



Enhancing the lives of canines. Enriching the lives of those who love them.

Annual Blood Work for Dogs Under 7 Years of Age

Blood Chemistries

This is a list of blood tests run annually by your pet's doctor to assess your dog's overall health. Blood tests are often recommended for pets about to undergo anesthesia, sick patients and also for healthy pets in order to establish a baseline and monitor any changes. Interpretation of these tests allows for a quick and non-invasive assessment of the major organ systems of the body.

Kidney

- **BUN** (blood urea nitrogen)- elevations may be seen with decreased kidney function, dehydration, heart disease, shock or urinary obstruction as well as following a high protein diet; lower levels may be seen with overhydration.
- **CREA** (creatinine)- elevations may be seen with decreased kidney function and other conditions as noted with BUN, but it is not affected by recent high protein diet; lower levels may be seen with overhydration.

Liver

- **ALT** (alanine aminotransferase)- elevations are a sensitive indicator of liver cell damage
- **ALP** (alkaline phosphatase)- elevations may indicate a liver abnormality (cholestasis), Cushing's Disease, active bone growth in young pets, active remodeling bone growth after bone injury; may be induced by multiple drugs and nonspecific conditions.
- **ALB** (albumin)- elevations may indicate dehydration; lower levels may be seen with decreased liver function, blood loss, gastrointestinal disease and kidney disease.

Protein Profile

- **TP** (total protein)- elevations may indicate dehydration or an inflammatory condition; lower levels may be seen with decreased liver function, blood loss, gastrointestinal disease and kidney disease.
- **GLOB** (globulin)- elevations may be seen with inflammation and potential chronic infection; lower levels may be seen with blood loss, gastrointestinal disease, and immune deficiencies.

Electrolytes

- **K+** (potassium)- elevations may indicate kidney disease due to decreased excretion, with Addison's disease, dehydration and kidney obstruction; lower levels may be seen with loss during diarrhea or vomiting.

Miscellaneous Chemistries

- **GLU** (glucose)- elevations may indicate diabetes mellitus; decreases may be due to liver disease, pancreatic disease and other conditions and could lead to collapse, seizure or coma.

Complete Blood Count (CBC)

This is a common test performed to provide objective information about the general health status of your dog. The objective data obtained from a CBC can be helpful in monitoring ill patients.

Red Blood Cell (RBC) Parameters

- **RBC** (red blood cell count), **HCT** (hematocrit) and **HGB** (hemoglobin)- elevations in these parameters may support dehydration or a disease of increased production of RBC's; lower levels indicate anemia and decreased oxygen-carrying capability of the blood.
- **MCV** (mean cell volume)- elevations indicate the presence of larger than normal cells, which may be related to the emergence of young cells during response to anemia; lower levels indicate the presence of smaller than normal cells, which may be associated with chronic blood loss/iron deficiency.
- **MCH** (mean cell hemoglobin) and **MCHC** (mean cell hemoglobin concentration)- elevations suggest the presence of hemolysis or an interference in hemoglobin measurement; lower levels suggest decreased hemoglobin concentration, which can be seen during response to anemia and chronic blood loss/iron deficiency.

White Blood Cell (WBC) Parameters

- **WBC** (white blood cells)- elevations may be due to inflammation, stress, excitement, and leukemia; lower levels may be due to overwhelming inflammation and bone marrow failure.
- **Leukocyte Differential**- Various patterns of change in numbers of Neutrophils (**NEU**), Lymphocytes (**LYM**), Monocytes (**MONO**), Eosinophils (**EOS**), and Basophils (**BASO**) may be seen with different types of inflammation, stress, excitement, and leukemia.

NEU- inflammatory cell associated with infectious and noninfectious disease processes

LYM- immune cell highly responsive to "stress" and potentially increased during chronic infection.

MONO- inflammatory cell associated with repair of tissue injury.

EOS- inflammatory cell associated with parasitic disease, hypersensitivity and allergy

BASO-inflammatory cell associated with parasitic disease, hypersensitivity and allergy

Platelet (PLT) Parameters

- **PLT** (platelet) and **PCT** (platelet crit)- elevations in the parameters of the overall platelet mass are potentially associated with hypercoagulable state; lower levels may be seen with decreased production (bone marrow failure), increased consumption (coagulation, inflammation, etc.) and destruction in the blood (infectious, immune-mediated, etc.)

Other Possible Tests

- **Canine Heartworm**- test for deadly parasites that can live in the heart, major vessels, and the lungs.
- **Canine Fecal**- test for potentially harmful parasites that live within gastrointestinal tract and are shed through the feces.