

Hair Restoration Revision Techniques

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For patients with unfortunately less than desirable results of an initial hair restoration, a reparative, or revision procedure can be performed to improve unaesthetic or unnatural results. A “pluggy” or “doll’s hair” look is usually the result of hair restoration work using grafts that are too large, either performed years earlier or with outdated techniques. **Hair restoration** can additionally appear unnatural for reasons like improper hairline placement, improper angling of grafts, or scarring of the donor site and transplant areas. Patients may also be disappointed in the density of the previously performed hair restoration or may have had a painful or messy experience.

For patients with less than desirable aesthetic hairlines from prior transplantation, the most commonly recommended revision method is further grafting. The concept of further grafting is that new grafts are placed in a more refined approach to conceal the old grafts, which can be useful when the first transplanted hairline is sufficiently high enough and there is a sufficient donor hair supply. I have utilized this technique in the majority of the more than 1,500 revision procedures I have performed over the past 20 years with very impressive outcomes in the large majority. In addition, in some of these cases, some of the most unaesthetic grafts also needed to be removed to achieve a more natural appearance, especially for those along the frontal hairline that are very noticeable.



Before and after revision procedure.

There are certain situations however, where this grafting method will not improve hairline aesthetics sufficiently to allow the patient to regain the desired natural appearance. This may be especially true for patients with aesthetic problems that include hairlines that are too low or flat/rounded, a large number of unnatural grafts that cannot be concealed with further grafting, and/or scarring of the surrounding skin around prior placed or prior removed grafts.

For these patients, three alternative procedures can and may be considered. These three methods include:

1. Linear excision of a portion of or the entire hairline

2. [FUE](#) punch removal of prior placed hairline grafts
3. Fusiform-shaped scalp reduction performed just behind the hairline.

This article will demonstrate these techniques and applications of these three techniques. When performed properly, these techniques have made a huge difference in the lives of some of my patients, allowing them to no longer feel unsatisfied with their unnatural appearance from a prior hair transplant procedure.

1. Linear Excision of the Hairline – Partial and Complete

Almost 11 years ago, I was faced with a challenging case of a male who underwent a series of plug and minigraft transplanting 20 years earlier to create a 2.5cm-wide hairline that unfortunately was too flat and too far forward. Another surgeon had attempted to remove some of the larger of the 700 grafts, which resulted in unaesthetic hypopigmented scarring in place of the grafts. The patient was resigned to wearing a hairpiece, unless something heroic was performed for him. It was in this desperate situation that I recommended what at the time I considered a rather invasive procedure, a complete excision of the entire 2.5cm-wide hairline and reapproximating the defect with suture closure. This can be compared to performing a browlift without the forehead undermining that would be performed to elevate the brows. The prior transplanted hairs contained in this removed strip were dissected out and replanted higher into the frontal forelock. The scar healed up beautifully, and the patient chose not to have the offered second procedure of grafting into the residual hairline scar once it matured, which is now something I perform in the majority of these patients.

This patient was an appropriate candidate because he firstly had no other options, secondly, the patient had a decent amount of forehead/hairline region laxity, and thirdly, and very importantly, the skin along the hairline was also damaged due to scarring from a combination of the prior large grafts and previous attempts to remove them using larger punches.

The patient described above had his entire hairline excised, however, in approximately one-third of my patients, only a portion of the hairline is excised. Most commonly, this is in the frontotemporal recessions where the typical patient had poorly placed grafts making the hairline appear too flat. These partial hairline excisions are most commonly performed bilaterally, sparing as much as 8cm of the frontal-most hairline.

Whether unilateral or bilateral, the technique is similar; an incision is made right along the leading edge of the affected hairline and the forehead skin is undermined forward, and then pulled back, to assess how much of the hairline can be excised. If a browlift is being performed as well, the undermining of forehead skin is extended to the region of the brows to free them up for elevation. The excess hairline skin, including hair grafts, is removed, and the defect is sutured closed; both incisions being made with a rolling irregular fashion to achieve a less detectable nonlinear scar.

Bruising and swelling are usually quite minimal unless the browlift is performed and these procedures, unless incorporating a browlift, are usually performed under local anesthesia with oral sedation, if desired. The prior transplanted grafts that are contained in the excised hairline skin can be dissected out and re-transplanted into another part of the scalp at the same procedure.

2. Extensive FUE Punch Removal of Grafts

The fundamentals of this technique have been described in the past, but only primarily applied to larger grafts, and with certain limitations. Using follicular unit extraction instrumentation, a large number of grafts closely placed together can be removed, with little if any residual detectable scarring. FUE punches can be used to extract smaller grafts containing 1-2 hairs and larger grafts containing 2-4 hairs, respectively.

The biggest challenge to **FUE** punch extraction is that scarring and fibrosis of the transplanted grafts can sometimes make removal difficult. In some cases, not all of the hairs in a graft get extracted, so patients are advised that they may desire a second procedure as soon as 2 months later to remove additional grafts. Healing of these extracted sites is quite rapid, with healing by secondary intention (no suturing required) taking place in typically less than a week with any residual pinkness resolving over several more weeks.



Before and After Revision Procedure

3. Fusiform-Shaped Scalp Reduction Behind the Hairline

Instead of excising the grafts right along the hairline, in some circumstances a similar result can be achieved by performing what is in essence, a **scalp reduction** behind the hairline. The main advantage of this technique is that it avoids making any incision along the hairline which is rather pulled up/back from the fusiform scalp reduction incision. This technique therefore improves the position of the hairline but it does not remove unaesthetic grafts or scarred skin along the hairline.

The most common indication for this procedure is for elevating the frontotemporal recessions, either unilaterally or bilaterally. By placing the incision or incisions close to the hairline, greater control of the amount of elevation is achieved, and if desired, asymmetric hairlines can be made more symmetric.

Conclusion

In summary, the literature is replete with the descriptions of reparative techniques that involve further grafting sometimes combined with graft removal. As a result of relative noninvasiveness and patient acceptance, these techniques are quite effective in the majority of patients. While the hairline excision procedure is a much more invasive technique, the appropriate patients simply see few options to having the procedure performed, whether due to scarring of the recipient area that needs to be completely excised or a hairline that is simply too low, and willingly undergoes the surgery that will potentially allow them to resume a life not restricted to wearing a hairpiece.



Before and after revision procedure

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