

Bullet Point Nursing

Reproductive health pharmacology

Disclaimer: These notes are designed to provide the key points of each topic and may not contain all necessary information. Every effort is made to ensure this content is up to date and accurate at the time of writing. No liability is assumed for the content or its relation to current standards and practices. This should not replace comprehensive nursing educational resources.

Drug class: Oral contraceptive (OCP) AKA combined oral contraceptive (COC)

- Drugs:
 - Norethindrone and ethinyl estradiol
 - Norgestimate and ethinyl estradiol
 - Many generic and brand/trade names for OCP
 - Nearly all include an estrogen and progesterone
- MOA: Prevents ovulation by suppressing LH (Hormonal contraceptive)
- Indications: Contraception, acne, reduce risk of endometrial and ovarian cancer
- Off-label use: Dysmenorrhea, menstrual suppression, PCOS symptoms
- SE/AE: Blood clot, hypertension
 - Withdrawal bleeding is a hormonally triggered bleeding episode that occurs during the hormone-free interval of combined hormonal contraceptive use
- Black Box warning: Increased risk for thromboembolic events when combined with smoking, particularly in women over 35 years of age
- Available in 24 or 28-day cycles, 91-day cycles, and 365-day cycle
- 28-day cycles available as 21 tablets with 7 placebos or 24 tablets and 4 placebos
 - Placebo tablets may contain iron
 - Placebo is there to help patients' daily medication routine
- Several medications, such as antiepileptics and antibiotics, can reduce the efficacy of OCP
- Patient education:
 - Should be started greater than five days from onset of bleeding
 - Is generally started on a Sunday
 - Use alternative method of contraception for the first seven days of starting OCP
 - A missed pill should be taken when remembered and can be taken two in one day
 - If two pills are missed, double up for two days and use an alternative method for 7 days
 - If three pills are missed, stop taking and start new pack after at least 7 days
 - Must be stopped in the event pregnancy occurs

Drug class: Progesterone only pill (POP)

- Drug:
 - Norethindrone (Minipill)
- MOA: Suppresses LH surge, interferes with sperm and egg movement, thins endometrium
- Indications: Contraception
 - Less effective than combined estrogen – progesterone OCP
- Patient education: Must be taken at the same time every day
- Can be started immediately after childbirth
- **Medroxyprogesterone (Depo-provera)**

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- Can be given via IM injection, SC injection or PO
- Indications: contraception, abnormal uterine bleeding, endometrial issues
- Black box warnings: Cardiac disorders, dementia, breast cancer
- Not recommended for therapy duration over 2 years
- Use by injection carries increased risk of bone density loss

Drug class: Emergency contraception

- Drugs:
 - Levonorgestrel (Plan B, Plan B One-step)
 - Ulipristal (Ella)
- MOA: Interferes with ovulation
- Indications: Emergency contraception
- SE/AE: Abnormal vaginal bleeding
- Is only effective within the first 3-5 days after unprotected intercourse
- Significantly less effective in patients with a high BMI
- Does not abort a fetus
- Does not require a prescription

Medical termination of pregnancy in the U.S. is done with mifepristone (RU 486) and misoprostol

Pregnancy pharmacology notes

Data is constantly changing. Ask your healthcare provider before using this information in practice.

- Recommend iron and folic acid supplements for all females planning conception
- First line medication for nausea in pregnancy is pyridoxine and/or doxylamine
 - Second line options are metoclopramide and promethazine
- First line medication for heartburn in pregnancy is an antacid
 - Avoid magnesium and sodium bicarbonate containing antacids in pregnancy
- First line treatment for constipation in pregnancy is non-pharm interventions
 - Pharmacological treatment usually started with bulk forming laxatives or docusate
- First line OTC analgesic in pregnancy is acetaminophen
- Patients with preeclampsia may be treated with methyldopa, hydralazine, beta antagonists

Drug class: Ovulation stimulant

- Drug:
 - Clomiphene citrate (Clomid)
- MOA: Causes growth in ovarian follicle by stimulating release of FSH and LH
- Indication: Ovulation induction for fertility
- Onset (ovulation) is in 5-10 days
- Not recommended to be used for more than 12 cycles
- Patient education:
 - Start taking on day 5 of cycle
 - Have intercourse at least every other day for days 5-10 after final dose
 - Increases chance of multiple gestation

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- This drug is also considered to be a SERM

Letrozole is another drug that is used off label for stimulating follicular growth

hCG may be given by IM to induce ovulation

Drug class: Tocolytic

- Drugs (with MOA):
 - Terbutaline
 - Relaxes smooth muscle by stimulating beta-2, inhibiting uterine contractions
 - Nifedipine
 - Inhibits calcium influx into smooth muscle cells, leading to uterine relaxation
 - Magnesium
 - Relaxes smooth muscle, reducing uterine muscle contractility
 - Indomethacin
 - Inhibits prostaglandin synthesis by blocking COX, reducing uterine contractions.
- Indications: To delay or prevent preterm labor
 - Survival rates increase each week in-utero. While, data varies widely, below are some approximations:
 - At 24 weeks the survival rate is roughly 50%
 - At 28 weeks the survival rate is generally over 90%
- Tocolytics are limited to use up to 48 hours

Patients with preterm labor may be treated with steroids to promote fetal lung development

Drug name: Oxytocin (Pitocin)

- MOA: Stimulates uterine contractions by increasing effects of calcium
- Indication: Induction of labor, postpartum hemorrhage
- Onset is around one minute
- Black Box warning: Not labeled for use in elective induction of labor
 - That is an off-label use
- Patient education: This will increase the strength of the contractions

Drug class: Estrogen replacement

- Drug:
 - Conjugated estrogen (Premarin)
- MOA: Actions of estrogen
- Indications: Symptoms of menopause (i.e. hot flashes, vaginal dryness), breast cancer
- Black Box warnings: Endometrial and breast cancer, CVD, dementia
- SE/AE: Breast tenderness, n/v, fluid retention, leg cramps, increases risk of blood clot
- Available in many routes: PO, TD, IM, IV and vaginal
- Teratogenic

Drug class: Androgen

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- Drug:
 - Testosterone
- MOA: Produces anabolic and androgenic effects (muscle growth, male sex characteristics)
- Indications: Delayed puberty, hypogonadism, HRT
- Black Box warning: Hypertension, virilization in women and children
- Available in various forms, including intramuscular injections, transdermal patches, topical gels/creams, buccal systems, and pellets
- SE/AE: Insomnia, aggressive behavior, polycythemia
- Requires regular monitoring of hematocrit, PSA, and testosterone levels
- Controlled substance (Schedule III)

Drug class: Alpha one adrenergic antagonists (Alpha blockers)

- Drugs:
 - Uroselective (BPH):
 - Tamsulosin (Flomax)
 - Cardioselective (HTN):
 - Prazosin (Minipress)
 - Dual indicated (Both):
 - Doxazosin (Cardura)
- MOA: Inhibits alpha one receptor blocking vasoconstriction also relaxes the prostate
- Indications: BPH and HTN
- SE/AE: Orthostatic hypotension and reflex tachycardia, sexual dysfunction
- Phentolamine is a drug in this class that is used for extravasation and diagnosing a pheochromocytoma

Drug class: 5-Alpha-Reductase Inhibitors

- Drugs:
 - Finasteride
- MOA: Inhibits the enzyme 5-alpha-reductase, which converts testosterone to dihydrotestosterone (DHT). DHT is a key factor in prostate growth and male pattern hair loss
- Indications: BPH, Male pattern baldness
- SE/AE: Sexual dysfunction

Drug class: Phosphodiesterase-5 inhibitor

- Drugs:
 - Sildenafil (Viagra)
 - Tadalafil (Cialis)
 - Vardenafil (Levitra)
- MOA: Causes smooth muscle relaxation; increasing blood flow to the corpus cavernosum
- Indications: Erectile dysfunction, pulmonary artery hypertension
- SE/AE: Headache, hearing and vision issues, hypotension, priapism
- Should not be combined with nitrates
- Tadalafil is also used for BPH

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- Often prescribed to address the side effect of erectile dysfunction with many medications
 - SSRI, TCA, MAOI, alpha blockers, beta blockers, alcohol, benzodiazepines, and more

Sexually transmitted infections review

- Chlamydia
 - Doxycycline or Azithromycin
- Gonorrhea
 - Ceftriaxone
- Syphilis
 - Penicillin G
- Herpes outbreak
 - Acyclovir
- Trichomoniasis
 - Metronidazole
- Candidiasis
 - Fluconazole

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