

## HAIR RESTORATION

For hair restoration, I consider a few things. One, is medical therapy, and there are medications like Propecia (r) and Rogaine (r) (that can help re-grow hair). And then there are less invasive ways to restore hair growth, and that would be PRP which is platelet-rich plasma (we will talk about that), and the third is hair transplantation, where we get follicles from the back of the head and implant them into areas of thinning.

There are indications probably for all three approaches (medication, PRP, hair transplantation), and sometimes we even combine them. When someone comes in for hair restoration, the first thing I will ask is if you have been taking any medications like Propecia (r) or Rogaine (r), and if it has been effective.

Secondly, we would like to assess the rapidity of the hair loss and see if there is any link to genetic predisposition where you can basically estimate the degree of hair loss down the road, and once we determine these things, we will try to figure out what the desires are, and hopefully they are realistic and we can plan a program perhaps using hair transplantation with PRP or without PRP, and medications to restore your hair. But everyone is different, and age, the rapidity of the hair loss, and those kinds of factors, really determine what is the best course.

There are some limitations with hair transplantation. It works best when there are some areas of thinning. When we have really advanced hair loss, it is generally impossible to restore a full head of hair. We have limited resources back here (the scalp) and so we can only use so many follicles to restore your hair.

So, it is important to understand what we can accomplish before we go down that path. Hair transplantation is generally done in a few different fashions. There is the extraction process and that is where the follicles are removed generally from back of the head. (Extraction) can be done in a strip method in which a surgeon will make an incision in the back of the scalp and take out some tissue, and those follicles will be chopped up and then separated and segregated and placed into the scalp. That leaves a scar in the back of the head that many men or women find unpleasant and visible particularly when they are coming out of the water or shower, particularly when the hair is short.

To avoid a linear scar, we could use manual extraction, FUE (follicular unit extraction). It is done by removing each follicle one by one either with little instruments (picture little hollowed-out screwdrivers in nature), or something like NeoGraft, which is automated, and that uses a little punch and generally extracts the follicle from the scalp with gentle suction.

These are two of the more common ways to extract hairs. There is a third way, ARTAS, and that is robotic extraction. They all have their advantages and disadvantages. I tend to believe that NeoGraft provides the most gentle extraction method and, thus, the best viability of the grafts which, of course, is very important because if we are putting in follicles that do not live, they do not grow hair.

When we perform FUE, or follicular unit extraction, we will extract basically every third or fourth follicle in the back of the scalp in this region, and the punches we use are very small, sometimes 0.8 mm, sometimes 1 or a little greater than 1, but these are very small punches that leave very little scars that are often imperceptible or not visible after they heal.

It would be very rare to have visible, or obvious scars from NeoGraft using the small punches we discussed. When we extract back in the head, the density reduction is not going to look thin (as opposed to the hair where there is thinning from hair loss). The idea of course is to thicken any of the areas that are thinning in the crown or the temporal region, not necessarily to give you the same density as you had 10, 15, or 20 years ago, but to get to a density where it looks good and natural.

Hair transplantation is an all-day affair. So, we are talking about the patient arriving at 8 a.m., getting marked, shaved, injected, extraction and placement of the follicles one by one can take an entire day. You are there maybe until 5 or 6 o'clock for a really large session.

The recovery time for hair transplantation depends mainly on the extraction method. The implantations (of the follicle) generally are the same. If the extraction method includes a large incision in the back of the scalp (as in the older strip method), the recovery time is going to be longer than during the FUE method where follicles are taken out one at a time. We are looking at maybe a couple of weeks of recovery of staples coming out and healing with the linear strip method versus very quick recovery (with FUE) when perhaps these donor sites, as we call them, will heal in a few days.

The implantation is the same for both methods because we are talking about extraction methods and implantation, in any given hair transplantation. (Two parts.) The follicles that are placed will leave little scabs that will exist maybe for 5 to 10 days and then will naturally be washed away with bathing, and the stigma or the evidence, so to speak, that a hair transplantation was performed should be gone by 7 to 10 days, sometimes earlier. If we are grafting areas that have already pre-existing hair, they can camouflage the recipient site and people can go back to work in a few days.

It is important to understand that the results of the hair transplantation are not really dependent on the extraction method that we talked about, but it is actually the implantation and that is where more of the art comes into play. After the follicles are extracted, we will segregate the follicles into the ones that have one hair, two hairs, three hairs, or four hairs. That is, some of the follicles may have multiple hairs.

Then, we will place the follicles in an orientation similar to the existing hairs in that area. So, we will be able to, under magnification, find the orientation as it comes out of the scalp. Usually it is not perpendicular, usually it is in an angle and that angle depends on different areas of the scalp. So, we will place them in the appropriate orientation and also in the appropriate density pattern, meaning that the follicles that have one or two

hairs are generally placed in the front (that is how our hair naturally grows) and the three's and four's are placed further back and into the areas where we blend, which leads to another point which is blending. Blending transplanted hair into areas that are still somewhat thick and dense is a critical part of the hair transplantation because if a man comes in with a moderate hair loss pattern, it is conceivable that he may thin in the future and we do not want a obvious step-off between grafted hair and the native hair. So, it is important to graft that area that can thin out potentially.

The hair that will grow from the transplantation can take up to a year to grow. The follicles will be placed into the scalp and can go through different phases and probably end up in a sleep state for a prolonged period of time and before they wake up, that could be, again, months or up to a year. They will all wake up and grow at different rates and then, by a year or so, they should be more in sync and grow consistently.

**TAKE HOME POINT:** Hair transplantation includes extraction with either large scars in the back of the head (strip method) or small punches with FUE (follicular unit extraction) that generally leaves no obvious scar. The transplantation method itself is an art with specific orientation and density distribution of single and multi-hair follicles.