

# Comprehensive blood test to include the following:

**Lipids**, including Total Cholesterol, HDL (good) Cholesterol, LDL (bad) Cholesterol, Risk Ratio (good to total), and Triglycerides

**Complete Blood Count(CBC's)**: 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.

**Fluids and Electrolytes, including** Chloride, Potassium, Sodium, and Carbon Dioxide

**Thyroid w/TSH**, including T-3 Uptake, Total T4, (Free thyroxine index)T7, and TSH

**Liver**, including Albumin, Alkaline Phosphatase, Alanine Transaminase (ALT or SGPT), Aspartate Transaminase (AST or SGOT), Total Bilirubin, Total Protein, LDH, Total Globulin, Albumin/Globulin Ratio, and GGT

**Kidney**, including Blood Urea Nitrogen (BUN), Creatinine, BUN/Creatinine Ratio, eGFR, and Uric Acid

**Glucose (Diabetes)**

**Mineral and Bone, including** Total Iron, Calcium, and Phosphorus

**Magnesium**: This mineral is particularly important to nerves and muscles. Low magnesium is found in malnutrition, alcoholism, diabetes, hyperparathyroidism, and more. High magnesium is seen in kidney failure

**Iron W/TIBC**: Total Iron Binding Capacity (TIBC)measures the amount of transferrin, a blood protein that transports iron from the gut to the cells that use it. Your body makes transferrin in relationship to your need for iron; when iron stores are low, transferrin levels increase, while transferrin is low when there is too much iron. Usually about one third of the transferrin is being used to transport iron. Because of this, your blood serum has considerable extra iron-binding capacity, which is the Unsaturated Iron Biding Capacity (UIBC). The TIBC equals UIBC plus the serum iron measurement. Some laboratories measure UIBC, some measure TIBC, and some measure transferrin.

**Serum Iron Level**: Measures the level of iron in the liquid part of your blood.

**Ferritin:** Composed of iron and protein, Ferritin is a storehouse for iron in the body. Measurement provides an accurate picture of how much iron you have available in reserve. It is used to evaluate anemia and for diagnosing iron deficiency. Low Ferritin is a sign of iron deficiency. Ferritin is high with inflammation, infection, liver disease, iron overload, certain amends and certain cancers (leukemia and lymphoma)

**T3-Total:** One Increased T3 often occurs in hyperthyroidism, but in approximately 5% of cases only T3 is elevated, “T3 toxicosis.” Do not confuse T3 with T3 uptake; these are two different tests. The latter is done very commonly as part of the usual thyroid profile. Less than 1% of T3 is unbound.

**T3 Free: Tri-iodothyronine (T3):** This test is used to evaluate thyroid function. It is primarily used to diagnose hyperthyroidism. It is also used to assess abnormal binding protein disorders and to monitor thyroid replacement and suppressive therapy .

**T4 Free: Thyroxine T4 (Free):** This test is used to evaluate thyroid function in individuals who may have protein abnormalities that could affect total T4 levels. It is used to evaluate thyroid function and monitor replacement and suppressive therapy

**HgbA1C:** This non-fasting test indicates how well you have controlled your diabetes over the last few months. Even though you may have some very high or very low blood glucose values, Hemoglobin A1C will give you a picture of the average amount of glucose in your blood over that time period.

**C-Reactive protein,hs:** A substance in the blood that indicates the presence of inflammation and could warn of a heart attack in advance. Elevated amounts of the protein in men may triple their risk for heart attack and double their risk for stroke, whereas elevated amounts in women can increase their heart attack risk up to seven times. Cardio (also specific or high sensitivity) C-Reactive Protein is a marker of inflammation to the blood vessels and a strong predictor of risk for future myocardial infarctions.

**Homocysteine:** Commonly used as a screen for people at high risk for heart attack or stroke. It may be useful in patients who have a family history of coronary artery disease but no other known risk factors.

**Fibrinogen:** Also referred to as factor I, is a 340 kilodalton glycoprotein that is produced by the liver. Fibrinogen has a plasma half-life of about 4 days. Proteolytic conversion of fibrinogen to fibrin occurs through both the extrinsic and intrinsic pathways.<sup>6</sup> Fibrinogen deficiency should be considered when a patient with bleeding history has both extended protime (PT) and activated partial thromboplastin time (aPTT).

**Vitamin D, 25 Hydroxy:** This highly automated test measures both D2 and D3 together and reports a total 25-hydroxyl.