NCLEX 2026 · MATERNAL-NEWBORN HEALTH · EDITION 01

Prenatal Testing & *Amniocentesis*

HIGH-YIELD

Clinical Judgment
Priority · Safety · Rationale

01 Definition · Overview

WHAT · WHY IT MATTERS

THE CORE IDEA

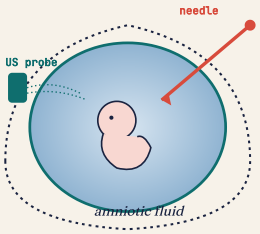
Testing that protects both mother and fetus — from first trimester to delivery.

Prenatal testing evaluates **fetal well-being, chromosomal/genetic conditions, neural tube defects, and lung maturity** across pregnancy.

Tests fall into two lanes: **SCREENING** estimates risk; **DIAGNOSTIC** confirms the condition.

Amniocentesis is the gold-standard diagnostic — withdrawing amniotic fluid for genetic, metabolic, and lung-maturity analysis.

→ Ties directly to CLINICAL JUDGMENT, ETHICS, CONSENT & RH STATUS



AMNIOCENTESIS · US-GUIDED TRANSABDOMINAL ASPIRATION

02 The Landscape — Screening vs Diagnostic

TIMING · PURPOSE · TYPE

Test	Timing	Type	Purpose / Key Finding
First Trimester Screen (NT + PAPP-A + hCG)	11–14 wks	SCREENING	Down syndrome, trisomy 18. Nuchal translucency + blood markers estimate risk.
Cell-free DNA (NIPT)	After 10 wks	SCREENING	Trisomies 21/18/13, sex chromosome abnormalities via maternal blood.
Chorionic Villus Sampling	10–13 wks	DIAGNOSTIC	Chromosomal/genetic disorders (earlier than amnio). **Does NOT detect NTDs.**
Quad Screen	15–20 wks	SCREENING	AFP, hCG, estriol, inhibin A → NTDs & Down syndrome risk.
★ Amniocentesis	15–20 wks genetic 3rd tri lung maturity	DIAGNOSTIC	Chromosomes, NTDs (AFP), bilirubin (Rh isoimmunization), lung maturity (L/S 2:1, PG+).
Non-Stress Test (NST)	3rd trimester	WELL-BEING	**Reactive** = 2+ accelerations ≥15 bpm × 15 sec in 20 min = reassuring.
Biophysical Profile (BPP)	3rd trimester	WELL-BEING	5 components × 0 or 2 each = /10. Breathing, Tone, Movement, Fluid, NST.
Contraction Stress Test	3rd trimester	WELL-BEING	**Negative** = good (no late decels). **Positive** = problem.
Group B Strep (GBS)	35–37 wks	SCREENING	Vaginal/rectal swab. Positive → intrapartum IV PCN to prevent neonatal sepsis.

03 How Amniocentesis Works — Step by Step

MECHANISM · FLOW

Clinical Presentation · Priority Action PAGE 02 · ABC + SAFETY

04 Signs & Symptoms — Post-Procedure

EXPECTED VS RED FLAGS

✓ Expected / Mild — Normal

- Mild abdominal cramping for a few hours
- Slight soreness at needle insertion site
- Small amount of spotting (very minimal)
- Normal fetal movement should continue

RED FLAGS — Call Provider — Priority

- **Fever ≥100.4°F (38°C)** or chills → infection
- **Fluid leaking from vagina** → PROM
- **Vaginal bleeding** beyond mild spotting
- **Severe abdominal pain** / persistent contractions
- **Decreased / absent fetal movement**

Key Lab Values to Know

AFP ↑ → Neural tube defect, open abdominal wall, multiples

AFP ↓ → Down syndrome, trisomy 18

L/S ratio ≥ 2:1 + PG present → Fetal lungs mature

05 Priority Nursing Interventions

ABCS · SAFETY · CONSENT · FHR

Before — PRE-PROCEDURE

- ★ **Verify informed consent** signed
- ✓ Obtain **baseline maternal VS & FHR**
- ✓ Confirm **Rh status** (critical for RhoGAM)
- ✓ Bladder: **empty if >20 wks** (prevents puncture); full if <20 wks
- ✓ Position supine with **left hip wedge** (avoid supine hypotension)
- ✓ Assist with ultrasound localization of placenta & fetus
- ✓ Provide **emotional support** — anxiety is high

During — INTRA-PROCEDURE

- ★ **Monitor FHR** continuously — PRIORITY
- ✓ Maintain **sterile field**
- ✓ Watch maternal skin color, VS, comfort
- ✓ Coach breathing, keep client still during needle pass
- ✓ Label specimens immediately; protect from light (bilirubin)

After — POST-PROCEDURE

- ★ **Monitor FHR 30–60 min** after procedure
- ✓ Reassess maternal VS; watch for contractions
- ★ **RhoGAM 300 mcg IM** within 72 hrs if Rh-negative
- ✓ Apply bandage to puncture site
- ✓ Teach warning signs (CHAMBER)
- ✓ Advise **rest × 24 hrs**; no lifting or intercourse
- ✓ Confirm follow-up; results typically 1–2 weeks

06 Pharmacology

DRUG · MECH · SIDE EFFECTS · NURSING

RhoGAM

RH₀(D) IMMUNE GLOBULIN

MECHANISM
Prevents maternal anti-Rh antibody formation against Rh+ fetal RBCs (passive immunity).

SIDE EFFECTS
Injection-site soreness, low-grade fever, rare hypersensitivity.

WHEN GIVEN
Within **72 hrs** of amnio; also at 28 wks; within 72 hrs postpartum if mom Rh− & baby Rh+.

NURSING
Confirm Rh status **before** procedure. IM only. Never give to Rh+ mother.

Betamethasone

ANTENATAL CORTICOSTEROID

MECHANISM
Accelerates fetal lung maturity via surfactant production — reduces neonatal RDS.

SIDE EFFECTS
Maternal hyperglycemia, pulmonary edema, immunosuppression.

WHEN GIVEN
24–34 wks gestation if preterm birth expected. **12 mg IM × 2**, 24 hrs apart.

NURSING
Monitor **blood glucose** (esp. GDM); assess lungs; both doses for full benefit.

Test Traps · Patient Teaching · Memory PAGE 03 · EXAM DAY READY

07 NCLEX Test Traps ⚠

WHERE STUDENTS LOSE POINTS

01 **CVS vs Amniocentesis timing confusion.** CVS is EARLIER (10–13 wks) — amniocentesis is 15–20 wks. *Trick: CVS = "Come Very Soon"*

02 **CVS does NOT detect neural tube defects.** Only amniocentesis detects NTDs (via AFP in amniotic fluid).
If question asks about NTD detection → always amnio

03 **Forgetting RhoGAM after amnio in Rh-negative mother.** Even if baby's Rh is unknown, give RhoGAM within 72 hrs.
Any invasive procedure breaching placenta → RhoGAM if Rh−

04 **Counterintuitive test results.** NST *reactive* = GOOD. CST *positive* = BAD. BPP score higher = better.
Reactive = Reassuring · Positive = Problem

05 **Screening ≠ Diagnostic.** Quad screen, NIPT, first-trimester screen = RISK only. Abnormal screen → confirm with amnio/CVS.
Don't tell client "baby has Down syndrome" from a screen

06 **AFP direction matters.** AFP ↑ = neural tube defects / open abdominal wall / twins. AFP ↓ = Down syndrome / trisomy 18.

07 **Priority after amnio is NOT documentation.** It's **FHR monitoring** (ABC / fetal safety) → then maternal VS → then RhoGAM → then teaching.

08 **Bladder state depends on gestational age.** <20 wks → FULL bladder elevates uterus. >20 wks → EMPTY bladder prevents puncture.

08 Patient Education

TEACH-BACK · SAFETY AT HOME

1. **Rest × 24 hrs.** No strenuous activity, heavy lifting, or stair climbing. Take acetaminophen (NOT NSAIDs) for mild cramping.
2. **No intercourse × 1–2 days.** Allow puncture site and uterus to recover.
3. **Call provider immediately** for fever, leaking fluid, heavy bleeding, severe pain, or decreased fetal movement.
4. **Count fetal kicks** as instructed (if ≥28 wks). Report any decrease in movement.
5. **Results in 1–2 weeks.** Plan follow-up for result review and continue prenatal vitamins/appointments.
6. **Seek genetic counseling** if abnormal results — supports informed, values-based decisions.

09 Memory Boosters

MNEMONICS · PATTERN RECOGNITION

POST-AMNIO RED FLAGS

CHAMBER

- **C** **Chills** — infection warning
- **H** **Hot / Fever** ≥100.4°F
- **A** **Amniotic fluid leak**
- **M** **Movement decreased** (fetal)
- **B** **Bleeding** vaginal
- **E** **Extreme abdominal pain**
- **R** **Rapid contractions**

BIOPHYSICAL PROFILE COMPONENTS (/10)

T·M·B·F·N

- **T** Fetal **Tone**
- **M** Fetal **Movement**
- **B** Fetal **Breathing**
- **F** Amniotic **Fluid** volume
- **N** **NST** reactive?

Each scored 0 or 2 · 8–10 reassuring · ≤4 abnormal

PATTERN RECOGNITION · RESULTS

"Reactive = Reassuring" — NST (both start with R)
"Positive = Problem" — CST (both start with P)
AFP ↑ = Holes (NTD, abdominal wall) · AFP ↓ = Down