NCLEX 2026 • HIGH-YIELD INFOGRAPHIC

Newborn Assessment

🍼 Maternal–Newborn | 👶 Pediatric | 🩺 Clinical Judgment

🟨 1. Overview — Why It Matters

- **Systematic head-to-toe evaluation** of the neonate after birth to identify normal findings vs deviations.
- Detects risks early → supports a **safe transition to extrauterine life** (breathing, circulation, thermoregulation, feeding).
- Foundation for all subsequent newborn care, discharge teaching, and follow-up.

🟥 2. Physiology of Transition — Fetal → Neonatal

First breath → **Lungs expand** → **↓ Pulmonary vascular resistance** → **↑ Pulmonary blood flow**

Foramen ovale closes → **Ductus arteriosus closes** → **Ductus venosus closes** → **Adult circulation**

🔥 **Thermoregulation: newborn loses heat by evaporation, conduction, convection, radiation → relies on brown fat (non-shivering thermogenesis). Cold stress → ↑ O_2 consumption → hypoglycemia & respiratory distress.**

🟧 3a. Normal Vital Signs & Measurements

Vital Sign	Normal Range
Heart rate	**110–160 bpm** (apical × 1 min)
Respirations	**30–60/min**, irregular, abdominal
Temperature (axillary)	**97.7–99.5°F** (36.5–37.5°C)
Blood pressure	**60–80 / 40–50 mmHg**
O_2 saturation	≥ 95% (right hand preductal)
Blood glucose	≥ 40–45 mg/dL

Measurement	Normal Range
Weight	**2,500–4,000 g** (5 lb 8 oz – 8 lb 13 oz)
Length	18–22 in (45–55 cm)
Head circumference	**32–36 cm** (13–14 in)
Chest circumference	30–33 cm (~2 cm < head)
Anterior fontanel	Diamond, closes **12–18 mo**
Posterior fontanel	Triangle, closes **2–3 mo**

⚠️ **Expected weight loss: up to 10% of birth weight in the first week; regained by 10–14 days.**

🟧 3b. APGAR Score

Scored at 1 & 5 min

Sign	0	1	2
Appearance (color)	Blue / pale	Body pink, extremities blue (acrocyanosis)	Completely pink
Pulse (HR)	Absent	< 100 bpm	> 100 bpm
Grimace (reflex irritability)	No response	Grimace	Cry / cough / sneeze
Activity (muscle tone)	Limp	Some flexion	Active motion
Respirations	Absent	Slow, weak, irregular	Strong cry

7–10
Normal
Routine care

4–6
Moderate difficulty
Stimulation, O_2

0–3
Severe distress
Resuscitation

💡 **APGAR does NOT determine the need for resuscitation — ABCs do. The 5-min score is more predictive of neurologic outcome than the 1-min score.**

🟧 3c. Primitive Reflexes (Expected)

Reflex	How to Elicit	Disappears by
Moro (startle)	Sudden movement / loud noise → arms abduct then adduct	4 mo
Rooting	Stroke cheek → turns toward stimulus	3–4 mo
Sucking	Object in mouth → sucks	10–12 mo
Palmar grasp	Finger in palm → grasps	3–4 mo
Plantar grasp	Pressure on ball of foot → toes curl	8 mo
Babinski	Stroke sole → toes fan & hyperextend	12 mo (1 yr)
Tonic neck (fencing)	Turn head → same-side arm/leg extend	3–4 mo
Stepping / dance	Hold upright, feet touch → steps	4 wk

🚩 **Absent or asymmetric primitive reflexes = abnormal. Persistence past expected age = neurologic concern.**

🟧 3d. 🚨 Red-Flag Findings — Call provider / escalate

🫁 Respiratory
- Nasal flaring, grunting, retractions
- RR < 30 or > 60 sustained
- Apnea > 20 sec
- **Central** cyanosis (lips/tongue)

❤️ Cardiac / Circulation
- HR < 100 or > 160 sustained
- Murmurs + poor feeding / cyanosis
- Weak or unequal femoral pulses
- Prolonged capillary refill > 3 sec

🧠 Neuro
- Jittery / tremors → check glucose
- High-pitched cry, lethargy, seizures
- Bulging or sunken fontanels
- Absent / asymmetric primitive reflexes

🌡️ Metabolic / Skin / Elimination
- Temp instability (< 97.7 or > 99.5°F)
- **Jaundice < 24 hr** = pathologic
- Glucose < 40 mg/dL
- No void in 24 hr / no stool in 48 hr

🟩 4. Priority Nursing Interventions — ABCs + Safety

🅰️ Airway / Breathing (1st)
- Suction **mouth BEFORE nose** with bulb syringe (prevents gasping/aspiration)
- Position on back, head slightly extended
- Dry vigorously → stimulates respirations
- Observe for flaring, grunting, retractions

🌡️ Thermoregulation
- Dry immediately, remove wet linens
- Skin-to-skin with mother or radiant warmer
- Apply **cap** (head = largest SA for heat loss)
- Delay first bath until temp stable (> 1 hr)

📋 Assessment Tasks
- **APGAR at 1 & 5 min** (10 if < 7)
- Vital signs q30 min × 2 hr, then per policy
- Weight, length, head & chest circumference
- Head-to-toe assessment
- Gestational age (Ballard / New Ballard)

🩹 Safety / Identification
- Two matching ID bands (mom + baby) BEFORE leaving delivery room
- Cord clamp → keep clean & dry
- Security band / footprints
- Never leave unattended on flat surface
- Back to sleep; no loose bedding

🎯 **NCLEX priority order: Airway → Warmth → Identification → Eye & Vitamin K prophylaxis → Feeding/bonding.**

🟪 5. Pharmacology — Routine Newborn Meds

💉 Vitamin K (Phytonadione / AquaMEPHYTON)

- **Dose:** 0.5–1 mg
- **Route:** IM, **vastus lateralis** (mid-anterolateral thigh)
- **Action:** promotes clotting factors II, VII, IX, X
- **Prevents:** Vitamin K–deficient bleeding (hemorrhagic disease of newborn) — gut flora not yet present to synthesize
- **Nursing:** 25-ga 5/8-in needle; rotate sites; give within **1 hr** of birth

👁️ Erythromycin 0.5% Ophthalmic Ointment

- **Action:** prophylactic antibiotic
- **Prevents:** ophthalmia neonatorum (gonococcal & chlamydial conjunctivitis)
- **How:** 1–2 cm thin ribbon inner → outer canthus, both eyes
- **Timing:** within **1 hr** of birth (may delay up to 1–2 hr for bonding)
- **Side effect:** mild chemical conjunctivitis, blurred vision (normal, transient)

💊 Hepatitis B Vaccine

- **Dose #1:** 0.5 mL IM **vastus lateralis** within **12–24 hr** of birth
- **Consent required** from parent
- If **mother HBsAg (+):** give HepB vaccine **+ HBIG** within 12 hr at **different sites**
- Watch for local redness, low-grade fever

💡 **Mnemonic — "VEH": Vitamin K → Erythromycin → Hepatitis B = 3 routine newborn meds.**

🟫 6. ⚠️ NCLEX Test Traps & Commonly Confused

🧢 Caput vs Cephalohematoma

- **Molding:** vaginal-birth elongation, resolves 1–3 d, normal.
- **Caput:** soft-tissue edema, **CROSSES** sutures, resolves in days.
- **Cephalohematoma:** blood under periosteum, **does NOT** cross sutures → ↑ **jaundice risk**.

🫁 Acro- vs Central Cyanosis

- **Acrocyanosis** = hands/feet only → **NORMAL** first 24–48 hr.
- **Central cyanosis** = lips, tongue, trunk → **NEVER NORMAL**; act now.

💛 Jaundice Timing

- **< 24 hr** = PATHOLOGIC (hemolytic, ABO/Rh, sepsis).
- **After 24 hr** = usually physiologic, peaks day 3–5.
- Breastfeeding jaundice: week 1; breast-milk jaundice: after day 7.

🔄 Airway & Temp Traps

- **M**outh before **N**ose when suctioning.
- Bulb syringe: compress **BEFORE** inserting.
- Axillary temp — **never rectal**.
- No water submersion until cord falls off (10–14 d).

🧴 Normal Skin (Don't Report)

- **Milia:** white pinpoint papules on nose.
- **Dermal melanocytosis** (formerly Mongolian spots): bluish sacral — document.
- **Erythema toxicum:** "newborn rash."
- Lanugo, vernix, stork bite, peeling — normal.

🧠 Priority Pitfalls

- APGAR # does NOT drive resuscitation — **ABCs do**.
- Jittery baby → **glucose first**, not seizure precautions.
- Cold stress → **warm baby** first (prevents hypoglycemia/RDS).
- Vitamin K is **IM**, not SQ or PO.

🟦 7. Patient / Parent Education

😴 Safe Sleep

- **"Back to Sleep, Tummy to Play"** — reduces SIDS.
- Firm flat mattress, **no** pillows, bumpers, blankets, toys.
- Room-sharing (not bed-sharing) × 6 mo.
- Avoid overheating & smoke exposure.

🍼 Feeding

- Breast: on demand, **q2–3 hr**, 8–12×/day.
- Formula: **q3–4 hr**, 1.5–3 oz per feeding initially.
- 6–8 wet diapers/day after day 4; 3–4 stools/day.
- **No water**, juice, cereal, or honey before 6–12 mo.

🩹 Cord & Circumcision Care

- Cord: keep **clean & dry**, fold diaper below, sponge baths until detached.
- Report redness, foul odor, discharge, bleeding.
- Circumcision: yellow exudate is normal (do not remove); apply petroleum gauze.
- Report no void in 24 hr or bleeding > quarter-size.

🚗 Safety & Follow-Up

- **Rear-facing** car seat in back seat; harness at/below shoulders.
- Hand hygiene before handling; limit visitors.
- Call provider: fever > 100.4°F (38°C), poor feeding, lethargy, jaundice worsening.
- First well-baby visit within **3–5 days** of discharge.

🟨 8. Memory Boosters 🧠

A-P-G-A-R

- **A**ppearance — color
- **P**ulse — heart rate
- **G**rimace — reflex irritability
- **A**ctivity — muscle tone
- **R**espirations — effort / cry

"V-E-H"

- **V**itamin K — IM, clotting
- **E**rythromycin — eye prophylaxis
- **H**epatitis B — within 12–24 hr
- The 3 routine newborn medications.

"110 – 160 – 60"

- **HR 110–160** bpm
- **RR up to 60**/min
- Simple way to memorize newborn vitals.

Heat loss "E-C-C-R"

- **E**vaporation — wet skin → dry immediately
- **C**onduction — cold surface → warm blanket
- **C**onvection — cold air → keep away from drafts
- **R**adiation — cold wall/window → move away

"Caput CROSSES"

- **Caput** succedaneum **CROSSES** suture lines — soft-tissue edema, resolves fast.
- **Cephalohematoma** is **Contained** (does not cross) — blood, slower resolution, ↑ jaundice risk.

"TORCH"

- **T**oxoplasmosis
- **O**ther (syphilis, HIV, varicella, parvovirus B19)
- **R**ubella
- **C**ytomegalovirus
- **H**erpes simplex — congenital infections to assess.