

Menopause

- Permanent cessation of menstruation resulting from the loss of ovarian follicular activity *
- Recognized to have occurred after 12 or > consecutive months of amenorrhea, for which there is no other obvious pathological or physiological cause *
- Occurs with the final menstrual period (FMP) which is known with certainty only in retrospect a year or more after the event.

* NO UTERUS (still ovarian function exist)
so NO Menstru so it's not Menopausal

Climacteric

* so ~~not~~ able to preg. * decline much earlier (35y)

- The phase in the aging of women marking the transition from the reproductive phase to the ~~non~~-reproductive state. This phase incorporates the perimenopause.
- When the climacteric is associated with symptomatology, it may be termed the “climacteric syndrome”.

menopausal 5 ↓

Perimenopause (Transitional)

- The period immediately prior to the menopause (when the endocrinological, biological, and clinical features of approaching menopause commence) and the first year after menopause.

↓
depression
≡
hot flashes

Menopausal transition

- Period of time before the FMP when ↑ variability in the menstrual cycle is usually increased.

↓
تنبیرات فقط بالدم

*Irreg , Unpredictable

Postmenopause

- The period dating from the FMP,
regardless of whether the menopause
was induced or spontaneous.



eg Remove ovaries

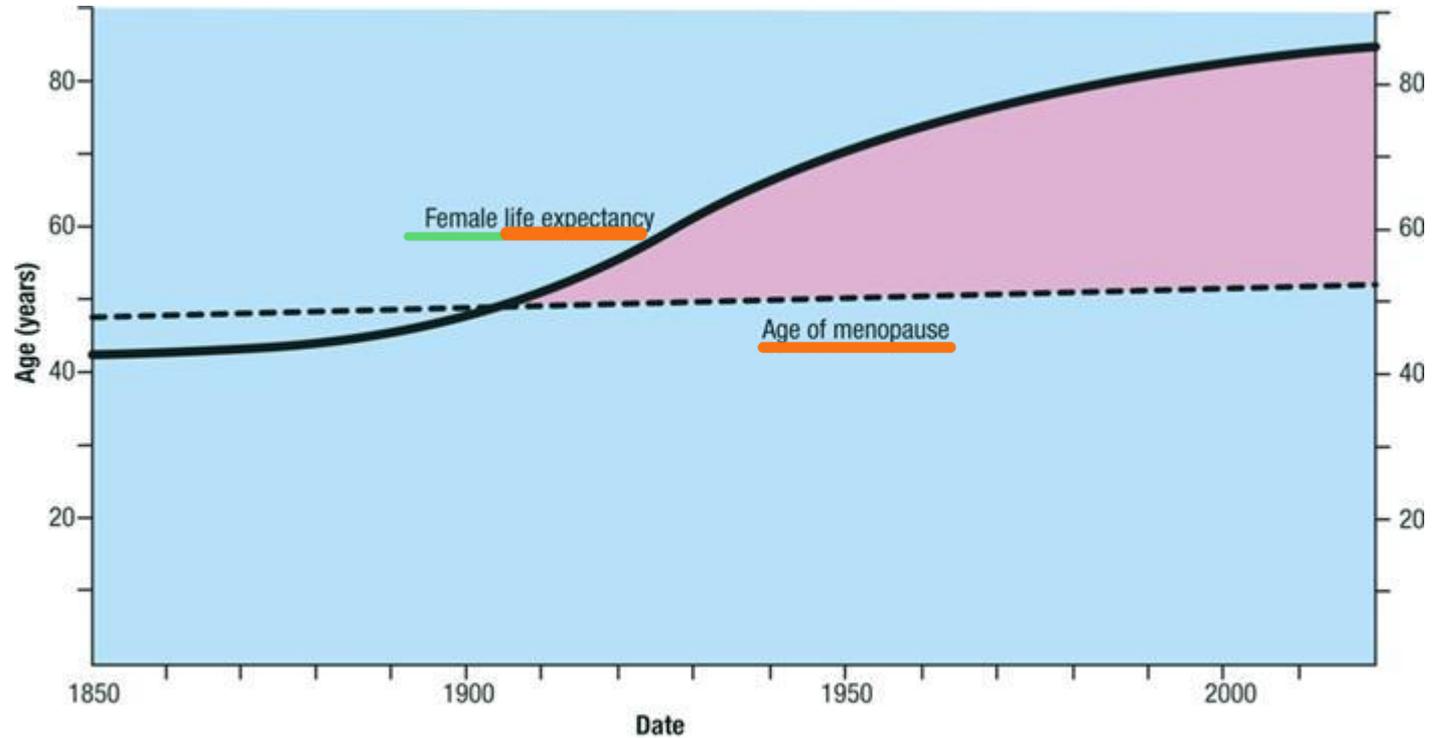
Premature menopause

- ideally, premature menopause should be defined as menopause that occurs at an age less than two standard deviations below the mean established for the reference population.
- In practice, in the absence of reliable estimates of the distribution of age at natural menopause in populations in developing countries, the age of 40 years is frequently used as an arbitrary cut-off point, below which menopause is said to be premature.

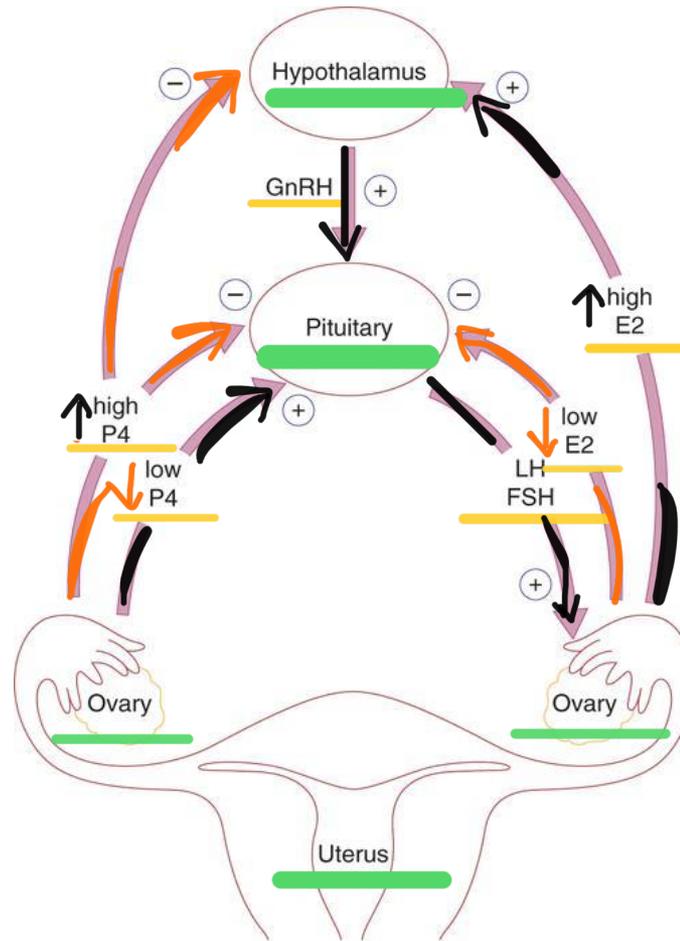
Induced menopause

- the cessation of menstruation which follows either surgical removal of both ovaries (with or without hysterectomy) or iatrogenic ablation of ovarian function (e.g. by chemotherapy or radiation).

Menopause and Life Expectancy



HPO axis





Pathophysiology

- There is a steady decline in the number of oocytes over the course of a woman's reproductive years
- As the ovary ages the remaining follicles are those least sensitive to gonadotrophins, and are less likely to mature, and ovarian function gradually fails.
- Cycles become anovulatory and irregular
- Fertility declines

↑
↓
even in
perimenopause

FSH

Pathophysiology

- Fall in ovarian inhibin production
- Fall in ovarian oestradiol levels

N: Inhibin
(↓ pituitary)

Short Term Effects (0-5y)

- Vasomotor symptoms flushes / N sweats
- Psychological symptoms Anxiety / sad /
- Loss of concentration and poor memory
(cognitive)
- Joint aches and pains
- Dry and itchy skins
- Hair changes
- Decreased libido

Intermediate Effects (3-10y)

- Vaginal dryness
- Dyspareunia
- Sensory urgency
- Recurrent UTIs
- Urogenital prolapse

CT problems

Long Term (> 10y)

- Osteoporosis
- Cardiovascular disease
- Dementia



History

- Symptoms
- Effect on quality of life
- Previous treatments and side effects
- Risk factors for cardiovascular disease, osteoporosis, breast and gynaecological cancers, thrombosis.
- Family history

Screen

Gabfer tx

Physical Examination

- Breast
- Abdomen
- PV
- Cervical smear
- Symptom guided

Investigations : Needed more in Perimen

- FSH \geq 30 IU/L, preferably 2 measurements, 2 weeks to 3 months apart.
- Breast screening and mammography
- Endometrial assessment of unscheduled bleeding
- Cardiovascular disease risk assessment
- Skeletal assessment

MIMP
if still
there is some
bleed
↓
So Biopsy

Sodium-glucose Co-transporter 2 (SGLT2) Inhibitors

- SGLT2 is the main transporter for glucose re-absorption in the proximal tubules (90%). *prevents urinary excretion of glucose*
- Inhibitors include **canagliflozin** which increases urinary glucose loss. ** SGLT-2i* *↑ infections*
- Not very effective in chronic renal dysfunction and are even contraindicated. *→ If GFR < 45 ml/min/100 cm³ (contraindicated)*

Therapies :

Menopausal Symptoms

Prescription

Non-prescription

Alpha-adrenergic agonists

Beta blockers

SSRI

HRT

Lifestyle changes

Complementary therapies

Herbal remedies

Bio-identical hormones

May (according) No symptoms "asym."

A for vasomotor symp

B if psychology

H

(↓wt) smoke

H

BD

(احتياج) (أعراض)

- SE: thrombosis
 - if uterus intact combine with prog to save endomet.
 if hysterectomy only estrogen



Lifestyle advice

- Smoking cessation
- Diet
- Exercise

HRT

Oestrogen

ALONE
Only for
hysterectomised
women

COMBINED
(PROG)

Routes:

• Oral

• Topical (cream, gel,
patches)

• Subcutaneous
implants

(esp in surgical remove
of ovaries to maintain
+/- Testosterone

Sexual
Func

Regimens

- Cyclical: (if irreg cycle)

Prefer it.

Mimicks the natural cycle

* Perimenopausal

- Continuous:

~~No~~ bleed treatment

* Post-menopausal

Benefits of HRT

- Vasomotor symptoms ↓ VTI ↓ dy
 - Urogenital symptoms
 - Osteoporosis
 - Colon cancer
- } ~~Not indications for treatment~~

Risks (even with Combi with prog)

- Breast cancer
- VTE
- Endometrial cancer

Controversies

- Cardiovascular disease
- Alzheimer's
- Ovarian cancer

Absolute Contraindications

- Pregnancy
- Breast cancer
- Endometrial cancer
- Active liver disease
- Uncontrolled hypertension
- Known VTE
- Known thrombophilia
- Otosclerosis

Relative Contraindications

- Uninvestigated abnormal bleeding
- Large fibroids
- Past history of benign breast disease
- Family history of VTE
- Chronic stable liver disease
- Migraine with aura

Duration of treatment

- Minimum effective dose for shortest duration (*then gradually ↑ it.*)
- Average 2-3 years
- In premature menopause at least till age of 50

↓
Cuz high risk / ↑ bone problems