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Facial Fat Grafting / Facial Fat Transfer - Patient Information Leaflet

Introduction

The face naturally changes with age. These changes involve more than the skin alone.

Over time:

- Facial fat may reduce in volume or move into a lower position
- The facial bones gradually change and provide less structural support
- Muscles, ligaments, and other soft tissues may weaken or descend
- The skin becomes thinner and loses elasticity
- Repeated facial movement contributes to lines and folds

These changes may cause the face to appear flatter, hollow, tired, or less defined. Shadows may develop beneath the eyes, the cheeks may lose fullness, and folds around the nose and mouth may become more noticeable.

Facial fat grafting uses a patient's own fat to restore selected areas of facial volume and improve facial contour. The aim is to create a softer, balanced, and natural-looking result rather than an overfilled appearance.

What is Facial Fat Grafting?

Facial fat grafting is also known as facial fat transfer, autologous fat transfer, lipofilling, or fat injection.

The procedure involves:

- Removing fat from another area of the body using gentle liposuction
- Preparing and purifying the collected fat
- Injecting small amounts of fat into carefully selected areas of the face

The transferred fat is placed in multiple small amounts and tissue layers. This allows the fat cells to obtain a new blood supply and survive in their new position.

Some of the transferred fat will naturally be absorbed by the body. The amount that survives varies between patients and between different areas of the face.

More than one treatment may be required to achieve or maintain the desired result.

Microfat and Nanofat

Fat can be prepared in different ways depending on the treatment area and the result required.

Two commonly used preparations are microfat and nanofat. They are not interchangeable and have different purposes.

Microfat

Microfat consists of small parcels of processed fat that retain living fat cells.

It is mainly used to:

- Restore lost facial volume
- Fill hollow temples or cheeks
- Improve the transition between the lower eyelids and cheeks
- Correct deeper depressions
- Improve facial contour and proportion
- Treat selected scars or areas of asymmetry

Microfat provides structural filling and volume.

Some of the transferred fat is naturally absorbed. The fat that develops a new blood supply may provide a longer-lasting correction.

Nanofat

Nanofat is produced by processing and filtering harvested fat into a much finer liquid preparation.

Unlike microfat, nanofat contains few or no intact mature fat cells and does not provide reliable structural volume.

It is generally used more superficially with the aim of improving:

- Fine lines
- Skin texture
- Skin quality and thickness
- Areas of pigmentation or sun damage
- Thin or crepey skin
- Selected scars
- The delicate skin around the eyes or mouth

Research into the benefits of nanofat continues. Although published findings are encouraging, improvement varies and the available evidence is less established than for conventional structural fat grafting.

Selecting the Appropriate Fat Preparation

Microfat may be selected when structural volume is required. Nanofat may be considered when the main aim is improvement in superficial skin quality rather than filling.

The most appropriate preparation must be selected according to:

- The patient's concerns and desired result
- Whether the main problem is volume loss or skin quality
- The depth and location of treatment
- Skin thickness and tissue quality
- Facial anatomy and blood-vessel safety
- Previous surgery, fillers, scars, or other treatments
- The amount and quality of donor fat available

In some patients, microfat and nanofat may be used together in different tissue layers.

Not every patient or facial area is suitable for both treatments. The surgeon will recommend the safest and most appropriate fat preparation following a detailed assessment.

How Does Facial Volume Loss Affect Appearance?

Facial fullness and the distribution of fat help create youthful contours and smooth transitions between different areas of the face.

When facial volume is lost:

- The temples may become hollow
- The forehead and brow area may appear more bony
- The eyes may look sunken or tired

- Hollows may develop beneath the lower eyelids
- The cheeks may become flatter
- The cheekbones may appear more prominent or skeletal
- Folds between the nose and mouth may deepen
- Lines between the mouth and chin may become more noticeable
- The lips and area around the mouth may lose volume
- The jawline may become less defined
- Depressions or uneven contours may become more visible

Restoring volume may soften these changes, but fat grafting cannot stop the ageing process or correct every feature of facial ageing.

Areas Commonly Affected by Fat Loss

Facial fat grafting may be considered for the:

- Temples
- Forehead
- Brow area
- Upper eyelid hollows
- Area beneath the lower eyelids or tear troughs
- Cheeks
- Midface
- Nasolabial folds between the nose and mouth
- Lips
- Lines around the mouth
- Corners of the mouth
- Chin
- Jawline
- Depressed scars
- Areas of facial contour irregularity

Not every area is suitable for treatment in every patient. The surgeon will assess the skin, facial structure, blood vessels, existing volume, and overall facial balance before recommending treatment.

Other Causes of Facial Volume Loss

Facial volume loss is not always caused by normal ageing.

Other causes may include:

- Significant or rapid weight loss
- Naturally thin facial features

- Congenital or developmental differences
- Facial asymmetry
- Injury or trauma
- Previous facial surgery
- Scarring
- Infection
- Burns
- Facial wasting or lipodystrophy
- Certain medical conditions or medications
- Cancer treatment or radiotherapy
- Localised conditions affecting the fat or soft tissues
- Loss of tissue following removal of a growth or tumour

New, unexplained, one-sided, or rapidly progressing facial volume loss should be medically assessed before cosmetic treatment is considered.

Why is Facial Fat Grafting Performed?

Facial fat grafting may be performed to:

- Restore volume lost through ageing
- Improve hollow temples or cheeks
- Soften the transition between the lower eyelids and cheeks
- Improve selected facial lines and folds
- Improve facial balance and proportion
- Correct facial asymmetry
- Improve depressed scars
- Correct contour irregularities following injury or surgery
- Restore tissue following illness or medical treatment
- Improve the quality and thickness of selected soft tissues
- Complement other facial procedures

Fat grafting may be performed alone or combined with procedures such as a facelift, neck lift, eyelid surgery, brow lift, scar revision, or skin treatment.

Non-Surgical Treatment Options

Non-surgical treatments may be suitable for patients who do not want surgery, require a smaller correction, or prefer a temporary treatment.

Options may include:

- Hyaluronic acid dermal fillers
- Calcium hydroxylapatite fillers

- Collagen-stimulating injectable treatments
- Platelet-rich plasma or related treatments
- Skin resurfacing treatments
- Chemical peels
- Laser or energy-based skin treatments
- Medical-grade skincare

Dermal fillers can restore volume without fat harvesting and usually involve less recovery time. However, most fillers are temporary and require repeat treatment.

Some injectable treatments can be dissolved, while others cannot. All facial injections carry risks, including infection, lumps, asymmetry, tissue damage, and rare blood-vessel complications.

Skin treatments may improve texture, pigmentation, and fine lines but do not replace significant lost facial volume.

The most appropriate option depends on the patient's anatomy, degree of volume loss, desired result, tolerance for recovery, and preference for temporary or potentially longer-lasting treatment.

Planning the Procedure

A detailed consultation is required to assess:

- The pattern and cause of facial volume loss
- Whether the main concern is volume loss, skin quality, or both
- Whether microfat, nanofat, or a combination is most appropriate
- Facial shape and proportions
- Skin quality and elasticity
- Facial asymmetry
- Previous facial surgery or injectable treatment
- Previous facial trauma or scarring
- Available donor fat
- General health and medical history
- Current medication and supplements
- Smoking, vaping, or nicotine use
- The patient's concerns and expectations

Patients should tell the surgeon about all previous facial fillers, fat grafting, threads, implants, or other treatments, even if they were performed many years earlier.

Photographs may be taken as part of the assessment and surgical planning.

Donor Sites for Fat Harvesting

Fat is usually collected from an area where a suitable amount is available.

Common donor sites include:

- Abdomen
- Waist or flanks
- Inner thighs
- Outer thighs
- Hips
- Lower back
- Inner knees

The donor site is selected according to the patient's body shape, the amount of fat required, and the surgeon's preference.

Only a relatively small amount of fat may be required for facial treatment. Fat harvesting is performed to obtain graft material and should not be considered a substitute for formal liposuction or body-contouring surgery.

Small changes in the contour of the donor area may occur.

The Procedure

Facial fat grafting may be performed under:

- Local anaesthesia
- Local anaesthesia with sedation
- General anaesthesia

The choice of anaesthesia depends on the amount of fat required, the areas being treated, whether other procedures are being performed, and the patient's individual needs.

Fat is removed through small incisions using a narrow liposuction cannula. It is then prepared to remove unwanted fluid, oil, and damaged cells.

The fat may then be processed as microfat, nanofat, or another appropriate preparation according to the planned treatment.

Microfat is generally placed where structural volume is required. Nanofat is generally placed more superficially where the aim is to improve skin quality rather than provide volume.

The prepared fat is introduced into the face through small entry points using fine cannulas or needles appropriate to the treatment.

Small amounts are placed gradually and in carefully selected tissue layers. The amount placed may differ between the two sides of the face to improve existing asymmetry.

The procedure commonly takes approximately 1–2 hours when performed alone. It may take longer when combined with other surgery.

Hospital Stay

Facial fat grafting is typically performed as a day procedure.

Some patients may remain in hospital overnight, particularly when:

- General anaesthesia is used
- A larger volume of fat is transferred
- Fat grafting is combined with other procedures
- Additional monitoring is required
- The surgeon or anaesthetist considers an overnight stay appropriate

A responsible adult should take the patient home and remain available during the early recovery period.

Incisions and Sutures

The incisions used for fat harvesting and facial injection are small.

They are usually placed in natural creases or less visible areas where possible.

Absorbable sutures may be used and usually do not require removal. If non-absorbable sutures are used, they will be removed at a follow-up appointment.

Small scars may remain at the donor and injection sites.

Recovery

Swelling and bruising are expected after facial fat grafting. Swelling may initially make the face appear overfilled or uneven.

General recovery guidance may include:

- Rest with the head elevated
- Use cold compresses only if advised by the surgeon

- Avoid pressing, rubbing, or massaging the treated areas
- Avoid sleeping directly on the treated areas
- Take prescribed medication as directed
- Keep all incisions clean and dry as instructed
- Avoid strenuous exercise until cleared by the surgeon
- Avoid smoking, vaping, and nicotine
- Attend all follow-up appointments

Most patients require approximately 1–2 weeks away from work and social activities, although visible swelling or bruising may last longer.

The donor area may feel bruised, swollen, tender, or numb. A compression garment may be recommended for the donor site.

Swelling gradually decreases over several weeks. The result continues to settle as the transferred microfat establishes a blood supply and the body absorbs fat that does not survive.

Changes following nanofat treatment may develop gradually and cannot be assessed immediately.

The final result may take approximately 3–6 months to assess.

Expected Results

The goals of facial fat grafting may include:

- Restoration of facial volume
- Softer and smoother facial contours
- Improved balance and proportion
- Reduction in the appearance of selected hollows, folds, or depressions
- Improvement in facial asymmetry
- Improvement in selected aspects of skin quality
- A natural-looking and potentially longer-lasting result

The amount of microfat that survives cannot be predicted precisely. Some loss of the transferred volume is expected.

The result may therefore be:

- Less noticeable than anticipated
- Uneven
- Different on each side

- Reduced by later weight loss
- Increased by significant weight gain

A further fat-grafting procedure may be required.

The surviving fat behaves like fat elsewhere in the body and may change with ageing and weight fluctuations.

Nanofat does not provide predictable structural volume. Any improvement in skin texture, fine lines, pigmentation, or scarring varies between patients and cannot be guaranteed.

Risks and Possible Complications

All procedures carry some degree of risk. Possible complications of facial fat grafting may include:

- Bleeding
- Bruising
- Swelling
- Pain or prolonged tenderness
- Infection
- Delayed wound healing
- Scarring
- Numbness or altered sensation
- Prolonged redness
- Persistent swelling
- Facial asymmetry
- Uneven contour
- Under-correction
- Over-correction
- Lumps or firm areas
- Fat necrosis
- Oil cysts
- Calcification
- Prolonged inflammation
- Absorption or loss of transferred fat
- Excessive growth of transferred fat following weight gain
- Skin discolouration
- Acne flare or skin irritation
- Injury to nerves, muscles, glands, or other deeper structures
- Unsatisfactory cosmetic result
- Need for revision surgery or further fat grafting
- Anaesthetic complications

Donor-Site Risks

Possible complications at the fat-harvesting area may include:

- Bleeding
- Bruising and swelling
- Infection
- Fluid collection
- Numbness or altered sensation
- Loose or rippled skin
- Uneven contour
- Depressions or irregularities
- Persistent pain
- Visible scars
- Need for corrective treatment

Blood-Vessel Complications

Fat may accidentally enter or compress a blood vessel during facial injection.

This is rare but may interrupt the blood supply to the skin, eye, or brain.

Possible consequences include:

- Skin injury or skin loss
- Permanent scarring
- Visual disturbance
- Partial or complete blindness
- Stroke
- Permanent neurological injury
- Death

Although these complications are rare, they can be sudden, severe, and permanent. There is no guaranteed treatment capable of reversing every fat-related blood-vessel blockage.

Fat grafting in areas such as the forehead, temples, brow, nose, and central face requires particular care because of the blood vessels connecting the face, eyes, and brain.

Changes in vision, severe eye pain, sudden severe headache, weakness, difficulty speaking, confusion, collapse, or loss of consciousness during or after treatment require immediate emergency medical attention.

Fat Survival and Repeat Treatment

Not all transferred microfat will survive.

Fat survival depends on:

- The area being treated
- The quality of the donor fat
- The harvesting and preparation technique
- The injection technique
- The blood supply in the treated tissues
- Smoking or nicotine use
- Previous scarring, surgery, or radiotherapy
- Individual healing
- Weight changes after surgery

Some patients require more than one procedure to achieve the desired correction.

Further fat should generally not be added until swelling has settled and the result of the first procedure can be assessed.

Smoking and Nicotine

Smoking, vaping, and nicotine reduce blood flow and may interfere with healing and fat survival.

Nicotine use may increase the risk of:

- Infection
- Delayed wound healing
- Skin loss
- Poor scarring
- Reduced fat survival
- Unsatisfactory results

Smoking, vaping, and all nicotine-containing products should be stopped according to the surgeon's instructions before and after surgery.

When to Seek Medical Advice

Contact the surgeon or treating facility promptly if you develop:

- Increasing redness, warmth, or swelling
- Worsening pain not controlled by prescribed medication

- Fever or chills
- Pus or unusual fluid from an incision
- Sudden or rapidly increasing swelling
- Increasing facial asymmetry
- Pale, mottled, dusky, or darkening skin
- Blisters or signs of skin damage
- Persistent vomiting or inability to drink fluids
- New or worsening lumps
- Any unexpected or concerning symptoms

Seek immediate emergency medical attention for:

- Any change or loss of vision
- Severe eye pain
- A sudden severe headache
- Facial drooping
- Weakness or numbness on one side of the body
- Difficulty speaking or understanding speech
- Confusion
- Seizure
- Collapse or loss of consciousness
- Chest pain or difficulty breathing

Important Considerations

Patients considering facial fat grafting should understand that:

- The treatment uses the patient's own fat
- A suitable donor site is required
- Microfat is primarily used to restore structural volume
- Nanofat is primarily intended for superficial skin-quality concerns
- Nanofat does not provide reliable structural filling
- The surgeon must select the appropriate preparation and treatment depth for each patient and facial area
- Microfat, nanofat, or a combination may be recommended
- Not all transferred microfat will survive
- The final retained volume cannot be predicted precisely
- Temporary overfilling may be necessary in selected areas
- Swelling may initially appear uneven
- Perfect symmetry cannot be guaranteed
- More than one treatment may be required
- Small scars will be present at the donor and entry sites
- The donor site may develop contour irregularities
- The surviving fat can change with weight gain or weight loss

- Facial ageing will continue after treatment
- Improvement in skin quality following nanofat cannot be guaranteed
- Rare but serious complications can include skin loss, blindness, stroke, permanent disability, or death
- Revision surgery or further treatment may be required

Final Thoughts

Facial fat grafting can restore volume, improve contour, and soften some of the changes associated with ageing, weight loss, injury, illness, or previous surgery.

Microfat and nanofat have different purposes. Microfat is mainly used to restore structural volume, while nanofat is generally used more superficially with the aim of improving selected aspects of skin quality.

One preparation is not automatically better than the other. The correct option must be selected according to the patient's anatomy, concerns, skin and tissue quality, treatment area, and desired result. In some patients, a carefully planned combination may be appropriate.

Because the procedure uses the patient's own tissue, facial fat grafting may provide a natural-feeling and potentially longer-lasting improvement. However, microfat survival is variable, nanofat results are not fully predictable, and the final outcome cannot be guaranteed.

Facial fat grafting does not stop ageing, replace every form of facial surgery, or guarantee perfect symmetry. Some patients may achieve their goals with non-surgical treatments, while others may benefit from combining fat grafting with another procedure.

A detailed consultation is essential to identify the cause of the volume loss, discuss surgical and non-surgical options, select the appropriate donor area and fat preparation, and understand the expected recovery, limitations, and potential risks.

The overall aim is to achieve a balanced, natural-looking improvement while maintaining realistic expectations and placing patient safety first.