

Complete Blood Count (CBC):

The CBC typically has several parameters that are created from an automated cell counter. These are the most relevant:

- **White Blood Count (WBC)** is the number of white cells. High WBC can be a sign of infection, or certain types of leukemia. Low white counts can be a sign of bone marrow diseases or an enlarged spleen and, in some cases, is also found in HIV infection. (Note: The vast majority of low WBC counts in our population is **NOT** HIV-related.)
- **Hemoglobin (Hgb) and Hematocrit (Hct)** : The hemoglobin is the amount of oxygen-carrying protein contained within the red blood cells. The hematocrit is the percentage of the blood volume occupied by red blood cells. In most labs, the Hgb is actually measured, while the Hct is computed using the RBC measurement and the MCV measurement. Thus the Hgb measurement is generally more reliable. Low Hgb or Hct suggest an anemia, which can be due to nutritional deficiencies, blood loss, destruction of blood cells internally, or failure to produce blood in the bone marrow. High Hgb can occur due to lung disease, living at high altitude, or excessive bone marrow production of blood cells.
- **Mean Corpuscular Volume (MCV)**: This helps diagnose the cause of an anemia. Low values suggest iron deficiency; high values suggest either deficiencies of B12 or Folate, ineffective production in the bone marrow, or recent blood loss with replacement by newer (and larger) cells from the bone marrow.
- **Platelet Count (PLT)**: This is the number of cells that plug up holes in your blood vessels and prevent bleeding. High values can occur with bleeding, cigarette smoking or excess production by the bone marrow. Low values can occur from premature destruction states such as Immune Thrombocytopenia (ITP), acute blood loss, drug effects (such as heparin), infections with sepsis, entrapment of platelets in an enlarged spleen, or bone marrow failure from diseases such as myelofibrosis or leukemia. Low platelets also can occur from clumping of the platelets in a lavender-colored tube. In that case, you may need to repeat the test using a green-top tube.