



KATARZYNA MACKENZIE

PLASTIC SURGEON

Lipofilling

Lipofilling (also known as autologous fat transfer or fat grafting) is a procedure designed for people wishing to restore volume or shape to areas that lack or have lost definition. A fat grafting procedure transfers fat from areas in which you have excess fat, such as the outer thighs, and injects it into areas that may be lacking in volume, such as your face, hands, breasts or buttocks. This safe, long-lasting, well-tolerated procedure produces natural-looking results.

Fat transfer can help create a more shapely and natural looking appearance in areas that have lost volume due to ageing, scarring or weight loss.

Length of surgery	1-2 hours
Anaesthesia	General anaesthetic or local anaesthetic
Hospital stay	Day case
Risks/complications of surgery	Frequent: Bruising, swelling, temporary numbness Infrequent: Infection, unsightly scarring, asymmetry, bleeding, permanent numbness
Recovery	5-10 days until socialising with close friends and family 1-2 weeks until return to work and normal social engagements depending on area treated 3-12 weeks until swelling and bruising disappears 3-6 weeks until return to gym and other strenuous activities 3-6 months until final result.
Driving	2 weeks
Sleeping position	Sleep on your back if possible with 3-4 pillows for first 7-10 nights
Duration of results	Permanent unless followed by weight loss

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Lipofilling information sheet

Any plastic surgery procedure is a very personal choice and understandably there are a number of questions that arise. This information sheet is a general guide for patients considering lipofilling under the care of Dr Mackenzie. It should provide the answers to some questions that you may have. There are many factors that can affect your individual operation, your recovery and the long-term result. Some of these factors include your overall health, your skin type, previous surgery, any bleeding tendencies that you have and your healing capabilities, some of which will be affected by smoking, alcohol and various medications. Such issues that are specific to you need to be discussed with Dr Mackenzie and are not covered here. Please feel free to ask her any further questions before you sign the consent form.

Introduction

The technique of transferring fat from one part of the body to another - for example, from the tummy or buttocks to the face - has been practiced for many years, but one of the problems encountered had been variability of the results. However, relatively recent work by surgeons like Dr Sydney Coleman of New York has led to a much more consistently successful technique that can provide a gradual, controlled restoration of the youthful shapes of the face and other parts of the body. The transferred fat develops a new blood supply in its new location over the first few weeks following surgery. A proportion of fat will be reabsorbed by your body during this period (on average 20% but up to 50% in some situations). The remainder will stay permanently.

Lipofilling can help achieve a long lasting result by removing fat from one area of the body and effectively transferring it to another. This procedure is often used around the breast, buttock, cheek and lip areas to create a more aesthetically pleasing contour and voluminous shape. Lipofilling is often performed in conjunction with other surgical procedures such as a facelift, breast reconstruction or breast augmentation in order to rejuvenate the face or correct contour deformities by a volumetric approach.

Commonly grafted, or injected, areas include the hands, face (including the lips), depressions in the skin (following liposuction and scarring) and the breast and buttock (for augmentation).

What is lipofilling?

Lipofilling is a technique whereby fat is taken from one part of your body and injected into another area.

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Who is a good candidate for lipofilling?

The best candidates for lipofilling are those with easily outlined areas of defect with good quality, elastic skin. Older patients may have diminished skin elasticity and may not achieve the same results as a younger patient with tighter skin. A larger defect may require more than one session and the possibility of a second or even third lipofilling procedure will be discussed.

The following are some common reasons why you may want to consider lipofilling:

- Facial areas that lost volume with aging or weight loss
- If you desire more permanent correction than is provided by temporary fillers
- To improve the body contour, revise scars, fill bodily depressions and rejuvenate the hands and face
- For use in breast reconstruction, to fill in contour irregularities or hide obvious signs of breast implants to produce a smooth contour and an optimal shape
- Breast augmentation, if you desire a modest increase in breast size

Lipofilling may be a good option for you if:

- You are physically healthy and you do not have medical conditions that can impair healing or increase risk of surgery
- You have realistic expectations of what lipofilling surgery can accomplish
- You are a non-smoker

Are there any reasons for a patient to not have the lipofilling?

Patients who are actively smoking or on blood thinning medication such as aspirin and warfarin are at a high risk of complications such as bleeding or wound infections and delayed wound healing. It is advisable to not consume nicotine in any form for six weeks before a blepharoplasty and a similar time after. Medication such as aspirin or warfarin may need to be stopped (if this is not for an essential or life-threatening condition) at the appropriate time before surgery. This should be discussed with Dr Mackenzie or GP.

What are the limitations of lipofilling?

- More than one session of lipofilling may be needed. This is due to the nature of how the fat heals into the area it is transferred to. Usually these would be scheduled 3 to 6 months apart
- Lipofilling will not remove cellulite, stretch marks or scars
- If considering breast augmentation with lipofilling, the fat would be injected around the existing breast tissue. You will need a mammogram beforehand and you should be aware that

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there is ongoing research in to the interaction between the transferred fat and breast tissue and as to whether the transferred fat affects screening for breast cancer afterwards. To date research suggests that this technique is safe to use and that experienced breast radiologists can tell the difference between transferred fat and other changes on mammograms. You should always tell a radiographer if you have had fat transferred to your breasts before having a mammogram

- Despite the recent refinements in fat transfer it is impossible to accurately predict how much fat will survive but most estimates are put at between 50% and 60%

What to expect from lipofilling surgery consultation?

You would normally meet Dr Mackenzie for at least two pre-operative consultations. The first of which is mainly about assessment and the formulation of a specific operative plan. Dr Mackenzie usually summarises this consultation in a letter to you and if you decide to move forward towards surgery, a second consultation is scheduled to go over things once more and discuss the possible complications in more detail. It is usual for Dr Mackenzie to write to your GP but often patients do not want this, in which case no communication is made.

During your lipofilling surgery consultation Dr Mackenzie will discuss:

- Your goals for your appearance
- What outcome do you expect from the surgery? What is your chief motivation in undergoing lipofilling?
- Your complete medical history, including circulatory problems, kidney and thyroid problems diabetes
- Your previous surgery
- Your history of any non-invasive cosmetic procedures
- Your current prescription medications, including vitamins, herbal supplements, alcohol, tobacco and drug use. Make sure to tell your doctor about any herbal supplements you take, as some of them may cause bleeding problems

Dr Mackenzie will also:

- Evaluate your general health status and any risk factors
- Discuss your options
- Examine and measure different parts of your body
- Point out normal differences in symmetry you may never have noticed, and describe the results you can expect from your surgery and the positioning of the scars
- Evaluate elasticity of the skin
- Take the photographs from different angles. These photos help with planning the surgery and assessing its immediate and long-term effects

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- Discuss your expectations with you. An honest discussion will help determine a satisfactory outcome. Be prepared to talk about your motivation for seeking blepharoplasty and what you hope the results will be.
- Recommend a course of treatment
- Discuss likely outcomes of lipofilling surgery and any potential complications

Preparation for surgery

It is important to avoid taking any aspirin or products containing aspirin for 2 weeks either side of the operation since aspirin has an adverse effect on bruising as it thins the blood. The same is true for non-steroidal anti-inflammatory drugs (such as Brufen, Nurofen and Voltaren) and vitamin E tablets. You may also be asked to stop taking naturopathic substances such as garlic, ginko, ginseng and St John's Wort as they may affect clotting and anaesthesia. Always tell your surgeon EVERYTHING you are taking.

For procedures lasting longer than 1 hour it is normal practice to stop the contraceptive pill one cycle before the date of surgery. For smaller procedures may not be necessary and you should discuss this with Dr Mackenzie before surgery.

Some patients find homeopathic remedies such as arnica helpful to reduce bruising although it is very difficult to "prove" their efficacy scientifically. If you wish to use arnica you should begin 2-3 days before the operation and continue for a week afterward.

If you are a smoker it is absolutely imperative that you to stop for 6 weeks before surgery and for 6 weeks afterwards so as not to restrict the circulation to the skin. This restriction applies to all forms of nicotine including patches, inhalers and nicotine chewing gum!

For the best results of thigh lift, it is optimal if you have a body mass index (BMI) as close to normal (25) as possible.

Surgery requiring general anaesthesia is most safely conducted when patients are fit and healthy. General anaesthetic is unwise in patients who are unwell with viral illness or colds.

On the night before surgery we would ask that you eat well, and remain well hydrated. In most cases you will be asked to come to the hospital at 7:00am on the morning of surgery, having had nothing to eat from midnight. Clear water can be drunk up to 2 hours before surgery and tea without milk or coffee without milk can also be taken. Milk is considered to be solid food and cannot be taken within 6 hours of the start of surgery.

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On the morning of surgery, you will be admitted to the ward. You will meet the anaesthetist who will discuss the anaesthetic with you in detail and you will also see Dr Mackenzie who will mark the surgical site as required and complete the consent form for surgery with you.

While making preparations, be sure to arrange for someone to drive you home after your surgery and to help you out for a few days at home.

What is involved in the operation?

Surgery is usually carried out under general or local anaesthetic, depending on the extent of the surgery planned and your wishes. It takes around 1-1.5 hrs to perform, depending on the volume of fat transfer planned. Patients can usually return home the same day.

Fat is harvested from the body using liposuction whereby a solution is injected into the area which breaks down the fat, a very fine cannula is then introduced via small incisions and the fat removed with suction. The fat is then centrifuged or purified to separate the healthy cells from the damaged cells and then injected into the area that is lacking in volume. Typically, the fat would be taken from the thighs, abdomen and/or the buttocks where excess fat is usually available.

Once ready, this fat is then carefully injected into the chosen area for lipofilling. This is again performed with a syringe and cannula. The cannula size depends on where the aspirate is being placed – the face will need smaller cannulae than the breast, for example. The fat is injected in different layers and in fine, long threads.

Absorbable sutures may be used to close the incisions and you will then either be placed into a supportive dressing or garment as required.

Lipofilling is often combined with other procedures to give the best possible results for those procedures. Some common combinations include: lipofilling and facelift, lipofilling and breast augmentation.

Where will the incisions be?

Because liposuction incisions are small, the scars are also small and are placed in hidden areas. Sometimes depending on the location of fat deposits on your body, the incisions cannot be hidden. Most liposuction scars fade and are barely perceptible over time.

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What can you expect after the lipofilling surgery?

It is vitally important that you follow all postoperative instructions provided by Dr Mackenzie. Your surgeon will also provide detailed instructions about the normal symptoms you will experience and any potential signs of complications. It is important to realize that the amount of time it takes for recovery varies greatly among individuals.

Immediately after lipofilling surgery:

- You will have bruising and swelling in the treated area and the area where fat was taken from afterwards which will peak at day 2 to 3 and slowly resolve over the weeks following this. Most of this will go over 4 to 6 weeks
- You will likely experience some fluid drainage from the incisions
- Antibiotics may be prescribed to prevent infection
- You may be advised to wear a supportive or compression garment for 4 to 6 weeks postoperatively
- It is important to realise that at the area where fat has been injected, there will be some absorption of this fat as well. At about 6 weeks post surgery, there is usually a good indication of how much fat has remained

During the next few weeks:

- Avoid Aspirin and NSAIDs
- Avoid alcohol for five days
- Most people return to work between 2 and 14 days depending on the extent of the lipofilling and the nature of their work
- Avoid straining, heavy lifting, swimming, and strenuous activities for 4-6 weeks

How long does the effect of the lipofilling surgery last?

When done successfully, the injected fat establishes a new blood supply from your body and receives the nourishment it needs for survival. The number of fat cells that survive permanently can vary hugely (0 – 70%) because of factors like smoking, the technique used and previous radiotherapy.

A proportion of the transferred fat cells survive in their new location; thus they can respond to future weight change in the way they would have done on the body. For example, if large volumes of lipofilling are performed on the face and then the patient's weight increases dramatically, patients may see their facial soft-tissue volume also increase.

The rate at which ageing occurs, and continues, regardless of surgery.

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What are the complications of lipofilling?

Fortunately, significant complications from lipofilling surgery are infrequent. However, all surgery carries some uncertainty and risk, but complications are infrequent and minor.

- As with any surgery, bleeding and infection can occur. Bleeding might require a return to the operating theatre to avoid damage to the eye. Infection is usually readily treated with antibiotics, extending the course of treatment that you will have received after your surgery
- Swelling and bruising. This will peak around day 2 to 3 after surgery and will gradually reduce after that. Most of the swelling is usually gone by 6 weeks but occasionally lasts longer than expected
- Infection rates are low in lipofilling surgery but you will be started on some oral antibiotics after the surgery
- Asymmetry and contour irregularities
- The scars from liposuction harvest are small and strategically placed to be hidden from view
- Numbness and pigmentation changes may occur but these should settle after several months
- The recipient area that has been injected with fat will be bruised, swollen and inflamed. This should settle over the first few days
- In lipofilling to the face, there have a small number of reported cases worldwide of post-operative blindness affecting one eye. This is as a result of fat being injected directly into a blood vessel that then tracks to the back of the eye and blocks the blood supply to the retina. This is known as 'fat embolus' and can also happen with other types of injectable material, such as a dermal filler
- Fat embolism. This is a very rare complication of liposuction (used to harvest fat for lipofilling) where fat can enter the blood stream and travel to other sites in the body. If this is to the lungs, it can have very serious implications
- Numbness or hypersensitivity of the overlying skin due to bruising or damage to the small nerves of the skin. This is usually temporary but may persist
- Under or overcorrection which may require further procedures
- Fat necrosis. Sometimes when transferred fat does not survive, it undergoes necrosis or tissue death. This can become apparent as a lump in your tissue. Usually this slowly resolves over time and no specific treatment other than massage of the area is needed
- Oil cysts. Occasionally, if your body is absorbing some of the fat transferred, oily fluid cysts may form in your tissue as the fat liquefies. They may be palpable or cause a temporary discharge from injection sites
- Damage to internal organs – the very rare but serious complication of perforation of the abdominal or chest wall by the liposuction instruments used to harvest fat for lipofilling
- Disappointment with the result

Sometimes after undergoing a lipofilling procedure, patients are disappointed with the result. This may be due to one of the problems described above occurring or due to unrealistic expectations of

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the surgery e.g. mild asymmetries or less than expected retention of fat in the recipient area. It is important that you discuss your expectations in advance of the surgery so that you can understand what to expect from the surgery. Additional costs may be incurred for further procedures.