

Lab Results Quick Reference

Common blood test values with normal ranges — explained in plain English

COMPLETE BLOOD COUNT (CBC)

- Hemoglobin: 12.0–16.0 g/dL (women) | 13.5–17.5 g/dL (men)

Low = possible anemia; High = possible dehydration or other causes

- Hematocrit: 36–46% (women) | 41–53% (men)
- White Blood Cells (WBC): $4.5\text{--}11.0 \times 10^3/\mu\text{L}$

High = possible infection/inflammation; Low = possible immune issue

- Platelets: $150\text{--}400 \times 10^3/\mu\text{L}$
- MCV (Mean Corpuscular Volume): 80–100 fL

Low MCV with low Hgb often points to iron deficiency

THYROID PANEL

- TSH: 0.4–4.0 mIU/L

High TSH = underactive thyroid (hypothyroidism)

Low TSH = overactive thyroid (hyperthyroidism)

- Free T4: 0.8–1.8 ng/dL
- Free T3: 2.3–4.2 pg/mL
- TPO Antibodies: <35 IU/mL (elevated = possible autoimmune thyroid disease)

LIPID PANEL (CHOLESTEROL)

- Total Cholesterol: <200 mg/dL desirable
- LDL (bad cholesterol): <100 mg/dL optimal; <130 near-optimal
- HDL (good cholesterol): >60 mg/dL protective; <40 mg/dL low (risk factor)
- Triglycerides: <150 mg/dL normal; 150–199 borderline high

Note: Always fasting 9–12 hours before a lipid panel for accurate results.

BLOOD SUGAR (GLUCOSE & A1C)

- Fasting Glucose: 70–99 mg/dL (normal)
- 100–125 = prediabetes; ≥ 126 on two occasions = diabetes
- HbA1c: <5.7% (normal); 5.7–6.4% prediabetes; $\geq 6.5\%$ diabetes
 - Always fast at least 8 hours before a fasting glucose test

IRON & VITAMINS

- Ferritin: 12–150 ng/mL (women) | 12–300 ng/mL (men)

Low ferritin = early iron deficiency (often before anemia shows on CBC)

- Serum Iron: 60–170 mcg/dL
- Vitamin D (25-OH): 20–50 ng/mL (many clinicians prefer 40–60 ng/mL)
- Vitamin B12: 200–900 pg/mL
- Folate: >5.4 ng/mL

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KIDNEY & LIVER FUNCTION

- Creatinine: 0.6–1.2 mg/dL (women) | 0.7–1.3 mg/dL (men)
- BUN (Blood Urea Nitrogen): 7–20 mg/dL
- eGFR: >60 mL/min/1.73m² (normal kidney filtration)
- ALT (liver enzyme): 7–40 U/L
- AST (liver enzyme): 10–40 U/L
- Alkaline Phosphatase: 44–147 U/L

IMPORTANT REMINDERS

- Reference ranges vary between labs — always use the range on YOUR report
- A single out-of-range value is rarely a diagnosis on its own
- Trends over time matter more than a single snapshot
- Bring flagged results to your doctor with your symptoms and history
- This guide is for educational purposes only — not medical advice