

## Animal Medical Professionals of Ooltewah

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## UNDERSTANDING YOUR PET'S BLOODWORK

"CBC, Chem Five, Stat!" These words may sound familiar to you due to the popularity of television medical dramas such as *ER*, *Chicago Hope*, and *St. Elsewhere*. Blood tests enable us to determine causes of illness accurately, safely and quickly and allow us to monitor the progress of medical treatments. They often give us good news regarding the absence of disease or illness. To aid in understanding your pet's test results, this guide gives brief explanations of some of the more commonly performed blood tests.

### COMPLETE BLOOD CELL COUNT (CBC)

This is the most common blood test performed both on pets and people. Gives invaluable information on hydration status, anemia, ability to form blood clots, infection and ability to mount an immune response. Essential in pets with fevers, vomiting and/or diarrhea, weakness or pale gums, not eating, etc. Useful in pre-surgery evaluation to detect bleeding disorders or other unseen abnormalities.

- HCT - Hematocrit** – Measures amount of red blood cells. Detects anemia and dehydration.
- HGB, MCHC - Hemoglobin, Mean Corpuscular Hemoglobin Concentration** – Oxygen-carrying pigment of red blood cells.
- WBC - White Blood Cell Count** – Basic immune cells of the body. Increases or decreases indicate certain diseases and/or infections.
- GRANS, L/M - Granulocytes, Lymphocytes/Monocytes** – Specific types of white blood cells.
- EOS - Eosinophils** – Measured in dogs. Often indicate allergic or parasitic conditions.
- PLT - Platelet Count** – Cells that allow the body to form blood clots and stop bleeding.
- RETICS - Reticulocytes** – Immature red blood cells. Indicate regenerative anemia.
- FIBR - Fibrinogen** – An important clotting factor. High levels may indicate pregnancy in dogs 30-40 days pregnant.

### BLOOD CHEMISTRIES

These common blood serum tests evaluate organ function, electrolyte status, hormone levels and more. They are very important in evaluating older pets, cases of vomiting and diarrhea, shock, toxin exposure, for pets on long term medications and before anesthesia.

- ALB - Albumin** – Serum protein that helps evaluate hydration, enteritis, hemorrhage, liver and kidney disease.
- ALKP - Alkaline Phosphatase** – Elevations are related to liver damage, Cushing's disease, steroids, and active bone growth in young pets. Especially significant in cats.
- ALT - Alanine Aminotransferase** – Sensitive indicator of active liver damage but does not indicate the cause or reversibility.
- AMYL - Amylase** – Elevations often associated with pancreatitis or kidney disease.
- AST - Aspartate Transferase** – Increased levels indicated liver or skeletal muscle necrosis or damage.
- BUN - Blood Urea Nitrogen** – Kidney function. An increased blood level of nitrogenous waste products (proteins) is called *azotemia*. Kidney, liver and heart disease, urethral obstruction, shock and dehydration can cause abnormalities.
- Ca - Calcium** – Deviations can be a sign of a wide variety of diseases. Tumors, hyperparathyroidism, kidney disease and low albumin are just a few of the conditions that alter serum calcium.
- CHOL - Cholesterol** – Used to supplement diagnosis of hypothyroidism, liver disease, Cushing's disease, diabetes mellitus, etc.
- Cl - Chloride** – Electrolyte often lost with vomiting and Addison's disease. Elevations often indicate dehydration.
- Cortisol** – Hormone used to test for Cushing's disease in the low-dose dexamethasone suppression test.
- CREA - Creatinine** – Kidney function. Helps distinguish between kidney and non-kidney causes of elevated BUN.
- GGT - Gamma Glutamyl Transferase** – Liver enzyme that indicates disease or cortisol excess.
- GLOB - Globulin** – Blood protein that often increases with chronic inflammation and certain disease states.
- GLU - Glucose** – Blood 'sugar'. Greatly elevated levels may indicate diabetes mellitus. Low levels can cause collapse or even coma.
- K - Potassium** – Electrolyte lost with vomiting, diarrhea or excessive urination. Increased levels are associated with kidney failure, Addison's disease, dehydration and urethral obstruction. High elevations can lead to cardiac arrest.
- LIP - Lipase** – Pancreatic enzyme. May indicate pancreatitis or abnormal blood fats.
- Na - Sodium** – Electrolyte lost with vomiting, diarrhea, kidney disease and Addison's disease. Helps indicate hydration status.
- PHOS - Phosphorous** – Elevations often associated with kidney disease, hyperthyroidism and bleeding disorders.
- TBIL - Total Bilirubin** – Elevations may indicate liver or hemolytic disease. Helpful in diagnosing anemia and bile duct problems.
- TP - Total Protein** – Indicates hydration status and as additional information in liver, kidney, infectious diseases and more.
- T<sub>4</sub> - Thyroxine (total)** – Thyroid hormone. Decreased levels are most often related to primary hypothyroidism (usually dogs) while elevations are associated with hyperthyroidism (usually cats). Abnormal findings are confirmed by free T<sub>4</sub> by equilibrium dialysis testing at an outside lab.

Significant abnormal finding on your pet's bloodwork

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