Pharmacotherapy for Menopause – Dosing[11,28-73]

Drug	Brand	Strength	Initial	Standard	Titration	Max (typically for POI/SM)	Administration
Pharmacological Options for GSM							
Estrogen							
conjugated estrogen (CE)	Premarin®	0.625mg/g (cream)	0.5g/d HS intravaginally and/or topically Loading Phase: 0.5mg HS x 14d Maintenance Phase: 2-3x HS weekly		If sx control insufficient after 12wks: • Consider a loading phase for 28 days followed by maintenance phase[11] **or** • Consider alternative route/option		Apply intravaginally using supplied applicator. Clean applicator with mild soap and warm water (do not boil) after each use.
estrone	Estragyn®	1mg/g (cream)	0.5-2g/d HS intravaginally and/or topically Loading Phase: 0.5mg HS x 14d Maintenance Phase: 2-3x HS weekly (*can also be dosed in a 21d on, 7d off regimen, however not commonly used*)				Apply intravaginally using supplied applicator (doses in 0.5g increments). Clean applicator with mild soap and warm water (do not boil) after each use.
17β-estradiol	Vagifem®	10mcg (tab)	Loading Phase: 10mcg qHS x 14d Maintenance Phase: 2-3x HS weekly				Insert intravaginally using preloaded single-use applicator. Should be inserted as far as comfortably possible into lower third of vagina.
	Imvexxy®	4, 10 mcg (ovule)	Loading Phase: 1 vaginal insert daily HS x 14d Maintenance Phase: 2-3x HS weekly				Wash hands before and after insertion. Manual insertion without applicator of small end up into the lower third of the vagina (2 inches into vaginal canal), preferably at bedtime.
	Estring®	7.5mcg/day (vaginal ring)	One vaginal ring every 90 days		N/A	One vaginal ring at a time	Wash hands before and after insertion. Insert manually into the upper third of the vagina, compressing the ring between thumb and index finger.
Selective Estrogen Receptor Modulator (SERM)							
Ospemifene	Osphena®	60mg	60mg daily		N/A	60mg daily	With food to ↑ bioavailability.
Prohormone							
prasterone (DHEA)	Intrarosa®	6.5mg (intravaginal)	6.5mg ovule inserted intravaginally daily at bedtime		N/A	6.5mg daily	Wash hands before and after. Can be inserted intravaginally using provided reusable applicator (1 week per applicator) or fingers. Insert as deeply as comfortable.

Drug	Brand	Strength	Initial	Standard	Titration	Max (typically for POI/SM)	Administration
Pharmacological Options for VMS							
Oral Estrogen							
17β-estradiol	Estrace®	0.5, 1, 2mg	0.5mg/d	1mg/d	If sx control insufficient after 12wks, may ↑ to 1mg daily	2mg/d	Same time daily with or without food.
conjugated estrogen (CE)	Premarin®	0.3, 0.625, 1.25mg	0.3mg/d	0.625mg/d	If sx control insufficient after 12wks, may ↑ to 0.625 mg daily	1.25mg/d	Same time daily with or without food.
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	25-37.5mcg/d applied **twice** weekly	50mcg/d	If sx control insufficient after 12wks, may ↑ dose	100mcg/d	Twice weekly, apply patch by pressing firmly for 10 sec. to clean, dry, intact area of the lower abdomen twice weekly. Apply new patch to same area, but different skin site.
	Climara®	25, 50, 75 mcg/d	25mcg/d applied **once** weekly	50mcg/d		100mcg/d	Once weekly, apply patch by pressing firmly for 10 sec. on clean, dry, intact skin of the lower abdomen, hip, lower back or buttock. Apply new patch to same area, but different skin site.
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/d (0.75-1.5mg 17β-E)	1-2 pump/d (0.75-1.5mg 17β-E)	If sx control insufficient after 12wks, may ↑ dose	2-3 pumps/d (1.5-2.25mg 17β-E)	Spread thinly over a large area of clean, dry, intact skin of the upper arms and shoulders (both arms if >1 pump). Could also apply to abdomen or inner thighs. Do not rotate sites.
	Divigel®	0.25, 0.5, 1mg	0.25mg/d	0.5-1mg/d	If sx control insufficient after 12wks, dose may be ↑ to 0.5 mg/d or 1 mg/d	2mg/d	Apply once daily to clean, dry, intact skin of the upper thigh (alternating sides), spread over area that's size of two palms.

Drug	Brand	Strength	Initial	Standard	Titration	Max (typically for POI/SM)	Administration
Oral Progestogen *(*Required if taking estrogen with intact uterus to prevent endometrial hyperplasia)*							
micronized progesterone (mP)	Prometrium®	100mg	The dose of progestin should be proportional to the dose of estrogen. Refer to the Canadian Menopause Society MHT Equivalency Table for additional detail. As a general guide: For Low ET dose: **Cyclical PT:** 200mg x 12-14 days per month **Continuous PT:** 100mg qHS For Standard ET dose: **Cyclical PT:** 200mg x 12-14 days per month **Continuous PT:** 100-200mg qHS For High ET dose: **Cyclical PT:** 200-300mg x 12-14 days per month (≥ 200 may be required if ET doses are very high for POI/SM) **Continuous PT:** 200mg qHS (≥ 200 may be required if ET doses are very high for POI/SM)				With or without food (food can ↑ bioavailability). **Cyclical**: Causes monthly withdrawal bleeding; can help reduce breakthrough bleeding. **Continuous**: may be more suitable in those preferring amenorrhea and often preferred if LMP > 1yr prior.
medroxy-progesterone acetate (MPA)	Provera®	2.5, 5, 10mg	The dose of progestin should be proportional to the dose of estrogen. Refer to the Canadian Menopause Society MHT Equivalency Table for additional detail. As a general guide: For Low ET dose: **Cyclical PT:** 5mg x 10-12 days per month **Continuous PT:** 2.5mg daily For Standard ET dose: **Cyclical PT:** 10mg x 10-12 days per month **Continuous PT:** 2.5-5mg daily For High ET dose: **Cyclical PT:** 10mg x 10-12 days per month **Continuous PT:** 5mg daily				With or without food (food can ↑ bioavailability). **Cyclical**: Causes monthly withdrawal bleeding; can help reduce breakthrough bleeding. **Continuous**: may be more suitable in those preferring amenorrhea and often preferred if LMP > 1yr prior.
Intrauterine System (IUS) Progestogen *(*Required if taking estrogen with intact uterus to prevent endometrial hyperplasia)*							
levonorgestre†	Mirena®	52mg	One IUS inserted once into the uterine cavity by a trained HCP		No adjustment required based on ET dose (delivers ~21mcg/d)	One IUS at a time ~q5yr	Inserted by trained HCP
Selective Tissue Estrogenic Activity Regulator (STEAR)							
tibolone	Tibella®	2.5mg (oral)	2.5mg/d		N/A	2.5mg/d	Swallow whole, take with water/drink and with or without food.
Oral Combination							
17β-estradiol + micronized progesterone	Bijuva®	1mg/100mg	1mg/100mg daily		N/A	1 tab daily	Swallow whole, in the evening with food.
17β-estradiol + norethindrone	Activelle® Activelle® LD	1mg/0.5mg 0.5mg/0.1mg	0.5 mg/0.1mg		If sx control insufficient after 12wks, may ↑ dose to 1mg / 0.5mg	1 tab daily	Swallow whole, with or without food.
17β-estradiol + drospirenone	Angeliq®	1mg/1mg	1mg/1mg daily		N/A	1 tab daily	Swallow whole, with or without food.

Drug	Brand	Strength	Initial	Standard	Titration	Max (typically for POI/SM)	Administration
conjugated estrogen + bazedoxifene (SERM)	Duavive®	0.45mg/20mg	0.45mg/20mg daily		N/A	1 tab daily	Swallow whole, with or without food (food may ↑ bazedoxifene absorption).
Transdermal Combination *(*May be preferred in those at ↑ risk for VTE, migraines or metabolic concerns as it avoids first-pass hepatic metabolism)*							
17β-estradiol + norethindrone	Estalis®	50/140mcg/d 50/250mcg/d	50/140mcg/d **twice** weekly		If sx control insufficient after 12 weeks, may ↑ dose to 50/250mcg/d	50/250 mcg/d patch applied **twice** weekly	Twice weekly, apply patch by pressing firmly for 10 sec. on clean, dry, intact skin of the lower abdomen or buttock. Apply new patch to same area, but different skin site.
Neurokinin Receptor Antagonist							
fezolinetant	Veozah®	45mg	45mg daily *Baseline liver testing required before start and then at Month 1, 2, 3, 6, and 9.*		N/A	45mg daily	With or without food (food slightly ↓ bioavailability).
elinzanetant	Lynkuet®	60mg	120mg daily HS		N/A	120mg daily HS	With or without food.
Pharmacological Options for HSDD							
Testosterone Transdermal Gel							
testosterone†	Androgel® Pump	12.5mg/pump	1/2 pump on posterior calf daily (~6.25mg T) **or** 1 pump 3x week[11]		Based on sx response and serum T levels with re-assessment of baseline T levels at 3-6 weeks	Target T levels should remain within the premenopausal range (Total T < 2.8 nmol/L)	Wash hands and apply gel once daily. Spread thinly over a small area of the clean, dry, intact skin of the back of the calf.
	Androgel® Sachet	25, 50mg	1/4 of 25mg sachet on posterior calf daily (~6.25mg T)				
Other (5-HT Receptor Modulator)							
flibanserin	Addyi®	100mg	100mg daily HS *Dosed at HS b/c admin during waking hours ↑ risks of hypotension, syncope, and CNS depression.*		N/A	100mg daily HS	With or without food (fatty meals may ↑ absorption by 1-1.5-fold).

† off-label use

Legend

17β-E = 17β-estradiol; **b/c** = because; **CE** =conjugated estrogen; **ET** = estrogen therapy; **GSM** = genitourinary syndrome of menopause; **LMP** = last menstrual period; **HCP**= healthcare provider; **HS** = bedtime; **HSDD** = hypoactive sexual desire disorder; **mP** = micronized progesterone; **MPA** = medroxyprogesterone acetate; **N/A** = not applicable; **NIHB** = Non-Insured Health Benefit; **ODB** = Ontario Drug Benefit; **PT** = progesterone therapy; **qHS** = every night at bedtime; **sec** = seconds; **SERM** = Selective Estrogen Receptor Modulator; **sx** = symptom; **T** = testosterone; **VMS** = vasomotor symptoms; **VTE** = venous thromboembolism; **wk** = week