

By Evan R. Ransom, MD

Hair loss is a big deal, as I'm sure anyone with a receding hairline or thinning hair will tell you. By the age of 35, about 40% of men notice some hair loss. This number jumps to 65% by age 60. Though they receive far less attention, up to 50% of women experience significant hair loss at some point in their lives and about 80% of women in their 60's report hair loss. Most people think that hair loss is inherited through the maternal line and that routinely wearing caps or hats contributes to thinning hair. While neither of these things holds true, it is true that hair loss, sadly, can occur with stress.

Hair Loss in Men and Women Differ

Hair loss in men follows typical patterns: temporal recession is generally the first sign, often followed by a receding central hairline. Density loss at crown (the "bald spot") can occur along with either of these areas. The back of the head (occipital hair) is most often spared.

Hair loss in women follows a different pattern and generally results in diffuse thinning of the hair. This is most noticeable when the hairstyle includes a linear part. Some women may experience hairline recession along with thinning. This can be temporary, often associated with hormonal changes or medications, or permanent—particularly after menopause.

More than 1,000,000 people seek medical treatment for hair loss in the United States annually, and sales of prescription treatments have grown to around a billion dollars a year. Meanwhile, surgical intervention has become significantly less invasive, less "obvious," and therefore more popular.

Four Treatment Options

We can divide hair loss treatments into four categories:

- Medical, non-prescription options This includes nutritional supplementation with vitamins B-6, C, E, and Biotin, as well as minerals like selenium, zinc, and copper. Some preparations include keratin, collagen, and hyaluronic acid. Topical preparations are also on the market with similar ingredients. Camouflaging is also possible, including temporary options like Topik™ and permanent options such as scalp micropigmentation (like tattooing).
- Medical therapy requiring a prescription This involves hormones, including oral modulators like finasteride (Propecia®) and compounded topical agents like testosterone, progesterone, dutasteride, etc., and the vasodilator minoxidil (Rogaine®). Hormonal agents are generally only safe for men. The vasodilators can be used by men and women, but they require ongoing use or the effect is lost.
- Minimally-invasive procedures and technologies Currently, various infrared lights are available for home use and there is ongoing research into low-level laser therapy (LLLT). In a doctor's office, patients can receive platelet-rich plasma injections (PRP). For the scalp, PRP can be prepared and then injected in small amounts throughout the area of hair loss. This appears to reduce ongoing hair loss and may even stimulate regrowth in some patients.
- Surgical options for hair restoration Historically, surgery involved very invasive procedures such as scalp reduction and rotation flaps,

where areas of scalp with hair loss were removed and the resulting wound was closed with reconstructive techniques to bring hairbearing scalp to the front hairline. As you might imagine, this can leave visible scars; in addition, wound closure under tension can lead to further hair loss in the surrounding area. These procedures were eventually replaced with hair transplantation. In its original form, follicular unit transfer (FUT) or the "strip method," scalp is excised from occipital region (ear to ear) and the hairs from this area are transferred to the bald spot or hairline. Unfortunately, there can be significant recovery time due to pain and wound care issues and the closure leaves a large scar that may cause local hair loss. In addition, larger graft tissue can give a "doll hair" or "hair plug" appearance. The most recent, natural-looking and safe method is with the follicular unit extraction (FUE) method.

FUE Surgical Hair Restoration - A Comprehensive, Natural Result

Modern hair transplantation is performed with the follicular unit extraction (FUE) method - typically they are one to three hairs that are connected to a single nerve ending and blood vessel. With FUE, these are harvested using a precise pneumatic punch in an atraumatic fashion under magnification - without a big incision and linear scar! This means faster recovery with less pain and fewer wound complications. Further, FUE allows for multiple procedures over time if needed by avoiding scalp surface area reduction. Single sessions can be up to 3000 grafts.

The treatment process begins with a consultation and determination of the ideal hairline and/or density for the recipient site. In most adults, the hairline is ideally 6.5-7cm (about 2.5in) from the brow ridge with a gentle curvature at the temples. To prepare the donor site, occipital hair is cut to 2mm; in female patients, we can modify the donor site to allow for easier camouflage during regrowth. During the graft harvest, the scalp is anesthetized and patients have the option of supplemental oral or inhalational anesthetics. The harvested grafts are kept in sterile saline on ice while the recipient sites are made according to the treatment plan. Placing the grafts is the longest part and is performed with microforceps under magnification by trained technicians. After the procedure, patients are provided with some topical therapies and medications. These are intended to promote healthy implantation, reduce itching, and prevent infection.

Recovery is the easiest It's ever been

The recovery phase is quick and easy for most patients. The donor site regrows in a few weeks, while the recipient sites form small scabs that resolve in a week or so. The transplanted hairs start to grow immediately but then enter a dormant phase. Many of the hairs will fall out - but don't worry, the follicles are still alive! Follicle activation is a slower process as the blood flow and nutrients stimulate new hair growth. Usually we see this around four to six months, with obvious new hair growth at nine months to a year.

Hair loss treatment is best conceived as a comprehensive treatment plan involving medical and surgical therapies. In my practice, we recommend nutritional supplementation and prescribe minoxidil and finasteride where appropriate. We also offer PRP injections with or without transplantation procedures. The cornerstone of our strategy, however, is FUE procedures. This technique allows for customized treatment plans with minimal downtime and predictable results. With the latest technologies and treatments, natural-appearing hair restoration is within reach for men and women.



Dr. Evan Ransom is an Ivy League-trained, double-board certified facial plastic surgeon. His practice includes surgery for the aging face, rhinoplasty (nose reshaping), and reconstruction after trauma or skin cancer removal. Dr. Ransom also provides minimally-invasive treatments, including Botox®, fillers, laser resurfacing, IPL, non-surgical tightening (ThermiTight $^{\text{TM}}$), and non-invasive body sculpting (SculpSure $^{\otimes}$).

Community service is very important to Dr. Ransom. He performs pro bono cleft lip and palate surgery with Healing the Children. Our next mission, to Peru, is in April 2018.

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