

Prenatal laboratory testing

Initial visit · 24–28 weeks · 36–38 weeks

Initial labs

24–28 wks

36–38 wks

Why prenatal labs matter

- Each test is timed to a gestational window when a condition becomes **detectable or treatable**.
- Results drive key nursing actions: RhoGAM, Tdap, intrapartum antibiotics, newborn precautions.
- Missed labs → Rh isoimmunization, untreated GBS sepsis, unrecognized gestational diabetes.

1 Initial prenatal visit

~6–12 weeks

Baseline screen for mother + fetus. Establishes immunity, infection, and genetic risk.

Test	Purpose	Key nursing point
Blood type + Rh	Identify Rh-negative mother	Flag for RhoGAM at 28 wks + postpartum
Antibody screen (indirect Coombs)	Detect maternal antibodies to fetal RBCs	Negative → give RhoGAM later; positive → monitor fetus
CBC (H&H)	Baseline anemia, platelets	Hgb < 11 = anemia; iron teaching
Rubella + varicella titer	Confirm immunity	Non-immune → vaccinate POSTPARTUM (live vaccines)
HBsAg	Hepatitis B in mother	Positive → HBIG + hep B vaccine to newborn within 12 hr
HIV	Vertical transmission risk	Positive → antiretrovirals, C-section, no breastfeeding (US)
RPR / VDRL	Syphilis	Treat with penicillin — only cure that crosses placenta
Gonorrhea + chlamydia	STI screen	Untreated → neonatal conjunctivitis, preterm birth
Urinalysis + culture	Asymptomatic bacteriuria, protein, glucose	Treat UTI to prevent pyelonephritis + preterm labor
Pap smear	Cervical cancer screen	Routine if due
TSH (if indicated)	Thyroid status	Untreated hypothyroid → fetal neuro impairment

First + second trimester optional genetic screens

NIPT (cell-free DNA)

≥ 10 wks. Screens Down, trisomy 18/13, sex chromosomes. High sensitivity; confirm positives with amnio/CVS.

Nuchal translucency + PAPP-A / hCG

10–13 wks. Increased NT → chromosomal + cardiac defects.

Quad screen

15–20 wks. AFP, hCG, estriol, inhibin A. High AFP → neural tube defect. Low AFP → Down syndrome.

2 24–28 weeks

Second → third trimester

Gestational diabetes screen + Rh prophylaxis + anemia recheck.

1-hour glucose challenge test (GCT)

50 g oral glucose · **NO fasting required**

Result ≥ 140 mg/dL → proceed to 3-hour GTT

This is a **screen**, not a diagnosis.

3-hour glucose tolerance test (GTT)

100 g load · **fasting 8–12 hr required**

Fasting ≥ 95 · 1 hr ≥ 180 · 2 hr ≥ 155 · 3 hr ≥ 140

Two or more abnormal values = gestational diabetes

CBC recheck

Physiologic anemia of pregnancy peaks now (plasma volume expands more than RBC mass). Treat Hgb < 10.5 .

Antibody screen + RhoGAM

Rh-negative mother with negative antibody screen → **RhoGAM 300 mcg IM at 28 weeks**. Prevents maternal sensitization from any third-trimester fetal blood exposure.

Tdap vaccine

Given 27–36 weeks every pregnancy (even if prior Tdap). Passive pertussis antibodies protect the newborn until their own vaccines begin.

Repeat STI screen (high-risk)

HIV, syphilis, gonorrhea, chlamydia if risk factors or local policy requires.

3 36–38 weeks

Term preparation

Primary focus: Group B strep status drives intrapartum antibiotic decisions.

Group B streptococcus (GBS) culture ★

Collected **35–37 weeks** · vaginal → rectal swab, same swab, no speculum.

Valid for 5 weeks · repeat if delivery is delayed past that window.

Positive = IV penicillin G during labor (or cefazolin / clindamycin / vancomycin per allergy).

Prevents early-onset neonatal GBS sepsis, pneumonia, meningitis.

CBC

Confirm Hgb before delivery to anticipate postpartum hemorrhage tolerance.

Repeat HIV / STI if high-risk

Allows intrapartum antiretrovirals and neonatal prophylaxis if newly positive.

Type + screen

Many facilities re-send for faster crossmatch availability at delivery.

⚠ Red flag findings

Elevated MSAFP → neural tube defect (spina bifida, anencephaly). Order ultrasound + amnio.

Low MSAFP → trisomy 21 (Down syndrome).

Failed 1-hr GTT → proceed to 3-hr GTT; do not delay.

Rh-negative + positive antibody screen → already sensitized; RhoGAM will not help this pregnancy. Fetus needs surveillance.

Proteinuria + $\uparrow$ BP → preeclampsia workup (any visit).

GBS+ with no antibiotics before birth → notify provider; newborn needs extended observation / treatment.

Positive HBsAg → newborn HBIG + hep B vaccine within 12 hr of birth.

Non-immune rubella → MMR is live; give POSTPARTUM, avoid pregnancy 4 weeks after.

Priority nursing interventions (ABCs · safety · NCLEX prioritization)

Assess

Verify gestational age before ordering age-specific labs. Confirm Rh status at every admission. Review antibody screen before giving RhoGAM.

Monitor

Glucose logs in GDM, fetal movement, fundal height, BP at every visit, proteinuria via dipstick.

Administer

RhoGAM 300 mcg IM at 28 wks + within 72 hr postpartum if newborn Rh+. Tdap 27–36 wks. Penicillin G in labor for GBS+.

Teach

No fasting for 1-hr GCT; 8–12 hr fast for 3-hr GTT. Carb-controlled diet for GDM. Kick counts after 28 wks.

Safety

Never give live vaccines (MMR, varicella, LAIV) during pregnancy. Check allergies before penicillin for GBS.

Report

Abnormal GTT, positive GBS after onset of labor, Hgb < 9, proteinuria 2+ with BP changes, positive HBsAg / HIV.

Pharmacology at a glance

Drug	Mechanism	Side effects	Nursing considerations
RhoGAM (Rh immune globulin)	Suppresses maternal immune response to fetal Rh+ RBCs	Mild injection-site pain; rare allergic reaction	300 mcg IM at 28 wks + within 72 hr postpartum. Also after miscarriage, amnio, trauma, or bleeding.
Tdap	Inactivated vaccine — passive pertussis immunity to newborn	Sore arm, low-grade fever	27–36 wks every pregnancy. Safe in pregnancy (not live).
Penicillin G (intrapartum)	Bactericidal β -lactam — clears GBS in birth canal	Allergy, anaphylaxis, diarrhea	5 million units IV load → 2.5–3 million units q4h until delivery. Need ≥ 2 doses before birth for full coverage.
Ferrous sulfate	Iron replacement for anemia	Constipation, dark stools, nausea	Take with vitamin C; avoid with milk/antacids. Screen at 28 wks.
MMR / varicella	Live attenuated vaccines	Contraindicated in pregnancy	Give postpartum before discharge; avoid pregnancy 4 weeks after.

⚠ NCLEX test traps

RhoGAM timing — tested at **28 weeks AND within 72 hours postpartum** (if newborn is Rh+). Students forget the 28-week dose.

RhoGAM is useless if already sensitized — if antibody screen is positive, giving RhoGAM will not reverse sensitization. The fetus is what needs monitoring.

1-hr GCT vs 3-hr GTT — 1-hour has NO fasting; 3-hour REQUIRES fasting. Don't tell a client to fast for the screen.

AFP direction is counterintuitive — HIGH AFP = neural tube defect; LOW AFP = Down syndrome. Easy to flip under pressure.

Tdap every pregnancy — even if given last year. Goal is peak antibody transfer to THIS fetus.

GBS antibiotics are intrapartum only — treating a positive GBS in the office before labor does NOT prevent neonatal disease. Must be IV during labor, ≥ 4 hours before delivery for full coverage.

Live vaccines are postpartum — MMR and varicella given before discharge, not prenatally.

Rubella non-immunity is not an emergency — mother is counseled to avoid exposure; vaccinated AFTER delivery. Don't pick "vaccinate now."

Penicillin allergy ≠ skip antibiotic — choose cefazolin (low-risk allergy), clindamycin or vancomycin (anaphylactic allergy).

Patient education

Before glucose tests

1-hr: eat normally beforehand, no fasting. 3-hr: fast 8–12 hr, high-carb diet 3 days prior, stay seated during test, no smoking, report dizziness.

GBS-positive mothers

Common; not an STI. Plan: arrive early in labor so ≥ 2 doses of IV penicillin can be given before birth. Newborn watched closely for 48 hr.

Danger signs to report

Vaginal bleeding, severe headache, visual changes, RUQ pain, decreased fetal movement, ruptured membranes, regular contractions before 37 wks, fever.

Rh-negative mothers

Explain purpose of RhoGAM: protects future pregnancies. Also needed after any bleeding, amnio, CVS, trauma, or miscarriage.

Non-immune rubella / varicella

Avoid sick contacts. Vaccine given postpartum before discharge. Avoid pregnancy 4 weeks after.

Iron therapy

Take with orange juice, not with milk or antacids. Stools may turn black. Increase fiber + fluids to prevent constipation.

Memory boosters

"28 = Rh date" — RhoGAM goes in at 28 weeks for every Rh-negative mom with a negative antibody screen.

"GBS = Group B at 35–37" — culture window 35–37 weeks; treatment is IV during labor.

"HIGH AFP = HIGH on the spine" — elevated AFP points to open neural tube defects. Low AFP = low chromosome count (trisomy 21).

Quad screen: "A HEI" — AFP, hCG, Estriol, Inhibin A.

3-hr GTT thresholds: 95 · 180 · 155 · 140 — fasting, 1 hr, 2 hr, 3 hr. Two or more abnormal = GDM.

"Live = leave it (until postpartum)" — MMR, varicella, LAIV deferred until after delivery.

"Tdap in the Third" — every pregnancy, third trimester (27–36 wks), for newborn pertussis protection.

Initial vs 28 vs 36 trick — "Screen → Sugar → Strep." Initial = screen everything; 28 wks = sugar (GTT) + RhoGAM; 36 wks = GBS (strep).

Aligned with NCLEX 2026 test plan · Health promotion + physiological adaptation · Maternal newborn nursing