

Blood Serum Chemistry - Normal Values

Constituent	Typical Normal Range
Electrolytes	
Bicarbonate (total)	18-30 mEq/L
Calcium (total)	9-11 mg/dL; 4.5-5.5 mEq/L
Chloride	98-106 mEq/L
Magnesium	1.8-3.6 mg/dL; 1.5-3.0 mEq/L
Phosphorus	3-4.5 mg/dL; 1.8-2.3 mEq/L (adults) 4-6.5 mg/dL; 2.3-3.8 mEq/L (children)
Potassium	3.5-5.5 mEq/L
Sodium	135-147 mEq/L
Enzymes*	
Alkaline Phosphatase	50-160 U/L
Amylase	53-123 U/L
Creatine Kinase (CK, CPK)	38-174 U/L (males) 96-140 U/L (females)
Lipase	10-150 U/L
ALT (GPT)	0-30 U/L
AST (GOT)	0-40 U/L
Other	
Albumin	3.5-5.5 g/dL
Bilirubin	<1.0 mg/dL total <0.4 mg/dL direct (glucuronide- or sulfate-conjugated)
Cholesterol	<225 mg/dL (depends on age)
Creatinine	1.0-2.0 mg/dL
Globulin	1.5-3.5 g/dL
Glucose	80-120 mg/dL
Protein (Total)	6.3-8.0 g/dL
Triglycerides	40-200 mg/dL
Urea	20-40 mg/dL
Uric Acid	2.0-4.0 mg/dL

Notes: The normal ranges in each laboratory depend on the local population, test methodology and conditions of assay, units, and a variety of additional circumstances. * The units for enzyme activities are especially sensitive to such circumstances. The normal ranges above are typical, but the normal ranges established for each laboratory should be used for most purposes. The units g/dL (grams per deciliter) and mg/dL are sometimes expressed as g% and mg%, or g/100 mL and mg/100 mL.

Blood Hematology - Normal Values

Measure (abbreviations, synonyms)	Typical Normal Range	
Whole Blood		
Hematocrit (HCT; packed cell volume)	38-54% (men) 36-47% (women)	
Hemoglobin (Hb)	14-18 g/dL (men) 12-16 g/dL (women) 12-14 g/dL (children) 14.5-24.5 g/dL (newborns)	
Complete Blood Count (CBC)		
Erythrocytes (Red blood cells; RBCs)	per mm³ 4.5-6 x10 ⁴ (men) 4.3-5.5x10 ⁴ (women)	percentage
Reticulocytes		0-1% of RBCs
Leukocytes (total)	5000-10000	
Myelocytes	0	0% of leukocytes
Juvenile neutrophils	0-100	0-1%
Band neutrophils	0-500	0-5%
Segmented neutrophils	2500-6000	40-60%
Lymphocytes	1000-4000	20-40%
Eosinophils	50-300	0-5%
Basophils	0-100	0-1%
Monocytes	200-800	4-8%
Platelets	200,000-500,000	
RBC Measurements		
Diameter	5.5-8.8 μm	
Mean corpuscular volume (MCV)	80-94 μm ³	
Mean corpuscular hemoglobin (MCH)	27-32 pg	
Mean corpuscular hemoglobin concentration	33.4-35.5 g/dL	
Miscellaneous		
Prothrombin time (PT)	10-20 seconds	0.8-1.2 INR (International Normalized Ratio)
Activated Partial Thromboplastin Time (aPTT)	30-45 seconds	

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