

# Abnormal Blood Chemistry

## What is it?

- **Complete Blood Count (CBC)**- has several parameters that are created from an automated cell counter
- **White Blood Count (WBC)**- the number of white cells
  - **High WBC**- sign of infection, increased with certain types of leukemia
  - **Low WBC**- sign of bone marrow disease, enlarged spleen, HIV infection in some cases
- **Hemoglobin (Hgb)**- amount of oxygen carrying protein in the red blood cells (RBC)
  - **High Hgb**- lung disease, excessive bone marrow production of blood cells, living at a high altitude
  - **Hematocrit (Hct)**- percentage of the blood volume occupied by red blood cells (RBC)
  - **Low Hgb and Hct**- suggest anemia
- **Mean Corpuscular Volume (MCV)**- helps to diagnosis a cause of an anemia
  - **High Levels**- ineffective production in the bone marrow, deficiency of Folate or B12, recent blood loss with replacement by larger and newer cells from the bone marrow
  - **Low Levels**- suggest iron (Fe) deficiency
- **Platelet Count (PLT)**- number of cells that plug up holes in the blood vessels to prevent bleeding
  - **High Levels**- cigarette smoking, bleeding, , excess production by the bone marrow
  - **Low Levels**- premature destruction as Immune Thrombocytopenia (ITP), drug effects (heparin), bone marrow failure from diseases such as leukemia or myelofibrosis, acute blood loss, entrapment of platelets in an enlarged spleen, infection from sepsis, clamping of platelets in a lavender colored tube, repeat with a green top tube



## Facts:

- **Anemia**- can be due to nutritional deficiencies, internal destruction of RBC's, a failure to produce blood in the bone marrow, blood loss
- **Most Labs**- Hgb is measured and Hct is computed using the MCV and RBC measurement

## What can I do?

- **See your Health Care Provider**- for more information
- **See a Registered Dietitian for help as needed**- See Food High In Iron (Fe) if needed
- **See a FFF RD**- on line for help

