

Pharmacotherapy for Menopause – Important Considerations^{11,28-73}

Drug	Brand	Strength	Bioidentical	Systemic Estrogen Dosing (refer to CMS Equivalency Table for more info)				Progestin Required? * for systemic ET w/ intact uterus	VMS (Onset ~1w Max Effect ~6-9w)	GSM (Onset ~2w Max Effect ~8w)	Other Considerations	Cost (3-mth)	Coverage (ODB/NIHB)
				Low	Standard	Mod- High	High (POI/SM)						
Pharmacological Options for GSM													
Estrogen													
conjugated estrogen (CE)	Premarin®	0.625mg/g (vaginal cream)	X (equine)	Effects predominately local with minimal systemic exposure				X	X	✓	Continue ∞ if beneficial	\$76-203	✓
estrone	Estragyn®	1mg/g (vaginal cream)	✓					✓ If 21d on / 7d off	X	✓	Creams may weaken latex condoms, diaphragms or cervical caps.	\$57-354	ODB X NIHB ✓
17β-estradiol	Vagifem®	10mcg (vaginal tab)	✓					X	X	✓		\$140-193	✓
	Imvexxy®	4, 10 mcg (vaginal ovule)	✓					X	X	✓		\$114-156	✓
	Estring®	7.5mcg/day (vaginal ring)	✓					X	X	✓	Inserts are less messy than creams.	\$134	✓
Selective Estrogen Receptor Modulator (SERM)													
ospemifene	Osphena®	60mg (oral)							✓	Hot flashes and ↑ sweating common at initiation but ↓ by 4wks	\$175	X	
Prohormone													
prasterone (DHEA)	Intrarosa®	6.5mg (vaginal ovule)	✓	Effects predominately local with minimal systemic exposure				X	X	✓	Controlled drug	\$182	X
Pharmacological Options for VMS													
Oral Estrogen													
17β-estradiol	Estrace®	0.5, 1, 2mg	✓	✓ 0.5mg	✓ 1mg	✓ 2mg	✓ 3-4mg	✓	✓	✓	osteoporosis prevention	\$25-63	✓
conjugated estrogen (CE)	Premarin®	0.3, 0.625, 1.25mg	X (equine)	✓ 0.3mg	✓ 0.625mg	X	✓ 1.25mg	✓	✓	✓	osteoporosis prevention CE may ↑ VTE risk vs. 17β-E	\$54-58	ODB ✓ (only 0.625mg) NIHB ✓
Transdermal Estrogen Patch (May be preferred in those at ↑ risk for VTE, migraines or metabolic concerns as it avoids first-pass hepatic metabolism)													
17β-estradiol	Estradot®	25, 37.5, 50, 75, 100 mcg/d	✓	✓ 25 or 37.5mcg	✓ 50mcg	✓ 75mcg	✓ 100mcg	✓	✓	✓	osteoporosis prevention can be cut	\$143-171	ODB X NIHB ✓
	Climara®	25, 50, 75 mcg/d	✓	✓ 25mg	✓ 50mcg	✓ 75mcg	✓ 100mcg	✓	✓	✓	osteoporosis prevention; 50+ mcg/d can be cut	\$92-104	ODB X NIHB ✓
Transdermal Estrogen Gel (May be preferred in those at ↑ risk for VTE, migraines or metabolic concerns as it avoids first-pass hepatic metabolism)													
17β-estradiol	Estrogel®	0.75mg/pump	✓	✓ 1 pump	✓ 1-2 pumps	✓ 2-3 pumps	✓ 4 pumps	✓	✓	✓	osteoporosis prevention; 2+ pumps/d	\$122-340	ODB X NIHB ✓
	Divigel®	0.25, 0.5, 1mg	✓	✓ 0.25- 0.5 mg	✓ 1mg	✓ 1.5mg	✓ 2mg	✓	✓	X	osteoporosis prevention; 1+ mg/d Easy for travel (small form factor)	\$115	ODB X NIHB ✓

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Oral Progestogen <i>(Required if taking systemic estrogen with intact uterus to prevent endometrial hyperplasia)</i>													
micronized progesterone (mP)	Prometrium®	100mg	✓								Peanut oil: Teva, Reddy, Auro *Avoid if peanut allergy Sunflower oil: Prometrium®, PMS, Sanis, Mantra mP ↑ lethargy vs. MPA If S/E from oral admin, can admin vaginally	\$79-285	ODB X NIHB ✓
medroxy- progesterone acetate (MPA)	Provera®	2.5, 5, 10mg	X (soybean)								MPA may ↑VTE, ↑CV, ↑breast cancer risk vs. mP	\$18-63	✓
Intrauterine System (IUS) Progestogen <i>(*Required if taking systemic estrogen with intact uterus to prevent endometrial hyperplasia)</i>													
levonorgestrel†	Mirena®	52mg	X (synthetic)								Option if oral progestin not tolerated, contraception desired or to ↓ bleeding during perimenopause	\$445 (once ~5yr)	✓
Selective Tissue Estrogenic Activity Regulator (STEAR)													
Tibolone	Tibella®	2.5mg (oral)	X					X	✓	X	↓ vaginal bleeding vs. ET ↑ risk of stroke, endometrial cancer and breast cancer Controlled drug	\$364	X
Oral Combination													
17β-estradiol + micronized progesterone	Bijuva®	1mg/100mg	✓	X	✓	X	X	Included in combination	✓	X	↓ dosing flexibility, as cannot be divided (split/cut)	\$107	✓
17β-estradiol + norethindrone	Activelle®, Activelle® LD	1mg/0.5mg 0.5mg/0.1mg	17β-E: ✓ NETA: X	✓ 0.5mg	✓ 1mg	X	X		✓	✓ (LD for VMS only)		\$296	X
17β-estradiol + drospirenone	Angeliq®	1mg/1mg	17β-E: ✓ drosp: X	X	✓ 1mg	X	X		✓	✓		\$89	X
conjugated estrogen + bazedoxifene (SERM)	Duavive®	0.45mg/20mg	CE: X (equine)	X	✓ 0.45mg	X	X	X <i>Forms Tissue- Selective Estrogen Complex (TSEC)</i>	✓	X	preferred in ↑ breast density, tenderness or progestin not tolerated; TSEC ↓ breakthrough bleeding	\$314	X

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Transdermal Combination													
17β-estradiol + norethindrone	Estalis®	50/140mcg/d 50/250mcg/d	17β-E: ✓ NETA: X		✓ 50mcg			Included in combination	✓	✓		\$178	X
Neurokinin Receptor Antagonist													
fezolinetant	Veozah®	45mg						X non-hormonal	✓		Baseline liver tests (ALT, AST, ALP, total and direct bilirubin) required before initiation with ongoing monitoring	\$587	X
elinzanetant	Lynkuet®	60mg						X non-hormonal	✓		Approved, but not marketed yet	Pending	X
Pharmacological Options for HSDD													
Testosterone Transdermal Gel													
testosterone†	Androgel® Pump	12.5mg/pump	✓					X	HSDD: ↑sexual desire, arousal, orgasm, pleasure, ↓ distress with low libido		\$89-540	ODB X NIHB ✓	
	Androgel® Sachet	25, 50mg	✓					X			\$54-474	✓ (male only)	
Other (5-HT Receptor Modulator)													
flibanserin	Addyi®	100mg						X non-hormonal	Discontinue treatment after 8 weeks if no improvement in HSDD symptoms		\$849	X	

† off-label use

Legend

17β-E = 17β-estradiol; **CE** = conjugated estrogen; **ET** = estrogen therapy; **EPT** = estrogen-progesterone therapy; **GSM** = genitourinary syndrome of menopause; **HSDD** = hypoactive sexual desire disorder; **MP** = micronized progesterone; **MPA** = medroxyprogesterone acetate; **mth** = month; **NETA** = norethindrone; **NIHB** = Non-Insured Health Benefit; **ODB** = Ontario Drug Benefit; **POI** = primary ovarian insufficiency; **SM** = surgical menopause; **VMS** = vasomotor symptoms; **VTE** = venous thromboembolism; **w/** = with; **wk** = week