Hormonal replacement therapy

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Not all women require HRT

• 70-85% of women remain healthy need only good nutrition and healthy lifestyle.
Types of hormones contained in HRT
Oestrogens

Systemic oestrogen-only HRT is suitable for women who no longer have a uterus following a hysterectomy.

Because if oestrogen is given without progestogenic opposition, there is a risk that in time endometrial hyperplasia and cancer may develop.
Estrogen

**Short term estrogen therapy**
- To relieve symptoms like; hot flush, night sweats, palpitations, disturbed sleep
- for dyspareunia, urethral syndrome and senile vaginitis

**Long term therapy:**
- For delaying osteoporosis
- Reduce the risk of CV disease
- Beyond 8-10yr
Progesterone

- The administration of progestogen is necessary to protect the endometrium in women who have not had a hysterectomy.
- Prevents breast cancer
- Improves bone mineral density
Oestrogen with progestogen

- **during the perimenopause or early postmenopausal years**: normally given cyclically in preparations over a 28-day cycle, of which 16–18 days will provide oestrogen alone and 10–12 days provide estrogen and progesterone combined.

- **postmenopausal or over the age of 54 years**: Oestrogen and progesterone may be given continuously (continuous combined HRT).

- These regimes normally result in about 90% of women not experiencing vaginal bleeding.
**Oestrogens:**
- oestradiol (the main physiological oestrogen);
- oestrone sulphate;
- oestriol;
- conjugated equine oestrogen.

**Progestogens:**
- norethisterone;
- levonorgestrel;
- dydrogesterone;
- medroxyprogesterone acetate;
- drospirenone;
- micronized progesterone
Testosterone

• given to women with disorders of sexual desire and energy levels who have failed to respond to normal HRT

• testosterone needs to be instigated under the care of a doctor with specialist menopause knowledge
Routes of hormone therapy administration

*Oral way*:

normally a daily tablet that contains the appropriate mix of oestrogen and progestogen, depending on the preparation

**Advantages**:  
Easy to take & cheap.

**Disadvantages**:  
influence lipid metabolism and the coagulation system through its effects on the liver during first-pass metabolism
The transdermal route

either given as patches applied to the skin on the trunk or as gel

**Advantage:**
- delivery of oestradiol directly into the circulation, avoiding the adverse effects on the liver and the coagulation system
- No thromboembolic risk or hypertension

**Disadvantages:**
- More expensive
- Not well tolerated in warm climates
- Variable absorption.
• Sub cutaneous implant (estradiol): -
  – 25 / 50 / 100 mg. 6 monthly.

• **Advantages.**
  – Pure estradiol, 6 monthly insertion, high level of estradiol in blood.
  – Avoids first pass effects
  – Better response in severe osteoporosis.

• **Disadvantages.**
  – Needs surgical procedure
  – Unable to control absorption
  – Difficult to remove pellet
Beneficial effects of hormone therapy

Vasomotor symptoms:

- 90% of women note a significant improvement within 6 weeks
- reductions in frequency and severity of hot flushes
- night sweats
- consequent improvements in sleep and daytime energy levels

The skeleton:

- Prevention of osteoporosis:
- increased bone mineral density;
- reduced incidence of osteoporotic fractures.
The lower genital tract

• improves vulvovaginal dryness, irritation, soreness and dyspareunia
• improvement in symptoms of cystitis and occasionally dysuria

Cardiovascular system:
• reduction in ischaemic heart disease and overall mortality

Colon:
Decreased incidence and mortality of colon cancer
Side effect of HRT

Side-effects associated with oestrogen:

• breast tenderness or swelling;
• nausea;
• leg cramps;
• headaches.

Side-effects associated with progestogen:

• fluid retention;
• breast tenderness;
• headaches;
• mood swings;
• depression;
• acne.
**contraindications**

**Absolute contraindications:**
- suspected pregnancy;
- breast cancer;
- endometrial cancer;
- active liver disease;
- uncontrolled hypertension;
- known current venous thromboembolism (VTE);
- known thrombophilia (e.g. Factor V leiden);
- otosclerosis.

**Relative contraindications:**
- uninvestigated abnormal bleeding;
- large uterine fibroids;
- past history of benign breast disease;
- unconfirmed personal history or a strong family history of VTE;
- chronic stable liver disease;
- migraine with aura.
Risks of hormone therapy

• **1 - Cancer :**
  • risk of breast cancer
  • Endometrial cancer and ovarian cancer are not considered significant risks with HRT use
  • Endometrial malignancy risk is largely eliminated if women are given progestogens.

• **2 – Cardiovascular and stroke :**
  • when given to younger women are beneficial but older women the effects may become deleterious.
  • Stroke incidence has a similar age effect, with the increased incidence greater in the older woman.

• **3 - Venous thromboembolism :**
  • HRT doubles risk in older women
  • transdermal HRT, through its avoidance of effects on the liver, may not have such a great effect on VTE incidence