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The endoscopic brow lift can be a powerful surgical procedure. As surgery is performed within a closed space and with specialized instrumentation, attention to detail, knowledge of anatomy, and surgical experience is critical to attain successful results. Educate yourself with knowledge and practice.

With these basic principles in mind, I have found that there are a number of caveats which both simplify the surgery and enhance surgical outcome:

1. In the majority of patients, it is the tail of the brow that has become lax and ptotic. Elevating the body and head of the brow out of proportion to the tail yields unnatural results and unhappy patients. To accomplish this elevation, mark the temporal posthairline incision parallel to the tail of the brow. The marking should be 3 cm long and the same distance behind the temporal hairline. When fixating the brow temporally make sure the vector of pull is supero-medial to avoid splaying the brows.
2. I rarely perform paracentral boney fixation with screws or other means, as it has risks and is unnecessary with appropriate release.

If you choose paracentral boney fixation, the fixation point (and incision) should be somewhere between the lateral limbus and lateral canthus. The exact point will vary with individual anatomy.

3. Precise incisional markings are not necessary in my experience. I routinely use three incisions (one midline, two temporal). The anteroposterior midline incision is approximately 2 cm posterior to the hairline and 1 cm in length. Temporal incisions are 3 cm long and 3 cm posterior to the hairline. The temporal incision is parallel to the tail of the brow, with its medial extent just lateral to the superior temporal line. It is not necessary to mark the incision before surgery.
4. Use high-volume, low-concentration local anesthetics. To avoid excess bleeding that will obscure the surgical view, inject 15–20 cc of 1 % xylocaine with 1:100,000 epinephrine where bleeding typically occurs, to the incision sites, supraorbital rims, lateral canthus, and medial zygomatic arch. Inject 30–40 cc of 0.25 % xylocaine with 1:800,000 epinephrine diffusely to the same areas and sites in between. This high-volume injection aids greatly in attaining appropriate hemostasis.
5. Avoid cautery subcutaneously at the incision sites to prevent hair loss. If bleeding occurs, reinject with the dilute solution mentioned above or with saline. If bleeding is brisk and cautery is necessary, do so conservatively.

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6. When performing the temporal dissection, cut down to the white glistening surface of the deep temporal fascia. Entrance into and maintaining surgery within this plane will avoid inadvertent injury to the frontal branch of the facial nerve.  
Be sure to connect the temporal subaponeurotic plane with the central subperiosteal plane by dissecting in a temporal to central direction through the conjoint. This helps to avoid inadvertent injury to the frontal branch of the facial nerve.
7. Be careful when performing glabellar muscle manipulation. Weakening the corrugators and procerus muscles will yield an elevated medial brow and will increase the interbrow distance. This may not be a desired effect. Discuss this with patients preoperatively, and proceed with caution. We tell the patient that the procedure elevates the ptotic brow, but does not eliminate frown lines (see caveat 15 regarding botulinum toxin).
8. In all cases, release the periosteum at the arcus marginalis along the entire supra-orbital rim. It is also critical to spread and release the orbital portion of the orbicularis oculi muscle (the temporal brow depressor). We spread and release the muscle until the yellow brow fat pad is exposed. This allows unopposed elevation of the brow during the postoperative period and is important in attaining appropriate brow elevation.
9. Postoperative dressings can increase periorbital swelling and ecchymoses. It may be helpful to place a #10 French drain from one temporal incision to the opposite one, making sure the drain is situated inferiorly in the temporal incisions and along the orbital rim. The drain can be removed in 2 days and greatly reduces postoperative bruising and swelling.
10. Deep temporal fixation only (DTFO). I believe if appropriate release is achieved, only temporal fixation is needed in most cases. This is accomplished by securing the superficial to deep temporal fascia with two to three interrupted 2-0 PDS sutures.
11. Overcorrect brow height. This is necessary to compensate for the inevitable drop in postoperative height.
12. Close incisions at the skin only with staples. Subcutaneous closure leads to hair loss.
13. Inject dilute Marcaine (bupivacaine) solution to the supraorbital nerve bundles postoperatively. This allows pain control in the immediate postoperative period.
14. Botulinum toxin is used pre- or postoperatively in the temporal brow area to weaken orbicularis fibers and maintain brow height during healing.
15. Be careful when adding blepharoplasty to avoid creating unnatural/hollow appearance and lagophthalmos. When we combine these procedures, we do not excise orbicularis muscle. The brow lift plus blepharoplasty adequately debulks the eyelid so orbicularis excision is superfluous and can lead to difficulties.

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### Suggested Reading

- Ramirez OM. Endoscopic subperiosteal browlift and facelift. *Clin Plast Surg*. 1995;22:639–60.
- Zimble MS, Nassif PS. Adjunctive applications for botulinum toxin in facial aesthetic surgery. *Facial Plast Surg Clin North Am*. 2003;11:477–82.