Understanding Your Lab Work

Our intent of letting you view lab results on the patient portal is to further educate you and advise you about your health. One caution that comes with this knowledge is that abnormalities do not necessarily mean disease and, also, some people who have diseases will have normal test values. Minor variations from the reference ranges can be seen in normal people and are not cause for alarm. Some of this need to be tested again to see if they will fall within the normal range and some of them can just be discounted as lab error. We have tried to address in our personal notes to each one of you whether we find these results significant enough for concern. We would ask if there are any further questions on your lab work that you bring your lab work with you and we will be happy to discuss it with you at your next appointment.

Please log on to the patient portal to request an appointment or send a secure message to one of our providers.

Please note this is only to be used as a reference tool.

Terminology seen on Lab Reports

**GLUCOSE:** Blood sugar test. High values may be seen in diabetics. Can also be altered by diet and medication.

**BLOOD UREA NITROGEN (BUN):** Measures kidney function and is very similar to creatinine.

**CREATININE:** A waste product which should be removed from the blood by the kidneys and measures kidney function.

**TOTAL CHOLESTEROL:** A blood fat in part related to eating of animal fat, such as eggs, cheese, cream, liver, pork, beef, etc. Increased values may indicate a tendency toward hardening of the arteries.

**HDL CHOLESTEROL:** Your protective or “good” cholesterol. It is desirable to have high values of this cholesterol.

**LDL CHOLESTEROL:** Your “bad” cholesterol. This is harmful if it is elevated and it is the most sensitive predictor of hardening of the arteries.

**TRIGLYCERIDES:** Blood fat related more to total calories and starch, especially sweets, rather than fat. High levels can lead to hardening of the arteries. Alcohol will also increase values of this. To have the most accurate reading of your triglycerides overnight fasting is required.

**CALCIUM:** A mineral in the blood coming from the bone. Abnormalities of the bone such as loss of bone tissue can increase values while poor intake, kidney disease, and lack of vitamin D can decrease your calcium value.

**PHOSPHORUS:** Generally related to bone breakdown and activity and usually follows the exact opposite pattern to the blood calcium.

**SODIUM:** A body salt. Kidney disease and certain diseases of the adrenal gland, along with your state of hydration, can cause abnormal values.

**POTASSIUM:** One of the body salts. Found mostly inside of the body cells. Fasting and also damage of the blood cells in handling of the blood sample can also increase the value. Water pills or diuretics will frequently lower the value and often indicate need for supplementation.
CHLORIDE: A body salt usually following the same pattern as sodium.

CARBON DIOXIDE: A blood gas which helps keep the body from becoming too acidic or alkaline. Patients who have respiratory diseases, such as asthma, emphysema or bronchitis, often will have changes in this blood value.

URIC ACID: A material excessive amounts of which can deposit in the kidney and cause stones or can deposit in the joint and cause gout. Some water pills or diuretics may increase this value. Also this value can be increased in dehyrdrations.
TOTAL PROTEIN: A combination of albumin and globulin which are your two basic blood proteins. This is often used as a marker of nutrition.

ALBUMIN: A blood protein manufactured by the liver. Marked changes may be related to liver disease or poor nutrition.

GLOBULIN: Similar to albumin but contains some portion of the blood related to your immunity or body defense system. Minor variations in this are common and often insignificant.

TOTAL BILIRUBIN: Level of the bile pigment in the blood. Increases can be associated with liver disease or breakdown of red blood cells. Slight increases are sometimes seen and are without any significance. This value can also be elevated in gallstones and gallbladder disease.

ALKALINE PHOSPHATASE: A material in the blood which can be related either to the liver or the bone. Young people naturally have higher levels because their bones are actively growing.

LACTIC DEHYDROGENASE: A material found in blood cells and liver cells. Breakdown of blood cells of liver damage may increase these values.

SGOT: A material found inside of liver cells and also muscles cells. Damage of either of these organs may increase these values. Also, remember that some medication can increase your liver values.

SGPT: Measures similar things to SGOT and often these go hand in hand.

GGT: A further breakdown of SGOT and SGPT and is more sensitive than either of these. It, however, measures the same parameters of liver damage.

FERRITIN LEVEL: A very nonspecific index of your total body iron. Low levels of this can be seen in iron deficiency anemia. High levels often indicate acute inflammation in the body.

CBC WITH PLATELET:

WBC: Your white blood cell count. These are your immune cells and help to fight off infection.

HEMOGLOBIN: A measurement of the volume of blood in your body. Low values of this indicate anemia.

HEMATOCRIT: Also measures the amount of blood in your body. The hemoglobin and hematocrit go hand in hand and are used by different physicians to define anemia.

MCV: A measurement of how big or how small your blood cells are. This is instructional to physicians to aid in finding the type of anemia you have.

MCH: A measurement of how dense or how much hemoglobin your red blood cells contain. This also helps to indicate what type of anemia you have.

LYMPHOCYTES: A sub-set of your white blood cell count which fight against viral illnesses in general.
NEUTROPHILS: A sub-set of your white blood cell count which fight against bacterial infections.

MONOCYTES: A sub-set of your white blood cells which often are increased in viral illnesses.

EOSINOPHILS: A sub-set of your white cell count which are generally elevated in allergic conditions.

BASOPHILS: A further sub-set of your white blood cell count with very nonspecific implications.

PLATELET COUNT: These are your blood cells which are responsible for clotting. Low values of these may seen in liver disease and also indicate a tendency to bleed easily. Elevated levels of platelets can be seen in either acute inflammation or some forms of blood cancers.