

Lab Values Quick Reference

The typical adult ranges most tested on the NCLEX-RN, with what an abnormal result means for your client. For explanations and practice questions, see the full NCLEX lab values page.

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Typical adult values used in nursing education. Each laboratory sets its own reference ranges, so use the range your facility or the question gives you.

Electrolytes

Test	Typical adult range	Why it matters
Sodium (Na)	135–145 mEq/L	Low or high sodium changes neurologic status. Watch for confusion and seizures, and correct slowly.
Potassium (K)	3.5–5.0 mEq/L	Both low and high potassium cause dysrhythmias. Hyperkalemia: peaked T waves. Hypokalemia: U waves and higher risk of digoxin toxicity.
Chloride (Cl)	98–106 mEq/L	Usually moves with sodium and affects acid-base balance.
Calcium, total (Ca)	9.0–10.5 mg/dL	Low calcium: tetany and positive Chvostek and Trousseau signs. High calcium: muscle weakness and kidney stones.
Magnesium (Mg)	1.3–2.1 mEq/L	High magnesium (for example during magnesium sulfate therapy) depresses deep tendon reflexes and respirations.
Phosphorus (P)	3.0–4.5 mg/dL	Moves opposite to calcium. Often high in chronic kidney disease.

Complete blood count

Test	Typical adult range	Why it matters
Hemoglobin (Hgb)	Male 14–18 g/dL; female 12–16 g/dL	Low values mean anemia or bleeding. Check for tachycardia, pallor, and fatigue.
Hematocrit (Hct)	Male 42–52%; female 37–47%	Rises with dehydration and falls with bleeding or fluid overload.
White blood cells (WBC)	5,000–10,000/mm ³	High suggests infection or inflammation. Low means infection risk: use neutropenic precautions.
Platelets	150,000–400,000/mm ³	Below about 50,000/mm ³ , bleeding risk rises: avoid injections and use bleeding precautions.

Coagulation

Test	Typical adult range	Why it matters
Prothrombin time (PT)	11–12.5 seconds	Monitors warfarin therapy along with the INR.
INR	0.8–1.1 (no anticoagulant)	Warfarin target is usually 2–3, and higher for some mechanical heart valves. Vitamin K reverses warfarin.
aPTT	30–40 seconds	Monitors IV unfractionated heparin; a common target is 1.5–2.5 times control. Protamine reverses heparin.

Arterial blood gases

Test	Typical adult range	Why it matters
pH	7.35–7.45	Below 7.35 is acidosis; above 7.45 is alkalosis.
PaCO₂	35–45 mm Hg	The respiratory part. High PaCO ₂ with low pH is respiratory acidosis.
HCO₃[−] (bicarbonate)	22–26 mEq/L	The metabolic part. Low HCO ₃ [−] with low pH is metabolic acidosis.
PaO₂	80–100 mm Hg	Below 80 mm Hg is hypoxemia.
SaO₂	95–100%	Interpret with the client's baseline; some clients with COPD have a lower target.

Kidney function and glucose

Test	Typical adult range	Why it matters
BUN	10–20 mg/dL	Rises with dehydration, GI bleeding, and kidney injury.
Creatinine	0.5–1.2 mg/dL	The better marker of kidney function. Check it before nephrotoxic drugs and contrast.
Fasting blood glucose	70–99 mg/dL	Below 70 mg/dL is hypoglycemia: treat it right away. 126 mg/dL or higher on two tests suggests diabetes.
Hemoglobin A1C	Below 5.7%	5.7–6.4% is prediabetes and 6.5% or higher is diabetes. Shows average glucose over about 3 months.

Therapeutic drug levels

Test	Typical adult range	Why it matters
Digoxin	0.5–2.0 ng/mL	Many heart failure guidelines aim for the low end. Toxicity: nausea, vision changes, and bradycardia, made worse by low potassium.
Lithium	0.6–1.2 mEq/L (maintenance)	Narrow range. Dehydration and low sodium raise levels; above about 1.5 mEq/L signs of toxicity appear.
Phenytoin	10–20 mcg/mL	Toxicity causes nystagmus, ataxia, and confusion.

Other high-yield values

Test	Typical adult range	Why it matters
Albumin	3.5–5.0 g/dL	Low albumin points to poor nutrition or liver disease, and to edema.
BNP	Below 100 pg/mL	Higher values support a diagnosis of heart failure.
Troponin	Below the lab's 99th percentile cutoff	A rise and fall above the cutoff means myocardial injury, such as a heart attack. Ranges depend on the assay.
Total cholesterol	Below 200 mg/dL	Part of cardiovascular risk assessment along with LDL and HDL.
Urine specific gravity	1.005–1.030	High suggests dehydration; low suggests overhydration or diabetes insipidus.

How to study these

- Learn the direction first: what high and low each mean for the client and what you would do.
- Pair labs with drugs: potassium with digoxin and diuretics, INR with warfarin, aPTT with heparin, glucose with insulin.
- Know the critical ones cold: potassium, sodium, glucose, platelets, and the ABG values.

Sources

1. Pagana KD, Pagana TJ, Pagana TN. Mosby's Manual of Diagnostic and Laboratory Tests.
2. MedlinePlus Medical Tests (U.S. National Library of Medicine).
3. American Diabetes Association. Standards of Care in Diabetes (A1C and glucose).
4. FDA prescribing information (DailyMed) for digoxin, lithium, phenytoin, warfarin, and heparin.

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