



KATARZYNA MACKENZIE

PLASTIC SURGEON

Brow Lift

A forehead lift or "brow lift" is a procedure that restores a more youthful, refreshed look to the area above the eyes. Brow lift improves signs of aging by smoothing frown lines, wrinkles and expression lines on your forehead and by repositioning sagging eyebrows that cause hooding of the upper eyelids. It has the ultimate effect of creating a more aesthetically ideal upper facial region. The brow lift is frequently combined with facelift surgery and/or eyelid surgery but may equally be carried out as an isolated procedure.

Length of surgery	2 hours
Anaesthesia	General anaesthetic
Hospital stay	1 night
Risks/complications of surgery	Frequent: Bruising, swelling, temporary numbness and/or headaches Infrequent: Infection, unsightly scarring, asymmetry, bleeding (haematoma), numbness to the front of the scalp, nerve injury 1:100), asymmetry to the forehead, bald spots at incision sites usually temporary, relapse
Recovery	5 days until socialising with close friends and family 1 week until return to work and normal social engagements with make up 2 weeks until swelling and bruising disappears 4-6 weeks until return to gym and other strenuous activities 3-6 months until final result – scars continue to improve over the next 12 months.
Driving	2-3 weeks
Sleeping position	Sleep on your back if possible with 3-4 pillows for first 7-10 nights
Long term issues	Some numbness over the scalp

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Brow lift 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 a brow lift operation 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 facial or eye 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 orbital region is of primary importance of facial aesthetics and expression. The eyebrow represents the upper frame of the eyes, and its shape and position convey youthfulness and attractiveness.

The angry, sad, stressed appearance that is created by drooping eyebrows causes many women and men to feel self-conscious. Patients say that they attract unwelcome comments about being tired or worried from acquaintances and colleagues at work and are unhappy about the frown lines on the forehead and between the eyebrows. This is often a cause of significant distress and results in a request for a consultation to discuss rejuvenation of the upper half of the face.

An approximate idea of what can be achieved will be gained by placing the palms of your hands at the outer edges of your eyes above the eyebrows and drawing the skin gently upward to raise both the brow and forehead area.

Who is a good candidate for a brow lift?

It is most common for people in their forties and fifties to have this procedure, but it may be performed on much younger people who may have inherited heavy, droopy eyebrows and fullness in the upper eyelids. Most people have the operation to get rid of the overhanging folds at the outer half of the upper eyelids and the heavy droop of the eyebrows.

Because we all age differently, depending on whether we are men or women and on the characteristics, we inherit, even young people may experience this problem. However, brow lift surgery can address these issues by restoring a more youthful and pleasing brow shape and position.

When the brow position is low, some people tend to actively lift eyebrows, which leads to forehead lines. This behaviour tends to disappear when the brow is again in a normal position.

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In addition, in many cases (particularly with younger patients) repositioning the eyebrow may refresh the appearance of your eyes without the need for eyelid surgery.

The following are some common reasons why you may want to consider a brow lift:

- Sagging forehead
- Profound creases in the forehead and between the brows (frown lines)
- Lowered eyebrows
- Drooping eyelids
- Heavy skin hanging low over the eyes
- If you are a female and you are unable to apply makeup on the upper eyelid, because the surface area has been obscured by drooping tissues as you have aged.
- If you gently lift the skin above your eyebrow into a pleasing position and it eliminates most of the excess skin in your upper eyelid, a brow lift may be right for you

Are there any reasons for a patient to not have a brow lift?

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 brow lift 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 a brow lift?

- If there is extra skin on the upper eyelid as well as a low eyebrow position, then this will not be treated by a brow lift alone. An upper blepharoplasty or eyelid lift is needed as well in this situation to treat the excess tissue. The two procedures can be combined together very successfully
- Some types of brow lift will not affect the "frown lines" that form between the eyebrows. However, these can be very effectively treated with botulinum toxin (Botox®) injections

What to expect from a brow lift 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 an operative plan specific to your face and brow area. It also involves taking some photographs. 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

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Mackenzie to write to your GP but often patients do not want this, in which case no communication is made.

During your brow lift consultation Dr Mackenzie will discuss:

- Your goals for your appearance
- Your complete medical history, social history, allergies
- Your current prescription medications, including vitamins, herbal supplements, alcohol, tobacco and drug use

Dr Mackenzie will also:

- Evaluate your general health status and any risk factors
- Examine and measure different parts of your face
- Evaluate elasticity of the skin
- Determine the relationship between your upper eyelid, brow and the upper edge of the eye socket. Once this is clear, she will lift the lateral (outside) portion of your eyebrow to establish how much correction will be needed to place your brow in the ideal position:
 - For women, this ideal position is between five millimeters and one centimeter above the rim of the eye socket for the lateral part of the brow
 - For men, raising the brow this much could create a feminine appearance so the brow is positioned at the rim of the eye socket or slightly above
 - For both men and women the inside corner of the eyebrows should sit either just below or just above the edge of the eye socket
- Discuss your options
- Take photographs
- Recommend a course of treatment
- Discuss likely outcomes of brow lift surgery and any potential complications

It is important that if you have had any problem with your eyes in the past, particularly dry eyes with recurrent soreness or infection or excessively watery eyes, that you inform Dr Mackenzie so that she can get an assessment of your tear film. Brow and eyelid surgery can interfere with the tear film in the short term although eye drops will normally help with this problem.

Once Dr Mackenzie has determined the ideal eyebrow position, she will evaluate the appearance of your upper eyelids. If significant excess skin would remain in the upper eyelid area even after brow lift, a combination of brow lift, and upper eyelid lift may provide better results than either procedure alone. This is evaluated in the context of the forehead shape, as it will determine which type of procedure and access is best suited for you.

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Where will the incisions be?

The endoscopic brow lift is performed by Dr Mackenzie using a "key hole" technique so all the small incisions are kept hidden in the scalp. This means that there will be no visible scars.

If direct brow lift is indicated, the incision will be placed just above the eyebrow.

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 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!

Hair tinting may be continued up to the time of surgery but strong bleach containing colorants should be avoided for six weeks afterwards. Please wash your hair thoroughly with a mild shampoo the day before surgery and come to the hospital with no make up on the morning of the operation.

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.

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.

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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 are the principles of the surgery?

Brow lift surgery is performed under a general anaesthetic and usually involves an overnight stay in hospital. It is often associated with a face lift or eyelid surgery. In the past, surgeons elevated the brows high up on the forehead using an incision across the top of the scalp. This often produced an over-operated or surprised look. We now understand the ideal aesthetics of the brow much more and appreciate the important factors that improve the appearance of the brow-eyelid complex. These are different for men and women and not only include the position of the brow relative to the eyelid but also the shape of the brow.

Today, most brow lift surgery is performed through several small incisions in the hair behind the hairline. The procedure, called an endoscopic brow lift, is assisted by the use of an endoscope, a tiny camera and light mounted on a tubular probe and inserted through these incisions.

During the surgery, the tissues of the forehead are lifted from the bone and repositioned higher. Frown muscles may be weakened (generally they are not destroyed entirely as this could cause the position of the brows to change too much resulting in a startled appearance.) The skin is then supported in its new position with a dissolvable device called Endotine® and the wounds are closed with skin staples.

Brow lift can also be carried out as a direct brow lift. The direct brow lift involves the removal of skin just above the eyebrows. Dr Mackenzie makes a small incision at the top of the eyebrow, at which point she removes a small amount of skin and muscle. This procedure is often performed on older patients looking to enhance their brows, as well as men with pattern baldness who want to raise their hairline. The direct brow lift is unique in the sense that it doesn't remove facial wrinkles or fine lines. This technique does allow for precise shaping of the brow.

Non-surgical treatments, such as chemical skin peel, dermabrasion or skin resurfacing of the face, may also be undertaken at the same time as the brow lift. The aim of these treatments is to treat sun-damaged skin and crow's feet around the eyes, which are not removed by brow lift surgery.

What is involved in the operation?

On the day of surgery, you must have nothing to eat for 6 hours before surgery, although you can drink small amounts of water only up until 2 hours before surgery. If your operation is in the morning you must have nothing to eat or drink from midnight the night before and arrive at the hospital at 7.00 am. You should not wear make-up or cream on your face. Do not take any medications without first

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checking with Dr Mackenzie that these will not interfere with the operation. It is a good idea to bring some small headphones with an Ipod (or Smartphone equivalent) with you because you will not feel like reading after the operation. Please bring some sunglasses to wear for your departure and you should have someone to drive you to and from the hospital and to spend the first night at home with you.

The operation is performed under general anaesthetic with one night stay in hospital afterwards. Local anaesthetic is also used to relieve the post-operative discomfort in the first 24 hours.

After the anaesthetic has been administered and you are asleep Dr Mackenzie prepares the hair of the scalp for surgery. She does not shave any hair at all during brow lift as it can easily be parted with hair gel. Dr Mackenzie infiltrates the forehead with a salt solution containing local anaesthetic (tumescient infiltration) as this reduces swelling and bruising after surgery. The incisions are then made in the scalp and are each 12-15 mm long. As they are kept behind the hair line there will be no visible scars on your forehead. The tissues of the forehead are then lifted and repositioned higher. At the time of the surgery the frown muscles can be weakened as well in addition to lifting of the brow. Dr Mackenzie is always careful to judge the position of your brow carefully in order to avoid creating a startled appearance after surgery. The skin is then supported in the new position and the wounds are closed with staples.

You will be nursed propped up in bed and it is very important that you try to remain as calm as possible to avoid big changes to your blood pressure.

An overnight stay in hospital is all that is normally needed. However, if you do not live locally Dr Mackenzie may suggest staying an extra night in hospital for your comfort.

What to expect immediately after the surgery?

You will be seen by Dr Mackenzie personally after the operation. At home, rest and sleep well propped up on at least four pillows. You should avoid alcohol for five days. For the first few days it is common to experience some headache in the forehead region as the nerves to the scalp in this area are stretched. You can expect some discomfort with moderate swelling, black and blue discolouration of the forehead, eyelids and occasionally blood shot eyes. You will feel tightness and numbness, particularly in the upper eyelids, for a couple of weeks after the surgery. If your eyes feel gritty and watery try covering them at night. The eyebrows may appear excessively elevated for a few days after surgery, but they descend to a more natural position within a period of a couple of weeks.

A certain amount of bruising will always occur and for this reason it is a good idea to take a scarf and dark glasses to the hospital to wear on your way home. An overnight stay in hospital is all that is normally needed. However, if you do not live locally Dr Mackenzie may suggest staying an extra night in hospital for your comfort

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You may be prescribed some mild painkiller tablets (Panadol/Paracetamol) and some antibiotics. If you have any significant worsening pain or swelling, then you must inform the nurses or Dr Mackenzie immediately.

At home, rest and sleep propped up on at least four pillows. You may wash your hair on the second day after surgery, by suspending your head backwards over the sink, and afterwards drying with a cool dryer.

You will usually be seen after 7 to 10 days for removal of the skin staples from the scalp. Exercise should be avoided for two weeks after surgery to minimise any post-operative swelling. Avoidance of excessive sun exposure is important for three to six months as this can affect the pigmentation of the forehead.

In the first few weeks after surgery your eyelids may not close fully. This can lead to irritation of the eye, so it is important to use lubricants and eye moisturizers like artificial tears to protect your eyes from drying out, particularly at night.

How long does it take to recover from a brow lift?

The timeline for resuming activity after a brow lift depends on the individual—if you are having a brow lift alone, recovery is usually much quicker than that for a patient having a brow lift in conjunction with a facelift or other more extensive procedure.

Below are typical recovery milestones following brow lift surgery:

- Day of surgery: walking around the house is encouraged
- Don't bend down
- 1 to 2 days after surgery: showering is permitted; be gentle around your incision sites
- 1 week after surgery: return to a sedentary job; some patients are able to return to work earlier. You may tire more easily, so consider a limited work schedule initially. If you are concerned about visible bruising, your cosmetic surgeon can recommend options for camouflage makeup
- The staples used to close your incisions will be removed at your 7-10 day follow-up visit. Although anticipated by most patients with apprehension, removal of staples is a painless event, and staples have the advantage of protecting the hair follicles much better than stitches
- 2 to 3 weeks after surgery: resume driving, as long as you have full mobility and are no longer taking prescription pain medication
- 4 to 6 weeks after surgery: gradually resume exercise; Dr Mackenzie will provide guidance for which activities are allowed
- You should expect some bruising around your forehead. It is wise to limit vigorous activity to keep this bruising under control

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- You may also experience headaches for the first few days. Any discomfort you experience can be controlled by taking paracetamol. Do not take aspirin or other anti-inflammatory medication as these can promote bleeding
- You may be aware that one eye is more swollen and bruised than the other; it is normal and will settle over the coming days and weeks
- If Endotine® devices have been used, they will be slightly palpable and may be slightly visible until they resorb away over 3 months

How long does the effect of a brow lift last?

The improvements made with brow lift surgery should last for many years to come. However, nothing can stop the normal aging process, and eventually the forehead tissues will begin to settle with time and gravity. You can help keep your results looking their best by living a healthy lifestyle. Wear sunscreen daily, eat a diet rich in whole foods and vitamins, and don't smoke. This will help keep your body healthy and skin looking its best.

What are the complications of this procedure?

Fortunately, significant complications from brow lift surgery are infrequent. However, all surgery carries some uncertainty and risk, and they may include:

- In the early phase after the operation, the forehead and eyelids often swell. This is normal and takes between 7 to 10 days to resolve. The bruising may take a little longer to disappear, particularly just below the eyelids
- Blood can collect under the forehead skin leading to a tight boggy swelling that is often painful (haematoma). Very rarely this does not dissipate and needs to be washed out in the operating theatre
- Infection can occur but Dr Mackenzie will normally prescribe antibiotics for the first week to avoid this
- Headache-it is not unusual to have a headache for 48 to 72 hours following brow lift surgery, particularly endoscopic. This normally resolves without requiring more than standard painkillers
- The primary risk related to brow lift surgery is decreased sensation in the forehead. This is most commonly only temporary and is related to stretching of or injury to nerves at the edge of the eye socket. There may also be some associated irritation or itchiness to the scalp, both of which can be permanent in extremely rare situations
- The hair surrounding the small scars can be affected and not grow. This can take up to 18 months to fully recover although again it can be permanent in extremely rare cases. This is more common in people with fine hair and can be improved by scar revision

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- The position of your eyebrows immediately after surgery is a little higher than the end result but will settle within the first few months. It is usual to position the brow slightly higher than the planned height to allow for the inevitable minor descent as the tissues settle back to normal
- There is also a relatively low risk of damage to the nerves that move the forehead. This can lead to asymmetry in the forehead lines and the position of the eyebrows. Revisional surgery may be necessary to improve appearance
- Weakness of eyebrow movement. Rarely there is weakness of movement of the eyebrow due to damage to the nerve controlling muscles in the area. This is usually temporary and resolves over time but occasionally persists longer than expected

Other risks include:

- Elevated hairline
- Eye irritation or dryness
- Facial asymmetry
- Fluid accumulation
- Pain, which may persist
- Poor wound healing
- Possibility of revision surgery
- Skin loss
- Unfavourable scarring
- Rare risk of deep venous thrombosis (blood clots) that can result in pulmonary embolism with chest pain, shortness of breath

Sometimes after undergoing a brow lift 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 the surgery e.g. mild asymmetries or not realising an upper blepharoplasty procedure would be needed as well to gain the best result. It is important that you discuss your expectations in advance of the surgery so that you can understand what to expect from the surgery and so this situation is avoided as much as possible. Additional costs may be incurred for further procedures.