

- Assess for signs and symptoms of thromboembolic disorders regularly. These are most likely to occur in women older than 35 years of age who take oral contraceptives, women who are postmenopausal who take combined estrogen/progestin hormone replacement therapy, and women or men who take large doses for cancer.

Nursing Diagnoses

- Disturbed Body Image in women, related to effects of hormone deficiency states
- Disturbed Body Image in men, related to feminizing effects and impotence from female hormones
- Excess Fluid Volume related to sodium and water retention
- Deficient Knowledge: Effects of hormonal therapy
- Risk for Injury related to increased risks of hypertension and gallbladder disease

Planning/Goals

The client will:

- Be assisted to cope with self-concept and body image changes
- Take the drugs accurately, for the length of time prescribed
- Experience relief of symptoms for which the drugs are given
- Avoid preventable adverse drug effects
- Keep appointments for monitoring of drug effects

Interventions

- Assist clients of childbearing age to choose an appropriate contraceptive method. If the choice is an estrogen-progestin combination, help the client take it accurately.
- Help postmenopausal women plan for adequate calcium and vitamin D in the diet and adequate weight-bearing exercise to maintain bone strength and prevent osteoporosis.
- Assist clients in obtaining follow-up health care when indicated.

Evaluation

- Interview and observe for compliance with instructions for taking the drugs.
- Interview and observe for therapeutic and adverse drug effects.

Drug Selection Factors

Choice of preparation depends on the reason for use, desired route of administration, and duration of action. Conjugated estrogen (eg, Premarin) is a commonly used oral estrogen and medroxyprogesterone (eg, Provera) is a commonly used oral progestin.

The choice of combination contraceptive product may be determined by the progestin component. Some progestins are more likely to cause weight gain, acne, and changes in blood lipids that increase risks of myocardial infarction or stroke. These adverse effects are attributed mainly to the androgenic activity of the progestin, and some progestins have more androgenic effects than others. Progestins with minimal androgenic activity are desogestrel and norgestimate; those with intermediate activity include norethindrone and ethynodiol; norgestrel has high androgenic effects. In addition, there are long-acting progestin contraceptive preparations such as IM depot medroxyprogesterone (Depo-Provera) that lasts 3 months per injection, intrauterine progesterone that lasts 1 year, and levonorgestrel subcutaneous implants (Norplant) that last 5 years.

Dosage Factors

Although dosage needs vary with clients and the conditions for which the drugs are prescribed, a general rule is to use the smallest effective dose for the shortest effective time. Estrogens are often given cyclically. In one regimen, the drug is taken for 3 weeks, then omitted for 1 week; in another, it is omitted the first 5 days of each month. These regimens more closely resemble normal secretion of estrogen and avoid prolonged stimulation of body tissues. A progestin may be added for 10 days each month.

Effects of Estrogens and Oral Contraceptives on Other Drugs

These drugs may interact with several drugs or drug groups to increase or decrease their effects. Most interactions have been reported with oral contraceptives.

Estrogens may *decrease* the effectiveness of sulfonylurea antidiabetic drugs (probably by increasing their metabolism); warfarin, an oral anticoagulant (by increasing hepatic production of several clotting factors); and phenytoin, an anticonvulsant (possibly by increasing fluid retention). Estrogens may *increase* the adverse effects and risks of toxicity with corticosteroids, ropinirole, and tacrine by inhibiting their metabolism. Ropinirole and tacrine should not be used concurrently with an estrogen.

Oral contraceptives *decrease* effects of some benzodiazepines (eg, lorazepam, oxazepam, temazepam), insulin, sulfonylurea antidiabetic drugs, and warfarin. If one of these drugs is taken concurrently with an oral contraceptive, increased dosage may be needed for therapeutic effects. Contra-

PRINCIPLES OF THERAPY

Need for Continuous Supervision

Because estrogens, progestins, and hormonal contraceptives are often taken for years and may cause adverse reactions, clients taking these drugs need continued supervision by a health care provider. Before the drugs are prescribed, a complete medical history; a physical examination, including breast and pelvic examinations and a Pap smear; urinalysis; and weight and blood pressure measurements are recommended. These examinations should be repeated at least annually as long as the client is taking the drugs.