

face

FAT GRAFT

AN IDEAL AND SUSTAINABLE FILLER

SYDNEY COSMETIC SURGEON
DR LONGIN ZUREK SAYS
FAT GRAFTING OFFERS A
BREAKTHROUGH IN ANTI-AGEING
AND REJUVENATIVE MEDICINE.

In the past, facial ageing was thought to be the result of the relentless pull of gravity on skin and underlying fat. However, in recent years closer studies have demonstrated that age-related changes occur not only in skin and fat but also in the muscles and facial bones. It has been demonstrated that facial fat is distributed in separate compartments, rather than forming a continuous sheet of tissue as thought previously.

A major factor in the ageing of skin is the loss of collagen. The main cause of loss of facial volume, or deflation of the face, relates to the shrinkage of fat tissue. New scientific information allows a better understanding of facial ageing and improved techniques for rejuvenation.

The most important modality to restoring a youthful appearance is to replace lost volume. A number of artificial fillers have been used for many years. Starting in the late 19th century, paraffin was used to modify facial imperfections, which resulted in disastrous complications. Many other artificial fillers, including silicone, collagen and currently other synthetic fillers, have been heavily used and promoted, many of these resulting in major complications.

The primary principles of reconstructive surgery 'replace what is normal in a normal position and retain it there'. This was articulated at the beginning of the last century by Mr Harold Gilles (a New Zealander who is considered to be the father of modern plastic surgery).

As the main contributor to facial ageing is loss of fat, it makes sense to consider fat transfer to restore ideal facial volume.

The first fat graft was performed by a German surgeon at the end of the 19th century. The first fat transfer by injection was reported by another German surgeon just over 100 years ago.

In the 1980s, when liposuction surgery started, there was a new interest in fat grafting to repair liposuction deformities, as well as restoring volume in the face and body.

Ten years ago, fat was discovered to contain abundant amounts of stem cells which have the potential for tissue regeneration. Currently, fat is considered 'an organ of repair' and fat grafts not only produce restoration of volume but are also believed to regenerate surrounding tissues.

I commenced fat grafting procedures over 15 years ago and in 2001 I attended a workshop in Rome to learn a specific rice grain-sized fat implant technique, developed by the inventor of liposuction, Dr Giorgio Fischer.

This technique involved harvesting of fat using a 1ml syringe attached to a needle and then processing it by decanting only. Dr Fischer believes the risk of damaging the fat is reduced by less manipulation; he also recommended using only 14 to 15ml for the entire face.

I used Dr Fischer's technique until December 2009 but since January 2010 I have been employing the micro fat grafting technique. In order to achieve the best results, every step of my technique (harvesting, processing and implantation) is based on current scientific evidence and adjusted as new information becomes available.

I perform the fat grafting procedure under local anaesthetic and sedation and it takes, on average, two hours to complete. Following careful planning and marking on the skin, a special anaesthetic solution is injected into the donor area. The recipient areas, eg the face, neck, hands, are anaesthetised by nerve blocks (similar to a dental block).

Fat is harvested from the lower abdomen (flanks in men), inner thighs or inner knees, as these areas may contain

CASE STUDY 1



BEFORE (woman in her 50s)



2 years after fat grafting to face only by Dr Zurek

CASE STUDY 2



BEFORE (woman in her 50s)



6 months AFTER conservative lower eyelid surgery (transconjunctival) and fat grafting to orbit and cheek area by Dr Zurek

face

CASE STUDY 3



BEFORE (woman in her 70s)



After 1 session of peri-oral fat grafting by Dr Zurek

CASE STUDY 4



BEFORE (woman in her late 70s)



7 months AFTER fat grafting to the whole face by Dr Zurek

BENEFITS OF FAT GRAFTING

1. Patient's own body tissue is used – no risk of allergic reaction or rejection
2. Permanent restoration/enhancement of volume
3. No risk of lumpiness with microfat grafting technique
4. Improvement of skin quality (skin texture, subtleness and colour)
5. Improvement of existing scar quality
6. Economical, no additional cost of artificial fillers (which could be very substantial for large volume replacement)
7. Short downtime, with no bruising in the majority of cases

larger stem cell concentrations. Special fine harvesting cannulas are used, attached to a syringe, creating gentle negative pressure, allowing tiny parcels of fat (a fraction of a millimetre in diameter) to be obtained.

This fat is then processed by centrifuging, so that anaesthetic fluid and oil is separated and then removed, leaving condensed fat ready for injection to the recipient areas. Fat prepared this way has been found to contain viable fat cells including stem cells and 'Growth Factors' (chemical messengers, which tell cells what to do).

The purified fat is immediately implanted into the face through hidden skin punctures, using a tiny cannula. Fat is also injected into the skin itself to improve the appearance of scars and wrinkles.

‘The most important modality to restoring a youthful appearance is to replace lost volume’

Following the procedure the patient looks slightly swollen; bruising is unusual. Most patients can return to work after a few days, however it may take a few weeks for the swelling to fully subside. It takes six to 12 months for the graft to completely settle. Many patients report some decrease and then increase in volume during the first couple of years after the procedure which is described in scientific reports as 'dynamic behaviour'.

Some surgeons 'super charge' by adding isolated stem cells, PRP (platelet rich plasma) and other substances and report some improved results. However, this approach is controversial, as others claim that unadulterated fat is superior. **csbm**



DR LONGIN

FELLOW, AUSTRALIAN SOCIETY OF COSMETIC SURGERY

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CERTIFIED COSMETIC SURGEON

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Silhouette of actual patient before and after S-Lift performed by Dr Zurek