



## UNDERSTANDING YOUR PET'S BLOOD WORK

“CBC, chem.7 stat!” This may sound familiar if you watch such popular television dramas as *ER*, *Chicago Hope* and *Emergency Vets*. But do you know what the terms mean? Blood tests help doctors determine causes of illness accurately, safely and quickly and let us monitor the progress of medical treatments. This guide explains common lab tests and will help you understand your pet's test results. If you have any questions, please ask a veterinarian.

### Complete blood count (CBC)

This is the most common blood test performed on pets and people. A CBC gives information on hydration status, anemia, infection, the blood's clotting ability, and the ability of the immune system to respond. This test is essential for pets with fevers, vomiting, diarrhea, weakness, pale gums or loss of appetite. If your pet needs surgery, a CBC can detect bleeding disorders or other unseen abnormalities.

- **HCT** (hemotocrit) measures the percentage of red blood cells to detect anemia and dehydration
- **Hgb** and **MCHC** (hemoglobin and mean corpuscular hemoglobin concentration) are the oxygen-carrying pigments of red blood cells.
- **WBC** (white blood cell count) measures the body's immune cells. Increases or decreases indicate certain diseases and infections.
- **GRANS** and **L/M** (granulocytes and lymphocytes / monocytes) are specific types of white blood cells.
- **EOS** (eosinophils) are a specific type of white blood cells that may indicate allergic or parasitic conditions
- **PLT** (platelet count) measures cells that form blood clots
- **RETICS** (reticulocytes) are immature red blood cells. High levels indicate regenerative anemia.

### Blood Chemistries

These common blood serum tests evaluate organ function, electrolyte status, hormone levels, and more. They are important in evaluating older pets, pets with vomiting and diarrhea or toxin exposure, pets receiving long-term medications, and health before anesthesia.

- **ALB** (albumin) is a serum protein that helps evaluate hydration, hemorrhage, and intestinal, liver and kidney disease.
- **AlkP** (alkaline phosphatase) elevations may indicate liver damage, Cushing's disease, and active bone growth in young pets. This test is especially significant in cats
- **ALT** (alanine aminotransferase) is a sensitive indicator of active liver-damage but doesn't indicate the cause.
- **AMYL** (amylase) elevations show pancreatitis or kidney disease
- **AST** (aspartate aminotransferase) increases may indicate liver, heart or skeletal muscle damage.
- **BUN** (blood urea nitrogen) indicates kidney functions. An increased blood level is called azotemia and can be caused by kidney, liver or heart disease, urethral obstruction, shock and dehydration.
- **Ca** (calcium) deviations can indicate a variety of diseases. Tumors, hyperparathyroidism, kidney disease, and low albumin are just a few of the conditions that alter serum calcium.
- **CHOL** (cholesterol) is used to supplement diagnosis of hypothyroidism, liver disease, Cushing's disease, and diabetes mellitus.
- **Cl** (chloride) is an electrolyte often lost with vomiting and Addison's disease. Elevations often indicate dehydration.
- **Cortisol** is a hormone that is measured in tests for Cushing's disease (the low-dose dexamethasone suppression test) and Addison's disease (ACTH stimulation test)

- **CREA** (creatinine) reveals kidney function. This test helps distinguish between kidney and non-kidney causes of elevated BUN
- **GGT** (gamma glutamyl transferase) is an enzyme that indicates liver disease or corticosteroid excess.
- **GLOB** (globulin) is a blood protein that often increases with chronic inflammation and certain disease states.
- **GLU** (glucose) is a blood sugar. Elevated levels in may indicate diabetes mellitus. Low levels can cause collapse, seizures, or coma
- **K** (potassium) is an electrolyte lost with vomiting, diarrhea, or excessive urination. Increased levels may indicate kidney failure, Addison's disease, dehydration and urethral obstruction. High levels can lead to cardiac arrest.
- **LIP** (lipase) is an enzyme that may indicate pancreatitis.
- **Na** (sodium) is an electrolyte lost with vomiting, diarrhea and kidney and Addison's disease. This test helps indicate hydration status.
- **PHOS** (phosphorus) elevations are often associated with kidney disease, hyperthyroidism and bleeding disorders.
- **T.BIL** (total bilirubin) elevations may indicate liver or hemolytic disease. This helps identify bile duct problems and certain types of anemia.
- **TP** (total protein) indicates hydration status and provide additional information about the liver, kidneys and infectious diseases
- **T4** (thyroxine) is a thyroid hormone. Decreased levels often signal hypothyroidism in dogs, while high levels indicate hyperthyroidism in cats.