

Practical Approaches to Diagnosing and Treating Hair Loss



Determining whether the hair loss is due to medical or cosmetic issues is the key to success.

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>> Hair loss is a common presenting issue for many dermatology patients and a daunting diagnosis for the dermatologist. Assessing hair issues is like examining tree rings; you are assessing the future by looking at the past. This is particularly challenging since the hair available for examination at the scalp likely was formed by the follicle three months earlier, meaning any intervention will take three months to visualize. This article will present practical tips to help diagnose and treat hair loss.

BREAKAGE OR TRUE HAIR SHEDDING?

The first diagnostic step is to determine the type of hair loss that is occurring. The hair loss could be due to hair breakage, which is most commonly the case, or due to true shedding. The best way to differentiate between hair breakage and hair loss is to have the patient collect five consecutive days of shed hair. Hair should be gathered from the brush or comb, sink, and drain if the hair was shampooed. Each day's loss should be put in a separate plastic bag with the date of hair collection and a notation indicating if the hair was shampooed. The patient should put the five separate plastic bags in a larger plastic bag labeled with their name and drop them off at the dermatologist's office several days before their appointment. This allows time for the assessment of the collected hairs.

The dermatologist should take the bags and note if the patient has shampooed. If so, there should be more hair loss on the day of shampooing. Normal hair loss is about 125 hairs per day. If shampooing is done infrequently, count the hairs in each of the bags and average them across five days to be sure the hair loss is in range. After assessing how much hair is being lost, take the hairs out of the bag and put them on a white sheet of paper. The hairs should be separated to determine which hairs are without the hair bulb, (broken hairs) and which hairs contain the teardrop-shaped hair bulb, indicating

they have been shed during the telogen phase.

If the bulb remains tubular, the hairs have been shed during the anagen phase, and a medical work-up is indicated.

The next step is to determine the ratio between the broken hairs and the telogen-shed hairs. If the broken hairs comprise more than 25% of the hair loss, cosmetic intervention can help to restore hair health. A medical work-up for telogen effluvium can be instituted if the total telogen hair loss exceeds 125 hairs per day.

COSMETIC INTERVENTIONS TO MAXIMIZE HAIR APPEARANCE

Broken hairs without the bulb indicate the hair protein structure is weakened, and minimal mechanical trauma from combing, brushing, shampooing, and/or styling is fracturing the hair shaft. The strength of the hair comes from its evenly overlapping cuticular scale and the disulfide bonds within the hair shaft. When hair grows naturally, it is coated with a protective layer of water-repellent material known as 18-methyl eicosanoic acid (18-MEA). This prevents water from entering the hair shaft and predisposing it to breakage. The 18-MEA is a lipid layer covalently bound to the disulfide bonds and is removed with physical and chemical trauma, such as perming and permanently dyeing the hair. It cannot be replaced as the disulfide bonds oxidize as soon as the layer is removed. This means that synthetic coatings need to be applied to the hair shaft, such as instant and leave-in conditioners.

Instant conditioners should contain dimethicone or amodimethicone, a form of silicone that remains attached to the hair and plant oils, such as apricot kernel oil, sunflower seed oil, or grape seed oil. These plant oils can leave behind a friction-reducing film able to smooth the cuticle and partially restore some hair strength until the next shampooing.

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FOUR TIPS TO MINIMIZE HAIR BREAKAGE AND ASSOCIATED HAIR LOSS

1. Place a protective synthetic lipid layer over the hair shaft
2. Smooth the cuticle to decrease static electricity causing hair frizz
3. Increase hair shine with leave-in conditioners
4. Decrease physical and chemical hair trauma

(EverCreme Sulfate-free Moisture Care System, L'Oreal). Once the hair is towel dried, a second layer of conditioner should be applied to the damp hair also containing amodimethicone (Elvive Extraordinary Oil, L'Oreal). The hydrolyzed protein can minimally diffuse into the holes in the hair shaft created by physical and chemical trauma removing the cuticle and temporarily strengthening the hair shaft until the next shampooing (Elvive Total Repair 5, Protein Recharge, L'Oreal).

Fragile-damaged hair may also require conditioning between shampoos, which should be kept to a minimum as shampooing also precipitates hair breakage. If the hair is fine, a dimethicone and cyclopentasiloxane clear serum can be applied to the hair every morning before styling to smooth the cuticle, decrease friction, and reduce static electricity leading to frizzy dull hair (Sleek & Shine Anti-Frizz Serum, Garnier Fructis). Extremely damaged hair may need more emolliency and a heavier argan oil and sunflower seed oil (Sleek & Shine Moroccan Sleek Smoothing Oil, Garnier Fructis). Preventing hair breakage is the quickest way to improve hair loss. Patients with hair loss due to breakage will frequently complain that their hair does not grow, since the breakage exceeds the ability of the hair to grow.

Hair counts and the evaluation of shed hairs can guide the dermatologist in assessing hair loss. Determining whether the hair loss is due to medical issues or cosmetic issues related to hair breakage is key to achieving success. Hair breakage and the associated hair loss can be minimized by placing a protective synthetic lipid layer over the hair shaft, smoothing the cuticle to decrease static electricity causing hair frizz, increasing hair shine with leave-in conditioners, and decreasing physical and chemical hair trauma. These few recommendations will assist the dermatologist in counseling hair loss patients. ■

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