

# Introducing Hair Transplantation into a Facial Plastic Surgery Practice

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## Abstract

### Keywords

- ▶ hair restoration
- ▶ follicular unit extraction
- ▶ donor hair harvesting
- ▶ recipient site creation

Hair restoration can be an integral addition to the facial plastic surgery practice. As surgeons dedicated to reconstructive and aesthetic surgery of the head and neck, hair restoration is a natural complement to a facial plastic surgeon's practice. This article presents the keys to adding and starting hair restoration to one's facial plastic surgery practice.

As surgeons dedicated exclusively to treating reconstructive and aesthetic concerns of the head and neck, hair restoration can play an integral role in a facial plastic surgery practice. Hair restoration can be a natural extension of the facial plastic surgeon's practice. As in any specialty, achieving consistent and great results is extremely challenging and hair restoration is no exception. Achieving great results in hair restoration involves a significant commitment and dedication to optimize one's technical skills. As facial plastic surgeons, we have both the surgical ability combined with an artistic appreciation of the aesthetics of the head and neck that provides us with an advantage in hair restoration. The facial plastic surgeon is both well-trained and well-equipped to handle hair restoration. In this article, I will elucidate on my experience as a facial plastic surgeon and how I have implemented hair restoration into my practice. This article is not intended to be an exhaustive reference for the many facets of hair restoration but will rather focus on the key challenges faced as a novice hair restoration surgeon adding hair transplantation to one's facial plastic surgery practice. From this perspective, I will present the keys to evaluate a patient's candidacy for hair restoration, the patient consultation, the surgical procedure, and post-operative management.

## The Consultation for Hair Restoration

The hair transplant patient is very similar to the aging face or rhinoplasty patient. They are well educated in the procedure and they have certain expectations that must be met if you are

to have satisfied and happy patients. As in any aesthetic procedure, it is imperative that proper expectations are established. The difficulty as one is beginning their career as a hair transplant surgeon is knowing what one can expect to achieve from a procedure. Until one achieves a level of experience or confidence, it is best to adhere to the old adage: "under promise and over deliver." To achieve this growth of confidence, it is best to start with cases where you have a much higher probability of achieving great results and avoid those with a higher potential for pitfalls. Hair transplant candidacy can follow a level of progression from the more favorable candidates to those that pose more of a challenge. It is best when starting to choose the more favorable candidates to allow you to build your confidence in the procedure. I find what can be the most underappreciated aspect is the ability to create the illusion of density in hair restoration. As in any specialty, the assessment of a patient for their candidacy starts with the proper history and physical examination, fundamentals which cannot be overlooked in hair restoration.

## Pertinent Medical History

Patients who are candidates for hair restoration must, of course, be in good general health to undergo a procedure. Pertinent questions to obtain from the history include medications, including the use of nonprescription supplements. It is particularly important to ask about the use of medications which impede coagulation, including supplements such as fish oil or those containing omega fatty acids. Given

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that hair restoration relies on making thousands of submillimeter incisions, bleeding can make for a very difficult procedure which is an underappreciated challenge by one beginning in hair restoration. Although the majority of patients we see have hair loss secondary to androgenic alopecia (AA), it is of absolute importance to rule out what are known as the imposters of AA.<sup>1</sup> Pertinent questions to ask regarding hair loss include: the length of time they have noted their hair loss, the temporal progression of the hair loss—has it been fast or slow, and the family history of hair loss. If applicable, I have them point at a Norwood chart to show where their close family relative is within that chart and their age. This also helps to set the stage for the next part of the consultation.

### Setting Proper Patient Expectations

This is very likely one of the most essential aspects in setting the stage for a successful hair transplant. Many patients are under the belief that a hair transplant is permanent or that it will restore all their lost hair. Many do not understand the progressive nature of hair loss. It is our job as their physician to properly counsel them and guide them in this process. As their physician, we must educate them about the nature of hair loss and set proper expectations of what can be accomplished through hair transplantation.

It is important to ascertain from the patient exactly what their goals are for hair restoration. This may sound self-evident but, for instance, it is easy for the novice surgeon to assume that a patient with significant frontal hair loss may want to restore this frontal area when, in fact, they are only bothered by their crown hair loss. It is helpful to start with general and nonleading questions such as, “how can I help you?” or “what are your goals?” It is through these questions that you can not only learn their goals but equally as important—their expectations. It is not uncommon for male patients to desire a hairline they may have had as a 20-year-old. Or when they point at their frontal temporal recessions (FTRs) they want the hairline rounded, for example. As one beginning in hair restoration, do not fall into these traps. Lack of experience may incline you to have the patient dictate the placement of a hairline—a common pitfall. It is important at this point that you then educate the patient as to the nature of hair loss. I explain that a

hair line that may look normal for a 30-year-old will not look natural in their 40s or 50s. You will find that this area is where you will likely encounter the most resistance especially from the younger male patient. It would be prudent as a surgeon beginning in the field of hair restoration to defer treatment of the young male patient until one gains the experience needed of knowing what a hair transplant is capable of achieving in your hands.

### Assessing Candidacy for Hair Restoration

It may be tempting when starting in hair restoration to try and gain your experience by offering your new found services to as many existing patients as possible in your facial plastic surgery practice. To establish yourself as a good hair restoration surgeon and successfully build this area of your practice, it is obviously important to attain good outcomes and happy patients. To this end, you will be at a great advantage in knowing who makes for a good hair transplant candidate when establishing your hair restoration practice. As in other facial plastic surgeries such as rhinoplasty or facelifts, selecting the best candidates and the “easier” cases at the beginning of your practice allows one to not only gain experience but facilitates the confidence needed to gradually expand your practice. Given the surgical complexity of other facial plastic surgery procedures, it is easy for the facial plastic surgeon beginning in the field of hair restoration to underappreciate the difficulty of achieving successful results in hair restoration. To leverage your inexperience, it is best to choose patients who will likely have the most successful outcomes—the key is knowing which factors will make for better outcomes.

Who makes a “great” hair transplant candidate? In general, the male patient who has a relatively stable hair loss pattern with a primarily frontal hair loss makes the “best” candidate for hair transplant (► Fig. 1). Although an exact age cutoff criteria cannot be placed, this is typically your male patient over 40 years old with FTRs, who has a slowly progressive hair loss pattern. These patients make for the “best” candidates for the novice hair transplant surgeon because a relatively small procedure can have a very impactful outcome. The creation of the appearance of density in the frontal temporal region is much easier to establish than the creation of density in other regions of the scalp. A patient



**Fig. 1** (A, B) Example of a good candidate for a hair transplant is a patient which in this case is a 45-year-old male with a stable hair loss pattern, looking to fill in his frontal temporal recessions.

with an already established frontal forelock but with FTRs just needs their FTRs filled in to produce a great result. It is important, however, when reestablishing a hairline that the hairline lowering in the frontal temporal region is conservative. As a general rule to follow: the younger a patient, the more conservative the hairline lowering.

While the male patients with primarily frontal hair loss pattern provide for the cases most amenable for a transplant, it is as important to be aware of those cases which pose a greater challenge to the inexperienced surgeon. The creation of density in the crown region is very difficult to achieve for various anatomical reasons. For one, it is a larger, circular area. Second, the scalp in this area is of a convex shape. Lastly, the hair grows in a radial direction away from the center. As previously discussed, if attempting a transplant procedure in the crown region, it is important that the patient is made aware of what degree of density is probable. Make the patient aware and set the expectation that they will very likely always “see” their scalp in the crown region. To better elucidate and explain it to the patient, I tell them that we would be likely taking them from a “balding” appearance in the crown to a “thinning” appearance. In this manner, I find that the patients best understand what amount of coverage is likely attainable. In general, it is prudent to reserve hair restoration in the crown region for the male patient in his late 40s or 50s with a stabilized hair loss pattern.

As an inexperienced surgeon, one needs to be particularly mindful of the young male patient seeking to lower their hairline. It is a common pitfall for the novice hair transplant surgeon to give in to the desires of their patients. As mentioned previously, patients need to understand the progressive nature of their hair loss, particularly the young patient. If transplanting a younger patient, you must opt for a very conservative hairline and smaller procedure. You need to foresee for them where their hairline will be appropriate as they age. In the younger patient, it is prudent to perform a conservative procedure ideally concentrating in filling in the frontal forelock. This will allow for aesthetic results with the “framing of the face” with a reinforced frontal forelock, while anticipating for future hair loss (► Fig. 2). If the patient is not willing to understand this conservative approach, it is best to defer their procedure.

## Procedural Approach

### Determining Graft Amount

One of the more daunting aspects for one beginning in hair restoration is trying to accurately estimate the number of grafts needed to create adequate density in a desired area. Although there are certain guidelines that have been referenced with regards to follicular unit per square centimeter, in practicality, this is often challenging to calculate.<sup>2</sup> As will be further expounded in the section on recipient site creation, it is helpful to keep detailed operative notes and immediate postoperative photos. As a beginner in hair restoration, this will allow you to make the connection between the graft counts you have utilized and found to provide for optimal results in a given area. As a general guideline, it is best to start with smaller cases until you gain this needed experience.

### Preoperative Planning

On the day of their procedure, patients are met with in a preoperative suite where their case is once again reviewed with them and formal consents for the procedure are obtained by the surgeon. Good quality preoperative photos are taken. The area to be addressed is then marked first with a washable surgical marking pen. Particularly, if working on the hairline, adequate time is taken and one must be critical of the markings. The marked hairline is viewed from the frontal view, stepping back from the patient, checking for symmetry. It is also viewed from a bird's eye/top view perspective to check for symmetry. It is important to realize that given the subtle undulations and inherent asymmetries in the topography of the scalp, what may be perceived as being symmetric from the bird's eye/top view may not be symmetric after stepping back and viewing it from the frontal view. Any alterations can be done at this point, removing the markings with an alcohol wipe. As mentioned, it is best to plan for a conservative hairline. Keeping in mind that a hairline can always be easily lowered in the future but not as readily raised. Once you are satisfied with the markings, the patient is then shown the area to be transplanted in a mirror. If you are both then in agreement, the markings are



**Fig. 2** Young male patient with what will be an advanced hair loss pattern. A conservative hairline is marked (A) for a procedure which concentrates addressing the frontal forelock (B), anticipating future hair loss pattern.



**Fig. 3** (A, B) Preoperative markings for a patient with frontal hair loss. Shown here are the markings with both the removable marker and a more permanent marker once the hairline position is agreed upon by the patient and the surgeon.

then reinforced with a more permanent ink marker and photos are once again taken (→**Fig. 3**). Patients are then given oral anxiolytic medication if they elect to do so and are then brought in to the procedure room.

#### Donor Harvesting

The vast majority of cases in our clinic are now being performed utilizing follicular unit extraction (FUE). The strip method is utilized for patients who have either already undergone a previous strip procedure or who elect to have a large number of grafts and are not willing to shave their donor area for the procedure. In FUE donor harvesting, the donor area is marked preoperatively, ensuring safe donor area harvesting. The safe donor area is considered the same as that for the “strip” procedure.<sup>3</sup> Two important points for the novice surgeon are to maintain within the safe donor area and to not overharvest within an area. It is important to limit donor hair harvesting to the safe donor area by not encroaching on areas that are potentially at risk for future AA. It is also important to not overextract in a particular area as this will increase the possibility of donor site shock loss or the appearance of overthinning in this area.<sup>4</sup>

#### Recipient Site Creation

The creation of recipient sites is the most important and, therefore, the most challenging facet of hair restoration. It is difficult as a novice surgeon to “see the forest through the trees” as they are creating recipient sites. In this, hair restoration has differences as they relate to the experience gained from other surgeries performed in facial plastic surgery. For example, as in facial rhytidectomy, one must “foresee” how the techniques one is employing at the time of surgery will affect the long-term outcome of the surgery, but, for the most part one is able to have a good appreciation of the results at the conclusion of the case. In hair restoration, you are making incisions for the placement of the hair grafts without “seeing” the long-term results of the procedure for likely 1 year. Without the experience of knowing how the placement of grafts in a certain manner will translate into for the patient in the long-term results, the incision placement can be daunting for the novice hair transplant surgeon. It is

therefore important to maintain detailed records in your hair operative report to reference once the patient returns for their long-term follow up. Immediate postoperative photos are also extremely helpful to reference. Photos allow you to start making the connection in your mind between what you are seeing at the end of a case versus what this translates in to the final results (→**Figs. 4 and 5**).



**Fig. 4** Immediate postoperative photos shown here of a transplant to the frontal area. High-quality digital images combined with detailed operative records allow for the assessment of graft distribution and how this translates in to the long-term results.



**Fig. 5** Similar immediate postoperative photos of a hair line.

### Postoperative Follow-Up

Close follow-up with your patients is critical. It is very important to educate your patients as to what they are to expect in the postoperative period. Patients are given detailed written postoperative instructions on how to care for the grafts and the donor hair. They are seen the following day and as needed the first week for hair washings. They are explained the process of grafts entering into a dormancy period where they will not see any hair regrowth. Patients are explained to expect full results from a transplant, on

average, 1 year postoperatively. Many patients need reassurance during this phase of recovery whereby close communication helps to ensure happy patients. Patients are seen one year to one and a half years after hair restoration to assess results. Follow-up with patients after 1 year is important as it allows assessment of the success of the transplant. It also allows you as a novice hair transplant surgeon to compare the before/immediate postoperative/and long-term postoperative photos. Reference your detailed intraoperative record and be critical of your results. When a patient has a good result, ask yourself *why* they had a good result. Important questions to ask yourself about the procedure are: How were the grafts distributed in their case? Where were most of the 3-hair grafts or larger grafts placed? How many rows of 1 hair grafts were placed along the hairline? It is this self-analysis of your results which will allow you to improve as a hair restoration surgeon. If, in the follow-up visit, it is noted that satisfactory density was not achieved, a smaller, secondary procedure can be performed and offered to the patient.

### Conclusion

Hair restoration surgery can be a great extension and complement to a facial plastic surgery practice. As facial plastic surgeons, we have the background and training to provide a great service to our patients as hair restoration surgeons. Successful hair restoration necessitates both a surgical acuity as well as an artistic acumen that a facial plastic surgeon can provide for patients.

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