



Unit IV – Problem 12 – Pharmacology: Drugs and Infertility

- Pharmacological approaches for management of infertility:

- **You can induce ovulation in infertile females by:**
 - ✓ SERMs (clomiphene).
 - ✓ Exogenous gonadotropins (rFSH, hCG and hMG).
 - ✓ Aromatase inhibitors (letrozole and anastrozole).
- **Notice that metformin (glucophage) will be used in females who have Polycystic ovarian syndrome (why?)** → because they suffer from insulin resistance. Other clinical features include: obesity, hirsutism and oligomenorrhea/amenorrhea.
- Patients who are infertile due to increased levels of prolactin in the blood (hyperprolactinemia) will be treated with dopamine agonists (which normally inhibits the secretion of prolactin from anterior pituitary gland) such as cabergoline or bromocriptine.
- **Drug therapy is least effective in males with oligospermia.**

- Drugs used in subfertility/infertility (ovulation inducers):

GnRH agonists	Gonadorelin
GnRH analogs	Cetrorelix and ganirelix
Gonadotropins	rFSH (follitropin)
Partial antagonists of estrogen	Clomiphene
Insulin sensitizers	Metformin and rosiglitazone
Aromatase inhibitors	Letrozole and anastrozole
Dopamine agonists	Bromocriptine and cabergoline

- Adverse reactions include the following:

- **Ovarian Hyper-Stimulation Syndrome (OHSS):**

Clinical features	<ul style="list-style-type: none">• Abdominal pain.• Nausea and vomiting.• Dyspnea and oliguria.
Complications	<ul style="list-style-type: none">• Hypovolemia.• Ascitis.• Hemoperitoneum.• ARDS.

- **Multiple births and associated complications.**
- **Risk for ovarian cancer (?)**
- **Teratogenicity (?)**