PIPADOR REVISION

MRCOG Part 1 Revision Notes

Drugs and Fertility

PHARMACOLOGY • LECTURE 370

VISUAL EXAMINATION REVISION NOTES

2026 Edition

370

MRCOG PART 1 REVISION NOTES | PHARMACOLOGY

Drugs and Fertility

Drugs impairing fertility, ovulation induction and ART drugs, and fertility preservation

Letrozole	≈ 74 days	Anabolic steroids	Preservation
First line for PCOS ovulation	Spermatogenesis — drug effects lag	Azoospermia	Before gonadotoxic therapy

■ **KEY FACTS: Learning objectives**

- Describe drugs that impair female and male fertility and their mechanisms.
- Describe drugs used to treat infertility (ovulation induction, ART).
- Describe fertility preservation before gonadotoxic therapy.

370.1 Drugs impairing fertility

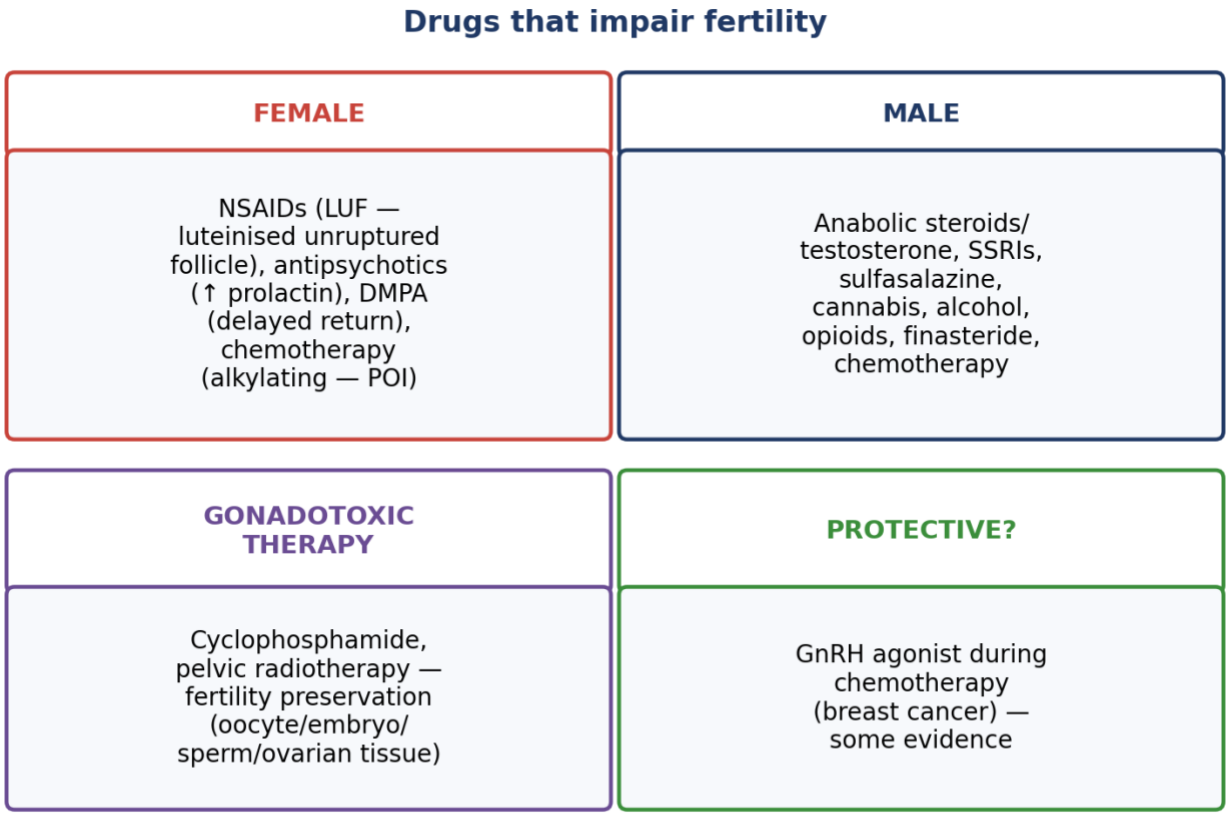


Figure 370.1 — Drugs that impair fertility

- **Hyperprolactinaemia** (antipsychotics — risperidone, haloperidol; metoclopramide; opioids) → anovulation, amenorrhoea, galactorrhoea.
- **Exogenous testosterone/anabolic steroids** suppress LH/FSH → azoospermia (recovery 6–24 months); hCG/clomifene may aid recovery.
- **Gonadotoxic chemotherapy** (alkylating agents — cyclophosphamide) → POI or azoospermia; risk depends on drug, dose and age.

- DMPA delays return of fertility (up to ≈ 12 months).

370.2 Fertility drugs

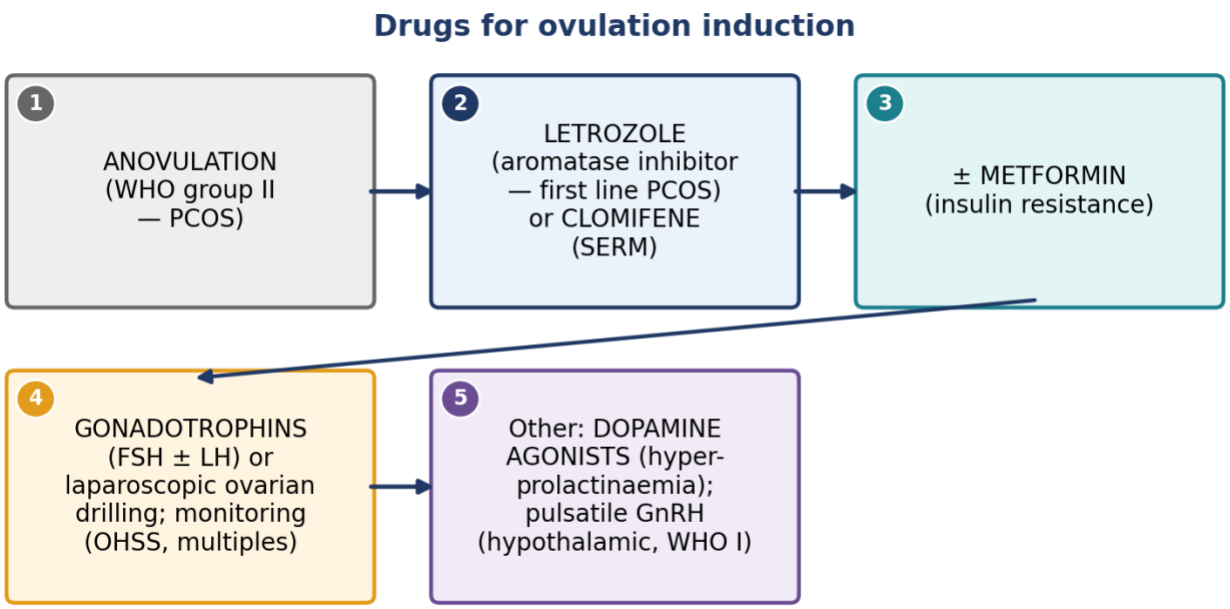


Figure 370.2 — Ovulation induction

Drug	Mechanism	Notes
Letrozole	Aromatase inhibitor → ↓ oestrogen feedback → ↑ FSH	First line in PCOS (higher live birth than clomifene); off-label
Clomifene	SERM — blocks hypothalamic ER → ↑ FSH/LH	• Multiple pregnancy ≈ 10% • ≤ 6–12 cycles • Antioestrogenic endometrium/mucus
Gonadotrophins (rFSH, hMG)	Direct follicle stimulation	Ovulation induction, IVF; OHSS, multiples — monitoring
GnRH agonists/antagonists	Prevent premature LH surge in IVF	Agonist trigger ↓ OHSS
hCG trigger	LH-like final oocyte maturation	OHSS risk
Progesterone	Luteal support in IVF	Vaginal/IM/SC
Metformin	Insulin sensitiser	PCOS with insulin resistance (adjunct)
Dopamine agonists	↓ Prolactin	Cabergoline, bromocriptine

370.3 Fertility preservation

- Offer before gonadotoxic treatment: **sperm cryopreservation** (men/adolescents)
  - **Oocyte or embryo cryopreservation** (≈ 2 weeks of stimulation, random-start; letrozole co-treatment in oestrogen-sensitive cancers)
  - **Ovarian tissue cryopreservation** (prepubertal girls, urgent cases).
- GnRH agonist during chemotherapy may ↓ POI risk (breast cancer).
- NHS funding criteria vary; consider urgent referral.

370.4 Must-know summary

■ **EXAM TIP**

- Hyperprolactinaemic drugs, testosterone/anabolics, chemotherapy, NSAIDs (LUF), DMPA delay.
- Letrozole first-line PCOS; clomifene (SERM); gonadotrophins (OHSS, multiples).
- IVF: GnRH analogues, hCG/agonist trigger, luteal progesterone.
- Fertility preservation before gonadotoxic therapy.

■ **MNEMONIC / MEMORY AID**

'Letrozole Leads in PCOS; Clomifene Comes second'.