



# MENOPAUSE

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# Menopause

- Permanent cessation of menstruation resulting from the loss of ovarian follicular activity
- Recognized to have occurred after 12 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.

# Perimenopause

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

# Menopausal transition

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

# Climacteric

- 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”.

# Postmenopause

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

# Premature menopause

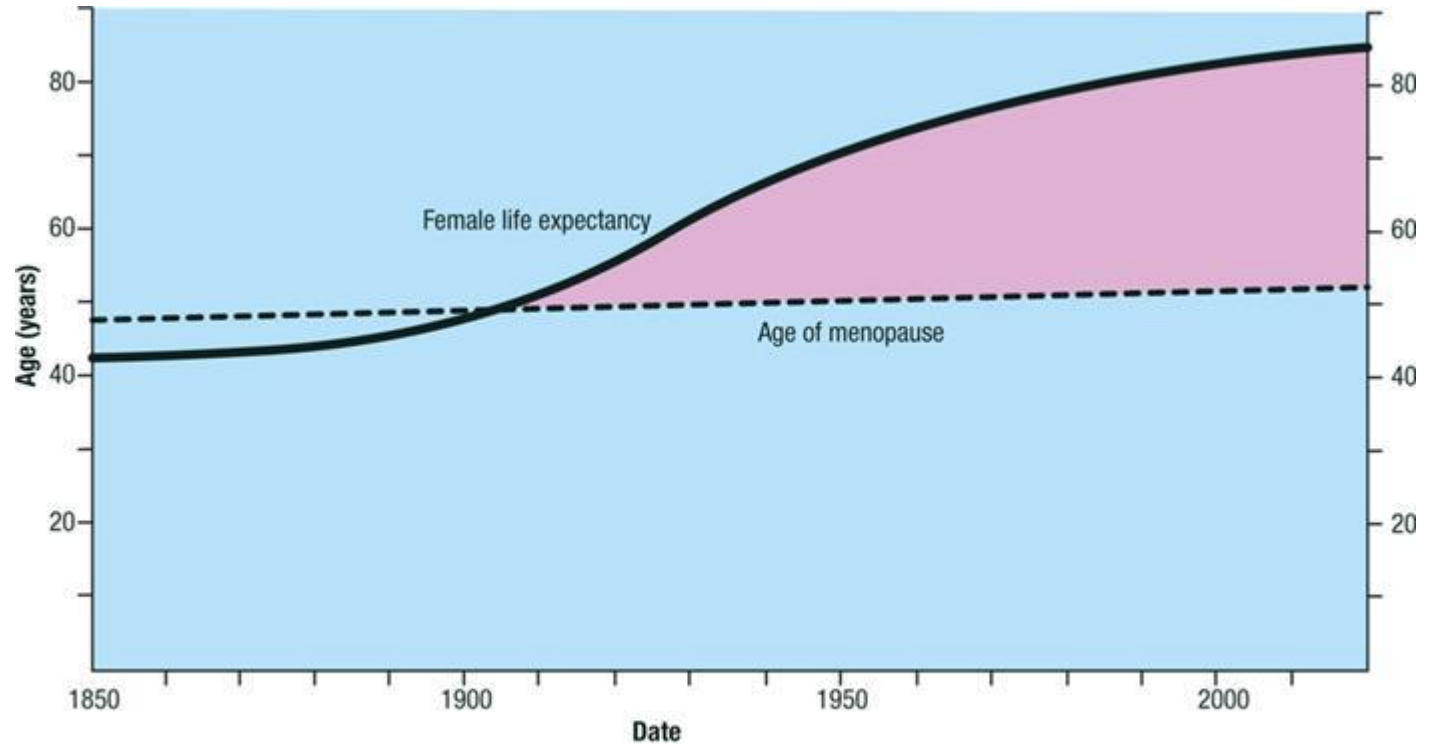
- ideally, premature menopause should be defined as menopause that occurs at an age less than two standard deviations below the mean established for the reference population.
- In practice, in the absence of reliable estimates of the distribution of age at natural menopause in populations in developing 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

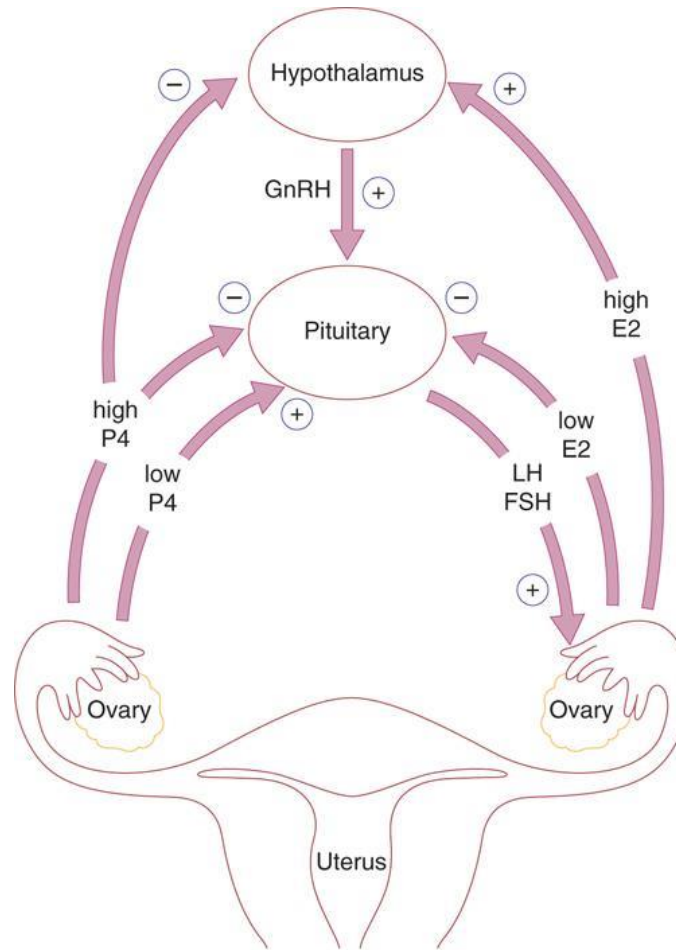
- the cessation of menstruation which follows either surgical removal of both ovaries (with or without hysterectomy) or iatrogenic ablation of ovarian function (e.g. by chemotherapy or radiation).



# 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

# Pathophysiology

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

# Short Term Effects (0-5y)

- Vasomotor symptoms
- Psychological symptoms
- Loss of concentration and poor memory
- 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

# 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



# Physical Examination

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

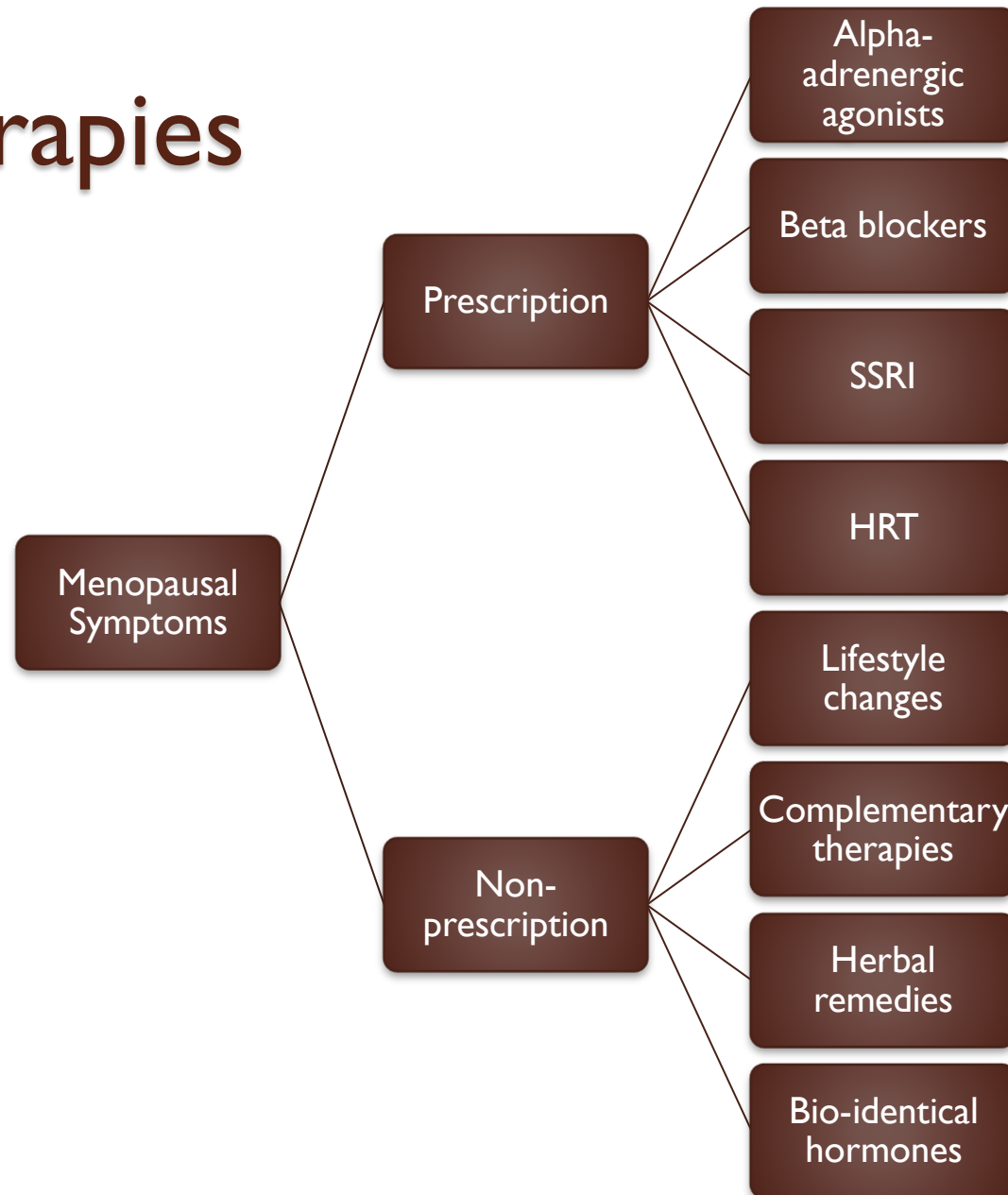
# Investigations

- FSH  $>$  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

# Management

- May not need any treatment
- HRT and alternatives
- Long term preventative strategies

# Therapies



# Lifestyle advice

- Smoking cessation
- Diet
- Exercise

# HRT

## Oestrogen

ALONE  
Only for  
hysterectomised  
women

COMBINED  
(PROG)

### Routes:

- Oral
- Topical (cream, gel, patches)
- Subcutaneous implants

+/- Testosterone

# Regimens

- Cyclical:

Mimicks the natural cycle

Perimenopausal

- Continuous:

No-bleed treatment

Post-menopausal

# Benefits

- Vasomotor symptoms
  - Urogenital symptoms
  - Osteoporosis
  - Colon cancer
- } Not indications  
for treatment



# Risks

- 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
- Average 2-3 years
- In premature menopause at least till age of 50



**END**