



Pan Facial Augmentation

Take Years off Your Face with Injectable Fillers

By Ron M. Shelton, M.D.

Facial aging has many components. The skin changes as a result of chronologic aging, as a result of photoaging and from exposure to other environmental stresses. It develops a sallow color, pores may become wider, criss-cross creases create a cobblestone-like appearance on the mid cheek, flat and raised brown spots occur, and the skin loses its reflective luster and elasticity. Makeup does not seem to go on as smoothly, and the skin starts to feel dry. Most of us feel like this happens all at once, even though it takes many years to see these changes.

The infrastructure of the skin provides shape to the overly-increasing covering of the face. Significant sun exposure not only ruins the “skin” of the grape, but it also makes the old grape

THE ARTISTRY OF FACIAL FILLING

Using facial fillers artfully is truly a tailored treatment; we customize the treatment we do for each individual.

Every face has different needs and goals.

Fillers have become a mainstay to reverse a tired appearance. Injectables made from a variety of substances can add volume to lift the midface and jawline, enhance features like lips and cheeks, and camouflage flaws such as acne scars and hollows.

We have to look at the face three dimensionally to understand how to create a more youthful appearance. In fact, it

Wrinkle fillers do not replace facelifts; they do something facelifts cannot do and are complementary treatments

lose more of its water. This volume loss creates a much smaller support of the grape skin, and voila, a raisin is created with its unique crinkled surface. Similar to a balloon that has lost its air over time, the skin becomes like crepe paper. Once you refill the balloon, the surface becomes smoother.

The aging appearance of the face is caused by the wasting of the layers under the skin over time. Our facial fatty layer becomes thinner, while our abdomen and love handles expand. Muscles of the face get lax and the bony framework becomes thinner, which in turn changes the way our teeth fit. Eyebrows fall, cheeks sink in, the tip of the nose drops, lips flatten and a double chin can appear. All of these changes are related to the cumulative effects of chronologic aging, diet, stress, lack of sleep and exposure to sun, uv rays, pollution and smoking (both direct and indirect smoke).

Drooping skin, which creates lower eyebrows and eyelids, loss of cheekbone prominences, deepening smile folds and jowls hanging over the jaw line, is not merely the result of gravity. Volume loss from fat wasting underneath the skin also contributes significantly to the aging process. A successful treatment involves the filling of the deflated balloon to improve its crinkled, raisin-like covering.

is becoming less common to inject fillers only into a smile wrinkle fillers do not replace facelifts; they are complementary treatments crease, called the nasolabial fold. Rather we look at the face as a whole and evaluate all of the surface contours to get the most natural rejuvenation. Dermal fillers are used in creative ways to restore the dermis to an earlier state. They are also used to reduce wrinkles, scar depressions, enhance lips and cheeks, lift sagging jowls and replace soft-tissue volume loss.

This evolution of volume replacement with fillers is one of the most exciting aspects of facial rejuvenation in the last decade. The amount of volume ranges from small and subtle to dramatic, but the whole picture can be very pleasing. Improvement does not need to occur overnight, and more fillers can be added over time for a more gentle transitional effect, so that you don't shock yourself when looking in the mirror.

Most FDA-approved fillers give temporary results, which can be an advantage; if you do not like the results, you are not committed forever. As your face continues to age with more fat and muscle atrophy and bony resorption, additional filling can continue to be done as needed. Some of the permanent or long term fillers such as

off-label use of silicone can produce delayed lumps even decades after treatment and may not look natural as the face continues to change. This may be hard to repair or reverse, even with surgery.

My personal favorite temporary treatments are Juvederm® (Allergan), Restylane® (Medicis Aesthetics), Radiesse® (Bioform Medical), Sculptra® Aesthetic (Sanofi-Aventis), as well as fat injections fat injections to replace volume loss. I may use only one filler, or in some cases, I may use a combination of fillers to achieve the most aesthetically pleasing result. A combination treatment may depend on the location and the amount needed to fill. A layering effect means that thicker fillers are placed deeper and thinner fillers are placed superficially.

The most commonly used fillers around the world are derived from hyaluronic acids, which are sugar/water molecules that a natural component of skin. Hyaluronic acids are also found in joints, as in chondroitin sulfate and glucosamine supplements used for joint health.

Hyaluronic acids help bind water in the dermis to the filler and plump up the depressed skin from below. Restylane and Juvederm Ultra are among this group of fillers. Perlane® and Juvederm® Ultra Plus are thicker fillers designed to be injected slightly deeper. Most recently, Juvederm XC, Restylane with lidocaine and perlane with lidocaine gained FDA approval. these hyaluronic acid gels contain an anesthetic to make injections for comfortable. Juvederm, Restylane and Radiesse are immediate fillers that provide instantaneous results and last approximately up to a year or longer. Fillers in dynamic areas such as the lips tend to be resorbed more quickly due to muscular activity, such as speaking and eating, increases the metabolism of the product.

Radiesse is calcium hydroxyapatite, a chemical that we have in our bodies. It is the normal precursor to the material that helps with bone formation. Radiesse is thick enough to provide nice volume augmentation in even very deep folds and hollows. It is often mixed with local anesthetic prior to the injection to make the treatment more comfortable.



Pan Facial Rejuvenation with Radiesse

Radiesse is an ideal choice for deep nasolabial folds, gaunt cheeks and downturned corners of the mouth.

Sculptra Aesthetic works like a “seed” to stimulate new collagen formation in a unique way.

Sculptra is fashioned from a substance called Poly L-lactic acid, a chemical similar to what is used in dissolvable sutures. It is mixed with water and anesthesia so the result is produced during treatment and lasts only one day while the fluids are redistributed. The remaining particles stimulate the body to produce new collagen over several months after the Sculptra is placed. Repeat treatment is needed to continue to improve the volume augmentation, and the results may last more than two years.

Fat injections are not actually fillers, but are considered a graft since the cells may live in the new environment of the face once they are harvested from the hips, abdomen or buttocks. The fat is processed and then injected in small amounts. Fat injections are usually done as a series of treatments at varying intervals to provide a long lasting result. In some cases, results can last more than five years.

NEW USES FOR FILLERS

Why is it that babies are born with smile creases and no one would ever say that a baby looks old? It is their cherubic cheeks.

Volume and fullness give the impression of youthfulness. Some people suddenly look in the mirror or see themselves in photos and feel they look older but don't know what they need. The reason has to do with deflation; the area that supported these parts of the face in the past is now unable to do so because of volume loss.

Starting from the top of your face down, the temples become more concave and the skin thins. Large veins become more apparent and the skin looks almost transparent which can convey a tired and older impression to others. Aging causes a drooping of the outer eyebrow, whereas an egg-shaped fullness of the skin of the outer area below the eyebrow and over the eyelid is the mark of a youthful appearance. It also helps support the eyelid. The injection of Radiesse or Restylane as an off-label use can lift the eyelid a few millimeters. The volumization of the eyelids retains a



Nasolabial folds treated with filler

young look, whereas removing too much fat and skin can make you look tired and older. Plastic surgeons are able to do this via a fat repositioning technique.

Over time, cheekbones become flatter and the face becomes more rectangular than a tapered appearance, which is considered more attractive. The midface can be further enhanced by adding fillers to the middle and inner cheek fat pads, where fullness has been lost with time. The subtle elevation helps improve light reflection, and provides rounded contours, which also rejuvenates the smile folds. Once the mid face is volumized, the eyes are drawn less to the smile folds. The face looks younger even before the smile creases are lifted.

Nasolabial folds are natural landmarks of the face. You don't want to make a smile fold go away entirely. When people look masklike, something looks wrong.

The smile folds can be treated by filling the area in multiple planes. Some people only have deep valleys with gently-sloping walls, while others have only superficial fine

creases in the skin and others have a deep fold that has a thin crease on the surface. The type of filler and the amount used is as important as where it is injected. Usually the filler gives a better result when it is placed slightly on the inner aspect of the crease instead of immediately under the crease. Some creases need augmentation on the cheek side to help support the fold better, and the filler may even be injected horizontally underneath the crease in these conditions. It is important to perform injectable treatments slowly and carefully to avoid overcorrection and to minimize bruising.

Vertical lines of the upper lip often cause lipstick to bleed, and this along with a flattening of lip projection gives an old-looking appearance. By examining your profile, we look at how the forward projection of the upper and lower lip meets the line extending from the tip of the nose to the chin. Radiesse or Juvederm can be injected off-label horizontally into the area beneath the nose, under the upper component of the skin-colored upper lip. Radiesse is not injected into the red lip. Juvederm and Restylane are frequently used in this part of the lip for a natural and soft enhancement. On profile, the line from the chin to the neck in this condition is straight and doesn't have the angle that is considered youthful. Augmentation of the chin can create a better angle. A thicker filler such as Radiesse, fat injections and Sculptra, can be used to create volume and the desired contour improvement.

A jowl is created when the skin hangs over the jaw. A dip that forms between the hanging jowl and the chin is referred to as the pre-jowl sulcus. Juvederm and Restylane can be used to fill the dip and create a straighter jaw line without a surgical face lift. The back of the jaw may become ill-defined as the skin starts to hang. With a careful use of fillers, the angle of the back of the jaw can also be improved non-surgically.

The beauty of temporary fillers is that they are so versatile. They can offer significant improvement in the 3-D contour of the face, which addresses the concern many people have about individual lines. To some extent the reversion of the raisin to the grape, or the refilling of the old crinkled deflated balloon, is responsible for the improved effect. Fillers may cause greater blood flow, which in turn strengthens collagen. The result is thicker skin that looks less

transparent. Once volume loss is addressed, the skin's surface wrinkles can be treated with Botox, peels and laser resurfacing to reduce sun damage.

BOTOX® BENEFITS

Botulinum Toxin is the world's leading non-surgical aesthetic procedure and the foundation of an anti-aging program for the face. Botox® Cosmetic™ (Allergan) and Dysport® (Medicis) are the brands of botulinum toxin used in the U.S. to minimize the muscular movement that causes the skin to crease like an accordion. Skin obtains a smoother appearance and lines and wrinkles of expression are reduced. Botulinum toxin is also used to soften the actions of muscles that pull the forehead down, thereby lifting the eyebrows as needed for a more open-eyed appearance. Outer eyebrow and crow's feet areas not only look less

TEST YOUR BOTOX® IQ: TRUE OR FALSE

Botox® is a dangerous poison	T ☐	F ☐
It gives you a frozen face and you can't show any expression	T ☐	F ☐
It will erase all your wrinkles	T ☐	F ☐
It makes you feel numb	T ☐	F ☐
It makes your eyelids droop	T ☐	F ☐
No one really knows if it is safe	T ☐	F ☐

If you said TRUE to any of the above statements, you would be mistaken. Botox® has been used for cosmetic purposes since the late 1980s, and it has an excellent safety profile. It is actually a purified protein. It is approved by health authorities in over 70 countries worldwide and for over 50 medical conditions, from neurology to ophthalmology, and other specialties in between. We do not use Botox® to freeze all the muscles in the face, but rather to minimize the appearance of lines caused by muscle contractions for a more subtle effect that is natural looking. The doses used for cosmetic dermatology are significantly lower than those used in neurologic conditions.

wrinkled after the toxin, but a lift to the outer eyebrow results from the relaxation of the downward pull of the circular eyelid muscle in this area.

With Botox and Dysport, you can start gradually and have more injections as needed.

These are the three most common areas we treat: Vertical creases between the eyebrows (glabella), crow's feet and horizontal forehead lines

Very small amounts of Botox, used off-label, are also injected expertly in the upper lip to decrease some of the vertical lines by minimizing the pursing action of the lip muscle. Use of botulinum toxin in the jawline may decrease the pulling down effect of the thin, but wide, strap muscle of the neck (the platysma muscle), which may in turn provide a lifting of the jaw. Botulinum toxin injected into the muscles that lower the corner of the mouth, helps elevate the sad look of a droopy lip. It can also improve the appearance of dimpled skin in the chin — what some people describe as facial cellulite.

SKIN REJUVENATION WITH LASERS

There is no perfect magic wand that can be waved over the face — without invasive laser surgery or long recovery time — that can transform your skin to the way it looked two decades ago.

After the structure of the face is restored to its appearance of years ago, textural and pigment changes of the skin can be treated using innovative methods of skin resurfacing. Newer technologies offer improvement in sun damage, texture, static wrinkles and acne scars, with a marked reduction of the long term side effects and risk of scarring.

In contrast to the old type of carbon dioxide laser, where 100% of the facial skin surface is blasted away, fractional carbon dioxide lasers are composed of many tiny individual beams within one laser pulse. The tiny remaining epidermal tissue in between the laser pulses allows for quicker healing, while the dermis is affected deeply enough to stimulate collagen formation and elevation of depressed lines and scars. We use Fraxel® re:pair (Solta Medical), for deeper resurfacing, which is usually a single treatment. The less invasive Fraxel® re:store laser involves multiple sessions a few weeks apart and is used to treat fine lines, brown



Full face resurfacing

discoloration and acne scars. It does not provide the same degree of skin tightening that Fraxel Re:pair laser creates, but results are impressive on texture, tone and skin quality. Fraxel Dual is a new middle-of-the-road resurfacing technique that can improve freckles and sun damage with less down time than Fraxel re:pair.

Another novel technology is Thermage® CPT (Solta Medical), the newest radiofrequency device that can help tighten the soft tissue and provide some lift in foreheads, eyelids, smile folds and jowls with minimal discomfort and no downtime.

There are a wide range of minimally invasive options available today with the advent of injectable wrinkle fillers and laser technologies. All of these procedures serve as an important tool to defer cosmetic surgery for a few more years. There is nothing more rewarding in terms of anti-aging benefits than to experience the immediate correction of facial wrinkles as a result of the injection of a dermal filler.

After all your efforts to obtain a more youthful face, remember to protect your new skin with a UVA and UVB sunscreen daily. Don't forget to take Vitamin D3 too — its production in the skin is blocked by the sunscreen you use. ❖

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