

ACTIVE LEARNING TEMPLATE: *Basic Concept*

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CONCEPT Medications Affecting the Reproductive Tract _____ REVIEW MODULE CHAPTER. 29 _____

Related Content

(E.G., DELEGATION, LEVELS OF PREVENTION, ADVANCE DIRECTIVES)

Major drug groups

- Estrogens
- Progesterone
- Hormonal contraceptives (pill, patch, ring, injection, implant, IUD)
- Emergency contraception (levonorgestrel)
- Mifepristone
- Androgens
- 5-alpha reductase inhibitors
- Alpha₁ blockers
- PDE5 inhibitors

Key uses

- Contraception, emergency contraception
- Relief of menopausal symptoms
- Treatment of dysfunctional uterine bleeding, endometriosis
- Support fertility treatments
- Breast/prostate cancer (hormone-sensitive)
- Hypogonadism, delayed puberty, androgen deficiency
- BPH symptom relief
- Erectile dysfunction

Major complications

- Hormones: thromboembolism (DVT, PE, MI, stroke), breast cancer growth, breakthrough bleeding, hypertension, hyperglycemia
- Androgens: virilization, liver toxicity, **increase** LDL, edema, polycythemia
- 5-ARI: **decrease** libido, erectile dysfunction
- Alpha blockers: hypotension, dizziness
- PDE5 inhibitors: severe hypotension with nitrates, priapism, sudden hearing loss

Underlying Principles

Estrogens/progestins bind receptors and modify gene expression results in control of ovulation, endometrial growth, menstrual cycle regulation.

Combination contraceptives **inhibit** ovulation, thicken cervical mucus, alter endometrium results in reduced fertilization and implantation.

Emergency contraception delays ovulation; mifepristone blocks progesterone needed to maintain pregnancy.

Androgens promote male characteristics, muscle growth, and RBC production results in potential for virilization and polycythemia.

5-ARI **decrease** conversion of testosterone to DHT results in reduced prostate size.

1 Alpha blockers relax prostate and bladder neck smooth muscle results in improved urine flow.

PDE5 inhibitors enhance nitric oxide effects results in vasodilation and erection; nitrates + PDE5 results in dangerous hypotension.

Nursing Interventions

WHO? WHEN? WHY? HOW?

WHO

- Clients using hormonal contraception or HRT.
- Clients receiving progestins for bleeding/endometriosis.
- Clients on androgens, 5-ARI, alpha blockers, or PDE5 inhibitors.
- Clients using emergency contraception or mifepristone.

WHEN

- **Before starting:**
 - Rule out pregnancy.
 - Assess history of thromboembolism, cancers, liver disease, hypertension, nitrate use.
 - Obtain baseline BP, weight, labs (LFTs, lipids, glucose, PSA if indicated).
- **During therapy:**
 - Monitor BP, bleeding patterns, breast changes.
 - Watch for signs of thromboembolism.
 - Repeat labs as needed (LFTs, lipids, glucose, PSA).

WHY

- To ensure medications result in:
 - Effective pregnancy prevention.
 - Controlled bleeding and reduced menopausal symptoms.
 - Improved BPH or ED symptoms.
- To prevent serious adverse effects such as thromboembolism, hypotension, liver dysfunction, cancer progression, or severe bleeding.

HOW

- Screen for contraindications (pregnancy, history of clots, cancers, liver disease, nitrate use).
- Teach clients to report signs of thromboembolism, chest pain, shortness of breath, heavy bleeding, or severe headache.
- Instruct on correct use of contraceptives (take at same time daily; follow missed-pill rules; use backup when needed).
- Apply/rotate patches correctly; use rings, injections, implants, or IUDs per schedule.
- Monitor BP, labs (LFTs, lipids, glucose, PSA), and adverse effects regularly.
- For androgens: monitor for virilization, liver dysfunction, and **increase** in hematocrit.
- For BPH meds: caution with hypotension; teach slow position changes.
- For PDE5 inhibitors: **never** combine with nitrates; limit to once in 24 hr.