

PRESCRIPTION MONOGRAPH

Compounded Active Ingredients: DHEA/Estradiol

Form: Topical Cream

Drug Class:

- DHEA: Endogenous androgen/estrogen precursor
- Estradiol: Estrogen; agonist at estrogen receptors (ER α , ER β , and membrane estrogen receptors)

Mechanism of Action^{1,2}:

When compounded together, DHEA/Estradiol can address endocrine balance, sexual function, and cognition. It is intended to:

- Restore hormonal balance by replacing declining sex steroids to improve vasomotor symptoms, sexual function, and quality of life.
- Serve as upstream hormone precursor that tissues convert into androgens and estrogens, supporting sexual function, bone integrity, and wellbeing.

Indications Commonly Prescribed For:

- Estrogen-androgen balance correction in cases of estrogen dominance
- Hypoactive sexual desire disorder in postmenopausal women
- Menopausal hormone therapy (MHT)
- Address depressive or cognitive decline associated with low estrogenic tone

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

Contraindications:

- Known hypersensitivity to components.
- Thromboembolic disorders or recent events (e.g., DVT, PE, stroke, MI).
- Men with carcinoma of the breast, known or suspected prostate cancer.
- Undiagnosed vaginal bleeding.
- Hormone-sensitive malignancies.

Cautions: Let your Healthcare provider know if you experience any adverse side effects.

How to Use: This compounded preparation is in the form of a topical cream. The cream is a special container that will administer 0.6ml dose. Clean desired area prior to use. To administer remove the protective covering on the top of the dispenser. Place the jar on a flat surface. Using clean, dry hands, gently press down on the top of the pump. This will dispense a measured amount of cream through the center opening. Confirm the cream has exited the holes at the top of the dispenser. Apply the cream onto the desired area. Continue to rub the area until the cream is evenly dispersed over the desired area. Replace the protective cover and store the device until next dose. If you miss a dose apply as soon as you remember, but not at the time for the next dose. The desired results may take up to several weeks.

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Warnings and Precaution:

- Cardiovascular Risks: Potential increased risk of heart attack and stroke; monitor patients.
 - Use cautiously/avoid in patients with hormone-sensitive malignancies.
 - Hepatic Effects: Monitor liver function periodically.
 - Androgenic adverse effects in women (acne, hirsutism, alopecia, voice deepening).
 - Lipid effects: DHEA may lower HDL cholesterol; assess in cardiovascular risk patients.
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Adverse Reactions:

Common:

- Skin irritation
- Acne
- Mood swings
- Increased red blood cell count

Serious, But Rare:

- Cardiovascular events
 - Liver toxicity
 - Thromboembolism
 - Gynecomastia
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Interactions:

- Anticoagulants: Testosterone may enhance the effects of oral anticoagulants.
 - CYP3A4 modulators: May alter estradiol and DHEA metabolism.
 - Insulin: Testosterone may decrease blood glucose levels; watch glycemic control.
 - Oral estradiol induces hepatic protein synthesis and may impact drugs metabolized by liver enzymes.
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Use in Specific Populations:

- Geriatric: May increase the risk of cardiovascular events.
 - Pregnant/Breastfeeding: Contraindicated.
 - Liver or renal impairment: Use caution and monitor labs more frequently.
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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.
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Monitoring Parameters:

- Hormone panel
 - Routine labs: Lipid profile, liver function, and blood pressure
 - Hematocrit and hemoglobin levels to detect polycythemia
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Citations:

1. Sigel A, Michalkova D, Capdevila A. Pharmacological activities of dehydroepiandrosterone: a review. Clin Endocrinol (Oxf). 2019;90(4):633–642. doi:10.1530/EC-19-0155
 2. Kovács T, Szabó-Meleg E, Ábrahám IM. Estradiol-Induced Epigenetically Mediated Mechanisms and Regulation of Gene Expression. International Journal of Molecular Sciences. 2020; 21(9):3177. <https://doi.org/10.3390/ijms21093177>
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