



Micro Fat Grafting

"Redeploying" Fats for a Fuller Face

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AGEING IS A fact of life, but looking one's age is not. The holy grail of plastic surgery is always to reverse the ravages of ageing and to bring the patient back to his or her previous youthful glory.

As we age, our skin becomes saggy and there is noticeable volume deflation in our face due to the resorption of our bone, fat and soft tissue. Like a deflating balloon, the face loses its roundness and the deflation is especially obvious over the temples, peri-orbital (eye) region, mid-cheek and chin.

The Age of Beauty

Previously, the common solution for volume replacement was through the use of filler injections or "liquid facelift". However, the effects of filler injection are temporary (nine to 12 months), and over-injection leads to the infamous Hollywood "pillow face" or worse still, "cat face" as the over-filled cheek presses on the eyelids, making the eyes look smaller and slanted.

Fat injection itself is not a new technique. However, in previous injection techniques, up to 70% or 80% of the fat will disappear as surgeons used to inject the fat as large clumps. As a result, only the peripheral fat in contact with surrounding blood vessels would survive while the innermost fat would die off.

Over the past few years, with the invention of slimmer cannula for fat harvesting and fat deposition, the concept of micro fat grafting has become increasingly popular. Essentially, micro fat grafting entails careful harvesting of fat using low-vacuum cannula, purification of the fat and then injecting it into the face in tiny aliquots over multiple passes. This avoids the previous problems of fibrosis, cyst and nodule formation. This technique is very operator dependent and requires some learning curve. However, under the hands of a skilful plastic surgeon, it is a very rewarding procedure both for the patient as well as for the surgeon.

Why favour fat over fillers?

The advantages of fat versus filler injection are many:

- ▶ **Long life** - Most importantly, this includes the prolonged survival of fat. It is postulated that injected fat can easily survive for 10 years or more.
- ▶ **Reduced risk of rejection** - Because it comes from the patient's own body, there is no risk of adverse immune reactions to the injected fat.
- ▶ **Smoother skin** - With the mesenchymal stem cells it contains, the injected fat has been shown to improve the overlying skin texture and quality.

What is micro fat grafting good for?

This technique is very useful for:

- Correction of sunken, hollow eyes
- Correction of dark eye circle which happens from a combination of fat loss around the eye and a sagging of the upper cheek. By filling in the shadow within the tear trough under the eyes, fat grafting can make an extraordinary difference in rejuvenating the look around the eyes.
- Getting rid of laugh lines around the face, and the hollowing over the chin as well as temple
- Volume augmentation of hypoplastic, saggy breasts
- Rehabilitating patients with scarring on the body from previous accidents or deformities caused by previous surgeries, including liposuction deformities, previous over-zealous eyelid surgeries or flattening of the mid-cheek from previous facelift surgeries
- Getting rid of depressed or atrophic scars around the body



What happens in micro fat grafting?

Here's what to expect:

- Micro fat grafting of the face is usually performed under local anaesthesia. The fat is harvested via two or three small stab incisions over the thigh or abdomen.
- The fat harvested is first centrifuged to separate out the pure fat from the blood and serum. This also helps to concentrate the fat and associated stem cells.
- Then, using an 18-gauge needle, small needle puncture marks are made in the face and the fat is injected into the face using blunt-tip cannula. The key to success lies in careful deposition of tiny aliquots of fat near the facial muscles. The rich blood supply from the facial muscles will ensure the continued survival of these fat cells.
- Post-operatively, there may be bruising which will last for one to two weeks. There are no stitches involved as the tiny puncture marks will heal spontaneously.

In summary, micro fat grafting is an exciting new technique which causes a paradigm shift in our approach towards facial rejuvenation. Under trained hands, it is safe and promises long lasting results for patients. eh



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