Gluecose (Blood Sugar):
This is a measure of the sugar level in your blood. High values are associated with eating before the test, and diabetes.

Glycosolated Hemoglobin A1C):
This test measures the amount of glucose chemically attached to your red blood cells. Since blood cells live about 3 months, it tells us your average glucose for the last 6 - 8 weeks. A high level suggests poor diabetes control.

TSH (Thyroid Stimulating Hormone):
This protein hormone is secreted by the pituitary gland and regulates the thyroid gland. A high level suggests your thyroid is underactive, and a low level suggests your thyroid is overactive. This test can vary by time of day, so a single abnormal measurement does not always mean there is a problem. Also, levels tend to be higher in older people, so it is not uncommon to see mild elevations in people in their 70's or 80's that do not necessarily indicate a medical problem.

PSA (Prostatic Specific Antigen):
The test measures the amount of prostate-specific antigen in the blood. PSA is released into a man's blood by his prostate gland. Healthy men usually have low amounts of PSA in the blood. The amount of PSA in the blood normally increases as a man's prostate enlarges with age. PSA may increase as a result of an injury, a digital rectal exam, sexual activity, inflammation of the prostate gland, or prostate cancer. When combined with a digital rectal exam the chances increase for detecting prostate cancer.

Enzymes:
AST, ALT, SGOT, SGPT, and GGT and Alkaline Phosphatase are abbreviations for proteins called enzymes which help all the chemical activities within cells to take place. Injury to cells release these enzymes into the blood. They are found in muscles, the liver and heart. Damage from alcohol and a number of diseases are reflected in high values.

Alkaline phosphatase is an enzyme found primarily in bones and the liver. Expected values are higher for those who are growing (children and pregnant women) or when damage to bones or liver has occurred or with gallstones. Low values are probably not significant.

GGT is also elevated in liver disease, particularly with obstruction of bile ducts. Unlike the alkaline phosphatase it is not elevated with bone growth or damage.

AST/SGOT , ALT/ SGPT are also liver and muscle enzymes. They may be elevated from liver problems, hepatitis, excess alcohol ingestion, muscle injury and recent heart attack.

Electrolytes:
These are your potassium, sodium, chloride, and CO2 levels.

Potassium is controlled very carefully by the kidneys. It is important for the proper functioning of the nerves and muscles, particularly the heart. Any value outside the expected range, high or low, requires medical evaluation. This is especially important if you are taking a diuretic (water pill) or heart pill (Digitalis, Lanoxin, etc.).

Sodium is also regulated by the kidneys and adrenal glands. There are numerous causes of high and low sodium levels, but the most common causes of low sodium are diuretic usage, diabetes drugs like chlorpropamide, and excessive water intake in patients with heart or liver disease.

CO2 reflects the acid status of your blood. Low CO2 levels can be due to either increased acidity from uncontrolled diabetes, kidney disease, metabolic disorders, or low CO2 can be due to chronic hyperventilation. Mildly abnormal CO2 values are usually not clinically significant and may not indicate any underlying disease.

Minerals:
Calcium is controlled in the blood by the parathyroid glands and the kidneys. Calcium is found mostly in bone and is important for proper blood clotting, nerve, and cell activity. An elevated calcium can be due to medications such as thiazide type diuretics, inherited disorders of calcium handling in the kidneys, or excess parathyroid gland activity or vitamin D. Low calcium can be due to certain metabolic disorders such as insufficient parathyroid hormone; or drugs like Fosamax or furosemide type diuretics.

Calcium is bound to albumin in the blood, so a low albumin level will cause the total calcium level in the blood to drop. Your doctor can easily determine if this is significant or not.

Phosphorus is also largely stored in the bone. It is regulated by the kidneys, and high levels may be due to kidney disease. When low levels are seen with high calcium levels it suggests parathyroid disease, however there are other causes. A low phosphorus, in combination with a high calcium, may suggest an overactive parathyroid gland.

Waste products:
Blood Urea Nitrogen (BUN) is a waste product produced in the liver and excreted by the kidneys. High values may mean that the kidneys are not working as well as they should. BUN is also affected by high protein diets and/or strenuous exercise which raise levels, and by pregnancy which lowers it.

Creatinine is a waste product largely from muscle breakdown. Creatinine can become elevated the day after strenuous exercise. High values, especially with high BUN levels, may indicate problems with the kidneys.

Uric Acid is normally excreted in urine. High values are associated with gout, arthritis, kidney problems and the use of some diuretics.

CBC (Complete Blood Count):
This test is used to help tell the provider is your illness is viral or bacterial. It shows information about the number, shape and size of blood cells as well as levels of hematocrit and hemoglobin present in a blood sample. The following seven cell count and levels breakdown and explain the components of a CBC.

Red Cell Count:
Red blood cells transport nutrients such as oxygen to the body tissues and carry away waste products, such as carbon dioxide. A red cell count that is too low may signify a type of anemia. Elevated levels can be associated with smoking and certain diseases.

White Cell Count:
The White blood count is important in the diagnosis of infection. These cells grow in number for a variety of reasons. If the level of white cells is high, the provider will look for a cause, such as allergic reaction, inflammation, or bacterial infection.

Platelet Count:
Platelets are involved in blood clotting and their number is extremely important. Too many cause problems with unnecessary clotting and too few may cause excessive bleeding. Certain conditions can alter this count.

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. Significant increases or decreases can be seen in anemia. Anemia 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.

MCV, MCH, MCHC, RDW:
These tests measure size and other characteristics of the red blood cells. They can be used to further define the cause of an anemia state.

Lymphocytes, Monocytes, Neutrophils, Eosinophils:
These are different types of white blood cells. They may be used to evaluate allergic reactions or differentiate between bacteria, viral or parasitic infections.

Entira® FAMILY CLINICS
Where generations thrive®

EntiraFamilyClinics.com
651-788-4444
Facebook.com/EntiraFamilyClinics.com
Twitter.com/Entira12

UnderstandTestvBR00418

Understanding Your Test Results

Entira® FAMILY CLINICS
Where generations thrive®