

HairCare for Treatment of Androgenetic Alopecia

HairCare is 5% minoxidil solution prepared in the form of spray. It is manufactured in United States under strict quality control procedures to meet utmost quality standards. The fine mist spray which has received approval from FDA delivers 0.16 ml of liquid on each application. Below, you will find evidence based information on topical minoxidil use.

Topical minoxidil — Minoxidil promotes hair growth by increasing the duration of anagen and enlarging miniaturized and suboptimal follicles; the mechanism by which this occurs is unclear. Topical minoxidil is available over the counter in both 2 and 5 percent solutions.

Use in men — Both 2 and 5 percent minoxidil have consistently demonstrated benefit in men with androgenetic alopecia compared with placebo, and the 5 percent preparation is more effective than the 2 percent solution [1]. In the largest controlled trial, 393 men with androgenetic alopecia were randomly assigned to treatment with 5 or 2 percent topical minoxidil solution or placebo [1]. After 48 weeks of therapy, 5 percent minoxidil was significantly superior to the 2 percent solution or placebo in terms of change from baseline in nonvellus hair count (increase in count of 18.6, 12.7, and 3.9 per cm², respectively), patient rating of scalp coverage and treatment benefit, and investigator rating of scalp coverage. Treatment with 5 percent minoxidil was also associated with an earlier therapeutic response and an improvement in the patients' psychological perceptions of hair loss. Patients treated with 5 compared with 2 percent minoxidil reported more pruritus and local irritation.



Use in women — Two double-blind studies of 550 women ages 18 to 45 years with androgenetic alopecia demonstrated the efficacy of 2 percent minoxidil in women [2,3]. In one study, 13 percent of women in the minoxidil-treated group had moderate growth and 50 percent had minimal growth, compared with 6 and 33 percent, respectively, in the placebo-treated group [2].

Similarly, 60 percent of women in the minoxidil group reported that they had new hair growth (20 percent moderate and 40 percent minimal) compared with 40 percent (7 percent moderate and 33 percent minimal) of patients in the placebo group.

A randomized trial that compared 5 percent minoxidil, 2 percent minoxidil, and placebo in 381 women with androgenetic alopecia found that 5 percent minoxidil was significantly superior to placebo for each of the three primary endpoints (nonvellus hair count, patient assessment of hair growth/scalp coverage, and investigator assessment of hair growth/scalp coverage) [4].

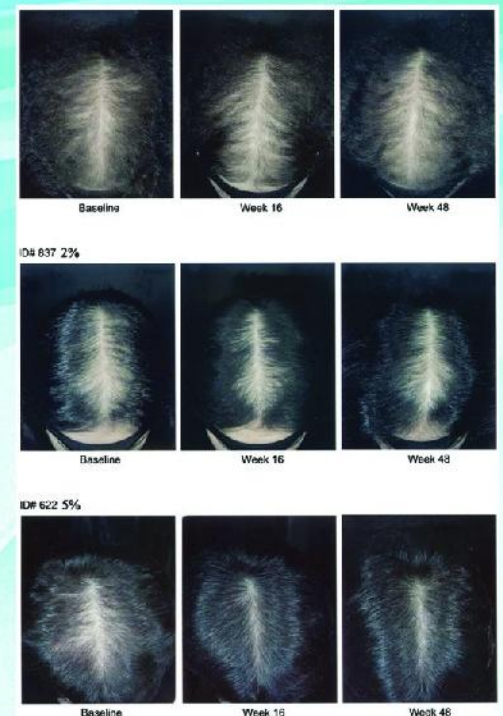


Fig 4. Clinical photographs of patients treated with placebo (top), 2% topical minoxidil solution (TMS)(middle), and 5% TMS(bottom).

Two percent minoxidil was also superior to placebo on the end points of hair count and investigator assessment, but not on the patient assessment end point. In comparing the two strengths of minoxidil, patient assessment was significantly better and there was a trend toward higher nonvellus hair counts with 5 versus 2 percent minoxidil. Dermatologic adverse events including pruritus, dermatitis, scaling, and hypertrichosis (facial hair growth), were more common with 5 percent minoxidil than with 2 percent minoxidil or placebo (14, 6, and 4 percent, respectively); hypertrichosis occurred in 4 of 153 patients receiving 5 percent minoxidil.

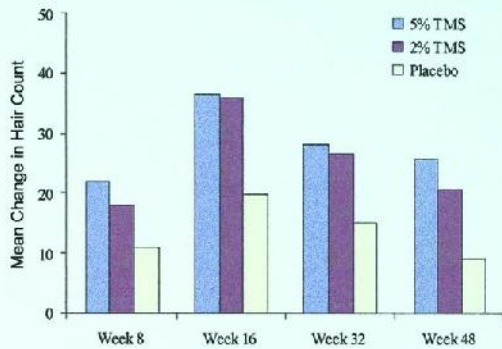


Fig 2. Change from baseline in nonvellus hair count. Group with 5% topical minoxidil solution (TMS) was significantly superior ($P = .031$) to 2% TMS group at week 48 (primary evaluation time point). Both 5% and 2% TMS groups were significantly superior ($P < .05$) to placebo group at each evaluation time point.

Administration — Patients considering use of minoxidil should be advised of the following:

- Explain that minoxidil solution is available over-the-counter and is to be used for an indefinite time, and that it is not usually covered by insurance. Once stopped, any hair regrowth will be lost.
- Emphasize that minoxidil is a scalp treatment, not a hair treatment, and must be used exactly as prescribed for maximum benefit. A normal, healthy scalp is required to use this medication.
- Apply 1 mL twice a day to involved areas on a dry scalp. The solution can be applied by dropper or pump spray device to the scalp and spread lightly with a finger; massage is not needed.
- Explain that minoxidil solution must be used twice a day for at least four months before evaluating the initial response to therapy. Hair shedding usually decreases within two months of starting treatment. Hair growth may be seen within four to eight months and stabilizes at 12 to 18 months.
- Cosmetically significant hair growth occurs in only 30 to 40 percent of patients with vertex hair loss. The best results are obtained if the baldness pattern is present for less than five years, involves a vertex location, and is less than 10 cm in diameter.
- Treatment must be continued indefinitely; once discontinued, any hair maintained or regrown as a result of the medication will be lost.
- The most common side effects, although infrequent, are contact and irritant dermatitis [5]. Neither 5 percent nor 2 percent solution of minoxidil alters systolic or diastolic blood pressure, pulse rate, or body weight when applied daily. Nevertheless, patients with a history of cardiovascular disease should be educated to watch for tachycardia, edema, or weight gain because systemic absorption can occur if the scalp skin barrier is not intact.
- Topical minoxidil 5 percent solution is more effective than the 2 percent solution in men; there are limited data in women that also suggest greater efficacy of 5 percent minoxidil; however, a small number of women appear to develop facial hair growth with the higher concentration solution [4].

References

- 1: Olsen EA, Dunlap FE, Funicella T, Koperski JA, Swinehart JM, Tschien EH, Trancik RJ. A randomized clinical trial of 5% topical minoxidil versus 2% topical minoxidil and placebo in the treatment of androgenetic alopecia in men. *J Am Acad Dermatol.* 2002;47(3):377. *Arch Dermatol.* 1994;130(3):303.
- 2: DeVillez RL, Jacobs JP, Szpunar CA, Warner ML. Androgenetic alopecia in the female. Treatment with 2% topical minoxidil solution.
- 3: Jacobs JP, Szpunar CA, Warner ML. Use of topical minoxidil therapy for androgenetic alopecia in women. *Int J Dermatol.* 1993;32(10):758.
- 4: Lucky AW, Piacquadio DJ, Ditre CM, Dunlap F, Kantor I, Pandya AG, Savin RC, Tharp MD. A randomized, placebo-controlled trial of 5% and 2% topical minoxidil solutions in the treatment of female pattern hair loss. *J Am Acad Dermatol.* 2004;50(4):541.
- 5: Ebner H, Müller E. Allergic contact dermatitis from minoxidil. *Contact Dermatitis* 1995; 32:316.