Supplements and female-pattern hair loss

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Female-pattern hair loss (FPHL) is an increasingly common and incredibly frustrating disease, affecting about 40% of all women. Although genetics, hormones, age, environment, stress, and nutrition all play a role in the etiology of FPHL, the underlying pathophysiology is poorly understood. The only Food and Drug Administration–approved medication to treat FPHL is topical minoxidil. The armamentarium is limited so alternative treatments such as platelet-rich plasma, topical hair loss preparations, and nutritional supplements are now being used in an effort to slow down progression of this disease.

Hair follicles are metabolically active and thus nutrient deficiency as well as calorie and protein restriction impact the hair growth cycle. Patients often inquire if dietary changes or supplementation can help prevent the loss or increase the growth of the hair. Unfortunately, the quality of evidence on nutritional supplements for this use is poor. Furthermore, it is unclear whether patients with FPHL should be routinely tested for nutritional deficiencies, and which type and concentration of supplementation will be of benefit to patients.

Iron deficiency is one of the most well-known factors for hair loss. Risk factors include heavy bleeding during menses, gastrointestinal blood loss, and malabsorption. Studies have shown that iron supplementation does help increase hair growth in iron-deficient mice. Zinc is also a key mineral in hair follicle development, and zinc deficiency is seen in genetic diseases or malabsorption syndromes and has been linked to hair loss.

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Deficiencies in selenium, essential fatty acids, vitamin D, vitamin A, vitamin E, folic acid, and biotin have been documented in relation to hair loss. However, no studies have effectively shown that supplementation of these nutrients helps hair growth in patients without a documented deficiency. Currently, it is difficult to ascertain which nutrients and what concentrations are both safe and effective to correct hair loss.

In the vast hair supplement market, some of the more popular supplements for FPHL are DeeplyRooted (Hush & Hush), Viviscal, Nutrafol, and Nature's Bounty and Sugarbearhair products. These supplements contain a combination of micronutrients (such as vitamin D, niacin, zinc, biotin, and selenium) and adaptogens (a natural substance that helps the body heal with stress and increased cortisol production during stress) that may stimulate the growth and health of the hair follicle and minimize the production of stress hormones and dihydrotestosterone.

In my practice, we see over 100 hair loss patients a week; 30%-40% are patients with FPHL who are often suffering from depression, anxiety, and emotional distress. Our combination treatments always include nutritional supplementation and we have had success not only halting subclinical shedding, but also increasing hair growth. Until the complex pathophysiology of FPHL is identified and new therapeutics are developed, practitioners should consider adding nutritional supplements for the treatment of women with FPHL. Monitoring of supplement use is essential given the risk of toxicity from some vitamins and supplements when taken without proper supervision. More research is also needed to help delineate both the guidelines of micronutrient testing and parameters for supplementation. ■

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