Class: Hormone Replacement Therapy

Prototype Med	Conjugated Equine Estrogen
	Premarin
Other Meds	Transdermal Estradiol (Estraderm)
	Cimara
	FemPatch
Intravaginal Meds	Estradiol Intravaginal Tablets (Vagirem)
	Estradiol Cream (Estrace Vag. Cream)

Action: Estrogen works by binding to estrogen receptors in target tissues such as the genital organs, breasts, hypothalamus, and pituitary gland to maintain the functions of reproduction and feminization.

Therapeutic Use*

- Relief of severe menopausal symptoms (vasomotor) and vulvar and vaginal atrophy
- Prevention of postmenopausal osteoporosis

Adverse Drug Reactions

- Nausea
- Thromboembolism: thrombophlebitis, pulmonary embolism, stroke, myocardial infarction
- Hypertension
- Endometrial hyperplasia, endometrial and ovarian cancer

Nursing Interventions

- Inform clients that this effect diminishes with time.
- Monitor for and report any indications of deep vein thrombosis, pulmo- nary embolism, myocardial infarction, and cerebrovascular accident.
- Encourage clients who smoke to quit smoking.
- Use HRT for no more than 3 to 4 years to treat vasomotor or genital symptoms of menopause.
- Monitor blood pressure.
- Monitor for vaginal bleeding.
- Advise a yearly pelvic examination
- Check that clients who have an intact uterus are prescribed progester- one with their estrogen.

Patient Education

- Take oral forms with food.
- Report leg or chest pain, leg edema, sudden change in vision, severe headache, or shortness of breath.
- Do not smoke.
- Stop taking at least 4 weeks before any surgery that increases the risk of thromboembolic events.
- Exercise regularly and follow a healthy, low-fat diet.
- Take, apply, or instill at bedtime.
- Obtain regular blood pressure checks.
- Report persistent or recurrent vaginal bleeding.

Administration

Oral Capsules	Take according to the precise dosing schedule, typically continuously to avoid monthly bleeding. Take pills at the same time each day.
Transdermal estradiol patche	Apply patches at the recommended interval, typically once or twice per week.
	Apply to clean, dry, intact skin on the abdomen or trunk (not breasts or waistline) and press firmly for 10 seconds. Do not use the same site more than once per week.
Intravaginal estradiol hemihydrate tablets (Vagifem) or vaginal cream (Estrace vaginal cream)	Use according to the precise dosing schedule, typically tablets are insert- ed once daily for 2 weeks, then twice per week. Insert tablet using provided applicator at bedtime.
	Vaginal cream is applied using a reusable applicator to measure the precise dose; insert into vagina at bedtime.

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Contrindications

- History of or other risk for thromboembolic events
- Suspected or confirmed breast, vaginal, cervical, or endometrial cancer
- Liver disease
- Undiagnosed vaginal bleeding

Precautions

- Hypertension/Heart Disease/Diabetes mellitus
- Gallbladder disease/Kidney Dysfunction
- Migraines

Interactions

- Rifampin, ritonavir (Norvir), phenobarbital, carbamazepine (Tegretol), primidone (Mysoline), phenytoin (Dilantin), and St. John’s wort can re- duce the effectiveness of estrogens.
- Estrogens can reduce the effects of warfarin (Coumadin) and hypoglyce- mic drugs.
- Estrogens can increase levels of theophylline (Theo-24), diazepam (Vali- um), chlordiazepoxide (Librium), and tricyclic antidepressants.

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