CBC W/Auto Diff
The CBC is used as a broad screening test to check for such disorders as anemia, infection, and many other diseases. It is actually a panel of tests that examines different parts of the blood and includes the following:

- **WBC**
  - White blood cell (WBC) count is a count of the actual number of white blood cells per volume of blood. WBC assesses the ability of the body to respond to and eliminate infection. Eating, physical activity, and stress may alter white blood cell differential values. There are five types of white blood cells, each with different functions: neutrophils, lymphocytes, monocytes, eosinophils, and basophils.

- **LYM**
  - LYM means lymphocyte absolute count. Lymphocytes occur in two forms: B cells, which produce antibodies, and T cells, which recognize foreign substances and process them for removal.

- **MID**
  - MID means mid-range absolute count. This count generally includes monocytes, eosinophils, and basophils. Monocytes function in the ingestion of bacteria and other foreign particles. Eosinophils are believed to function in allergic responses and in resisting some infections. Basophils may increase or decrease in certain diseases.

- **GRAN**
  - GRAN means Granulocyte absolute count. Neutrophils (also known as segs, PMNs, granulocytes, grans) are normally the most abundant type of white blood cell in healthy adults.

- **RBC**
  - Red blood cell (RBC) count is a count of the actual number of red blood cells per volume of blood. Both increases and decreases can point to abnormal conditions.

- **Hemoglobin**
  - Hemoglobin measures the amount of oxygen-carrying protein in the blood.

- **Hematocrit**
  - Hematocrit measures the percentage of red blood cells in a given volume of whole blood.

- **MCV**
  - The mean cell volume (MCV) is elevated when your RBCs are larger than normal (macrocytic). When the MCV is decreased, your RBCs are smaller than normal (microcytic).

- **MCH**
  - Mean corpuscular hemoglobin (MCH) is a calculation of the average amount of oxygen-carrying hemoglobin inside a red blood cell. Macrocytic RBCs are large so tend to have a higher MCH, while microcytic red cells would have a lower value.

- **MCHC**
Mean corpuscular hemoglobin concentration (MCHC) is a calculation of the average concentration of hemoglobin inside a red cell.

RDW
- Red cell distribution width (RDW) is a calculation of the variation in the size of your RBCs.

Platelet
- The platelet count is the number of platelets in a given volume of blood. Both increases and decreases can point to abnormal conditions of excess bleeding or clotting.

Gran %
- Granulocyte percent. Granulocytes normally up to 60% of the total white blood cell count.

Mid %
- Mid-range percent. Basophils normally constitute 1% or less of the total white blood cell count. Eosinophils, normally about 1-3% of the total white blood cell count. Monocytes make up 5-10% of the total white blood cell count.

Lym %
- Lymphocyte percent. Leukocyte that normally makes up about 25% of the total white blood cell count.

Comprehensive Metabolic
The Comprehensive Metabolic Panel (CMP) is a frequently ordered panel of tests that gives your doctor important information about the current status of your kidneys, liver, and electrolyte and acid/base balance as well as of your blood sugar and blood proteins. CMP includes the following:

- Sodium
  - To determine whether your sodium concentration is within normal limits and to help evaluate electrolyte balance and kidney function; to monitor chronic or acute hypernatremia or hyponatremia.

- Potassium
  - To determine whether your potassium concentration is within normal limits and to help evaluate an electrolyte imbalance; to monitor chronic or acute hyperkalemia or hypokalemia.

- Chloride
  - To determine if there is a problem with your body's electrolyte or acid-base balance and to monitor treatment.

- Total Carbon Dioxide
  - As part of an electrolyte panel to screen for an electrolyte or acid-base imbalance or to monitor a known imbalance.

- Glucose
  - To determine if your blood glucose level is within healthy ranges; to screen for, diagnose, and monitor hyperglycemia, hypoglycemia, diabetes, and pre-diabetes.

- Calcium
As part of a routine metabolic panel, when you have kidney, bone, or nerve disease, or when symptoms of significantly increased or decreased calcium concentrations are present.

- **BUN**
  - To evaluate kidney function or monitor the effectiveness of dialysis and other treatments related to kidney disease or damage.

- **Creatinine**
  - To determine if your kidneys are functioning normally and to monitor treatment for kidney disease.

- **Bilirubin, Total**
  - To screen for or monitor liver disorders.

- **ALT**
  - To screen for liver damage and/or to help diagnose liver disease.

- **AST**
  - To detect liver damage and/or to help diagnose liver disease.

- **Albumin**
  - To screen for a liver disorder or kidney disease or to evaluate nutritional status.

- **Total Protein**
  - As part of a general health checkup, to determine your nutritional status or to screen for certain liver and kidney disorders as well as other diseases.

- **ALK Phos**
  - To screen for or monitor treatment for a liver or bone disorder.

- **GFR (IDMS)**
  - To assess kidney function.

### Lipid Panel

The lipid profile is a group of tests that are often ordered together to determine risk of coronary heart disease. They are tests that have been shown to be good indicators of whether someone is likely to have a heart attack or stroke caused by blockage of blood vessels or hardening of the arteries (atherosclerosis). The lipid profile typically includes:

- **Cholesterol, Total**
  - To screen for risk of developing heart disease.

- **HDL**
  - Often called the good cholesterol. To determine risk of developing heart disease.

- **Triglycerides**
  - To determine risk of developing heart disease.

- **LDL, calculated**
  - Often called the bad cholesterol. To determine risk of developing heart disease.

- **VLDL, calculated**
  - To help assess the risk of developing heart disease.

- **Chol/HDL Ratio**
  - To help assess the risk of developing heart disease.
**TSH**
The TSH test is often the test of choice for evaluating thyroid function and/or symptoms of hyper- or hypothyroidism. TSH testing is used to diagnose a thyroid disorder in a person with symptoms, screen newborns for an underactive thyroid, monitor thyroid replacement therapy in people with hypothyroidism diagnose, monitor female infertility problems, help evaluate the function of the pituitary gland (occasionally), and screen adults for thyroid disorders.

**PSA**
PSA test is used as a screening tool, increased levels may indicate an increased risk of prostate cancer, while lower levels indicate a decreased risk. American Cancer Society (ACS), recommend that doctors offer total PSA tests annually to all men, beginning at age 50 and to those at an increased risk of prostate cancer, such as American men of African descent and men with a family history of the disease, beginning at age 40 or 45. The ACS recommends that doctors discuss the testing options, benefits, and potential side effects with their male patients so that they can make informed choices.