Eyelids and Forehead: Blepharoplasty and Brow/Forehead Lifts

With age, the eyes may take on a tired or fatigued look due to several factors. Sometimes these changes are hereditary and occur in younger people. The upper eyelids may develop considerable redundant skin. The lower lids sometimes have true skin excess. Both can feature bulging of fat which distorts the youthful architecture.

Our eyes are vital to our sense of who we are and small alterations can make large differences. If there are changes making us look different but not like ourselves, this may cause serious concerns. There is much discussion among plastic surgeons as to the best approaches to rejuvenating the eyes

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ANATOMY

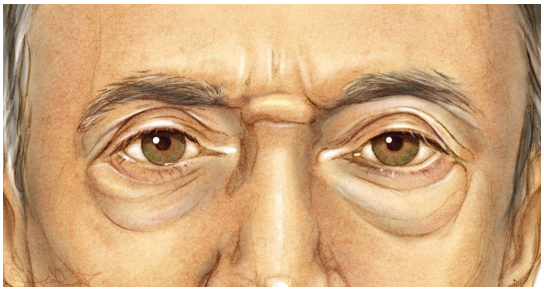
"The eyes are the windows of the soul".

Skin Excess of the upper lid skin may hang over the eyelids and even rest on the eyelashes. In some people, it may partially obstruct peripheral vision. If this extreme is reached, medical insurance may cover part or all of the cost. When the forehead and brow droop, the upper lid is crowded by the brow, and there appears to be more excess skin than there actually is.

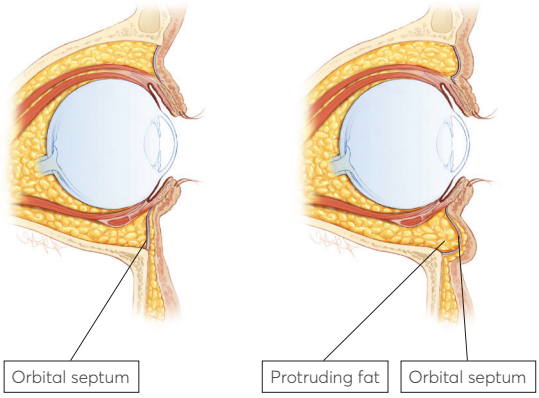
There is usually much less excess skin in the lower lids. Removal of too much skin from the lower lids used to be one of the main reasons people looked strange after cosmetic surgery.

The **canthi** are the corners of the eyes *(please see canthopexy, below)*

Aging changes around the eyes may feature protruding fat and excess skin



Protruding fat and **prominent fat**:
The eye floats in the eye"socket" in a cushion of fat cells. This fat is held in place by a thin membrane which acts as a retaining wall. This "orbital septum" runs from the lower lid to the rim of the cheek bone and from the upper lid to the brow.



Sometimes even in the teens or early 20s the septum sags and fat begins to bulge into the skin of both or either of the lower and upper eyelids. "Bags" under the eyes are usually the fat bulging below the youthful border of the eyelid. We also see this above the upper eyelid and above the inner canthi —the inner corners of the eye. As people age, sometimes it is the shrinkage of everything around the eye and loss of both fat and bone that makes the eyelid seem to bulge with fat. It is now clear to surgeons that reducing fat must be done conservatively, and often selective augmentation with fat transfer grafting is also needed to treat the aging face.

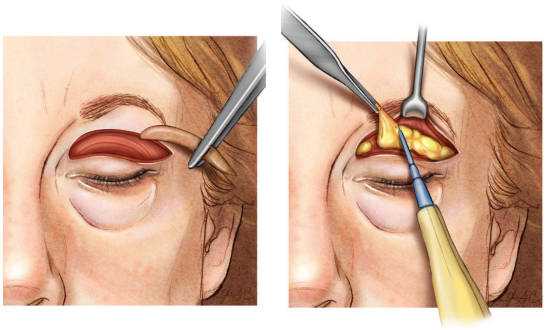
Muscles that move the eye pass from the back of the eye socket (the orbit) through the fat and attach to eye. The Levator muscle also passes through this layer and attaches to the eyelid. It acts to raise the eyelid. The optic nerve and other nerves are also found in this space.

TECHNICAL DETAILS

Upper eyelids:

- Incisions are marked out and skin excess estimated. (Attention is paid to how much of this is actually forehead sag)
- Local, anesthesia with sedation (twilight) or general anesthesia
- Removal of excess skin
- Shifting, augmenting or removal of fat
- (occasionally) tightening or shortening the levator muscle which opens the eye for "ptosis" or droop repair
- May be combined with facelift, brow and forehead lift or other procedures

The surgeon trims the excess skin from the upper eyelid and approaches the bulging fat by splitting the membrane, then trims the fat and



Traditional (trans-cutaneous) approach to lower lid

carefully cauterizes any tiny blood vessels which would otherwise cause bleeding, allows the remaining fat to return to its place and closes the incision with some fine stitches.

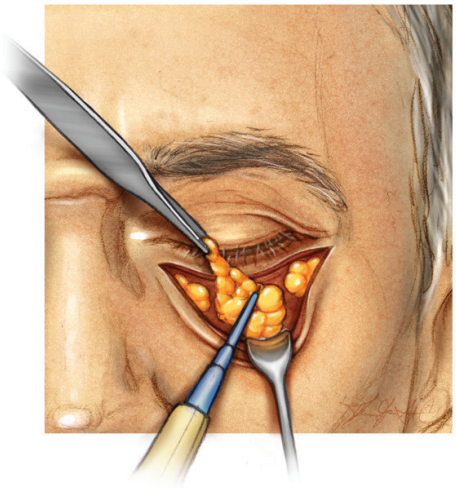
Lower lids:

- Incisions may run just under the lashes and out past the outer corner of the eye OR may be internal, inside the lid (transconjunctival), or both
- excess skin is trimmed along the incision under the lashes
- Bulging fat is dealt with in many different ways:
  - Traditionally by removal
  - Shifting it (transposition) onto the rim of the cheekbone
  - Returning it into the original position and repairing the septum
- Support of the lower lid corner (***canthopexy*** *stitch)*

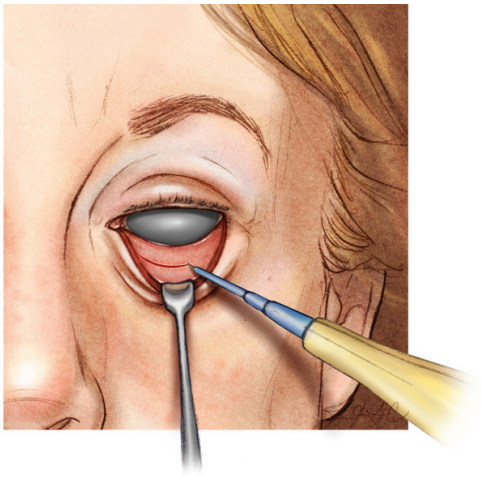
It is uncommon to have a lot of excess skin to the lower eyelids and attempts to **lift** the lower eyelid by means of trimming skin can pull the eyelid down. To help prevent this, with all external incision techniques, an internal supportive stitch, from the outer corner of the eye to the bone should be done (canthopexy). This may have a temporary effect of making the eyes look "oriental", but this relaxes in a few weeks and the benefits of preventing problems are worthwhile.

Fat conservation Techniques

Many surgeons now believe that excess removal of fat may lead to a rather hollow and operated look in later years. New techniques involving the traditional external incision but with repair and repositioning of the fat pockets, have been developed. The weak wall is repaired and the fat is partially removed with the remainder put back into position. I call this a hernia repair blepharoplasty and use it in over half of my eyelid patients. There are other methods used to perform lower eyelidplasty and conserve fat. Most commonly this involves moving the bulging fat out and onto the upper edge of the cheekbone, to fill this area.



Traditional (trans-cutaneous) approach to lower lid



Transconjunctival Blepharoplasty: A stainless steel corneal shield is used to protect the eye during the incision inside the lower lid to remove fat from inside the lower lid.

Decision Making

Whether to remove or reposition fat, whether to remove skin and if so how much, whether to inject fat, are decisions to be made in planning the surgery procedure. They are among many factors to be assessed in any individual case. You will want to discuss your particular anatomy as well as other factors particular with your case.

RISKS

Residual Skin Excess

It is safer to remove less skin than to risk problems from excess removal. Sometimes this means taking a little more skin out under local anaesthesia, several months later. This is more common for the upper eyelids, especially when a browlift is worthwhile but a patient has chosen not to have it done.

Infection and Bleeding

As with any surgical procedure, blepharoplasty can result in infection, bleeding, and delayed healing. The risk of these occurring is very small. Generally, the risk of infection in clean, elective surgical procedures is about 1%, and that of significant post-operative bleeding is about the same. Infection and post op bleeding in eyelidplasty procedures is much lower than 1%. We avoid operating on patients with untreated high blood pressure, those with an undiagnosed reason and history of bleeding, or those taking blood thinning medications including anti-inflammatories like aspirin. Bleeding inside the eye socket is an extremely rare but very serious problem which can lead to compromise to vision and is a true emergency.

"Lower Lid Malposition" and "Ectropion"

All lower eyelidplasty runs the risk of the lower lid getting pulled down, either because too much skin is removed or because of the forces of healing and scar formation. When this occurs, the effect may vary from excess white showing under the eyes to ectropion. Ectropion means the edge of the lid is being pulled outward away from the eye. This causes problems with the way tears moisten the eye and can cause and irritation and inflammation. The affected eye looks inflamed and the appearance of the eye causes huge concern. Fortunately, with current techniques and routine canthopexy for all external approaches to lower lid blepharoplasty, ectropion has become a rare complication. Most of the time, treatment is careful watching, with taping the lid and artificial tears to keep the eye moist while healing gradually softens the scar and the lid returns to a normal position. In rare cases, surgical treatment is needed.

Dry Eyes

Tear coverage of the cornea diminishes as we age. Dryness symptoms include, paradoxically, excess tearing when outdoors and in a windy situation: the eye reacts with a gush of tears and this may spill over the lower lid and run down the cheek (epiphora). Allergies and other factors can contribute. Skin removal from the upper lids and changes to the function of the lower lid can cause or aggravate this if there is a tendency to dryness already. Extreme dryness can lead to damage to the cornea. If are experiencing dryness symptoms, tell your doctor. Tear gel and artificial tears are helpful.

Aesthetic Dissatisfaction

Perfection is rare in cosmetic surgery.

It is important that you and your surgeon have a meeting of minds with similar aims of surgery, before setting out. This requires careful evaluation of your concerns, a proper diagnosis, and a treatment plan which considers all the options with the relative risks and benefits taken into consideration. There is no one right way to treat the anatomical changes that contribute to your concerns.

Some degree of asymmetry prior to surgery is almost always present. It is best if differences are pointed out by the surgeon in advance. Often one eye is smaller than the other, or higher, or on a different angle. Patients will look at their healing eyes more closely after than they ever did before surgery.

There may be small areas where bulging fat is still noticeable, and these may or may not improve over time.

If you are striving to eliminate wrinkles and skin damage from smoking or sun, you may be disappointed.

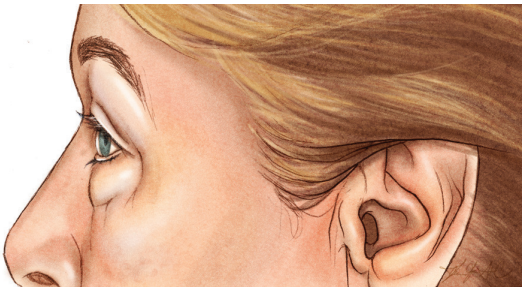
Some patients may benefit from skin resurfacing with laser or other techniques but these have their own risks and benefits and are best discussed with an expert in that field.

Loss of Vision

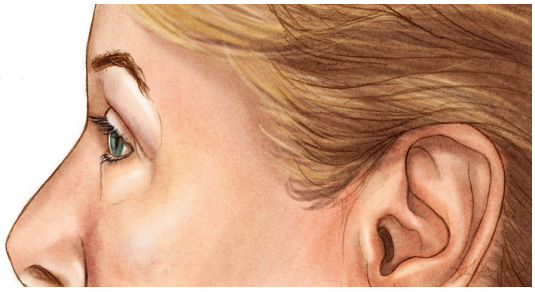
There are cases of visual loss associated with blepharoplasty, though in practice this has become virtually unknown to happen. Pre-operative control of blood pressure, elimination of ASA and other anti-inflammatory medication, blood thinners, and food containing blood thinners, and properly planned post-op care with a responsible adult have all contributed to making this dreaded complication a near thing of the past.

SUMMARY

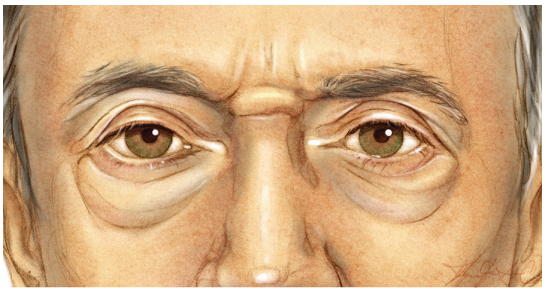
Blepharoplasty procedures are done for any reasons and in many ways. After a discussion of the many different options available, with careful planning and execution of surgery, patients and surgeons can be rewarded with truly gratifying outcomes.



Pre-operation



Post-operation



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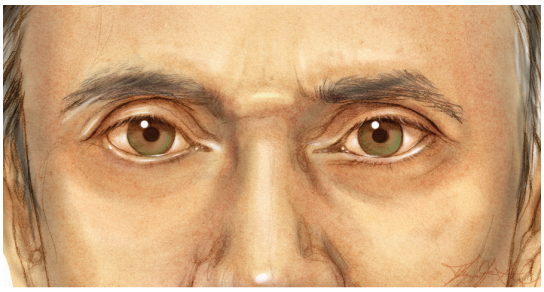
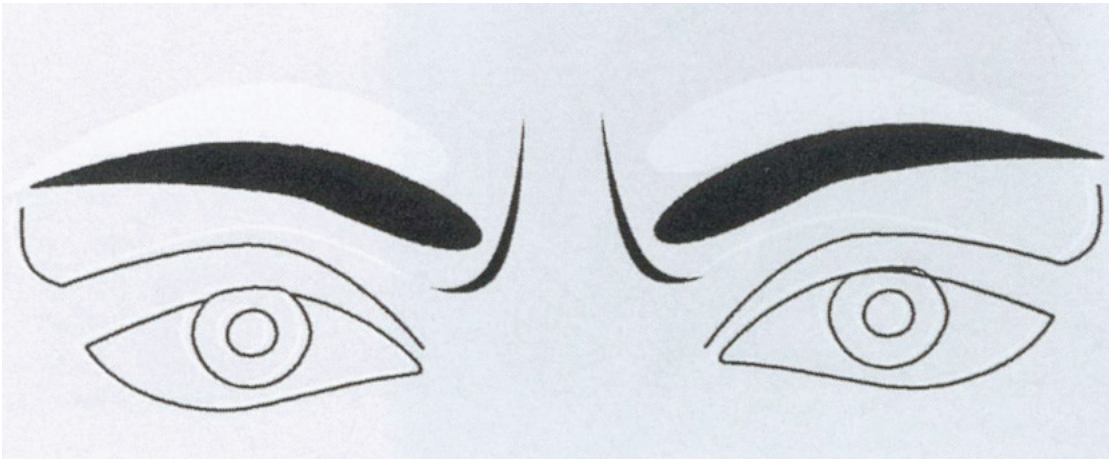
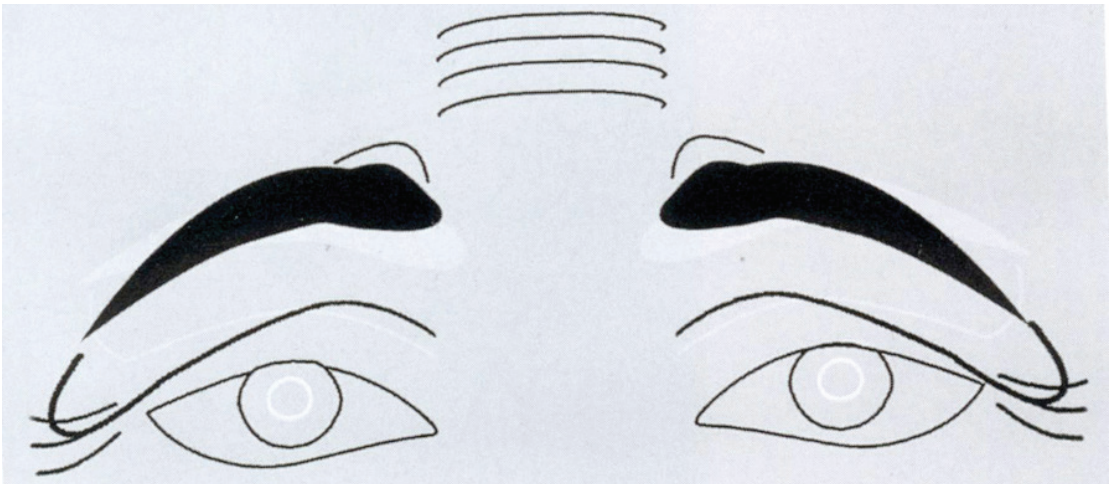


Post-operation

Browlift and Forehead Lifts

For years, caricaturists have understood the link between the emotions and their expressions. In the best of animation, emotion is conveyed by simple but easy to understand lines.





Much of this is conveyed by the position and shape of the brows, and lines that are formed by contraction of the muscles around the eyes. Fear, anger, sadness and fatigue are all read from subtle but significant differences in these expressions.

Much of the astonishing success of Botox® is related to this, and it has become the treatment of choice for many patients who see expressions they don't like beginning to become etched on their faces.

Sagging of the brows may also contribute to the apparent excess of skin of the upper eyelids; removal of upper lid skin when the problem is brow sag will make matters worse and may cause a patient to look angry.

Meet the Doctor

BENJAMIN GELFANT MD FRCSC

Dr Gelfant is a member of the Canadian Society for Aesthetic (Cosmetic) Plastic Surgery (CSAPS), as well as the American Society of Plastic Surgeons (ASPS) and the American Society for Aesthetic Plastic Surgery (ASAPS).

View more procedures and learn about Benjamin's process at **drgelfant.com**