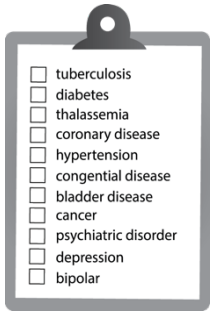
UNDERSTANDING YOUR LABORATORY TEST REPORT



Have you ever wondered why you need to have routine blood work done? A blood test is often ordered by your doctor in addition to a physical exam and health history. It is an important tool to help your doctor evaluate your health status. A blood test can be used to diagnose diseases, monitor illnesses, determine how your organs are functioning, and in some cases, catch potential health problems in their early stages. Blood work can reveal problems before you show signs of the disease so that something can be done before you become sick.

Depending on the type of test ordered, you may be required to "fast" beforehand. Fasting means you are not allowed to eat or drink anything (except water and medication) for at least 10 to 12 hours before the test. One or more small tubes of blood are obtained from a vein in the arm so that the blood can be analyzed. Given the fact that an adult person has approximately 5 liters (1.3 gallons) of blood circulating in its body, the small amount of blood drawn will not deplete your body of this precious fluid. On the other hand, having your blood tested will provide your doctor with a wealth of information about your health.

The results of your tests are then compared to a "reference" or "normal "range. Keep in mind that different laboratories use different reference ranges. The reference range is based on the average values of a healthy population, where about 95% of people fall within this range. Many factors can influence the test results, including age, gender, diet, medications, stress and exercise. Interpretation of test results should only be done by your doctor.

Any dramatic changes in a person's test values require special medical attention. To help you gain some basic understanding of your blood test report, explanations of the different tests and what they measure are listed as follows. This information is not meant to replace discussion of your test results with your doctor. Remember that your doctor is the best person to explain your test results to you.

1. **Triglyceride, Cholesterol, High Density Lipoprotein (HDL), Low Density Lipoprotein (LDL)**
   These are different types of blood lipids (fats). HDL is known as "good" cholesterol because it is able to remove cholesterol from the body. Having high levels seems to protect against heart disease. Whereas LDL is known as "bad" cholesterol because high levels of this is usually a signal for medical problems such as heart disease. They help to determine your risk for heart disease.

2. **Sodium, Potassium, Chloride, Calcium, Carbon Dioxide (CO2)**
   These are electrolytes, which are particles that carry an electrical charge. They regulate the functions of the nerves and muscles (including the heart), acid-base balance of the blood and other bodily fluids, and maintain fluid balance inside and outside of cells. They help to detect disorders of various organs and glands.

3. **Glucose, Hemoglobin A1C**
   The glucose test measures the level of sugar in your blood and is used to diagnose diabetes. Hemoglobin A1C measures the amount of glucose that is attached to your red blood cells and is used for evaluation of long term diabetes control.

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4. **Blood Urea Nitrogen (BUN), Creatinine**
   These are waste products, produced in the liver and from muscle breakdown, which are excreted by the kidneys. They help to assess kidney function.

5. **Total Protein, Albumin**
   Albumin is a protein produced primarily in the liver that helps to hold fluid inside the blood vessels. They are used to measure overall health and nutrition.

6. **Total Bilirubin**
   Bilirubin is formed when red blood cells are broken down. It is also a component of bile, a digestive juice produced by the liver. This is a test for liver function.

7. **Alkaline Phosphatase (ALP), SGPT (ALT), SGOT (AST)**
   These are enzymes found in the bones, liver, heart and muscles. An enzyme is a protein that speeds up a chemical reaction within the body. Damage to the cells will release these enzymes into the blood. They are used to measure liver and gall bladder function.

8. **Hemoglobin, Hematocrit, Red Blood Cell Count (RBC), MCV, MCH, MCHC**
   Hemoglobin is the oxygen carrying protein in the red blood cells. Hematocrit is the percentage of the blood occupied by red blood cells. MCV, MCH and MCHC measure the cell size, the amount and percentage of hemoglobin in red blood cells. They help to detect different types of anemia.

9. **White Blood Cell Count (WBC)**
   White blood cells help the body fight off infections. Neutrophils, Lymphocytes, Monocytes, Eosinophils and Basophils are different types of white blood cells. Their numbers are affected by the presence of infections, allergies and other diseases.

10. **Platelet Count**
    Platelets are cells that are involved in blood clotting. The platelet count helps to diagnose conditions that cause abnormal bleeding or clotting.

11. **Thyroid Stimulating Hormone (TSH)**
    The thyroid gland secretes a hormone which regulates the body's metabolism. The amount of TSH produced depends on the level of thyroid hormone in the blood. The TSH test measures thyroid function.

12. **Uric Acid**
    Uric acid is formed when cells are broken down, most of which are excreted by the kidneys. This test helps to diagnose Gout, a form of arthritis caused by uric acid crystals that are deposited in the joints. It is also used to evaluate kidney function.

13. **Prostate Specific Antigen (PSA)**
    PSA is a protein that is made by the cells of the prostate gland, a male sex gland which produces semen. The PSA test can be used to help screen for prostate cancer in men.