

UNDERSTANDING YOUR CBC/CHEMISTRY PROFILE RESULTS

The CBC/Chemistry Profile is one of the most common and comprehensive blood panels available.

It provides your health practitioner with important information for evaluating your health status.

Below is a guide to help you better understand the components of this blood test.

LAST NAME, FIRST NAME, ID # 12345

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL
Glucose, Serum	96		mg/dL	65-99
Uric Acid, Serum	6.3		mg/dL	2.4-8.2
BUN	15		mg/dL	5-26
Creatinine, Serum	0.95		mg/dL	0.57-1.00
Glom Filtr Rate, Est	59	Low	mL/min/1.73	>59
If African American	>59		mL/min/1.73	>59
BUN/Creatinine Ratio	16			8-27
Sodium, Serum	141		mmol/L	135-145
Potassium, Serum	3.8		mmol/L	3.5-5.2
Chloride, Serum	103		mmol/L	97-108
Carbon Dioxide, Total	27		mmol/L	20-32
Calcium, Serum	9.1		mg/dL	8.5-10.6
Phosphorus, Serum	3.3		mg/dL	2.5-4.5
Protein, Total, Serum	7.3		g/dL	6.0-8.5
Albumin, Serum	4.3		g/dL	3.5-5.5
Globulin, Total	3.0		g/dL	1.5-4.5
Albumin/Globulin Ratio	1.4			1.1-2.5
Bilirubin, Total	0.6		mg/dL	0.1-1.2
Alkaline Phosphatase, S	86		IU/L	25-150
LDH	179		IU/L	100-250
AST	36		IU/L	0-40
ALT	38		IU/L	0-40
Iron, Serum	47		ug/dL	35-155
Cholesterol, Total	208	High	mg/dL	100-199
Triglycerides	87		mg/dL	0-149
HDL Cholesterol	66		mg/dL	>39
VLDL Cholesterol Calc	17		mg/dL	5-40
LDL Cholesterol Calc	125	High	mg/dL	0-99
T. Chol/HDL Ratio	3.2		ratio units	0.0-4.4
Estimated CHD Risk	<0.5		times avg.	0.0-1.0
WBC	6.4		x10E3/uL	4.0-10.5
RBC	4.56		x10E6/uL	3.80-5.10
Hemoglobin	14		g/dL	11.5-15.0
Hematocrit	41.2		%	34-44

MCV	91	fL	80-98
MCH	30.7	pg	27-34
MCHC	34	g/dL	32-36
RDW	13.3	%	11.7-15.0
Platelets	181	x10E3/uL	140-415
Neutrophils	62	%	40-74
Lymphs	23	%	14-46
Monocytes	9	%	4-13
Eos	5	%	0-7
Basos	1	%	0-3
Neutrophils (Absolute)	4.0	x10E3/uL	1.8-7.8
Lymphs (Absolute)	1.5	x10E3/uL	0.7-4.5
Monocytes (Absolute)	0.6	x10E3/uL	0.1-1.0
Eos (Absolute)	0.3	x10E3/uL	0.0-0.4
Baso (Absolute)	0.1	x10E3/uL	0.0-0.2

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1. BLOOD SUGAR

Glucose, fasting: This test directly measures glucose levels and is commonly used in the evaluation of diabetes.

2. KIDNEY FUNCTION

Uric acid: This test is used in the evaluation of gout, recurring kidney stones, and metabolic syndrome.

BUN/Creatinine ratio: This test is used to diagnose impaired renal function.

BUN (blood urea nitrogen): This test is used to measure kidney and liver function.

Creatinine: This is the primary test used to evaluate kidney function. It measures the rate of filtered fluid through the kidneys.

Glom Filt Rate, est: This is the estimated rate of fluid flow through the kidney and compliments the serum creatinine.

3. ELECTROLYTES

Sodium: This routine test is used to evaluate and monitor fluid and electrolyte balance and therapy.

Potassium: This routine test is used to evaluate and monitor electrolyte balance and is especially important for cardiac health.

Chloride: This is an important electrolyte for maintaining the body's acid/base balance.

Carbon Dioxide: This test measures your bicarbonate level and is used to evaluate kidney function.

Calcium: This test is used to evaluate parathyroid function and calcium metabolism.

Phosphorus: This test is used to measure serum phosphorus. An imbalance could indicate the possibility of any number of conditions including loss of appetite, anemia, muscle weakness, and bone pain.

4. PROTEINS AND LIVER FUNCTION

Protein/Albumin/Globulin: These proteins are produced by the liver and are used to assist in the detection of many diseases that affect blood proteins as a whole or one single fraction of protein.

Albumin/Globulin Ratio: This test is used to evaluate renal disease and other chronic diseases.

Bilirubin: This test is used to evaluate liver function. Increases can be seen in hepatitis, drug use, and jaundice.

Alkaline Phosphatase: This test is used to detect and monitor liver and/or bone disease.

LDH (Lactic dehydrogenase): This test measures the intracellular enzyme LDH which, when present in the blood, can support the detection of injury or disease.

AST (SGOT): This test is primarily used to evaluate liver disease.

ALT (SGPT): This test is primarily used to evaluate liver disease.

Iron: This test is used to evaluate many diseases including iron-deficiency anemia and hemochromatosis.

5. LIPID PROFILE

Cholesterol: This test is used to determine the risk of coronary heart disease (CHD) and dyslipidemia.

Triglycerides: This test is used to identify the risk of developing coronary heart disease or if fat metabolism disorders are suspected.

HDL Cholesterol: This test measures high-density lipoprotein and is used to predict heart disease.

VLDL Cholesterol (calc): VLDL cholesterol is a minor lipid component of very low-density lipoprotein. VLDL is calculated in a lipid profile in order to calculate LDL cholesterol. VLDL levels have been correlated with accelerated rates of atherosclerosis.

LDL Cholesterol (calc): This test is a calculation of low-density lipoprotein and is used to predict heart disease.

Total Cholesterol/HDL Ratio: The total cholesterol to HDL cholesterol ratio is a number that is helpful in predicting an individual's risk of developing atherosclerosis. The number is obtained by dividing the total cholesterol value by the value of the HDL cholesterol. (High ratios indicate higher risks of heart attacks, low ratios indicate lower risk.)

Estimated CHD Risk: Estimated risk for developing coronary heart disease based on dividing total cholesterol by HDL.

6. COMPLETE BLOOD COUNT (CBC)

With platelets and differential: This is a series of tests of the peripheral blood which provides a variety of information about the blood components. This series includes the following tests:

White blood cell count: The white blood cell count (WBC) measures the number of white blood cells. Changes in white blood cell count may indicate infection, inflammation, stress, or tissue damage.

Red blood cell count: Measures the number of red blood cells (RBCs). A low RBC count may indicate anemia. Fatigue, fainting, shortness of breath, dizziness, and/or altered mental status can also indicate low RBCs. Disturbed vision, headache, and flushing may be present with increased numbers of RBCs.

Hemoglobin: This is the iron-containing oxygen-transport protein in the red blood cells. This aids in the diagnosis of various forms of anemia.

Hematocrit: This test aids in the diagnosis and treatment of anemia. It can also be used as a tool to evaluate dehydration.

MCV (Mean corpuscular volume) is a measure of the average red blood cell volume and is used to evaluate anemia.

MCH (Mean corpuscular hemoglobin) is the average mass of hemoglobin per red blood cell in a sample of blood and is used to evaluate anemia.

MCHC (Mean corpuscular hemoglobin concentration) is a measure of the concentration of hemoglobin in a given volume of packed red blood cells and is used to evaluate anemia.

RDW (Red blood cell distribution width) is a measure of the variation of red blood cell width and is used to evaluate anemia.

Platelets: Measures the number of platelets. Platelets are important for clotting. Too many can cause a blood clot to form while too few can result in excessive bleeding.

Differential count: The white blood cell differential assesses the ability of the body to respond to and eliminate infection. It also detects the severity of allergic and drug reactions plus the response to parasitic and other types of infection. It is essential in evaluating the reaction to viral infections and response to chemotherapy. It can also identify various stages of leukemia.

The differentiation of white blood cells is expressed as a percentage and the actual number is counted in a given volume.

Neutrophils are the most common white blood cells. Neutrophils may increase during bacterial or fungal infections.

Lymphocytes are responsible for the immune response and regulation of antibody production. They are increased in some leukemias.

Monocytes ingest foreign cells. These may increase in some leukemias (different types from those that increase the lymphocytes).

Eosinophils increase during allergic attacks and some parasitic infections.

Basophils control inflammation and damage to the body. They increase in some blood diseases and poisoning.

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