NCLEX 2026 · HIGH-YIELD REVIEW

Hyperemesis *Gravidarum*

Severe pregnancy-related nausea & vomiting — a clinical judgment priority.

MATERNITY · FLUID & ELECTROLYTE · PHARM INTEGRATION · PRIORITY RECOGNITION

SYSTEM · MATERNAL / OB · GI

1 OVERVIEW
What It Is & Why It Matters

- **Severe, persistent nausea & vomiting** of pregnancy that goes beyond normal "morning sickness" — leads to **dehydration, electrolyte imbalance, and >5% pre-pregnancy weight loss**.
- Typically **begins 4–6 weeks** gestation, **peaks 9–13 weeks**, and usually resolves by **week 20**.
- Matters because untreated HG causes maternal **malnutrition, ketosis, Wernicke's encephalopathy**, and risks **IUGR / preterm birth** for the fetus.

2 PATHOPHYSIOLOGY
The Mechanism, Simplified

↑ hCG & ↑ Estrogen (high in early pregnancy)	→	Stimulates vomiting center + slows gastric emptying
Persistent, uncontrolled vomiting	→	Loss of fluid, Na^+, K^+, Cl^-, HCl (stomach acid)
Dehydration + electrolyte imbalance + ↓ nutrient intake	→	Metabolic **alkalosis**, hypokalemia, ketosis, weight loss

End Result: Maternal malnutrition, ketoacidosis risk, and fetal compromise if untreated

3 ASSESSMENT
Signs & Symptoms

🌱 Early / Mild

- ✓ Persistent nausea & vomiting (>3×/day)
- ✓ Inability to tolerate food or fluids
- ✓ Ptyalism (excess saliva)
- ✓ Mild weight loss
- ✓ Fatigue, weakness
- ✓ Dry mouth, decreased appetite

🔥 Late / Severe — RED FLAGS

- ⓘ **Weight loss >5%** pre-pregnancy weight
- ⓘ Dehydration: dry mucosa, poor skin turgor
- ⓘ **Tachycardia + hypotension** (orthostatic)
- ⓘ **Ketonuria** + dark, concentrated urine
- ⓘ Hypokalemia, hyponatremia, hypochloremia
- ⓘ Metabolic **alkalosis** (↑ pH, ↑ HCO_3^-)
- ⓘ Jaundice, confusion, vision changes
- ⓘ Oliguria (<30 mL/hr)

4 NURSING CARE
Priority Interventions

A · B · C → SAFETY → THEN EVERYTHING ELSE

01 **TOP PRIORITY** **Assess airway & aspiration risk** — position upright or side-lying during emesis.

02 **FLUID** **Administer IV fluids** (NS or LR) to correct dehydration — often the FIRST intervention ordered.

03 **Replace electrolytes** — especially **potassium** (never IV push; verify urine output ≥30 mL/hr before K^+ replacement).

04 **Give IV thiamine BEFORE dextrose** to prevent Wernicke's encephalopathy.

05 **NPO initially** 24–48 hrs → advance to clear liquids → bland solids as tolerated.

06 **Monitor I&O strictly**, daily weights (same time, same scale), urine specific gravity & ketones.

07 **Administer antiemetics** as prescribed (see Pharm section).

08 **Monitor fetal well-being** — FHR, fundal height, fetal movement.

09 **Assess labs** — electrolytes, BUN/creatinine, ABG, urine ketones, LFTs.

10 **Provide emotional support** — HG can be isolating and emotionally exhausting; screen for depression.

5

PHARMACOLOGY

Drugs You Must Know

Pyridoxine (Vitamin B_6) ± Doxylamine

1ST LINE · SAFE

BRAND: DICLEGIS / BONJESTA

MECHANISM
B_6 regulates CNS neurotransmitters; doxylamine = antihistamine that dulls the vomit reflex.

SIDE EFFECTS
Drowsiness, dry mouth, mild sedation.

NURSING CARE
Give at bedtime due to sedation; safest in pregnancy (Category A/B).

TEACHING
Take consistently — works best as scheduled therapy, not PRN.

Ondansetron (Zofran)

2ND LINE

CLASS: 5-HT_3 SEROTONIN ANTAGONIST

MECHANISM
Blocks serotonin (5-HT_3) receptors in the gut & CTZ.

SIDE EFFECTS
Headache, constipation, **QT prolongation**.

NURSING CARE
Obtain baseline ECG; check K^+ & Mg^{2+} (prevents arrhythmia).

TEACHING
Report palpitations, dizziness, or fainting immediately.

Promethazine (Phenergan)

2ND LINE

CLASS: PHENOTHIAZINE ANTIHISTAMINE

MECHANISM
H_1-receptor & dopamine blocker in CTZ.

SIDE EFFECTS
Heavy sedation, EPS, **tissue necrosis** if IV extravasates.

NURSING CARE
Give DEEP IM or diluted slow IV into large vein; verify patency.

TEACHING
Avoid driving; rise slowly; no alcohol.

Metoclopramide (Reglan)

2ND LINE

CLASS: PROKINETIC / DOPAMINE ANTAGONIST

MECHANISM
↑ gastric motility; blocks dopamine in CTZ.

SIDE EFFECTS
Tardive dyskinesia, EPS, restlessness.

NURSING CARE
Monitor for involuntary movements; limit to <12 weeks use.

TEACHING
Report tongue/lip twitching, tremors immediately.

Methylprednisolone (Solu-Medrol)

SEVERE · LAST RESORT

CLASS: CORTICOSTEROID

MECHANISM
Anti-inflammatory effect on vomiting center (mechanism not fully understood).

SIDE EFFECTS
Hyperglycemia, immunosuppression, cleft palate risk <10 wks.

NURSING CARE
Avoid in 1st trimester; monitor glucose; taper — do NOT stop abruptly.

TEACHING
Report infection signs; take with food.

6 NCLEX TEST TRAPS
What Students Miss ⚠️

~~Morning sickness~~ vs **HG**	Morning sickness = mild, no weight loss. **HG = >5% weight loss + dehydration + ketosis.** NCLEX wants you to recognize the severity.
~~Feed first~~ vs **Hydrate first**	**Priority = IV fluids + electrolytes**, not nutrition. Nutrition comes AFTER stabilizing fluid/electrolyte status.
~~Dextrose first~~ vs **Thiamine first**	**Always give IV thiamine BEFORE dextrose** — prevents Wernicke's encephalopathy (triad: confusion, ataxia, ophthalmoplegia).
~~K⁺ push~~ vs **Diluted drip**	**NEVER IV push potassium.** Always diluted, infused slowly, AND urine output must be ≥30 mL/hr before replacement.
~~Metabolic acidosis~~ vs **Metabolic alkalosis**	Vomiting = losing **HCl (stomach acid)** → body becomes alkalotic. Expect **↑ pH, ↑ HCO_3^-, hypokalemia, hypochloremia.**
~~Large meals~~ vs **Small frequent**	Teach **small, frequent, dry, bland meals** — not three large meals. Empty stomach worsens nausea.

7

PATIENT EDUCATION

Teaching Pearls

🍞

Eat Smart

Small, frequent, **bland meals** every 2–3 hrs. Try **BRAT** (bananas, rice, applesauce, toast). Keep crackers at bedside and eat BEFORE rising.

🚫

Avoid Triggers

Stay away from **strong odors, spicy, fatty & greasy foods**. No cooking smells — open windows or have someone else cook.

💧

Sip, Don't Gulp

Drink fluids **between meals, not with them**. Cold, clear liquids (ginger ale, electrolyte drinks, popsicles) are easier to tolerate.

🌱

Natural Aids

Ginger (tea, candies, capsules), **acupressure wristbands (P6 point)**, and vitamin B_6 supplements may reduce nausea.

🛏️

Position + Rest

Stay **upright 30 min after eating**. Rise slowly from bed. Rest often — fatigue worsens nausea.

📞

Call Provider If...

Can't keep fluids down ≥24 hrs, weight loss, dark urine, dizziness, ↓ fetal movement, or signs of dehydration. Don't "tough it out."

MEMORY BOOSTERS

8 Lock It In

"VOMIT" → HG SEVERITY CHECKLIST

V	O	M	I	T
omiting >3×/day	liguria / dark urine	etabolic alkalosis	ntake impossible	achycardia + wt loss

"BRAT" → SAFE DIET FOR NAUSEA

B	R	A	T
ananas	ice	pplesauce	oast

"Thiamine First" → WERNICKE'S PREVENTION

Before giving IV dextrose to a malnourished HG patient → **ALWAYS give thiamine first**. Remember: **"T before D"** (Thiamine before Dextrose) — same order as the alphabet wouldn't, so memorize the REVERSE.

"5% Rule" → DIAGNOSTIC THRESHOLD

Weight loss **>5% of pre-pregnancy body weight** = HG (not just morning sickness). If NCLEX mentions the 5% number → think HG.

"Vomit = Alkalosis" → ABG SHORTCUT

You lose **ACID** when you vomit → body goes **ALKALOTIC**. (Opposite of diarrhea, which causes acidosis.) **↑pH, ↑HCO_3^-, ↓K^+, ↓Cl^-** is the classic pattern.