



# MENOPAUSE

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# **MENOPAUSE**

- **Definition**

Permanent cessation of menstruation at the end of reproductive life due to loss of ovarian follicular activity.

- It is the point of time when final and last menstruation occurs.
- The age of menopause ranges from 45 to 55 years.

- **Climacteric**

Period of time during which a women passes through the reproductive to the non reproductive stage.

This phase covers 5 – 10 years of menopause.

- **Premenopause**

Period prior to menopause.

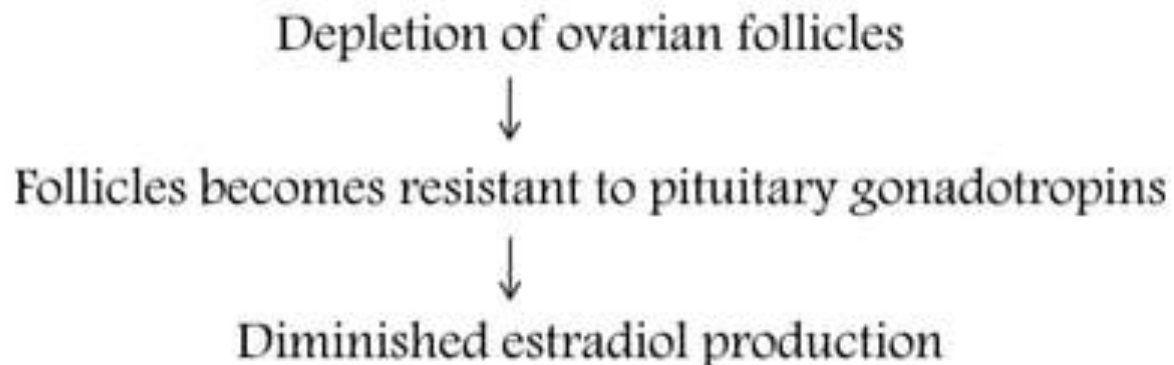
- **Perimenopause**

A part of climacteric when the menstrual cycle is likely to be irregular.

- **Postmenopause**

Phase of life that comes after the menopause.

# Endocrinology of Climacteric Menopause



Serum estradiol level 50 - 300 pg/ml before menopause

Serum estradiol level 10 - 20 pg/ml after menopause

## **Menstruation prior to Menopause**

- Abrupt cessation of menstruation (rare).
- Gradual decrease in both amount and duration.
- Irregular with or without excessive bleeding.

# **Menopausal Symptoms**

1. Vasomotor
2. Urogenital
3. Osteoporosis
4. Cardiovascular
5. Psychological
6. Skin and hair
7. Sexual dysfunction

# **Vasomotor symptoms**

i. Hot flushes

Sudden feeling of heat followed by profuse sweating.

i. Palpitation

ii. Fatigue

iii. Weakness

iv. Perspiration

v. Cutaneous vasodilatation

# Genital and Urinary Symptoms

Oestrogen deficiency causes atrophic epithelial changes.

## Genital symptoms:

- Dryness
- Pruritis
- Leucorrhoea

## Urinary symptoms:

- Urgency
- Dysuria
- Recurrent UTI
- Urinary incontinence



## **Sexual dysfunction**

- Low libido
- Atrophic changes
- Psychological changes

## **Psychological Changes:**

- Anxiety
- Headache
- Insomnia
- Irritability
- Depression
- Mood swing
- Dementia
- Inability to concentrate

# Skin and Hair Changes

- Skin thinning
- Loss of elasticity
- Wrinkling of skin
- *Crow feet* around the eyes
- *Purse string* wrinkling around mouth.
- Loss of hair



# Osteoporosis

Decline in collagenous bone matrix resulting in osteoporotic changes.

Osteoporosis types

- **Type 1 (Primary)**  
Oestrogen loss / Deficit nutrition / Hereditary
- **Type 2 (Secondary)**  
Endocrine abnormality / Medication

Symptoms:

- Back pain
- Loss of height
- Kyphosis

# Diagnosis of Menopause

1. Cessation of menopause for consecutive 12 months during climacteric.
2. Appearance of menopausal symptoms hot flush and night sweats.
3. Serum estradiol  $< 20$  pg/ml
4. Serum FSH and LH  $> 40$  mIU/ ml

# Management

- **Prevention**
  - i. Spontaneous menopause (Unavoidable)
  - ii. Artificially Menopause (Prevented / Delayed)

- **Counselling : Reassurance**

Adequate explanation about the physiological events.

# Treatment

Non Hormonal Treatment

Lifestyle modification

Drug Therapy

Hormone Replacement Therapy

Artificial hormones  
induction

# Lifestyle modifications

- Avoiding sedentary lifestyle
- Weight bearing exercise
- Reducing intake of coffee, alcohol, smoke
- Adequate Ca intake
- Vitamin D supplements
- Increased Protein and calcium intake

# Drugs Therapy

- Biphosphonate
- Fluoride
- Calcitonin
- Selective oestrogen receptor modulators
- Clonidine
- Thiazide
- Paroxetine



# Hormone Replacement Therapy

Indication of HRT :

- Relief of menopausal symptoms
- Prevention of osteoporosis
- To maintain the quality of life in menopausal years.

## **Available preparation for HRT**

- Principle hormone for treatment is oestrogen.
- Oestrogen treatment is ideal for women who has undergone hysterectomy but for women who has intact uterus addition of progesterone is a must in order to avoid complication of endometrial carcinoma and endometrial hyperplasia.

- **Oral**

Oestrogen regime: conjugated oestrogen 0.3 mg – 0.625 mg oestrogen and cyclic progestin: oestrogen continuously given for 25 days and progesterone is added for last 12 –14 days.

- **Subdermal implants**

17 beta oestradiol implant 25mg, 50mg, 100mg.

- **Percutaneous oestrogen gel**

1 gm applicator delivering 1 mg oestradiol daily.

- **Transdermal patch**

- **Vaginal cream**

Thank  
you