Lab Values Chart

Disclaimer: This lab values chart is intended for use by healthcare practitioners. Please note that units and reference ranges may vary based on the clinic or equipment used. It is essential to consult with relevant clinical guidelines and laboratory standards when interpreting lab results. Additionally, unique individual patient factors must be considered to ensure accurate assessment and care.

Hematology			
Absolute neutrophil count	2000–8250/µL	**Hematocrit**	*Female:* 37%–47% *Male:* 42%–50%
Activated partial thromboplastin time	25–35 seconds	**Hemoglobin, blood**	*Female:* 12–16 g/dL *Male:* 14–18 g/dL
Bleeding time	<8 minutes	**Leukocyte alkaline phosphatase**	16.5 ± 5.1 mg/dL of leukocytes
Erythrocyte count	4.2–5.9 million/µL	**Leukocyte count**	4000–11,000/µL
Erythrocyte sedimentation rate	*Female:* 0–20 mm/hr *Male:* 0–15 mm/hr	**Mean corpuscular hemoglobin**	28–32 pg
Erythropoietin	4–26 mU/mL	**Mean corpuscular hemoglobin concentration**	33–36 g/dL
D-Dimer	<0.5 µg/mL	**Mean corpuscular volume**	80–98 fL
Ferritin, serum	*Female:* 24–307 ng/mL *Male:* 24–336 ng/mL	**Platelet count**	150,000–450,000/µL
Haptoglobin, serum	83–267 mg/dL	**Reticulocyte count**	0.5%–1.5% of red cells
Blood, plasma, and serum chemistry studies			
Albumin, serum	3.5–5.5 g/dL	**Glucose, plasma**	70–99 mg/dL
Alkaline phosphatase, serum	30–120 U/L	**γ-Glutamyltransferase, serum (gamma-glutamyl transpeptidase)**	*Female:* 8–40 U/L *Male:* 9–50 U/L
α-Fetoprotein, serum	<10 ng/mL	**Homocysteine, plasma**	5–15 µmol/L
Aminotransferase, serum alanine (ALT, SGPT)	10–40 U/L	**Immunoglobulins**	*IgA* 90–325 mg/dL *IgE* <380 IU/mL *IgG* 800–1500 mg/dL *IgM* 45–150 mg/dL
Aminotransferase, serum aspartate (AST, SGOT)	10–40 U/L	**Iron, serum**	50–150 µg/dL

Blood, plasma, and serum chemistry studies			
Ammonia, plasma	40–70 µg/dL	**Lactate dehydrogenase, serum**	80–225 U/L
Amylase, serum	25–125 U/L (80–180 [Somogyi] units/dL)	**Lactic acid, serum**	6–19 mg/dL (0.7–2.1 mmol/L)
Bicarbonate, serum	23–28 mEq/L	**Lipase, serum**	10–140 U/L
Bilirubin, serum	*Total* 0.3–1.0 mg/dL *Direct* 0.1–0.3 mg/dL *Indirect* 0.2–0.7 mg/dL	**Magnesium, serum**	1.6–2.6 mg/dL
Blood gases, arterial (ambient air)	pH 7.38–7.44	**Methylmalonic acid, serum**	0.00–0.40 µmol/L
Blood urea nitrogen	8–20 mg/dL	**Osmolality, serum**	275–295 mOsm/kg H2O
C-reactive protein	≤0.8 mg/dL	**Phosphatase, alkaline, serum**	30–120 U/L
Calcium, serum	8.6–10.2 mg/dL	**Phosphorus, serum**	3.0–4.5 mg/dL
Carbon dioxide, serum	23–30 mEq/L	**Potassium, serum**	3.5–5.0 mEq/L
Chloride, serum	98–106 mEq/L	**Prostate-specific antigen, serum**	ng/mL; no specific normal or abnormal level
Cholesterol, serum	*Desirable* <200 mg/dL *Borderline-high* 200–239 mg/dL *High* >239 mg/dL	**Rheumatoid factor (nephelometry)**	<24 IU/mL
Complement, serum	*C3* 100–233 mg/dL *C4* 14–48 mg/dL *CH50* 110–190 units/mL	**Sodium, serum**	136–145 mEq/L
Creatine kinase, serum	*Female:* 30–135 U/L *Male:* 55–170 U/L	**Transferrin saturation**	20%–50%
Creatinine, serum	*Female:* 0.50–1.10 mg/dL *Male:* 0.70–1.30 mg/dL	**Triglycerides, serum**	*Optimal* <100 mg/dL *Normal* <150 mg/dL *Borderline-high* 150–199 mg/dL *High* 200–499 mg/dL
Electrolytes, serum	*Sodium* 136–145 mEq/L *Potassium* 3.5–5.0 mEq/L *Chloride* 98–106 mEq/L *Bicarbonate* 23–28 mEq/L	**Troponins, serum**	*Troponin I, cardiac, serum* ≤0.04 ng/mL *Troponin T, cardiac, serum* ≤0.01 ng/mL
Fibrinogen, plasma	200–400 mg/dL	**Urea nitrogen, blood**	8–20 mg/dL
Folate, red cell	150–450 ng/mL of packed cells	**Uric acid, serum**	3.0–7.0 mg/dL
Folate, serum	1.8–9.0 ng/mL	**Vitamin B12, serum**	200–800 pg/mL

Endocrine			
Adrenocorticotropic hormone (ACTH), plasma	10–60 pg/mL	**Norepinephrine, plasma**	*Supine* 70–750 pg/mL *Standing* 200–1700 pg/mL
Aldosterone, plasma	*Supine or seated* ≤10 ng/dL *Standing* <21 ng/dL *Low-sodium diet (supine)* ≤30 ng/dL	**Parathyroid hormone, serum**	*C -terminal* 150–350 pg/mL *Intact* 10–65 pg/mL
Aldosterone, urine	5–19 µg/24 hr	**Progesterone, serum**	*Female, follicular* 0.02–0.9 ng/mL *Female, luteal* 2–30 ng/mL *Male (adult)* 0.12–0.3 ng/mL
Catecholamines	*Dopamine* 65–400 µg/24 hr *Epinephrine, plasma (supine)* <50 pg/mL *Norepinephrine, plasma (supine)* 112–658 pg/mL *Total* 26–121 µg/24 hr	**Prolactin, serum**	<20 ng/mL
Cortisol, free, urine	4–50 µg/24 hr	**Testosterone, serum**	*Female:* 18–54 ng/dL *Male:* 291–1100 ng/dL
Dehydroepiandrosterone sulfate (DHEA), serum	*Female:* 44–332 µg/dL *Male:* 89–457 µg/dL	**Thyroid iodine (123I) uptake**	5%–30% of administered dose at 24 hours
Epinephrine, plasma (supine)	<110 pg/mL	**Thyroid-stimulating hormone (TSH)**	0.5–4.0 µU/mL (0.5–4.0 mU/L)
Estradiol, serum	*Male* 20–50 pg/mL *Female, follicular* 10–180 pg/mL *Mid-cycle peak* 100–300 pg/mL *Luteal* 40–200 pg/mL *Postmenopausal* <10 pg/mL	**Thyroxine (T4), serum**	*Total* 5–12 µg/dL *Free* 0.8–1.8 ng/dL
Follicle-stimulating hormone, serum	*Female, follicular/luteal* 2–9 mIU/mL (2–9 U/L) *Female, mid-cycle peak* 4–22 mIU/mL (4–22 U/L) *Female, postmenopausal* >30 mIU/mL (>30 U/L) *Male (adult)* 1–7 mIU/mL (1–7 U/L)	**Triiodothyronine, free (T3)**	2.3–4.2 pg/mL

Endocrine			
Growth hormone, serum	*At rest* <5 ng/mL *Response to provocative stimuli* >7 ng/mL	**Triiodothyronine, reverse (T3)**	20–40 ng/dL
Luteinizing hormone, serum	*Female, follicular/luteal* 1–12 mIU/mL (1–12 U/L) *Female, mid-cycle peak* 9–80 mIU/mL (9–80 U/L) *Female, postmenopausal* >30 mIU/mL (>30 U/L) *Male (adult)* 2–9 mIU/mL (2–9 U/L)	**Triiodothyronine, total (T3)**	80–180 ng/dL
Metanephrine, 24-hour urine	<900 µg/24 hr	**Vanillylmandelic acid, urine**	<9 mg/24 hr
Urine			
Albumin-to-creatinine ratio, urine	<30 mg/g	**5-Hydroxyindoleacetic acid (5-HIAA)**	2–9 mg/24 hr
Calcium	*Female:* <250 mg/24 hr *Male:* <300 mg/24 hr	**Sodium, serum**	136–145 mEq/L
Creatinine	*Female:* 0–100 mg/24 hr *Male:* 0–40 mg/24 hr	**Uric acid, urine**	250–750 mg/24 hr

American Board of Internal Medicine. (2024, January). *ABIM laboratory test references - January 2024.* https://www.abim.org/Media/bfijryql/laboratory-reference-ranges.pdf