

The Art and Science of Facial Fillers

By Todd E. Schlessinger, MD

■ These days, there are many ways to maintain and enhance one's natural beauty in our world of cosmetic surgery. No one procedure in recent memory has had a more significant impact than the use of dermal fillers to soften wrinkles and make lips look full and youthful. These fillers have become so popular for a number of reasons; they are non-invasive, produce immediate results and have very few side effects. Our view of the aging face has changed. In the past, we thought mostly of loose skin. Now, we think about volume loss and how to replace that. Patients just 5 years ago had to resort to expensive surgery with downtime and higher risk to achieve results they can now have in minutes and be back to their life the same day as their treatment.

Patients coming into my practice are looking for ways to restore the appearance they had when they were younger. Tops on their Wish List include an end to the folds around the nose, mouth, cheeks and chin. They want to have their down-turned mouth corners turned up, their lower eyelids less baggy and the wrinkles around their mouths gone. Even my own office manager did not like her "paper chip lips" and she said that friends would come up to her and ask why she was looking so unhappy. Her reply was always the same, "I wear a permanent frown". Now, after a few syringes of Perlane, she looks and feels great about her new lips and mouth. Friends and family have noticed the difference and now comment that she looks great, and when she tells them her age, they can't believe it.

Patients seeking dermal fillers should be aware that while fillers have been used successfully in millions of people with few problems, side effects such as bruising and swelling are likely to occur after treatment. Occasionally, there can be an infection from the injection and in the case of permanent fillers, small lumps may form. These are rarely visible and can be treated easily by a skilled physician. Look for a board-certified dermatologist or dermatologic surgeon with experience using fillers as injection

questions to ask

Before embarking on your journey to a new you, there are several questions you should ask yourself and then your doctor:

- 1) What areas of my face do I want enhanced?
- 2) Do I want a permanent or temporary filler?
- 3) How much do I plan to spend for these fillers?
- 4) What are the potential side effects?
- 5) Is the filler approved by the FDA for this use?

technique plays a large role in the eventual outcome of the procedure.

Dermatologists have known for years that wrinkles come from the loss of three critical skin components; collagen, hyaluronic acid and elastin. Today, we can replace two of the three components that are lost in aging skin.

The first filler, bovine (cow) collagen was the undisputed leader in treating facial wrinkles since injectable fillers were introduced in the 1970's. It's potential for allergic reactions and its short-term results limited the filler's potential. In 2002, the FDA approved a bioengineered human collagen for treating facial lines, acne scars and lip enhancement. While an improvement over its predecessor, dermatologists were looking for longer lasting fillers that could be used to treat deeper lines and wrinkles.



Most recently, several new fillers have entered the market and are now in widespread use:

Restylane and Perlane, two FDA-approved fillers in a family relying on hyaluronic acid use a naturally occurring substance to pull water into the skin resulting in skin plumping and increased volume. Hyaluronic acid does not pose an allergy risk, so patients can have their treatment at the first visit to the dermatologist. Restylane is thinner and works best for lips and finer lines and wrinkles. Perlane works best to enhance deeper folds such as those running from the nose to the corners of the lips or nasolabial folds. Perlane also works great to turn the corners of the mouth up, eliminating the “permanent frown” some patients present with. These versatile fillers can be used to enhance the cheeks, under the eyes, lips and jowls. Juvederm is another hyaluronic acid filler that is available but has a much smaller market share after being approved in 2006.

Radiesse, approved by the FDA for cosmetic use in 2004, is based on calcium microspheres suspended in a gel. Radiesse is great for deeper facial folds and works by allowing the body to lay down new collagen over the matrix injected. Radiesse can cause lumps when injected into lips so it is best to avoid that area, choosing another filler instead. Radiesse has been shown in studies to last a year to 18 months.

Artefill, approved by the FDA in 2006 uses microspheres of polymethylmethacrylate (PMMA) spheres suspended in purified bovine collagen base. The collagen holds the spheres in place until after injection only to dissipate leaving the spheres behind to stimulate the growth of new collagen into the area. Artefill is a permanent filler that is best suited to the nasolabial folds and may be the answer for those patients looking for the longest lasting result. While the main benefit is permanence, that can also be its downfall if it is injected improperly.

Sculptra, approved by the FDA in 2004 to treat HIV associated facial fat loss is often used off-label for

cosmetic purposes. It is composed of poly-L-lactic acid, a synthetic material also used in absorbable sutures. Sculptra is best labeled as a “volumizer” and differs from other products in that its results are not immediately visible. Patients are treated every month for four or five months until correct results are achieved. Sculptra is mixed with water and an anesthetic and is injected as a fluid. Once the fluid dissipates, the product causes new collagen to form, increasing skin volume and thickness over several weeks to months. Great for enhancing larger areas such as cheeks and the lower face, Sculptra is being used in my practice in combination with other fillers to produce a “liquid face lift” whose results may rival surgical face lifts in some cases. Sculptra may last two years or longer in the skin.

Combination therapy with Botox and multiple fillers is the trend making the most news. Botox injections enhance the results of facial fillers by relaxing the underlying muscles, allowing the filler to stay in place longer.

New on the horizon are other fillers based on existing and new substances and a rival to Botox.

What we now know about the aging face is a large force in the success of dermal fillers. Now, with little downtime and discomfort, we can produce a youthful and fresh looking face in a fraction of the time needed in the past. ■



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