

ACTIVE LEARNING TEMPLATE: Medication

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MEDICATION **Estrogen Conjugated** CATEGORY CLASS **Hormone, Estrogen**

PURPOSE OF MEDICATION

Action: Regulate development /function of female reproductive organs and promote the maintenance of secondary sex characteristics. They also play a role in modulating bone health, lipid metabolism, and the integrity of the skin and blood vessels, contributing to overall hormonal balance in various deficiency states and hormone-sensitive conditions.

Therapeutic Use: Restoration of hormonal balance in deficiency states and treatment of hormone-sensitive tumors. Supports reproductive health, secondary sex characteristics, and estrogen-responsive conditions.

Complications: Edema, hypertension, MI, thromboembolism. Acne, oily skin, pigmentation, urticaria. Gynecomastia (men), hyperglycemia. Hypercalcemia. Nausea, weight changes, anorexia, jaundice, vomiting. Women: amenorrhea, breakthrough bleeding, breast tenderness, dysmenorrhea, cervical erosion, loss of libido, vaginal candidiasis. Men: erectile dysfunction, testicular atrophy. ↑ appetite. Leg cramps. Headache, depression, dizziness, insomnia, lethargy. Anaphylaxis, angioedema, malignancy (breast, endometrial, ovarian).

Contraindications/Precautions: thromboembolic disease (DVT, PE, MI, stroke); undiagnosed vaginal bleeding; history of breast or estrogen-dependent cancer; hepatic impairment; thrombophilic disorders (Protein C, Protein S, antithrombin deficiency); pregnancy; lactation. Long-term use (↑ risk of MI, stroke, invasive breast cancer, pulmonary emboli, DVT, dementia); cardiovascular disease; hypertriglyceridemia; hereditary angioedema. Geriatrics: systemic estrogens (↑ risk of breast/endometrial cancer, heart disease, dementia); vaginal cream acceptable for dyspareunia, UTIs, and vaginal symptoms.

Interactions: Warfarin, oral hypoglycemic agents, and insulins may require adjustment. Barbiturates, carbamazepine, and rifampin ↓ effectiveness. Smoking ↑ risk of cardiovascular adverse reactions. Erythromycin, clarithromycin, itraconazole, ketoconazole, and ritonavir ↑ risk of adverse effects. Grapefruit juice ↑ risk of adverse effects.

Evaluation of Medication Effectiveness: Resolution of menopausal vasomotor symptoms. Decreased vaginal and vulvar itching, inflammation, or dryness. Normalized estrogen levels in ovariectomy or hypogonadism. Controlled spread of metastatic breast or prostate cancer. Osteoporosis prevention. Relief of moderate to severe dyspareunia due to menopause.

Medication Administration: PO: 1.25mg once daily cyclically. (3wk on, 1wk off).

Osteoporosis/Menopausal: 0.3-1.25mg once daily or in a cycle.

Hypogonadism: 0.3-0.625mg once daily cyclically. **Breast carcinoma:** 10mg 3 times daily.

Nursing Interventions: Monitor BP and weight periodically; report steady weight gain. Assess severity of vasomotor symptoms. Check lipid profiles (↑ HDL/triglycerides; ↓ LDL/total cholesterol). Monitor glucose, sodium, cortisol, prolactin, and clotting factors (↑ levels). Assess folate, pyridoxine, antithrombin III, and urine pregnanediol (↓ levels). Evaluate hepatic function regularly. Be aware of false thyroid test results and potential hypercalcemia in metastatic bone lesion cases.

Client Education: Avoid grapefruit juice. Report fluid retention, thromboembolic signs, depression, hepatic dysfunction, or abnormal bleeding. Notify provider of all medications and planned treatments. Routine follow-ups (BP, exams, Pap smears, mammograms) are essential. Premarin tablet in stool is harmless. Stop medication if pregnant or breastfeeding. Use sunscreen to avoid pigmentation changes. Discuss exercise for osteoporosis with healthcare provider.

