FAMILY HEALTH ASSOCIATES

EXPLANATION OF LABORATORY TESTS

HDL CHOLESTEROL: High density lipoprotein cholesterol responsible for "reverse transport" of cholesterol from peripheral tissues to the liver. Thought to be beneficial and high values are desirable. Low values are associated with premature hardening of the arteries.

LDL CHOLESTEROL: Low density lipoprotein cholesterol involved in transport of cholesterol from the liver to peripheral tissues and arteries. Considered "bad cholesterol." High values are strongly associated with premature hardening of the arteries.

CHOLESTEROL/HDL RATIO: An important predictive ratio of premature hardening of the arteries, obtained by taking the total cholesterol and dividing it by the HDL. The value should be less than 4.5.

SODIUM: A mineral important in fluid regulation in the body. This is the most common intracellular mineral. High values may indicate mild dehydration or excessive salt use. Low values are common with diuretics and overhydration.

POTASSIUM: A mineral important in cell membrane function. This is the most common intracellular mineral. Mild elevations are not significant. Very high values may indicate severe metabolic derangement. Low values are common with diuretics and very low values can be dangerous and lead to heart irregularities.

GLUCOSE: Commonly referred to as blood sugar. High fasting values often indicate diabetes and low values are referred to as hypoglycemia.

BUN: Blood urea nitrogen, a waste product that is excreted by the kidneys. Mild elevations are common with fasting or dehydration and are not significant. Very high values can indicate kidney impairment or failure. Low values are also not significant.

CREATININE: Another waste product excreted by the kidneys. A more accurate determination of kidney function. High values are indicative of kidney impairment or failure. It can range from mild to severe. Mild elevations are common in the elderly.

BUN/CR RATIO: Measure of renal function. Minor abnormalities are not significant.

CALCIUM: A mineral important to the bones and teeth as well as the function of cell membranes. Mild elevations are usually not significant. Very high values suggest the presence of a tumor. Low values usually mean poor nutrition.

PHOSPHORUS: A mineral important primarily in bone metabolism. Also needed by all cells to carry on normal metabolism. Mild high and low values are usually not significant.

URIC ACID: A breakdown product of protein. This is the cause of gout. High values are diagnostic of gout and low values are not significant.

PROTEIN, TOTAL: Important substances used in the structure and function of the body. The total value is the sum of albumin and globulin.

ALBUMIN AND GLOBULIN: Proteins in the blood responsible for transporting other substances or fighting infection. High values may require further testing. Low values usually indicate malnutrition or chronic disease states.

A/G RATIO: Measure of protein status. Minor abnormalities are not significant.

BILIRUBIN TOTAL: A pigment in bile. Small amounts are normally present in the blood. Mild elevations are common with fasting blood tests and a benign inherited condition called Gilbert's Syndrome. Very high values are consistent with jaundice and disorders of the liver and gallbladder.

BILIRUBIN DIRECT: That portion of the total bilirubin that has been transformed in the liver. This is the part that is excreted in the bile. It is elevated if there is obstructive jaundice caused by gallstones or tumor.

BILIRUBIN INDIRECT: That portion of the total bilirubin that has not been transformed in the liver. It is elevated if there is liver or gallbladder disease.

ALKALINE PHOSPHATASE and LDH: Enzymes from liver and bone. Mild elevations are normal in adolescents. In other age groups, further testing may be necessary.

AST (SGOT), ALT (SGPT): Enzymes produced by liver and muscle. Mild elevations are usually of no consequence. High values indicate organ damage from excessive alcohol consumption, liver disease, trauma, or heart attack.

CPK: Muscle enzyme found in skeletal and cardiac muscle. Elevated values are common, usually the result of physical exertion or exercise. Also a test to diagnose heart attacks.

CHOLESTEROL: Fatty substance in the blood. Primarily from foods of animal origin as well as made in the liver. High values often cause blocked arteries.

TRIGLYCERIDES: A fatty substance in the blood associated with hardening of the arteries. High values are caused by obesity, excessive alcohol intake, diabetes and, in some individuals, an inherited tendency.

PROSTATE SPECIFIC ANTIGEN (PSA): An important screening test for prostate cancer. High values may require consultation and possible biopsy.

THYROID STIMULATING HORMONE: A pituitary hormone which reflects thyroid status. High values indicate inadequate thyroid hormone and low values indicate excessive hormone or medicine replacement.

WHITE BLOOD CELL COUNT: The number of cells present which help fight infection. Low values usually indicate a viral infection. High values usually indicate bacterial infection or metabolic stress.

NEUTROPHILS: A type of white blood cell involved in fighting infection. High values usually indicate bacterial infections.

RED BLOOD CELL COUNT: A measure of bone marrow production. High values may indicate overproduction and low values indicate anemia and may also be associated with other illnesses.

HEMOGLOBIN, HEMATOCRIT: Transport molecule for oxygen in the blood. Low values indicate anemia and high values are often associated with cigarette use or a condition called polycythemia.

MCV: Measure of the volume of red blood cells. High values my indicate B12 or folate anemias or excessive alcohol consumption. Low values may indicate iron deficiency anemia or inherited condition, such as sickle cell anemia or thalassemia.

PLATELET COUNT: Cell fragments involved in clot formation.

EOSINOPHILS: A type of white blood cell. High values indicate allergies.

LYMPHOCYTES: A type of white blood cell involved in fighting infections. Low, values usually indicate a viral infection.

MONOCYTES and BASOPHILS: A type of white blood cell. Mild high and low values are not significant.

URINALYSIS: Various tests which monitor metabolism and kidney function. Minor abnormalities are usually not significant.

HELICOBACTER ANTIBODY: Blood test that detects the antibody to a bacteria called Helicobacter pylori, that is highly associated with ulcers. Other tests may be needed to prove the presence of an ulcer. Once exposed to the bacteria, the antibody test is always positive, regardless of treatment.