each patient, and part of the surgeon's skill is knowing when to use each option for the best results.

"One of the trends in plastic surgery today is that people want fuller cheeks," notes Sam Rizk, MD, director of Manhattan Facial Plastic Surgery and Park Avenue Facial Surgery in New York City. "Part of the aging process is losing facial volume in the cheeks and the temple area. Loss of volume in the upper face causes people to look older, and this is something that cannot be corrected with a facelift."

Injectable fillers, autologous fat transfer, and cheek and chin implants can restore lost volume and reshape a patient's face when used alone or in conjunction with a facelift. Each method has its pros and cons, and each of the doctors interviewed for this article has used all three methods.

Volume and Definition

There are several tools available to replace lost volume and add definition to the face, and each offers its own pros and cons.

By Cindi Myers



Injectables Offer Immediate Results Hyaluronic acid-based dermal fillers sold under the brand names Juvederm (juvederm.com), Restylane (restylaneusa.com), Elevess (elevess.com) and others are the most widely used type of fillers. Other options include calcium hydroxylapatite (Radiesse, radiesse.com) and injectable poly-L-lactic acid (Sculptra Aesthetic, sculptraaesthetic.com). With the exception of poly-L-lactic acid, dermal fillers are fast-acting with little to no downtime, and the results last from a few months to two years. In 2011,

plastic surgery like fillers because they can see results right away in most cases; if they don't like the results, they know the effect will not be permanent. Doctors can even reverse the effects of hyaluronic acid fillers by injecting hyaluronidase. The primary side effects of hyaluronic acid injections include minor swelling and bruising.

Hyaluronic acid is a substance that occurs naturally in the body, so it has a low risk of allergic reaction, but it is also reabsorbed by the body, so the effects last—on average—three to five months.

"With injectables, the disadvantage is that they're temporary, and the advantage is that they're temporary."

dermal fillers were one of the most popular minimally invasive cosmetic procedures, second only to Botox Cosmetic, according to the American Society of Plastic Surgeons (ASPS, plasticsurgery.org).

"With injectables, the disadvantage is that they're temporary, and the advantage is that they're temporary," says Jeffrey Spiegel, MD, chief of facial, plastic and reconstructive surgery at Boston University School of Medicine in Boston. "They are expensive to maintain, but they are an inexpensive way to try out facial contouring."

Younger patients and patients who are new to

Patients who tire of repeating injections several times a year may eventually graduate to more permanent facial contouring solutions.

Fillers can be used in small amounts, giving doctors great control over the results. Conversely, it is difficult to apply enough volume of fillers alone to sculpt areas in need of greater contouring, such as the chin or hollow cheeks.

"Fillers are ideal for areas that require fine tuning, such as the upper eyelid or the temple area," says Babak Azizzadeh, MD, of the Center for Advanced Facial Plastic Surgery in Los Angeles.

PHOTOS COURTESY OF SAM RIZK, MD

"Despite amazing technological advances, the predictability of the outcome for fat grafting is different for every doctor."

"They're good for patients who need very mild reshaping or have mild volume loss, and they allow you to achieve exact results."

The doctors interviewed for this article favor dermal fillers for use in the nasolabial folds and the lips. Restylane is currently the only filler FDA approved for use in the lips. Dr. Rizk cautions that when using dermal fillers in this area, it is important to maintain a natural relationship between the size of the upper and lower lips. "The lower lip should always be one-third larger than the upper lip," he says. "If the upper and lower lips are the same size, it looks unnatural."





Dr. Sam Rizk used fat grafting to restore volume to this patient's cheeks.

Patients who enjoy the results of their fillers but would like longer-lasting results may opt to use Sculptra, a synthetic filler that stimulates the body's own collagen production, or Radiesse. (Note: Long-term fillers are contraindicated for use in the lips.) Unlike hyaluronic acid fillers, Sculptra doesn't produce immediate results. Instead, patients notice results over a period of four to six weeks. "The one disadvantage to Sculptra is that the results are not immediate. The patient has to wait about a month, and Sculptra usually requires two or three sessions," says loannis Glavas, MD, of M.E. Plastic Surgery Center in Boston and New York. In rare cases, both Sculptra and Radiesse can form hard nodules, which require surgery to remove.

Fat as Filler

"With fat grafts, you don't have to worry about an allergic reaction, because it is the person's own fat," says Dr. Rizk. "You can get the large volume with fat that you need to fill the cheeks." He injects fat under the muscle, on top of the bone, to achieve a smooth appearance. Fat grafts will last five years or longer in most patients.

Unlike injectables, fat grafting does require surgery. "If a patient is going into the operating room for a facelift, blepharoplasty or other surgery, I may recommend fat grafting because they're already in the operating room," says Dr. Azizzadeh.

Fat for transfer may come from the abdomen, flank, inner or outer thighs, or almost anywhere the patient would like it removed. "You ask the person, 'What is that one area of fat you just can't lose?'" says Dr. Spiegel. "The fat that is the hardest to get rid of is the fat that sticks around the best."

Patients may have heard about a procedure called a "stem cell facelift," which touts the rejuvenating powers of the stem cells naturally found in fat. "I see doctors marketing this as an advantage, but we still don't have evidenced-based medicine that corroborates these claims," says Dr. Azizzadeh. "Do I think stem cells may play a role in the results you get from fat grafting? Yes, I do, but we don't have the clinical evidence to prove this."

Dr. Rizk agrees. "We know stem cells have a positive effect on collagen," he says. "We are still in the process of figuring out how to isolate stem cells." He uses Plasma Rich Platelets, or PRP, injections, which contain stem cells from blood, in conjunction with fat grafts in some patients. "I will use PRP if I think the skin is very wrinkled and the quality of the skin is not good. I'm not going to tell the patient that PRP is the answer to their aging process. It is one component of addressing the effect of aging, but it is not a cure-all. It is still under research," he says.

The doctors surveyed most often use fat transfer to the face for the cheeks, nasolabial folds and jowls. The primary side effects of fat transfers are swelling

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and bruising, temporary numbness and unevenness or lumps. "Despite amazing technological advances, the predictability of the outcome for fat grafting is different for every doctor," notes Dr. Azizzadeh.

Implants for Permanent Change
Facial implants offer the most permanent option for
volume replacement, as well as the potential to create the most dramatic facial contouring. Whether
someone was born with a weak chin, or has suffered
bone loss through aging, resulting in a smaller
chin or less prominent cheek bones, implants are a

"The cheek area responds beautifully to implants, which I think can give a more natural result than any other method," says Dr. Spiegel.

popular option for natural-looking reshaping.

Dr. Rizk points out that you can insert cheek implants from inside the mouth, with no external scarring. (ed note: Implant placement through the mouth may increase the risk of infection.) He likes to use a combination of an implant and fat injections in the pre-jowl sulcus to reshape the chin. Doctors can choose from an array of full and partial implants sized and shaped to create many different effects.

"The art is in the analysis."

The primary risks with implants are infection and shifting of the implant. And the results are difficult to reverse. "Any kind of permanent implant can have permanent excellent results," says Dr. Spiegel. "But if they are placed incorrectly, permanent implants won't just 'go away' over time. It will require a second procedure to correct."

Though implants offer the longest-lasting result, even a successful implant surgery can require revision down the road. "Nothing we do is permanent," notes Dr. Azizzadeh. "An implant is permanent, but the tissue and muscles around the implant continue to atrophy and the appearance changes."

Choosing the Right Approach

As with any cosmetic procedure, doctors must balance art with science and consider both the patient's physical condition and desired results. For instance, Dr. Azizzadeh notes that patients who are runners or those who have a low percentage of



body fat may not be good candidates for fat grafting, since it can be difficult to obtain a sufficient amount of fat for transfer. These patients may do better with dermal fillers. Patients who need a large amount of filler in the cheek area may not be satisfied with the results the doctor can obtain with injectables, and would be better candidates for fat grafting or an implant.

Ultimately, the decision lies with the patient. The doctors surveyed try to provide patients with as much information as possible to help them make the right choice. "I tell my patients they have to balance benefits and risks," says Dr. Glavas.

"I might even inject the patient with saline in the office to show them the kind of results they could achieve," says Dr. Spiegel.

Patients can benefit from talking with other patients who've undergone similar procedures, and physicians will benefit from sharing and learning new techniques. "If you're thinking about getting involved with this, find someone who is experienced with facial contouring and spend some time with them," urges Dr. Spiegel. "The quality of the outcome with these procedures depends on small subtleties. You can really jumpstart your skills by spending time with someone who does this well."

"I really think facial surgery is an art," says Dr. Azizzadeh. "The art is in the analysis. Avoid being cookie cutter in your approach. The difference between great outcomes and less great outcomes is in patient analysis, in analyzing the underlying anatomy and shape of the face, and knowing how to really develop a natural look."

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