COMPLETE BLOOD COUNT (CBC)

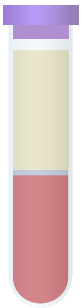
A complete blood count "CBC" is a lab test requiring a blood sample that provides information about the types and numbers of cells in the blood.

Types of Cells in the Blood

	General info and role of the cell	Lifespan
White blood cells (leukocytes) 	• Fight infections by attacking bacteria, viruses and germs that invade the body	• 13–20 days • Destroyed in the lymphatic system
Red blood cells 	• Carry hemoglobin that binds to oxygen • Carry O_2 to tissue and CO_2 to lungs to be exhaled	• 120 days
Platelets	• 20% of the diameter of a RBC • Principal function: prevent bleeding	• 8–9 days

LEARNING TIP:

A CBC is obtained via a blood sample in a purple top tube.



~55% Plasma volume

< 1% Buffy coat (WBC and platelets)

~45% Hematocrit (RBC)

Type of cell	Reference ranges (Ranges can vary depending on the source.)	Decreased can indicate	Increased can indicate
WBC	3.4–9.6 billion cells/L	• Infection • Liver or spleen conditions • Cancer	• Infection • Allergic reactions • Autoimmune conditions
RBC	3.92–5.65 trillion cells/L	• Hemorrhage • Anemia • Cancer • Malnutrition	• Dehydration • Heart disease • Lung disease • Polycythemia vera
Hemoglobin (HgB)	11.6–16.6 g/dL	Any abnormalities in HbG can indicate concerns in the blood's oxygen-carrying capacity.	
Hematocrit (Hct)	35.5–48.6%	• Low levels of iron • Heavy menses • Anemia	• Polycythemia vera • Dehydration • Shock
Platelet count	135–371 billion/L	Higher risk for bleeding	Higher risk for blood clots

NOTES