PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: Spironolactone/Minoxidil/Biotin
Form: Oral Capsule

Drug Class:

- Spironolactone: Mineralocorticoid receptor antagonist with antiandrogen activity
- Minoxidil: Antihypertensive vasodilator
- Biotin: Vitamin B7; Essential coenzyme

Mechanism of Action[1,2,3]: When compounded together, Spironolactone/Minoxidil/Biotin have the potential to provide a multi-targeted approach that enhances overall hair growth and preservation. Together they are intended to:

- Activate ATP-sensitive potassium (KATP) channels in cells within the hair follicle, including dermal papilla cells. This helps promote the active hair growth phase, supporting longer growth periods and increased hair production.
- Shift follicles toward and maintain the anagen phase, the part of the hair cycle when hair is actively produced. This allows follicles to spend more time growing rather than resting.
- Stimulated miniaturized but still viable follicles, minoxidil can increase hair diameter and improve overall hair density over time.
- Influence vascular and cellular growth signals surrounding the follicle, including pathways associated with VEGF to support the follicle's growth environment.
- Block androgen receptors to lower levels of DHT (a hormone linked to hair loss) in the scalp, protecting hair follicles from shrinking and to slow down shedding.
- Support normal hair-cell metabolism by correcting biotin deficiency to improve deficiency-related hair concerns.

Indications Commonly Prescribed For:

- Female pattern hair loss
- Progressive scalp thinning
- Widening of the hair part
- Reduced hair density
- Diffuse thinning
- Androgen-associated hair thinning
- Hair loss associated with hyperandrogenism
- Hair thinning accompanied by acne or hirsutism
- Complementary hair-growth support

Before Use: Let your health care provider know if you have any medication allergies before you take this compounded preparation. Let your health care provider know if you have any liver or kidney problems. Let your healthcare provider know of all supplements you are currently taking.

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Contraindications:

- Hypersensitivity to any component
- Significant renal or hepatic impairment
- Hyperkalemia
- Addison's disease
- Significant cardiovascular disease
- Symptomatic hypotension
- History of pericardial disease or pericardial effusion
- Significant edema or fluid-retention disorders
- Concurrent medications that substantially increase potassium
- Concurrent antihypertensive therapy

Cautions: Let your Healthcare provider know if you experience any adverse side effects. Benefits persist only while on therapy.

Warnings and Precautions:

- Initial shedding: Minoxidil may cause early “shedding” as follicles transition.
- Systemic absorption risk: monitor for hypotension and tachycardia.
- Cardiovascular risk: At low doses used for alopecia, adverse events are generally less frequent, but patients should still be monitored for
    - Lightheadedness
    - Low blood pressure
    - Increased heart rate/palpitations
    - Ankle or leg swelling
    - Fluid retention
    - Shortness of breath
    - Chest discomfort
- Hypertrichosis: Excess hair growth outside the scalp is the most common adverse effect of low-dose oral minoxidil.
- Fluid Balance: Minoxidil can promote sodium and water retention, while spironolactone has diuretic effects. Patients should monitor for fluid retention as spironolactone does not completely prevent minoxidil-associated edema.
- Renal Impairment: Patients with renal impairment may require additional caution because of fluid retention and cardiovascular complications.
- Hyperkalemia: Spironolactone reduces renal potassium excretion and can cause elevated blood potassium.
- High-dose biotin can interfere with certain laboratory immunoassays and produce falsely high or falsely low test results. Patients should tell healthcare professionals and laboratory personnel that they take biotin before blood testing.
- Treatment discontinuation: Benefits from minoxidil are generally not permanent after therapy is stopped. Newly maintained or regrown hair may gradually be lost over several months as follicles return toward their untreated growth pattern.

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Boxed Warning:
Minoxidil tablets contain the powerful antihypertensive agent, minoxidil, which may produce serious adverse effects. It can cause pericardial effusion, occasionally progressing to tamponade, and angina pectoris may be exacerbated. Minoxidil should be reserved for hypertensive patients who do not respond adequately to maximum therapeutic doses of a diuretic and two other antihypertensive agents.

In experimental animals, minoxidil caused several kinds of myocardial lesions as well as other adverse cardiac effects (see Cardiac Lesions in Animals).

Minoxidil must be administered under close supervision, usually concomitantly with therapeutic doses of a beta-adrenergic blocking agent to prevent tachycardia and increased myocardial workload. It must also usually be given with a diuretic, frequently one acting in the ascending limb of the loop of Henle, to prevent serious fluid accumulation. Patients with malignant hypertension and those already receiving guanethidine should be hospitalized when minoxidil is first administered so that they can be monitored to avoid too rapid, or large orthostatic, decreases in blood pressure.

Adverse Reactions: If you experience any side effects or adverse reactions, including those not listed, please contact your healthcare provider. Seek emergency care if symptoms are severe.

Common:

- Increased facial or body hair (hypertrichosis)
- Initial shedding
- Headache
- Dizziness or lightheadedness
- Mild ankle or lower-leg swelling
- Fluid retention
- Palpitations
- Mild increase in heart rate
- Increased urination
- Menstrual irregularities
- Breast tenderness or enlargement
- Fatigue
- Gastrointestinal upset

Serious, but Rare:

- Pericardial effusion
- Cardiac tamponade
- Pericarditis
- Significant fluid retention or generalized edema
- Severe or symptomatic hypotension
- Persistent or clinically significant tachycardia
- Worsening angina/chest pain
- Worsening heart failure
- Severe hypersensitivity reaction
- Hyperkalemia
- Severe dehydration or electrolyte abnormalities

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Interactions:

- Antihypertensive medications: Oral minoxidil may add to blood-pressure-lowering effects and increase dizziness or hypotension.
- Other vasodilators: May increase hypotension or cardiovascular effects.
- Diuretics: May influence fluid and blood-pressure responses and should be considered when evaluating minoxidil therapy.
- Beta blockers and other heart-rate-lowering medications: May influence the cardiovascular response to minoxidil.
- Guanethidine: Concurrent use can cause profound orthostatic effects and requires close supervision.
- ACE inhibitors / ARBs: May increase the risk of hyperkalemia when combined with spironolactone.
- Potassium supplements or potassium-containing salt substitutes: Can further increase serum potassium.
- Other potassium-sparing diuretics: Increase the risk of hyperkalemia and electrolyte abnormalities.
- NSAIDs: May reduce the diuretic/antihypertensive effects of spironolactone and can increase the risk of renal impairment and hyperkalemia in susceptible patients.
- Digoxin: Spironolactone may affect digoxin exposure and certain digoxin assays, requiring additional consideration in patients receiving both medications.

Use in Specific Populations:

- Pregnancy: Avoid if pregnant or planning pregnancy due to teratogenic risk
- Geriatrics: Start with the lower minoxidil strength and monitor tolerability
- Renal Impairment: Use with caution because impaired renal function substantially increases the risk of hyperkalemia.

How to Use: This compounded preparation is in the form of an oral capsule. Swallow the capsule whole with a glass of water. Do not chew or crush the capsule. If you miss a dose, take as soon as you remember, but not at the time for the next dose. The desired results may take up to several weeks.

Storage:

- Store in original container at room temperature (up to 30°C or 86°F)
- Store in a cool dry place away from heat, sunlight, and moisture

Monitoring Parameters:

- Skin/hair response over 8–12 weeks
- Cardiovascular monitoring
- Serum potassium
- Hormonal: Ask women about menstrual changes or breast tenderness if using higher spironolactone doses

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Citations:

1. Bryant Ranch Prepack. Minoxidil tablet [prescribing information]. DailyMed. National Library of Medicine. Updated July 14, 2026. Available from: https://www.dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=e39469e6-d4f6-450f-872c-6f538e67c71a. Accessed September 30, 2026.
2. Aleissa M. The Efficacy and Safety of Oral Spironolactone in the Treatment of Female Pattern Hair Loss: A Systematic Review and Meta-Analysis. *Cureus*. 2023;15(8):e43559. Published 2023 Aug 16. doi:10.7759/cureus.43559
3. Yelich A, Jenkins H, Holt S, Miller R. Biotin for Hair Loss: Teasing Out the Evidence. J Clin Aesthet Dermatol. 2024;17(8):56-61.

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