PIPADOR REVISION

MRCOG Part 1 Revision Notes

Antiemetics

PHARMACOLOGY • LECTURE 373

VISUAL EXAMINATION REVISION NOTES

2026 Edition

373

MRCOG PART 1 REVISION NOTES | PHARMACOLOGY

Antiemetics

Physiology of vomiting, antiemetic classes and safety, hyperemesis gravidarum and PONV

D_2 · 5-HT_3 · H_1 · NK_1	≈ 80%	≈ 1–3%	Thiamine
Main receptor targets	Pregnant women have nausea	Hyperemesis gravidarum	Before dextrose / prolonged vomiting

■ KEY FACTS: Learning objectives

- Describe the physiology of vomiting and the receptor targets of antiemetics.
- Describe classes of antiemetics, adverse effects and safety in pregnancy.
- Describe management of nausea and vomiting of pregnancy/hyperemesis and PONV.

373.1 Physiology and targets

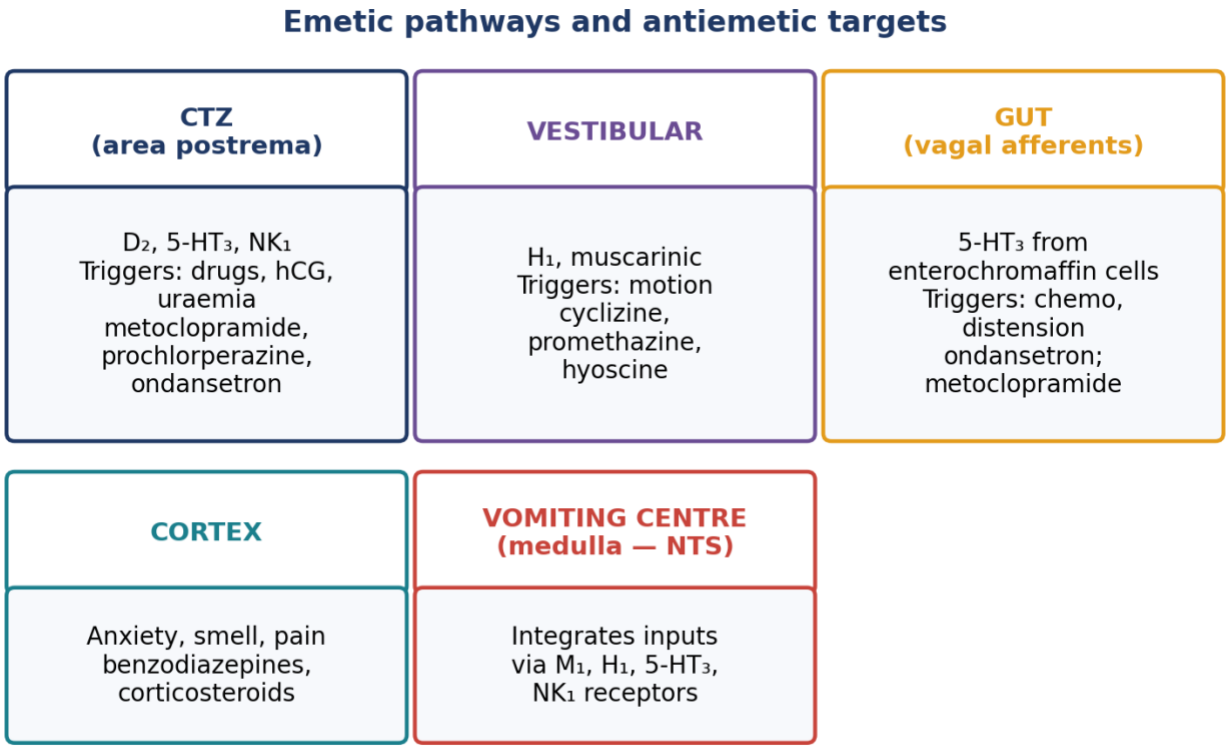


Figure 373.1 — Emetic pathways and antiemetic targets

Class	Examples	Adverse effects / notes
Antihistamines (H_1)	Cyclizine, promethazine, doxylamine	Sedation, antimuscarinic effects
Phenothiazines (D_2)	Prochlorperazine, chlorpromazine	Extrapyramidal effects, sedation
D_2 antagonist/prokinetic	Metoclopramide, domperidone	• **Extrapyramidal/oculogyric crisis** (young women) — limit to 5 days

Class	Examples	Adverse effects / notes
		• Domperidone QT
5-HT$_3$ antagonists	Ondansetron	• Constipation, headache, QT • Small ↑ orofacial cleft (≈ 3/10,000) in T1 — counsel
NK$_1$ antagonists	Aprepitant	Chemotherapy, PONV; limited pregnancy data
Corticosteroids	Dexamethasone, hydrocortisone, prednisolone	PONV, chemotherapy, refractory hyperemesis
Antimuscarinic	Hyoscine	Motion sickness

373.2 Nausea and vomiting of pregnancy

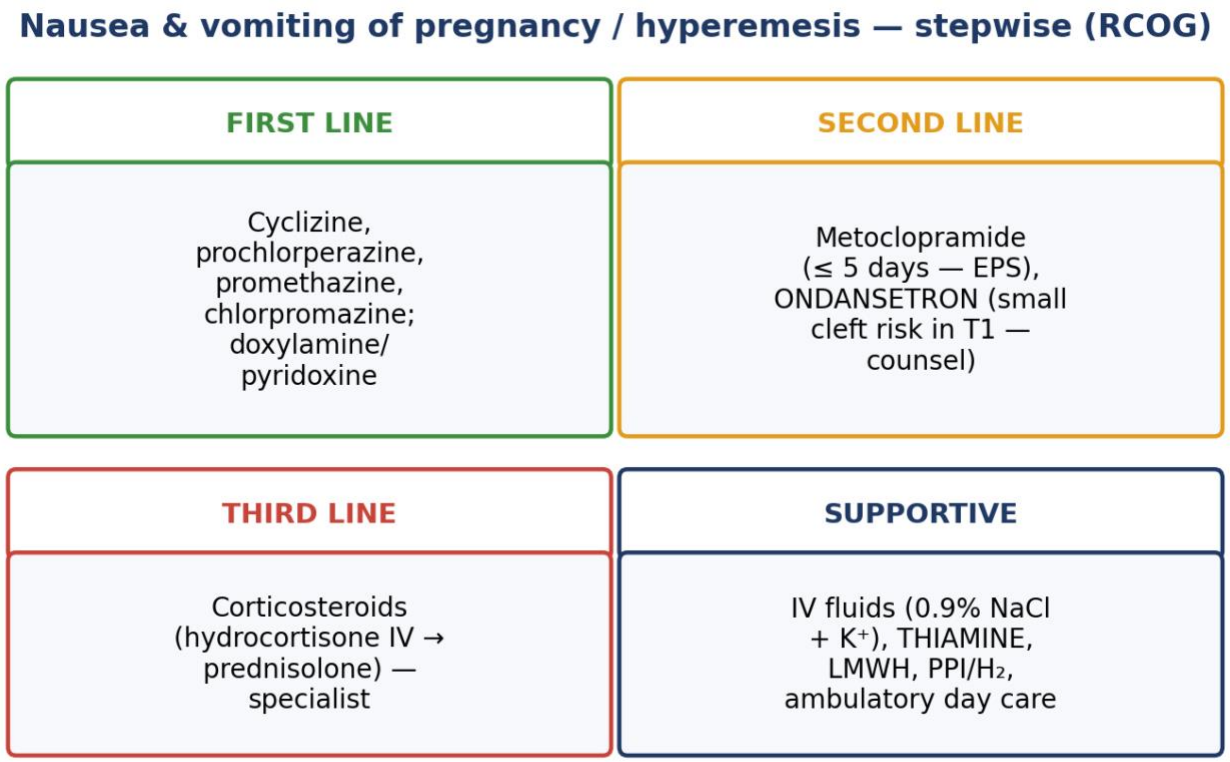


Figure 373.2 — Stepwise management

- Assess severity (PUQE score), weight loss, dehydration, ketonuria, electrolytes; exclude other causes (UTI, molar pregnancy, thyroid, gastro, DKA).
- **Thiamine** supplementation in prolonged vomiting (Wernicke's encephalopathy)
  - **0.9% saline with potassium** — avoid dextrose-rich fluids before thiamine
  - LMWH thromboprophylaxis if admitted.
- Combinations of antiemetics from different classes when single agents fail
  - Consider psychological support
  - Termination requests must be taken seriously after full treatment.

373.3 Postoperative and other settings

- **PONV prophylaxis** (Apfel risk factors: female, non-smoker, history of PONV/motion sickness, postoperative opioids): ondansetron, dexamethasone, cyclizine

  - TIVA reduces risk.
- At caesarean section under spinal: treat hypotension first (vasopressors), then antiemetics.
- Chemotherapy: 5-HT_3 antagonist + dexamethasone ± aprepitant.

373.4 Must-know summary

■ EXAM TIP

- CTZ (D_2, 5-HT_3, NK_1), vestibular (H_1, M), gut (5-HT_3), cortex.
- NVP: antihistamines/phenothiazines first; metoclopramide/ondansetron second; steroids third.
- Metoclopramide → EPS (≤ 5 days); ondansetron small cleft risk in T1 — counsel.
- Thiamine, saline + K^+, LMWH in hyperemesis.

■ MNEMONIC / MEMORY AID

Metoclopramide side effect — 'Meto = Movement disorder'.