NCLEX 2026 · HIGH-YIELD PHARM REVIEW

Methylergonovine

SYSTEM · OB / POSTPARTUM

CLASS · ERGOT ALKALOID (UTEROTONIC)

PHARMACOLOGY FOCUS

"Methergine" — the postpartum bleeding stopper you check the BP before giving.

◆ PRIORITY: SAFETY + MATERNAL HEMORRHAGE ◆ ROUTE: IM PREFERRED · PO F/U ◆ RED-FLAG DRUG ⚠ HTN

1 Definition & Overview

What is it?

- A **synthetic ergot alkaloid** that causes **sustained uterine contraction** to control postpartum hemorrhage (PPH).
- Used for **uterine atony** (boggy uterus) & **subinvolution** *after* placental delivery — **never during labor.**
- Why it matters: PPH = **#1 cause of maternal death worldwide.** This drug saves lives — but can cause dangerous HTN.

DRUG CLASS	CATEGORY
Ergot Alkaloid	Uterotonic / Oxytocic
STANDARD DOSE	**MAX IM DOSES**
0.2 mg IM q 2–4 h	5 doses, then PO

2 Pathophysiology (Simplified)

1. **After delivery**
   Uterus must contract to compress spiral arteries at the placental site.
2. **Uterine atony**
   Muscle stays **boggy** → vessels stay open → **heavy bleeding.**
3. **Methergine acts**
   Stimulates α-adrenergic & serotonin receptors on smooth muscle → **sustained tetanic contraction** → vessels compressed → bleeding stops. *Side effect:* same vasoconstriction in peripheral vessels → ↑ **BP.**

3 Signs & Symptoms

When the Drug is Indicated

- **Boggy / soft fundus** that doesn't firm with massage
- **Heavy lochia rubra** — saturating pad < 1 hr
- Passing of **large clots**
- **Subinvolution** of uterus (postpartum day 3+)
- **Uterine atony** after placental delivery

Adverse Effects — RED FLAGS ⚠

- **Severe hypertension** (hallmark)
- **Chest pain / angina** — coronary vasospasm
- **Severe HA, blurred vision, seizure** — stroke risk
- Numbness / tingling in extremities (vasoconstriction)
- Nausea, vomiting, uterine cramping
- Palpitations, dysrhythmias

Any chest pain, severe HA, visual changes, or sudden numbness = STOP drug, notify provider, prepare for MI/CVA workup.

4 Priority Nursing Interventions

Before administration

- **ASSESS BP before EVERY dose** — HOLD if **> 140/90** & notify provider.
- Verify placenta has been delivered (never give during labor).
- Confirm no contraindications: HTN, preeclampsia, cardiac dz, CVA hx.
- Review pulse, respirations, pain level.

During & after administration

- **Administer IM** (preferred) — **avoid IV**: causes severe HTN / stroke.
- **Assess fundus & lochia** q 15 min × first hr.
- Monitor BP, HR, chest pain, HA, visual changes.
- Have **calcium gluconate** available for severe cramping.
- Document uterine tone, bleeding, vitals before & after.

ABC + Safety priority: circulation is threatened in both directions — hemorrhage (low BP, ↓ perfusion) AND drug-induced HTN/stroke. Your *BP check* is the single most-tested nursing action.

5 Pharmacology at a Glance

PARAMETER	DETAILS
Generic / Brand	Methylergonovine maleate / **Methergine**
Class	Ergot alkaloid · Uterine stimulant (oxytocic)
Mechanism (simple)	Directly stimulates uterine smooth muscle → **sustained contraction** → compresses uterine vessels → stops bleeding. Also vasoconstricts peripheral vessels → ↑ BP.
Route & Dose	**IM:** 0.2 mg q 2–4 h (max 5 doses) · **PO:** 0.2 mg q 6–8 h × 2–7 days · **IV only in life-threatening emergency** (slowly, > 60 sec, with BP monitoring).
Key Side Effects	Severe HTN, HA, chest pain, dizziness, N/V, uterine cramping, palpitations, seizure, MI/CVA (rare but serious).
Contraindications	**HTN**, preeclampsia / eclampsia, cardiac disease, PVD, sepsis, hypersensitivity, **pregnancy (before placenta delivery)**.
Drug Interactions	Vasoconstrictors (↑ HTN) · CYP3A4 inhibitors (macrolides, antifungals, HIV protease inhibitors) ↑ toxicity · **Smoking** potentiates vasoconstriction.
Nursing Considerations	Check BP before each dose · IM preferred · monitor fundus/lochia · teach S/Sx of toxicity · caution in breastfeeding (may ↓ milk supply).

6 NCLEX Test Traps

✗ **Giving with elevated BP.** If BP > 140/90 — HOLD and notify provider. Don't "give and reassess."

✗ **Confusing with oxytocin (Pitocin).** Pitocin = during/after labor for induction + PPH. Methergine = *only after* placenta delivery.

✗ **Administering IV routinely.** IV route triggers severe HTN, stroke, MI — reserved for true emergencies only.

✗ **Ignoring preeclampsia history.** HTN disorders of pregnancy = absolute contraindication.

✗ **Skipping BP check on repeat doses.** BP can rise between doses — check *every single time.*

✗ **Treating chest pain as "just anxiety."** On this drug, chest pain = coronary vasospasm until proven otherwise.

7 🗣️ Patient Education

🚭

No smoking
Nicotine is a vasoconstrictor — combined with Methergine it dangerously amplifies HTN and stroke risk.

📞

Report immediately
Severe headache, chest pain, numbness/tingling, blurred vision, or cold/pale fingers and toes.

💊

Finish the course
Take all PO doses as prescribed to prevent recurrence of bleeding / subinvolution.

🩸

Watch your bleeding
Call for pad saturated in < 1 hr, large clots, foul-smelling lochia, or return of heavy bleeding.

🤱

Breastfeeding
May reduce milk supply. Discuss timing & alternatives with provider; monitor infant feeding.

🌀

Expect cramping
Uterine cramps are expected & a *sign the drug is working.* Use mild analgesia as ordered.

8 🧠 Memory Boosters

*"Check the **pressure** before you give the **Methergine measure.**"*

🔑 METH = HIGH

"METH makes pressure HIGH."

Methergine → vasoconstriction → ↑ BP. If BP already HIGH → **HOLD** the dose.

⏰ AFTER, not DURING

"After the Afterbirth."

Methergine is given **after** the placenta. During labor = oxytocin. Swap them on the NCLEX and it's wrong.

🚩 HHHH Danger Signs

Headache · Hypertension · Heart pain · Hands numb

Four H's = call provider. These = coronary / cerebral vasospasm.

🚫 The "NO" List

No HTN · No Preeclampsia · No IV push · No Smoking

If any of these are present — **do not give.**