

WhatDoesMyBloodTestMean.com

Name (and Abbreviations)	Normal Ranges <i>Ranges vary by lab so be sure to check the ranges on your report.</i>	What it is or does.
Comprehensive Metabolic Panel (CMP)		
Alkaline Phosphatase (ALP)	44 - 147 IU/L	Enzyme found throughout your body that is particularly high in the liver and bones.
Alanine Aminotransferase (ALT or SGPT)	Men 5 - 65 IU/L Women 5 - 35 IU/L	Enzyme found mostly in the liver and kidneys.
Aspartate Aminotransferase (AST or SGOT)	10 - 40 IU/L	Enzyme primarily found in the liver.
Bilirubin, Total	0.2 - 1.9 mg/dL	It's primarily a waste product from dying red blood cells. It's also found in the spleen, liver and bone marrow.
Calcium	8.5 - 10.9 mg/dL	Mineral found primarily in the bones.
Carbon Dioxide	20 - 33 mmol/L	Gaseous waste produced from metabolism.
Chloride	96 - 110 mmol/L	An electrolyte controlled by the kidneys.
Glucose (Fasting)	65 - 99 mg/dL	Sugar in the blood and your body's chief source of energy.
Potassium	3.5 - 5.3 mmol/L	A mineral and electrolyte controlled by the kidneys.
Protein, Total	6.2 - 8.3 g/dL	Chains of amino acids essential for cell growth and repairs.
Sodium	135 - 146 mmol/L	A mineral and electrolyte regulated by the kidney and adrenal glands to keep your body in balance.

Items Compared

Albumin	3.6 - 5.1 g/dL	Protein that protects tissues from free radicals, regulates water in tissues and binds to waste products. Transports vitamins, minerals and hormones.
Globulin	2.1 - 3.7 g/dL	Antibody protein that helps fight disease produced by white blood cells.
Albumin / Globulin Ratio	1.0 - 2.1 (calc)	
Blood Urea Nitrogen (BUN)	6 - 22 mg/dL	Waste product from protein breakdown in the liver.
Creatinine	0.8 - 1.4 mg/dL	Waste product produced by muscle breakdown.
BUN / Creatinine Ratio	10:1 to 20:1	
Estimated Glomerular Filtration Rate (eGFR) African American	84-120 mil/min <i>Results reported when below 60 mil/min</i>	Monitors kidney status or function.
Estimated Glomerular Filtration Rate (eGFR) Non-African American	72-120 mil/min <i>Results reported when below 60 mil/min</i>	Monitors kidney status or function.
<i>eGFR is calculated differently for African Americans because of increased muscle mass. The eGFR test is not considered reliable if you're younger than 18, older than 70, pregnant, very overweight, very muscular or have another serious illness.</i>		

Complete Blood Count (CBC)

White Blood Cell Count (WBC)	4,500 - 10,000 cells/mcL	Defends against infection by killing bacteria.
Red Blood Cell Count (RBC)	Men 4.7 - 6.1 Mill/mcL Women 4.2 - 5.4 Mill/mcL	Transports oxygen throughout the body.
Hemoglobin	Men 13.2 - 17.2 g/dL Women 12.1 - 15.1 g/dL	Primary transporter of oxygen and carbon in the blood.
Hematocrit	Men 40.7% - 50.3% Women 36.1% - 44.3%	Percentage of the blood volume occupied by red blood cells. Women have slightly lower hematocrit percentages than men because women lose some blood each month during their menstrual cycle.
Mean Corpuscular Volume (MCV)	80 - 100 fL	This measures the average size of red blood cells and their volume.
Mean Corpuscular Hemoglobin (MCH)	27 - 33 pg	This measures how much hemoglobin is in red blood cells.
Mean Corpuscular Hemoglobin Content (MCHC)	32 - 36 g/dL	This measures the volume and character of the hemoglobin.
Red cell Distribution Width (RDW)	11 - 15 %	This measures the sizes and shapes of the red cells.
Platelet Count (PLT or Thrombocyte Count)	140 - 400 Thous/mcL	These plug the holes in blood vessels (clotting).

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Low numbers may mean...

High numbers may mean...

Do not use this to diagnose yourself! This chart is for informational purposes ONLY. Conditions not on this list may be the cause. See your doctor for a proper reading of any and all medical tests.

Deficiency in zinc, hypoparathyroidism, hypophosphatasia, malnutrition and pernicious anemia. Low reading can occur if collection tube had EDTA preservative in it.

Possible pyridoxine (Vitamin B6) or magnesium deficiency.

Possible pyridoxine (Vitamin B6) deficiency or liver disease.

Typically not a concern.

Low dietary calcium, magnesium or Vitamin D. Diarrhea, malnutrition, neurological disorders, pancreatitis, low levels of protein or albumin in the blood.

Decreased ventilation, dehydration, diarrhea, increased acidity from uncontrolled diabetes, exercise, kidney disease, metabolic disorders or severe infection.

Chronic lung diseases, colitis, emphysema and vomiting.

Adrenal insufficiency, excess insulin, too much exercise, hypoglycemia, liver disease or pancreas problems.

Alcoholism, blood pressure medications or excessive use of water pills, corticosteroid use, diarrhea, insulin treatments or kidney problems.

Decreased production, intestinal malabsorption, kidney or liver disease and malnutrition.

Adrenal insufficiency, too much water intake, diuretics or blood pressure medications, diarrhea, heart or kidney failure.

Bone, liver or bile duct disease. Cancer of the liver or some cancers that spread to the bone. Drugs may cause high levels. Paget's disease.

Too much acetaminophen, alcohol or hepatitis.

Too much acetaminophen, alcohol, bloodstream infections, drugs processed through the liver, intramuscular injections, liver disease, skeletal muscle diseases and muscle injury. Ruptured red cells from improper handling of the blood can also cause high numbers.

Hepatitis, liver disease, bile duct disorder and red cell destruction. Can be falsely elevated when you have too much fat in the bloodstream.

Alcoholism, some cancers, exercise, hyperparathyroidism, kidney disease, medications like thiazide-type diuretics, excess calcium supplements, too much Vitamin D, too much fat, protein or albumin in the blood.

COPD or lung diseases. Can also be elevated by increased ventilation.

Acidosis, cushing's syndrome, dehydration, hyperventilation or kidney infection.

Diabetes, prediabetes, hyperglycemia, hyperthyroidism, liver disease, pancreatitis or systemic steroids. Can be elevated if you eat before the test.

Addison's disease, cardiac arrhythmia, dehydration, kidney problems, potassium supplements and various forms of acidosis.

Dehydration, kidney or liver disease, multiple myeloma and roundworms. False elevations can be caused by high concentrations of glucose, urea, sodium, chloride or lipids.

Cushing's syndrome, dehydration, diabetes insipidus, faulty water softener dumping salt, high salt consumption from foods, kidney dysfunction,

Cancer, heart disease, kidney or liver disease, malnutrition, pancreatic atrophy and parasites.	Dehydration, diabetes insipidus or infection. High elevations can happen when red blood cells are damaged in the sample or from fat in the blood.	
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Autoimmune diseases, cirrhosis or kidney disease.	Genetic deficiencies and some leukemias.	
Anorexia, fasting, malnutrition from poor diets, liver damage or pregnancy.	Dehydration, heart failure, kidney or liver disease, leukemia, pancreatitis or too much exercise.	
Anorexia or malnutrition, liver disease, kidney damage or pregnancy.	Dehydration, some drugs, hemorrhagic shock, too much exercise, kidney damage, obstruction or rupture or urine carrying parts and pancreatitis.	
Kidney or liver disease, malnutrition and sickle cell anemia.	Blood in intestinal tract, dehydration, diabetes or high blood pressure and kidney obstruction.	
Kidney damage.	Diabetes or high blood pressure may hinder kidneys from filtering microalbumin and they're leaking into urine.	
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Autoimmune diseases, bone marrow failure, chemotherapy or viral infections.	Cancer, infection, inflammation, intense exercise, steroid use and stress.	
Anemia, bone marrow damage, cancers, fluid overload in pregnancy, folate deficiency and hemorrhages.	Dehydration, pulmonary or congenital heart disease, renal problems or as the result of being at a higher altitude.	
Bone marrow damage; folate, iron or vitamin B12 deficiency.	Dehydration, pulmonary or congenital heart disease, renal problems or as the result of being at a higher altitude.	
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Anemia or rheumatoid arthritis.	Anemia, B12 or folate deficiency.	
Iron deficiency.	Folate or Vitamin B12 deficiency and recent blood loss.	
Iron deficiency and reticulocytes.	In vitro or in vivo hemolysis and spherocytosis.	
Macrocytic anemia and microcytic anemia.	Anemia, folic acid or B12 deficiency and liver disease.	
Chemotherapy, drugs like heparin, leukemia, lupus, pernicious anemia and viral infections. In women platelet counts decrease just before menstruation.	Cancer, cigarette smoking, infections, leukemia and strenuous activity. Higher numbers may also be seen when the spleen is removed.	