

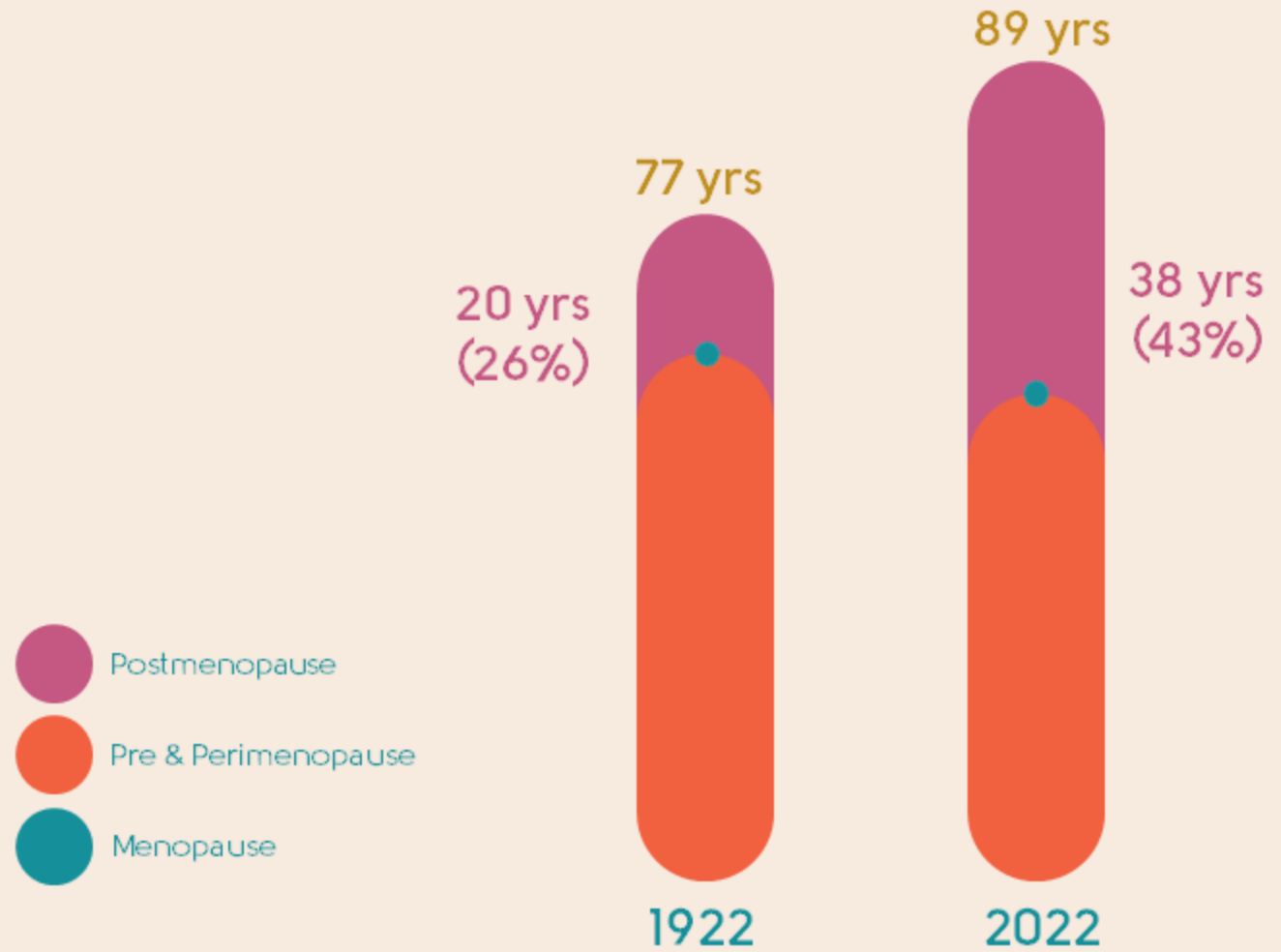


SAFETY

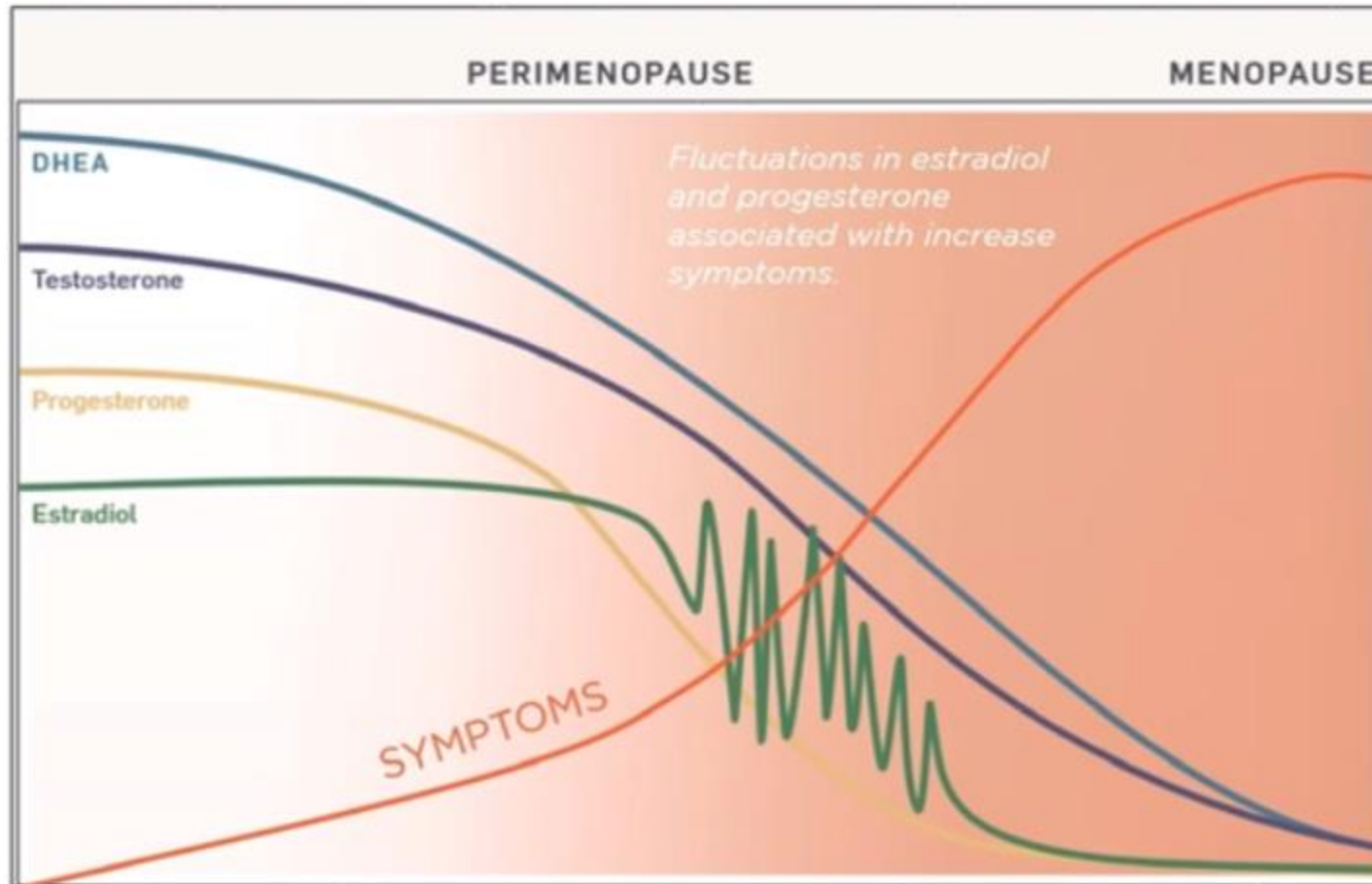
Life expectancy is increasing

Today
postmenstrual
life is approx.

40%
of your whole life



PERIMENOPAUSE SYMPTOMS



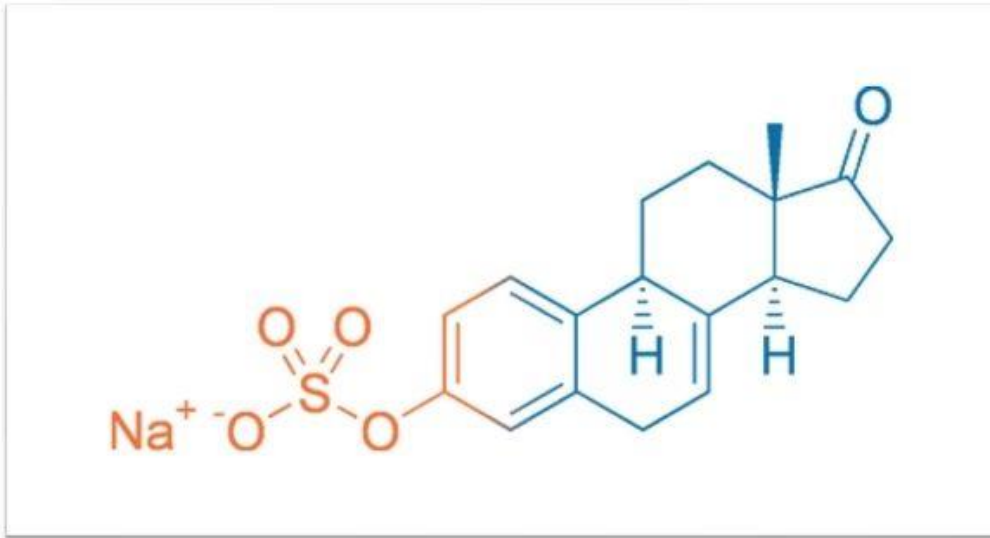
- Hot flashing
- Night sweats
- Bone loss
- Mood imbalances
- Urogenital atrophy
- Irregular bleeding
- Declining cognition
- Low libido
- Metabolic dysfunction
- Memory loss
- Sleep disruption
- Blood sugar dysregulation

Estrogen therapy terminology

Terms you need to understand

Premarin

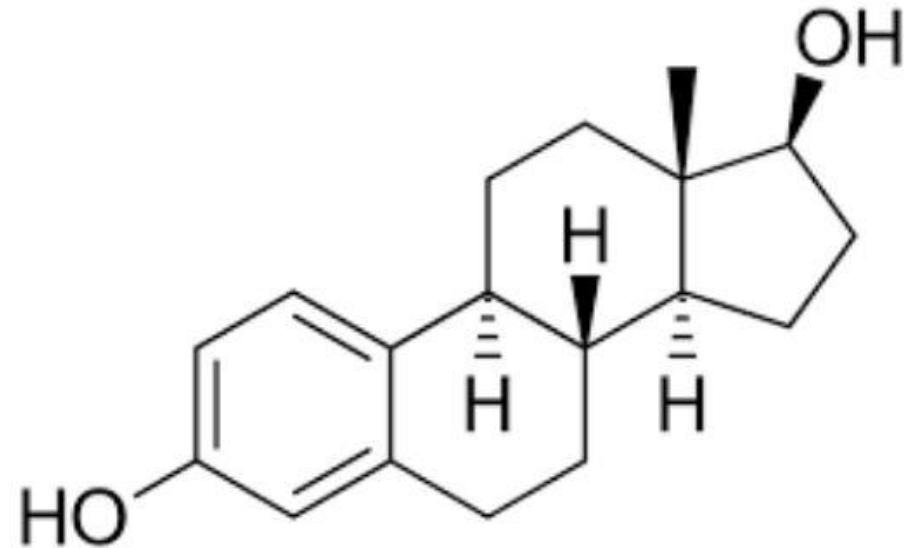
Equine (horse) estrogen product contains a mixture of at least 10 different estrogens



Water soluble

Estrodial

God given natural



FAT Soluble

The name Premarin was coined from pregnant mare (female horse) urine. Premarin, a conjugated equine estrogen product, contains a mixture of at least 10 different estrogens, primarily estrone (50%), equilin (25%), and equilenin (15%) in the form of water-soluble sodium sulfate conjugates

Here's a more detailed breakdown:

Primary Estrogens:

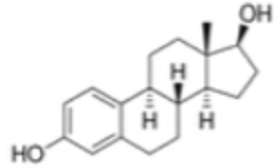
- **Estrone sulfate:** (approximately 50%) [↗](#)
- **Equilin sulfate:** (approximately 25%) [↗](#)
- **Equilenin sulfate:** (approximately 15%) [↗](#)

Other Estrogens (also sulfate esters):

- 17 β -estradiol sulfate [↗](#)
- 17 α -estradiol sulfate [↗](#)
- 17 β -dihydroequilin sulfate [↗](#)
- 17 α -dihydroequilin sulfate [↗](#)
- 17 β -dihydroequilenin sulfate [↗](#)
- 17 α -dihydroequilenin sulfate [↗](#)
- δ -8-estrone sulfate [↗](#)



Estradiol



- Treats vasomotor symptoms
- Prevents bone loss
- Supports vaginal lubrication + tissue integrity
- Urinary tract health
- Preserves key regions of brain
- Supports hippocampal volume
- Lowers risk of heart attack and blood clot development
- Synthesized from plant sterols to be molecularly identical to human estrogen

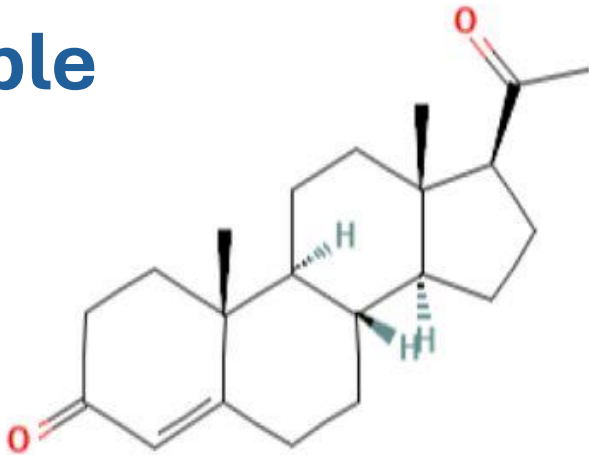
Premarin

- FDA approved for vasomotor symptoms, osteoporosis, vaginal atrophy (cream)
- Has been shown to accelerate brain metabolic decline
- Increases of stroke risk
- 60+ ingredients with a number of unidentified molecules
- Extracted from pregnant mares' urine

Progesterone therapy terminology

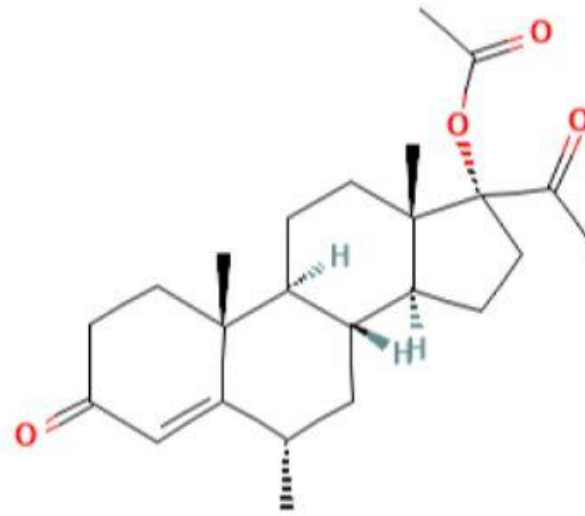
Progestin is made by humans in a lab
to mimic progesterone, which your
body makes naturally

FAT Soluble



progesterone

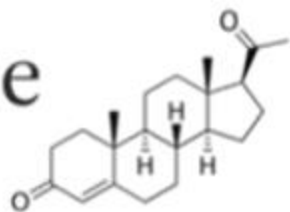
Water soluble



medroxyprogesterone acetate
(MPA)

Progestin

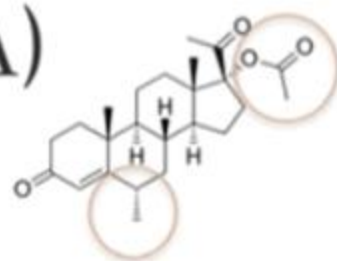
Progesterone



- Endometrial health
- Anti-estrogenic activity in breast tissue
- Lowers breast cell mitotic activity
- Metabolic health + Insulin sensitivity
- Supports cardiovascular health
- Fat soluble molecule

Progestin (MPA)

Medroxyprogesterone acetate



- Endometrial health
- Increases estrogen-driven tissue proliferation
- Increase in breast cancer risk with long term use
- Insulin resistance
- Increased risk of CVD and stroke
- Water soluble molecule

PROGESTIN AND PROGESTERONE ARE **NOT** THE SAME

SYNTHETIC

PROGESTIN

Causes headaches/migraines

Thins uterine lining

May cause irregular
menstrual bleeding

Increases mood issues /
depression / anxiety

Causes breast tenderness

Decreased sex drive

Chemically similar to androgens
(e.g. levonorgestrel)

VS



NATURAL

PROGESTERONE

Reduces headaches/migraines

Prepares lining for potential
pregnancy

Reduces spotting and
supports luteal phase length

Supports brain function and
has a calming effect

Supports breast health

Decreased sex drive
(luteal phase)

Anti-androgenic

Premarin = Synthetic Estrogen



Progestin = Synthetic Progestogen



2002, the Women's Health
Initiative (WHI)

JULY 22, 2002

WALL STREET: LOSING SAVINGS—AND TRUST

IS
THIS
OUR
FIRST
ANCESTOR?



Susan Pierres, 60, of Miami, has been on hormones for 10 years. She is angry and confused but not yet ready to stop taking them

THE TRUTH ABOUT HORMONES

Hormone-replacement therapy
is riskier than advertised.
What's a woman to do?

www.time.com AOL Keyword: TIME

In 2002, the Women's Health Initiative (WHI) study revealed that hormone replacement therapy (HRT), particularly estrogen combined with progestin, increased the risk of heart disease and breast cancer.

WOMEN'S HEALTH INITIATIVE (WHI)



- Hormones were being used in the 90's with great health benefits (Nurses Study)
- WHI: Attempt to randomize observational study by the NIH in 1991
- WHI Overview
- Average age 63. 50-79
- 27,000 participants. 40 clinics
- 17,000 supplemented conjugated equine estrogen (CEE) and Progestin
- 10,000 supplemented (CEE) alone
- The CEE and Progestin group stopped after 5.6 years (3.3 yrs early) because of breast cancer risk



QUICKSILVER
SCIENTIFIC
INSTITUTE

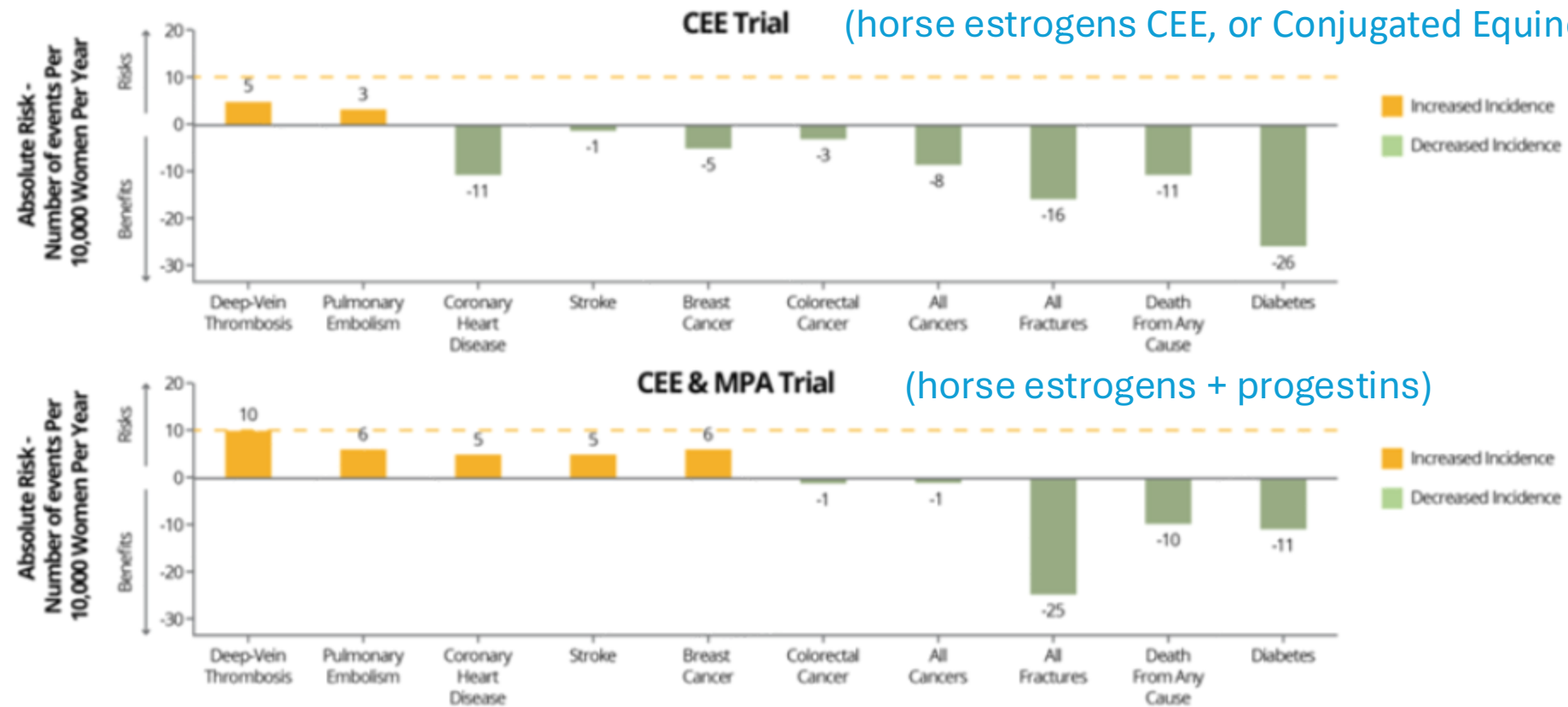
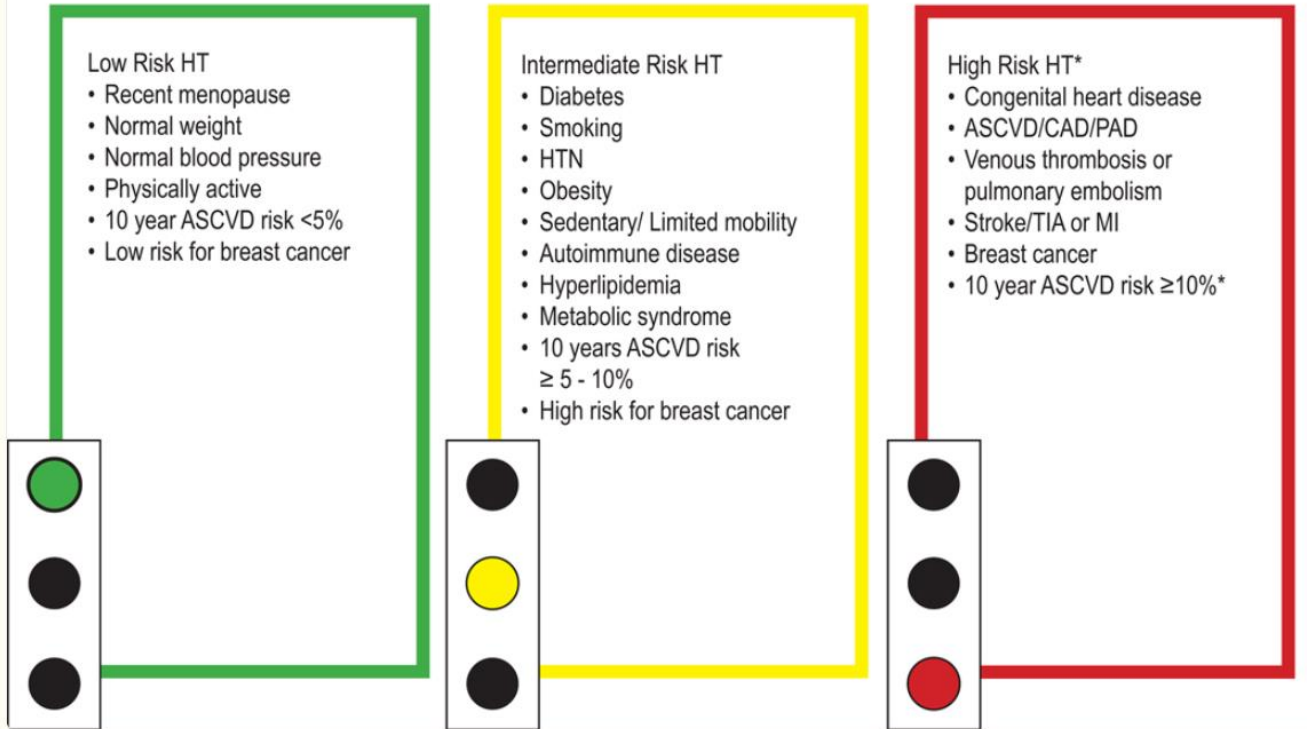
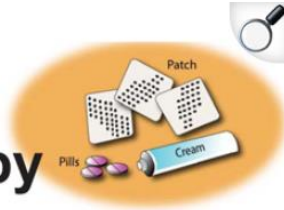


Fig. 1: Benefits and risks of the two hormone therapy formulations, conjugated equine estrogens (CEE) alone or in combination with medroxyprogesterone acetate (MPA), evaluated in the Women's Health Initiative for women aged 50-59 years. Risks and benefits are expressed as the difference in number of events (number of hormone therapy group minus the number in the placebo group) per 10,000 women per year, with <10 per 10,000 per year representing a rare event (dashed red line). Adapted from Manson JE, et al.

[https://pmc.ncbi.nlm.nih.gov/articles/PMC10708894/#:~:text=Women%20with%20a%20uterus%20were,of%20menopause%20\(Figure%202\).](https://pmc.ncbi.nlm.nih.gov/articles/PMC10708894/#:~:text=Women%20with%20a%20uterus%20were,of%20menopause%20(Figure%202).)



Menopausal Hormone Therapy



[Open in a new tab](#)

ASCVD- Atherosclerotic Cardiovascular Disease.

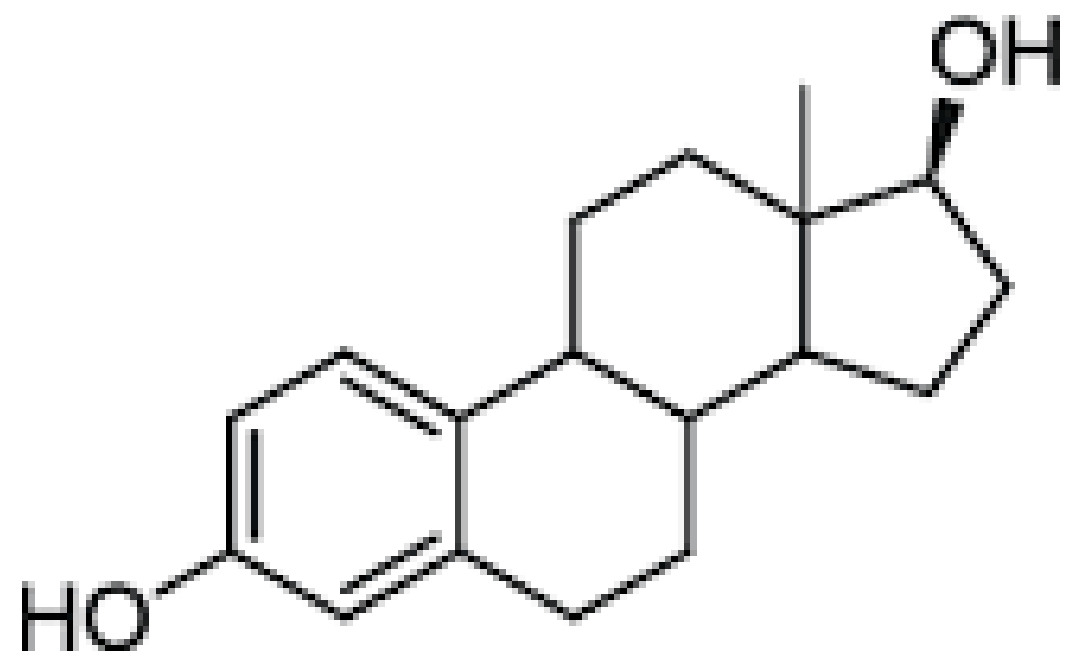
HT- Hypertension

CAD- coronary artery disease

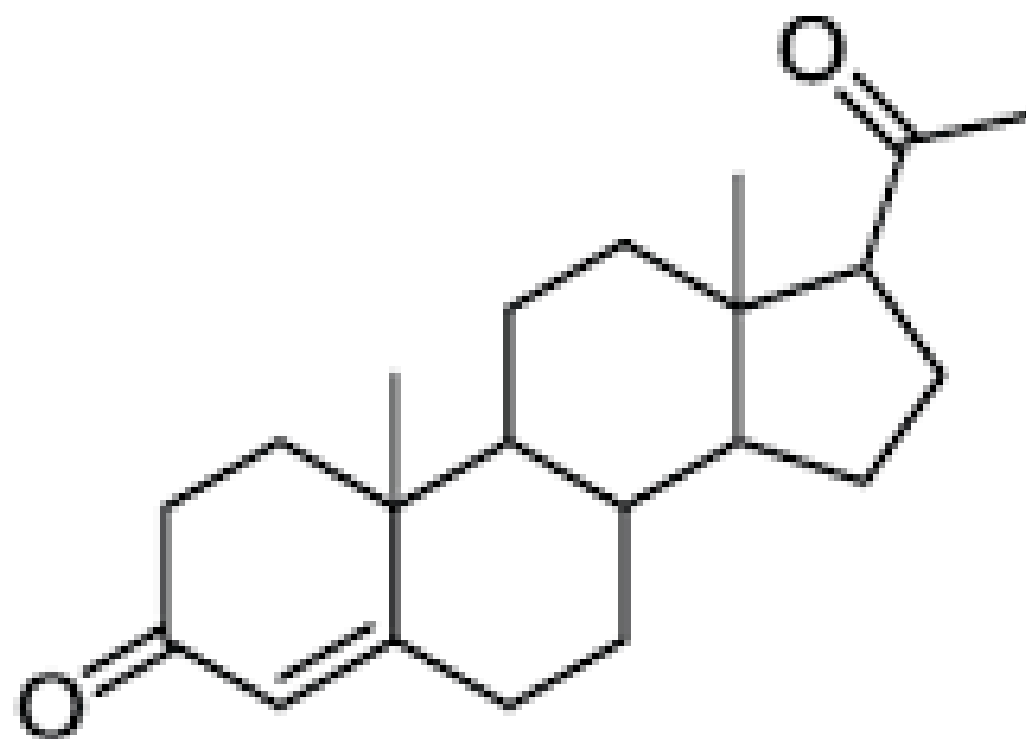
PAD- peripheral artery disease

TIA- transient ischemic attack (mini stroke)

[https://pmc.ncbi.nlm.nih.gov/articles/PMC10708894/#:~:text=Women%20with%20a%20uterus%20were,of%20menopause%20\(Figure%202\).](https://pmc.ncbi.nlm.nih.gov/articles/PMC10708894/#:~:text=Women%20with%20a%20uterus%20were,of%20menopause%20(Figure%202).)



Estradiol



Progesterone

- **Blood Clotting Disorders:** Women with a history of blood clots or those at increased risk of developing them should avoid BHRT, as it can further elevate this risk.
- **Estrogen-Sensitive Cancers:** Women with a history of estrogen-sensitive cancers like breast, uterine, or ovarian cancer should not use BHRT.
- **Stroke:** A history of stroke is also a contraindication for BHRT.
- **Liver Disease:** Severe active liver disease is another reason to avoid BHRT.
- **Undiagnosed Vaginal Bleeding:** If a woman is experiencing unexplained vaginal bleeding, BHRT should be avoided until the cause is determined.
- **Age and Timing:** Starting BHRT at age 60 or older, or more than 10 years after the onset of menopause, can increase the risk of certain complications.

At The End Of The Day!!

Women who take estrogen and a synthetic progestogen may have a very small increased risk of the diagnosis of breast cancer.⁵ However, this increased risk is of a similar magnitude to the risk of breast cancer for women who are overweight, or drinking one or two units of alcohol each night.¹

<https://pmc.ncbi.nlm.nih.gov/articles/PMC6808563/#:~:text=Women%20who%20take%20estrogen%20and,the%20diagnosis%20of%20breast%20cancer.&text=However%2C%20this%20increased%20risk%20is,units%20of%20alcohol%20each%20night.>