

**Hot Flashes, Cold Facts and a Lukewarm
Evidence Base:
PEER's evidence-based menopause
management**

November 7, 2025

Tina Korownyk, Samantha Moe, Betsy Thomas

FACULTY/PRESENTER DISCLOSURE

Faculty/Presenter: Tina Korownyk

Relationships with commercial interests:

- Grants/Research Support: CIHR, PRIHS
- Speakers Bureau/Honoraria: CFCP, provincial colleges
- Consulting Fees: None
- Other: Employed by the UofA

FACULTY/PRESENTER DISCLOSURE

Faculty/Presenter: Samantha Moe

Relationships with commercial interests:

- Honoraria: RxFiles, North York General**
- Grants/Research Support: none**
- Consulting Fees: none**
- Other: Employed by CFPC**

FACULTY/PRESENTER DISCLOSURE

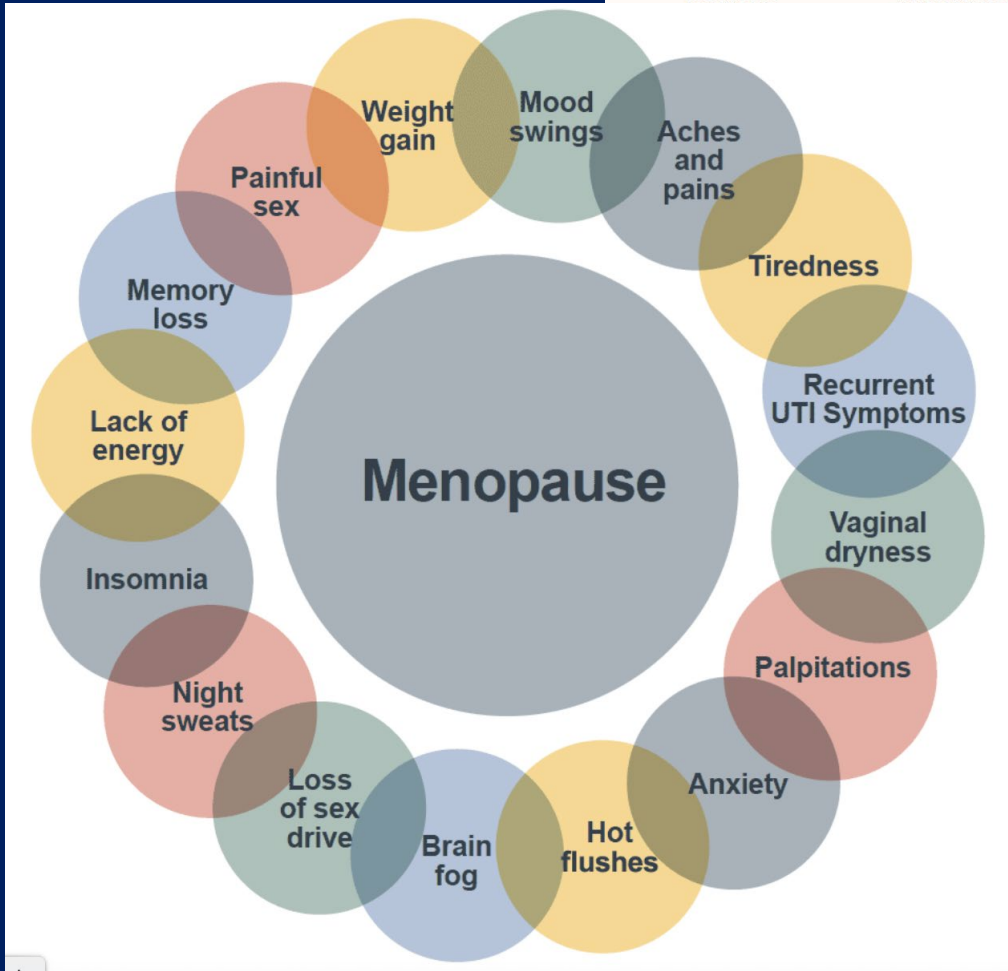
Faculty/Presenter: Betsy Thomas

Relationships with commercial interests:

- Honoraria: PEIP by PEER, Northern Health (BC)**
- Grants/Research Support: none**
- Consulting Fees: none**
- Other: Employed by CFPC**

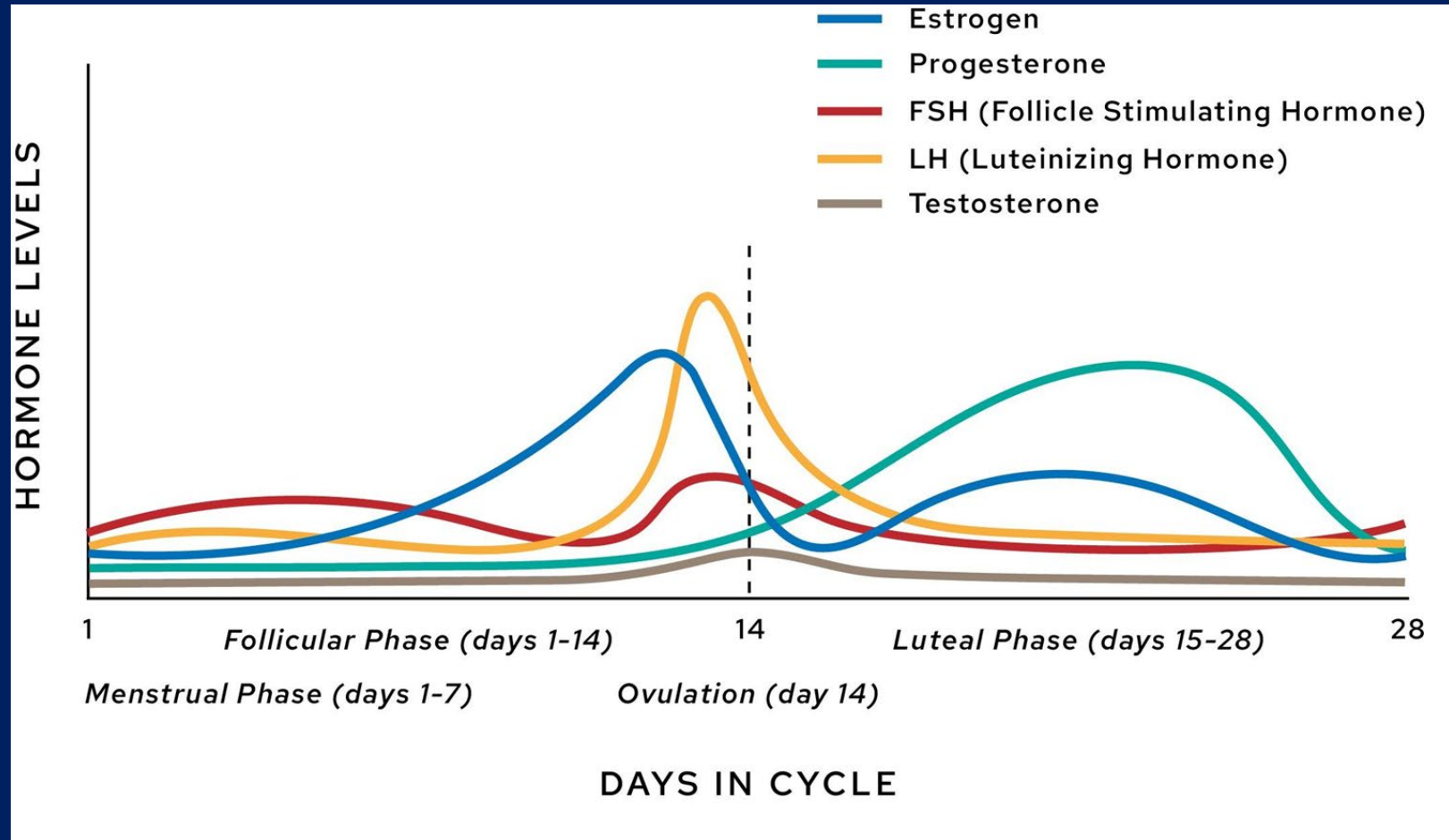
LEARNING OBJECTIVES

- Summarize risks and benefits of hormone therapy and non-hormonal therapy
- Recognize the challenges and limitations of clinical evidence related to menopause management.
- Identify an approach to symptoms of menopause and important counselling tips for patients

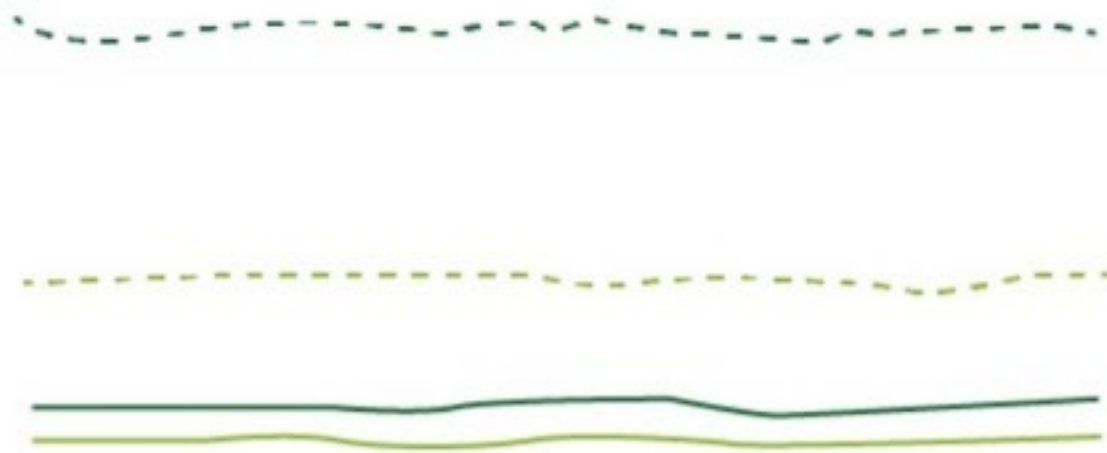


SLEEP ISSUES	DRY SKIN	FEELING ANXIOUS		
HEADACHES	HOT FLASHES	IRRITABILITY		
LOW LIBIDO	NIGHT SWEATS	PAINFUL SEX		
URINARY ISSUES	VAGINAL DRYNESS	WEIGHT GAIN		

NORMAL HORMONE VARIATION



Postmenopause (180 days)

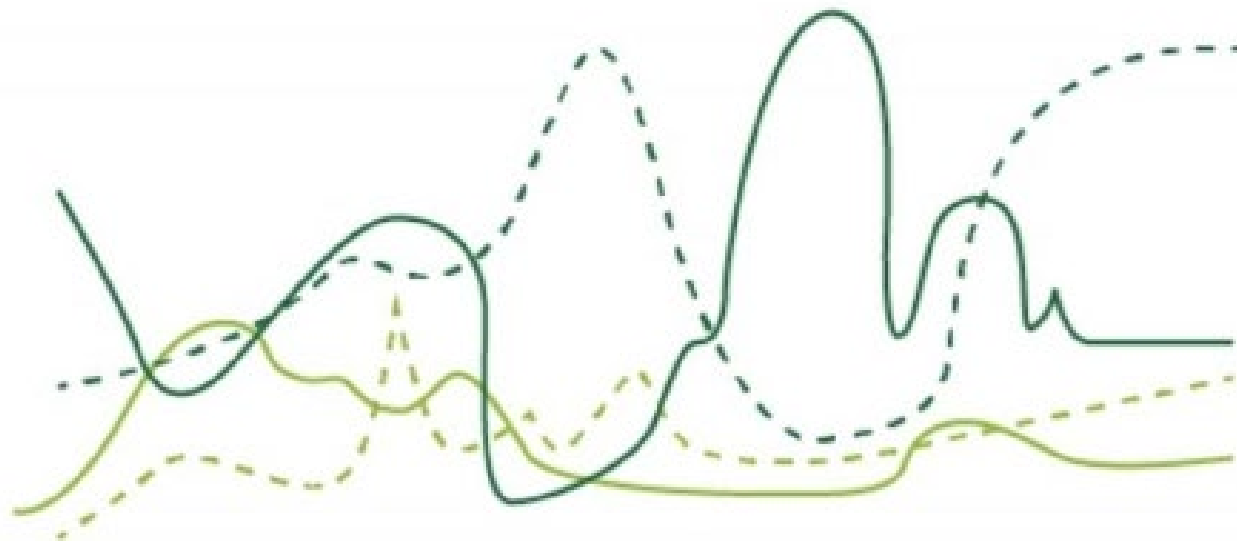


FORBES > LEADERSHIP > FORBESWOMEN

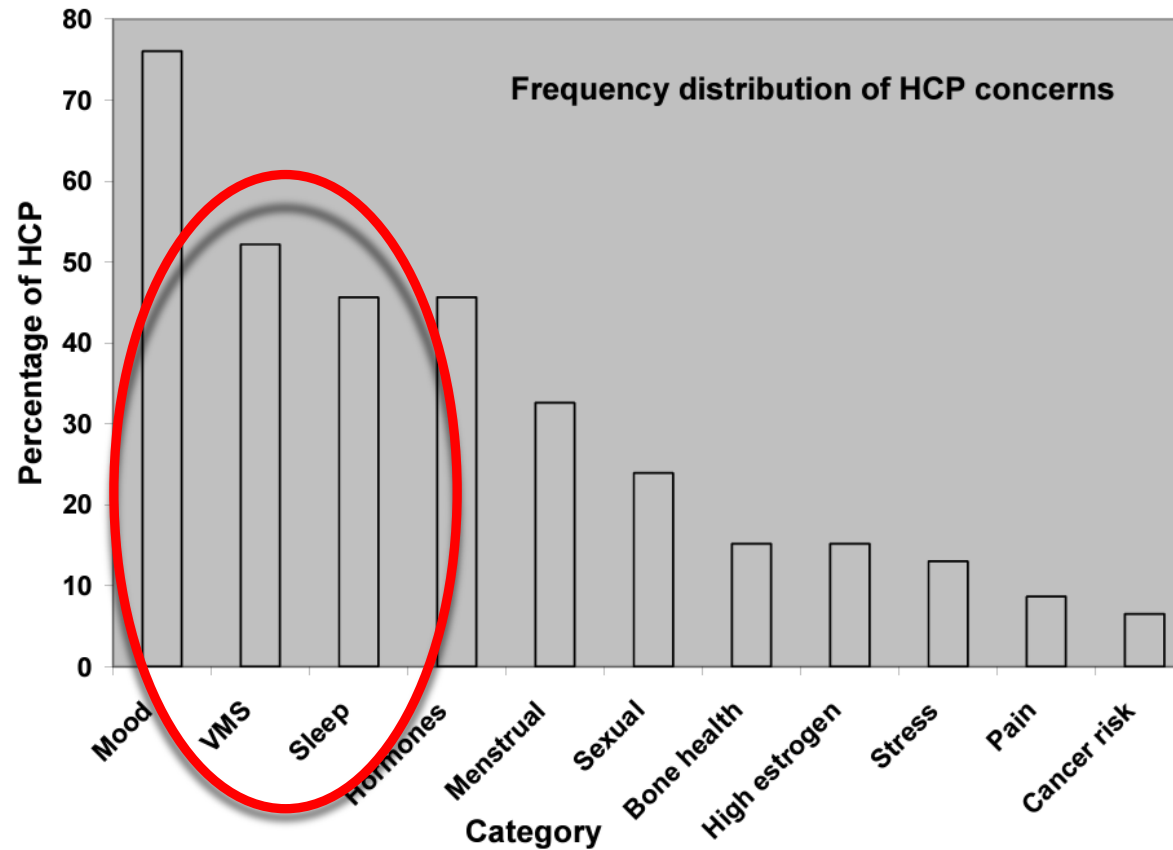
"Doctors Are Failing Women": A New Approach to Menopause Care

Generation of women 'deprived of HRT over misinterpreted data linking hormone therapy with breast cancer' – review

Perimenopause (180 days)



WHAT KINDS OF PROBLEMS DO YOUR PERIMENOPAUSAL PATIENTS HAVE THAT POSE THE MOST DIFFICULTY FOR YOU?"



VMS:
75% women,
38% men

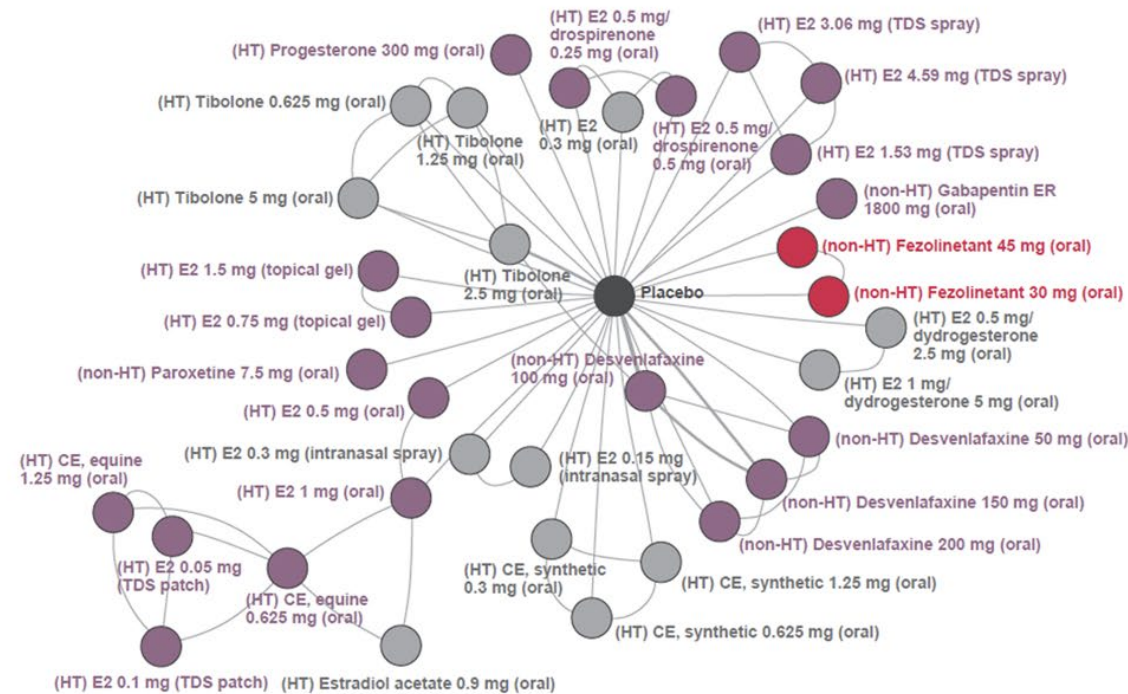
**Management
of Sleep:**
63% women,
36% men

THERAPEUTIC HOT TAKES

Vasomotor symptom management

WHAT WORKS?

Supplemental Figure S1. Evidence Network for VMS Frequency Outcome^{22,25-28,30-32,34-37,39-42,44-46}



36 treatment regimens

HT

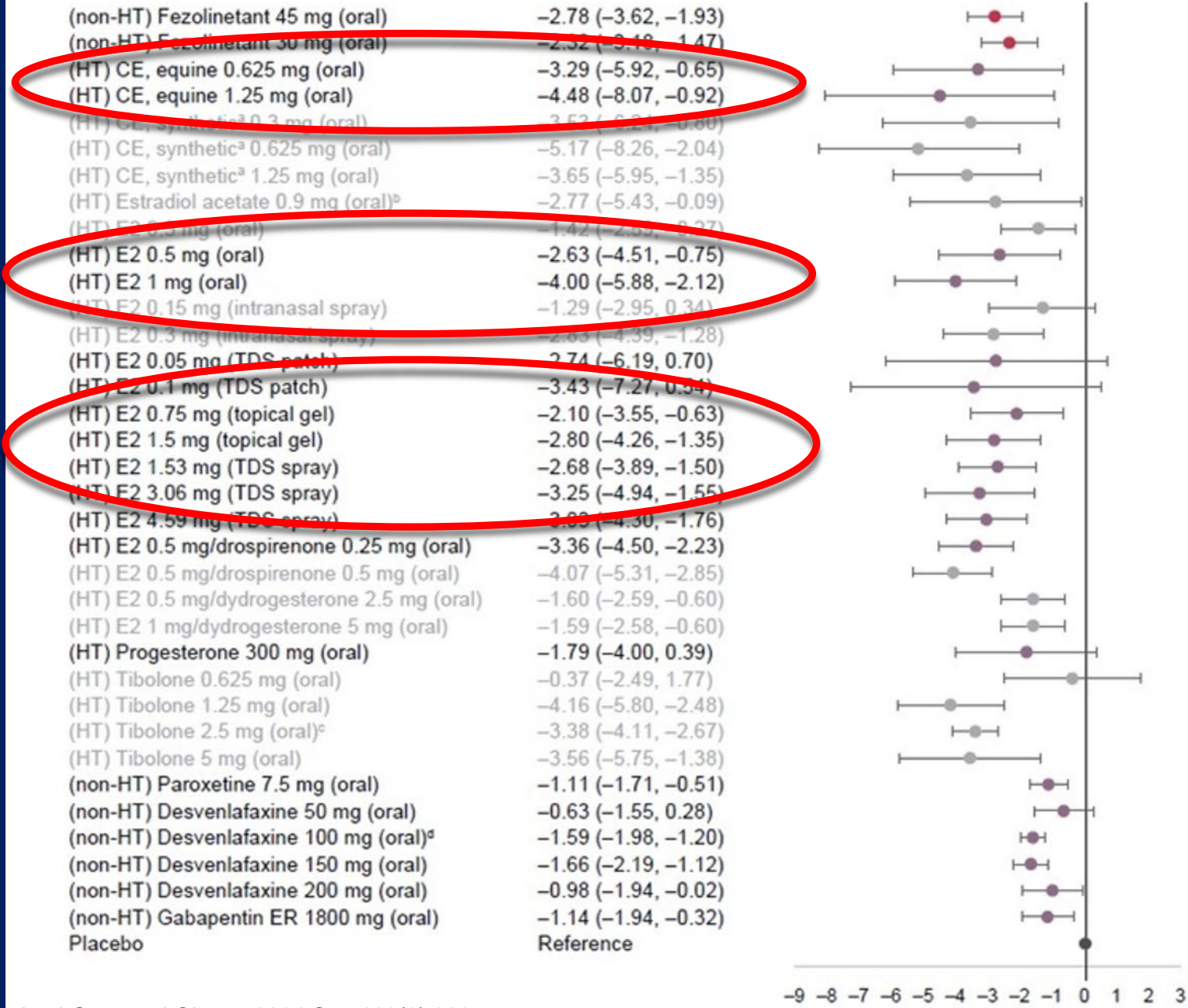
- CE, equine 0.625 and 1.25 mg (oral)
- CE, synthetic 0.3, 0.625, and 1.25 mg (oral)^a
- Estradiol acetate 0.9 mg (oral)^b
- E2 0.3, 0.5, and 1 mg (oral)
- E2 0.15 and 0.3 mg (intranasal spray)
- E2 0.05 and 0.1 mg (TDS patch)
- E2 0.75 and 1.5 mg (topical gel)
- E2 1.53, 3.06, and 4.59 mg (TDS spray)
- E2 0.5 mg/drospirenone 0.25 and 0.5 mg (oral)
- E2 0.5 mg/dydrogesterone 2.5 mg (oral)
- E2 1 mg/dydrogesterone 5 mg (oral)
- Progesterone 300 mg (oral)
- Tibolone 0.625, 1.25, 2.5, and 5 mg (oral)

Non-HT

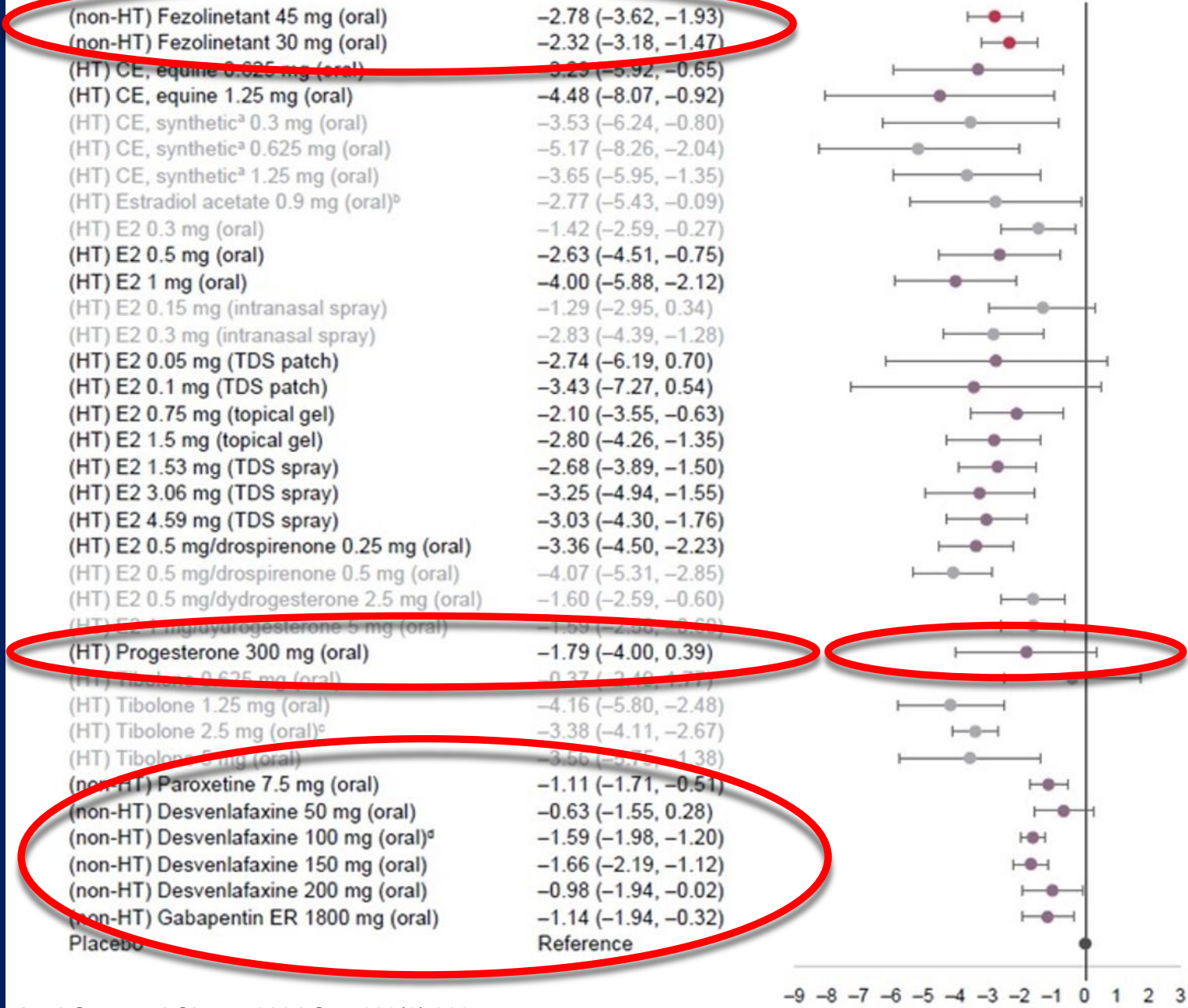
- Fezolinetant 30 and 45 mg (oral)
- Paroxetine 7.5 mg (oral)
- Desvenlafaxine 50, 100, 150, and 200 mg (oral)
- Gabapentin ER 1800 mg (oral)

Placebo

Difference vs placebo, mean (95% CrI)



Difference vs placebo, mean (95% CrI)



Guidelines

	1st Line	Route	Avoid	Consider
NICE 2024	E +/- P	Transdermal safer if at risk of VTE	SSRI, SNRIs, clonidine (not first line)	Black Cohosh/ Isoflavones
NAMS 2022	E +/- P “Gold Standard”	Comparative RCT data lacking	Black Cohosh Clonidine	SSRIs/SNRIs, Gabapentin
SOGC 2021	E +/- P “Most effective”	Lack of high-quality data		SNRIs/SNRIs, Gabapentin, Clonidine

All to start <60 or within 10 years of menopause

SOGC: Perimenopause – consider COC (Up to age 50), MHT, or estrogen + IUD

Menopause 29(7):p 767-794, July 2022

Menopause. 2023 Jun 1;30(6):573-590.

J Obstet Gynaecol Can. 2021 Oct;43(10):1188-1204.e1.

KEEPs Trial

- 727 women, 42-58 years, w/in 3 years of final period, ~85% mild hot flashes or worse
 - CEE 0.45mg vs transdermal estradiol 50mcg vs placebo (200mg micronized progesterone for “E” groups, 12d/mo)
 - Mod-severe hot flashes, 44% at baseline
 - At 6 mo: 28% placebo, 7% Estradiol, 4% CEE
 - Mod-severe night sweats, 35% at baseline
 - At 6 mo: 19%, 5.3% estradiol, 4.7% CEE
 - Irritability – No diff
- Bottom Line:** Low dose estrogen improves hot flashes and night sweats at 6 months (and up to 4 years)

What works?

	↓ Hot Flashes per day
Estrogen (mod dose) ¹	2.5-3 (up to 4-5 with high dose)
Fezolinetant ² (45mg)	2-3
Gabapentin ³ (300mg TID)	1-2
SSRI/SNRI ³ (mid dose)	1-2
Clonidine ³ (≤0.075mg BID)	1, (when breast cancer patients excluded, no different from plb)
Soy isoflavone extract ⁴ (50-70mg/d)	~1
Placebo ⁵	1

1. Cochrane 2004, Issue 4. Art. NO.: CD002978. 2) TFP #399, October 2025. 3) TFP #353, Nov 2023. 4) JAMA 2006; 295: 2057-71. 5) Sci Rep. 2020 Nov 18;10(1):20090. doi: 10.1038/s41598-020-77255-z.

Confusion

Estrogens

- Estradiol
- CEE
- (Estrone, mestranol)
- Patch
- Spray
- Gel

Evidence

- Observational and RCTs
- Dichotomous, continuous, scales
- Timing / age

Progestogens

- MPA
- micronized progesterone
- nor-derivatives
- IUD
- patch

Outcomes

- QOL
- VMS: frequency, severity
- Depression, irritability, mood, sleep
- Safety

Combos

- E, E+P
- Cyclic/sequential vs continuous

Bioidentical

- Commercial grade
- Compounded
- Ingredient permutations;
- Doses; routes

COSTS

Estradiol	Brand Name	Dose	Dosing	Cost/3mo
Oral	Estrace	1 mg	QD	\$35
Patch	Estradot	50 mcg	2x / week	\$85
Gel	Estrogel	2.5g gel	QD	\$105
Vaginal Tab	Vagifem	10mcg	2x / week	\$200
Vaginal Insert	Imvexxy	4/10mcg	2x/week	\$156/\$200
Micronized Progesterone		100mg	QD	\$50
Fezolinetant		45mg	QD	\$600

WHAT ARE THE RISKS?

PEER

Simplified Cardiovascular
Decision Aid

FAQ Languages: English (EN) ▾

1. Estimate your risk

Where do you live? Canada (Framingham) ▾

How old are you? 50 years

What is your sex? ✓ Male Female

Do you currently smoke? ✓ No Yes

Do you have diabetes? ✓ No Yes

What is your systolic blood pressure? 130 mmHg

Do you take medications for blood pressure? ✓ No Yes

What is your total cholesterol? 5 mmol/L

What is your HDL cholesterol? 1.3 mmol/L

Wondering why family history is not included?
Please see the [FAQ](#)

10-year risk of cardiovascular disease

(heart attack or stroke (fatal or non-fatal), heart failure, angina, or intermittent claudication)

Your risk 8.1% With treatment 8.1%

No Event

Treatment Benefit

Event

2. Choose your treatments

Lifestyle options

Mediterranean diet

Physical activity

Medication options (only select one)

These options have clear and direct evidence for primary prevention

Statin (low to moderate dose)

Statin (high dose)

Single blood pressure medication (thiazide, ACEI/ARB, or CCB)

Non-statin options not recommended for primary prevention in our guideline

Ezetimibe

PCSK9 inhibitor

Fibrates

Print

EMR Note/Share Link

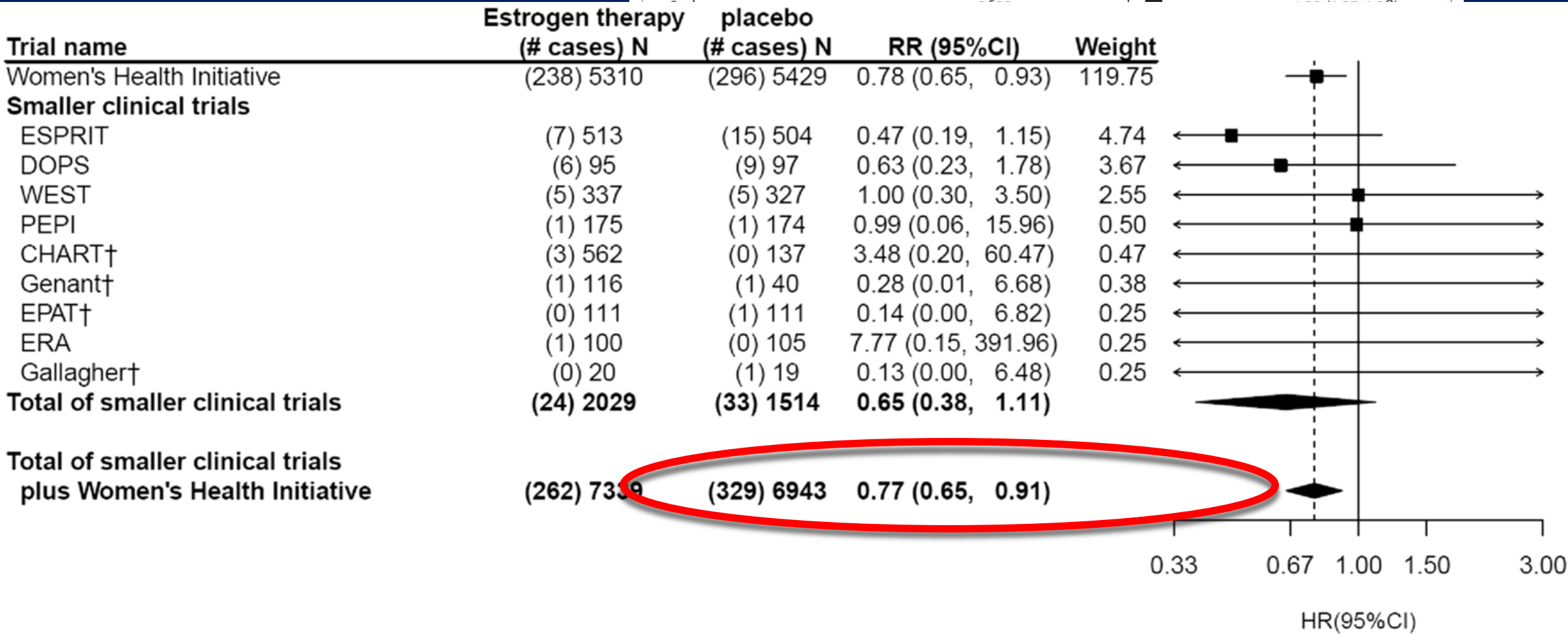
PEER Simplified Lipid Guidelines

Patient Handout

Breast Cancer, DVT, CVD

BREAST CANCER & HORMONE

	Number of cases		Relative risk (95% CI) during years 5-14 of MHT use
All oestrogen-only preparations	4869		1.33 (1.28-1.38)
By construction			
Equine oestrogen	1910		1.32 (1.25-1.39)
Oestradiol	1563		1.38 (1.30-1.46)
By mode of administration			



HRT & BREAST CANCER RISK

Citation	Year	Study	Mean age	Breast Cancer Risk (HR/RR)	
				Estrogen	E+P
WHI ^{1,2} Avg 5 – 7 yrs	2002, 2004	RCT	64	0.79 (0.61-1.02)	1.26 (1.00-1.59)
Collaborative Group ⁴	2019	SR Cohort	50	RR 1.33 (1.28-1.37) 5yr NNH = 200	RR 2.08 (2.02–2.15) 5 year NNH = 50
WHI ³ 20 yr f/u	2020	RCT	64	0.78 (0.65-0.93) CEE	1.28 (1.13-1.45) CEE + MPA
					5% vs 4%

1) JAMA. 2002 Jul 17;288(3):321-33. 2) JAMA. 2004 Apr 14;291(14):1701-12. 3) JAMA. 2020; 324(4): 369-380.
4) Lancet 2019; 394: 1159–68. 5) Clin Breast Cancer. 2022 Feb;22(2):e206-e213

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WHI ³ 20 yr f/u	2020	RCT	64	0.78 (0.65-0.93) CEE	1.28 (1.13-1.45) CEE + MPA ⁵ Also ↑ mortality

Bottom Line: Overall – risk with E+P ~25% increase, ie if baseline was 4%, increase to 5% over 20 yrs
Estrogen alone ...

1) JAMA. 2002 Jul 17;288(3):321-33. 2) JAMA. 2004 Apr 14;291(14):1701-12. 3) JAMA. 2020; 324(4): 369-380. 4) Lancet 2019; 394: 1159–68. 5) Clin Breast Cancer. 2022 Feb;22(2):e206-e213 5) Cochrane Database of Systematic Reviews 2017, Issue 1. Art. No.: CD004143.

DVT RISK

- Case control study – women 50-64yrs, insured in USA
 - 20,359 cases (DVT), 203,590 controls

Treatment Exposure	Treatment Exposure	Adjusted OR (95% CI)
Oral E +/- P	No hormone	1.40
Transdermal E + P	No hormone	0.76
E+P Contraception	No hormone	5.22 (others 2-3x)

Bottom Line: Not TFP Worthy .

Contraception > HT oral > HT transdermal.

E2 appeared lower risk than CEE ^{1,2}

Lower doses may confer less risk. ^{1,2}

DVT RISK - RCTS

Cochrane, 6 RCTs

HT vs placebo

- RR ~ 2x

1.9% vs 1.0% placebo

	“young” ¹	>50 years ^{2,3}
Baseline	5/10,000	20/10,000
MHT oral	10/10,000	40/10,000
Contraception	15/10,000	60/10,000
Pregnancy	20/10,000	
Postpartum	40-65/10,000	

Bottom Line (best evidence): HT ↑ DVT ~2x

Baseline risk variable: ↑ with age, Obesity (4x),
Smoking (2x)⁴

Different Estrogens or delivery method – only
observational data

1) Contraception. 2007 May;75(5):328-36. 2) *Arch Intern Med.* 2004;164(20):2260-2265. 3) <https://thebms.org.uk/wp-content/uploads/2022/12/04-BMS-TfC-HRT-Guide-NOV2022-A.pdf> 4) <https://cfpclearn.ca/tfp70/> 5) Cochrane Database of Systematic Reviews 2015, Issue 3. Art. No.: CD002229.

CARDIOVASCULAR RISK

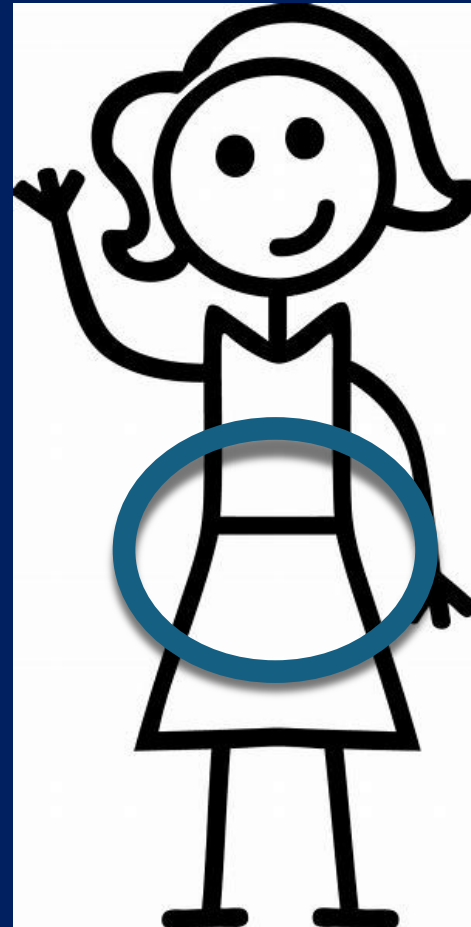
RCT	Intervention	Tx Duration (years)	F/U @ (years)	CV Outcomes
Keeps	E2 vs CEE vs Placebo (+/- progesterone)	4	14	No evidence CV/metabolic benefit or harm
WHI	CEE +/- MPA	5-7	18	Overall / CV mortality 27.1% Tx vs 27.6% placebo
HERS	CEE +/- MPA	4.1	2.7	CHD events RR0.99 (0.84-1.17)

GENITOURINARY SYNDROME OF MENOPAUSE

Sexual

Genital

Urinary



Genitourinary Syndrome of Menopause - 2014

Table 2

Genitourinary syndrome of menopause (GSM): symptoms and signs.

Symptoms	Signs
Genital dryness	Decreased moisture
Decreased lubrication with sexual activity	Decreased elasticity
Discomfort or pain with sexual activity	Labia minora resorption
Post-coital bleeding	Pallor/Erythema
Decreased arousal, orgasm, desire	Loss of vaginal rugae
Irritation/burning/itching of vulvar or vagina	Tissue fragility/fissures/petechiae
Dysuria	Urethral eversion or prolapse
Urinary frequency/urgency	Loss of hymenal remnants
	Prominence of urethral meatus
	Introital retraction
	Recurrent urinary tract infections

GENITOURINARY SYNDROME OF MENOPAUSE

- 2020 SR of RCTS on GSM – 109 RCTs

48 different outcomes

- Physician Observed:

- Vaginal epithelium
- Atrophy 51%
- Clinician-reported

- Patient Reported

- Sexual function

CORE OUTCOME SET

1. Pain with sex
2. Vulvovaginal dryness
3. Vulvovaginal discomfort or irritation
4. Discomfort or pain when urinating
5. Change in most bothersome symptom
6. Distress, bother or interference or genitourinary symptoms
7. Satisfaction with treatment
8. Site-effects of treatment

Variation in outcome reporting and measurement in clinical trials for postmenopausal women: a systematic review of genitourinary symptoms associated with menopause. *Menopause*, 28 (8), 859-866

BEST EVIDENCE? SYSTEMATIC REVIEW

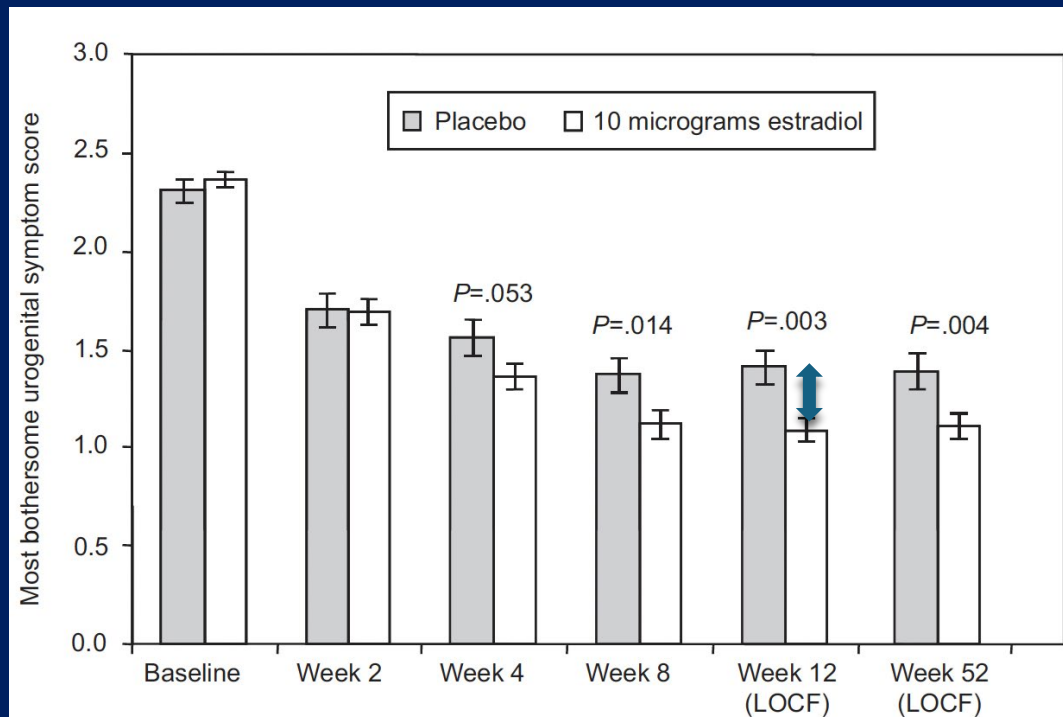
- Hormonal treatments & vaginal moisturizers, RCTs, ≥ 8 wks duration, ≥ 1 symptom
- 46 RCTs (mostly vaginal estrogen)
- Limitations: short duration, heterogeneous definition of GSM, heterogeneous outcomes, No head to head comparative effectiveness trials

SYSTEMATIC REVIEW

- Unable to meta-analyze outcomes
- Beneficial: (Low certainty evidence)
 - Estrogen –vaginal dryness (0.6 on 7 pt scale)
 - dyspareunia – $\geq 1/2$ trials found no stat sign benefit
 - Vaginal Moisturizers – vaginal dryness (2.6 on 11 pt scale)
 - Vaginal DHEA
 - Oral ospemifene
- No evidence: oral DHEA, raloxifene, bazedoxifene, vaginal oxytocin, or vaginal testosterone for any GSM symptom.

Effective Treatment of Vaginal Atrophy With an Ultra-Low-Dose Estradiol Vaginal Tablet

James Simon, MD, Lila Nachtigall, MD, Robert Gut, MD, PhD, Eva Lang, MD, David F. Archer, MD, and Wulf Utian, MD, PhD



**Change
~0.4
MCID ~0.5**

309 women, 10 mcg
Estradiol vs placebo x
52 weeks

Most bothersome
symptom

A/Es:

- Vulvovaginal Mycotic Infection 8% vs 3% placebo
- Vulvovaginal Pruritis 8% vs 2% placebo

The REJOICE trial: a phase 3 randomized, controlled trial evaluating the safety and efficacy of a novel vaginal estradiol soft-gel capsule for symptomatic vulvar and vaginal atrophy

RCT x 12 weeks, 764 women, self administer vaginal capsule (4, 10, 25mcg capsule) x 2 weeks, then 2x/week.

4 co-primary endpoints: Change % superficial cells, % parabasal cells, vaginal pH, dyspareunia

Results: 12 weeks:

Dyspareunia 0.4 improvement on 4 pt scale
(MCID 0.5)

A/Es: Not clinically meaningful

Post marketing – vaginal discharge

VAGINAL ESTROGEN AND DYSPAREUNIA

Dyspareunia

Vaginal estrogen vs. placebo	7 trials Total n = 2072	12 wk	FSFI pain†						
				Constantine et al, 2017 (32)	Estradiol tablet, 4 mcg ↔	2.2‡	1.9‡	↔↑	Low ⊕⊕○○ No difference
					Estradiol tablet, 10 mcg ↑	2.6‡			
				Fernandes et al, 2014 (33)	CEC, 1 g 3 times/wk	1.7‡	1.0‡	?	
				Mitchell et al, 2018 (30)	Estradiol, 10 mcg	1.4 (95% CI, 0.9 to 1.8)	0.9 (95% CI, 0.5 to 1.4)	↔	
			4-point severity§	Archer et al, 2018 (31)	Estradiol cream	No data (reported graphically)		↔	
				Bachmann et al, 2009 (36)	CEC, 0.5 g, 21 d on/7 d off	-1.4	-0.4	↑	
					CEC, 0.5 g 2 times/wk	-1.4	-0.7		
				Freedman et al, 2009 (37)	CEC, 1 g 2 times/wk	70% improved 34% resolved	40% improved 9% resolved	↑	
				Lima et al, 2013 (34)	CEC, 0.5 g daily	No data (graph improvement)		↔	

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Tools for Practice

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#237 Verifying the value of vaginal estradiol tablets

CLINICAL QUESTION

Are vaginal estradiol tablets (Vagifem®) effective for genitourinary syndrome of menopause?

BOTTOM LINE

Vaginal estradiol tablets are likely no better than placebo vaginal gel for reducing “most bothersome symptom scores” (mainly dyspareunia). However, compared to placebo vaginal tablets, they reduce symptoms (example: treatment “success” at 12 months in 86% versus 41% placebo). A non-medicated vaginal gel may be reasonable first-line for dyspareunia.

Improvement in Most
Bothersome Symptom
(0-3)

Estradiol – 1.4
Vaginal Gel – 1.2
Placebo Gel – 1.3

SOGC GUIDELINES

- First Line: may include **vaginal lubricants and/or vaginal moisturizers**, particularly if patient concerns are limited to vaginal dryness or dyspareunia (*strong, high*).
- Second-line: **vaginal estrogen** (cream, tablet, or sustained-release ring) (*strong, high*). Concomitant progestogen therapy is not needed (*strong, high*).
- Other second-line: **oral selective estrogen receptor modulator, ospemifene, and vaginal dehydroepiandrosterone ovules** (*strong, high*).

VAGINAL LUBRICANTS & MOISTURIZERS

9



X

Product	Original Price	Sale Price	Savings
KY Naturals Sensitive Soothe Apaiser	12.49	5.99	SAVE 1.80
KY Naturals Sensitive Gentle Douce	12.99	15.99	SAVE 1.80
KY Naturals Sensitive Hydrate	17.79	15.99	SAVE 1.80
KY silicone slide	39.99	23.39	SAVE 2.60
KY glide	29.99	8.99	SAVE 1.00
life Jelly	7.79	9.99	SAVE 1.00
KY Liquid smooth	13.79	12.39	SAVE 1.40
life Intimate Fluid Lotion Intime	9.99	9.99	0.00
KY Sensual Silk silky	13.79	12.39	SAVE 1.40
life Warming Intime	9.99	9.99	0.00
Pre-Seed	44.99	19.79	SAVE 2.20
Trojan Magnum	18.49	18.49	0.00
Trojan H2 Sensitive Touch	11.99	11.99	0.00
Trojan H2 Closer	18.49	18.49	0.00
Trojan Crazy Sexy Feet	18.49	18.49	0.00
Trojan Crazy Sexy Feet	22.99	22.99	0.00
Trojan Crazy Sexy Feet	22.99	22.99	0.00
Trojan Crazy Sexy Feet	22.99	22.99	0.00
Trojan Bareskin	22.99	22.99	0.00
Trojan Bareskin	22.99	22.99	0.00
Trojan Platinum	22.99	22.99	0.00



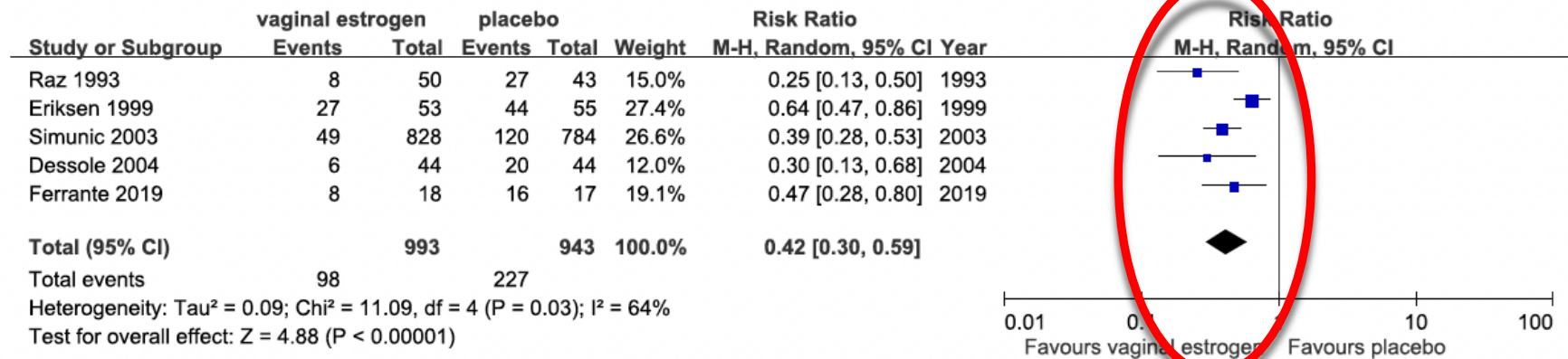
COSTS

	Brand Name	Dose	Dosing	Cost/3mo
Vaginal Moisturizer	Replens	1 applicator	2x / week	~\$60
Conjugated Estrogens	Premarin Vaginal Gel	0.5g	2x/week	\$100
Vaginal Tab	Vagifem	10mcg	2x / week	\$200
Vaginal Insert	Imvexxy	4/10mcg	2x/week	\$156/\$200
Prasterone (DHEA)	Intrarosa	Daily Ovule	QD	\$173
SERMs	Ospemifene	60mg	QD	\$166

GOOD EVIDENCE FOR VAGINAL ESTROGEN?

- Recurrent UTIs
 - SR 5 RCTs, 1936 pts, topical estrogen in pts with recurrent UTI
 - NNT ~8 to prevent one additional UTI

Int Urogynecol J (2021) 32:17–25



VAGINAL ESTROGEN ENDOMETRIAL SAFETY

- 1 year , 541 women, 60 yrs, 10mcg Vagifem
- 443 bx at 52 weeks, 386 “evaluable samples”
 - 1 endometrial hyperplasia & 1 endometrial cancer
 - Incidence rate: 0.52%
 - Background incidence 0% - 1%.

Original Research

Safety of Vaginal Estrogen Therapy for Genitourinary Syndrome of Menopause in Women With a History of Breast Cancer

- Retrospective cohort, 42,113 women with GSM Dx w/in r yrs after breast ca, 5% received vaginal estrogen
- Risk recurrence:
 - Positive estrogen receptor (409 Ca pts): 30.6% estrogen vs 32.5%
 - RR 0.94 (0.77 -1.15)
 - Any estrogen receptors (2109 Ca pts): 17.6% estrogen vs 17.1%
 - RR 1.03 (0.91-1.18)

Menopause Mystery Boxes

Testosterone

DHEA

Bioidentical
Hormones

Weighted
vests

TESTOSTERONE

Hypoactive Sexual Desire Disorder

Most comprehensive SR (36 RCTs, n=8480):¹ T vs placebo

- Satisfactory sexual events: ~1 more over placebo/month
- Many outcomes reported SS; but clinically meaningful? (arousal, orgasm, desire)

RCT (n=70):² estradiol ± transdermal testosterone x 8w
FSFI score <26.5: 56% (t) v 39%,
NNT=6

Other outcomes?

- Cognitive, bone density, muscle strength, mood – no difference¹
- GSM – SR (2 RCTs, compounded vaginal testosterone vs plb, n=84) “*evidence is very uncertain on the effects of vaginal testosterone.*”³

Harms: Acne (7% vs 5%, NNH~50),
hirsutism (10% vs 6%, NNH=24)¹

1. Islam et al. Lancet Diabetes Endocrinol 2019; 7: 754-66. 2. Chaikittisilpa et al. Climacteric 2019; 22(5): 460-65. 3. Liu et al. Menopause 2021; 29(4): 45-82.

VAGINAL DHEA

- Systematic Review 2024, 4 RCTs (n=216-558) x 12 weeks:
- Outcomes (4-point scale, lower better):
 - Vaginal dryness: -1.5 vs -1.0 (placebo)
 - Dyspareunia: -1.3 vs -0.9 (placebo)
 - QoL scores (lower better): 50% decrease vs 23% (placebo)
 - D/C due to AE's: 1.5%-11.4% vs 1.2-9.5% (placebo)

Bottom Line: Vaginal DHEA may help with GSM symptoms such as dryness and dyspareunia compared to placebo and likely similar to vaginal estrogen and moisturizers.

BIIDENTICAL HORMONES

Bioidentical = similar chemical structure to human hormones

Compounded products advertised as being

- Bioidentical (not a medical term, a marketing one!)
- Natural (all ingredients undergo chemical synthesis)
- Personalized approach, individualized (unregulated, lacking quality control)
- Safer (lack of evidence)

BIOIDENTICAL HORMONES: WHAT'S NEW?

Commercially available formulations

- Estradiol vs CEE¹
 - Patch: Hot flashes/wk-NSS, more AE
 - Oral: No difference in VMS (12 weeks)
- Micronized progesterone
 - vs medroxyprogesterone:²

Compounded formulations

- Multiple hormones + various dosage strengths + routes
- SR 2022: 29 RCTs , n=1808; cBHT
 - CV event and breast cancer = no studies
 - “Vasomotor symptoms were not thoroughly studied in the included RCTs”
 - Numerous surrogate markers
 - Atrophy symptoms, lubrication, satisfaction – used statistics that make clinical interpretation difficult

Reviewed: July 2, 2015
Evidence Updated: Case control study (and review in context) added
Bottom Line: Unchanged
First Published: March 5, 2012

Tools for Practice

Bio-identical hormone micronized progesterone: The same but totally different?

Clinical Question: Is “bio-identical” micronized progesterone (MP) instead of the “synthetic” medroxyprogesterone acetate (MPA) safer and better for menopausal symptom control?

ALBERTA COLLEGE of FAMILY PHYSICIANS

Bottom-line: Theoretical advantages of bio-identical hormones over synthetic hormones are not supported by reliable evidence. Until

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13 studies



5 studies



6 studies

What does the evidence say?

Study	Population	# of Participants	Intervention	Control
Klentrou 2007	Postmenopausal women	16	Exercise + WV	NO Exercise
Snow 2000 (Non RCT)	Postmenopausal women	18	Exercise + WV	“active” controls but NO exercise program
Shaw 1998 (Non RCT)	50-75 years (at least 5 years post menopause)	44	Exercise + WV	NO exercise
Srisaphon- phusitti 2022	Older community dwelling adults (~66)	51 (40 females)	WBV only WBV + WV	WV
Roghani 2013	Postmenopausal women with OP	36	Exercise Exercise + WV	NO exercise
Mierzwicki 2019	Older community dwelling adults (~69)	19 (10 females)	Exercise + WV	Exercise

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Bottom Line

- Good quality evidence is lacking showing that weighted vests in addition to exercise improves outcomes such as bone health, strength or balance.
- So.....



1) LOVE

2) EMPATHY

3) CONNECTION

Thank you

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