CHECKLIST

YOUR DOG'S BLOOD TEST

Have you ever wondered what all these values mean when you get your dog's blood test results? Don't worry, we've got you covered! This cheat sheet will help you understand the significance of each value, so you can better grasp your dog's health and well-being.

BEFORE WE START, SOME NOTES AND TIPS

REFERENCE VALUES: The values provided are based on measurements from 40-120 healthy dogs of the same age, but not necessarily the same size, breed, sex, or diet.

DIETARY INFLUENCE: If your dog is raw-fed, expect their values to be on the higher side. For fresh-fed dogs, values might fall somewhere in the middle to high range.

ANALYSIS LOCATION: Check whether the blood analysis was conducted in-house or sent to an external lab. Lab results tend to be more accurate as in-house machines may need regular calibration and might not always provide the most precise readings.

REGULAR TESTING: Regular blood tests are crucial for early detection of health issues. I recommend at least one blood test a year. Remember, this is not the only test you can request from your vet; there are various other tests that can provide a comprehensive overview of your dog's health.

CONSULT YOUR VET: Always discuss blood test results with your vet to understand what they mean for your dog's health.

FOLLOW UP: If any values are abnormal, follow up with additional tests or treatments as recommended by your vet.

COMPLETE BLOOD COUNT (CBC)

The Complete Blood Count (CBC) identifies the number of white blood cells, red blood cells, and platelets. Here are the key components:

- **RED BLOOD CELLS (RBC)**
  Normal Range: 5.5 - 8.5 million cells/µL
  Significance: RBCs carry oxygen from the lungs to the rest of the body. High levels may indicate dehydration or heart disease, while low levels can suggest anemia.

- **HEMOGLOBIN (HGB)**
  Normal Range: 12 - 18 g/dL
  Significance: Hemoglobin is the protein in RBCs that carries oxygen. Abnormal levels can indicate anemia, dehydration, or lung disease.

- **HEMATOCRIT (HCT)**
  Normal Range: 37% - 55%
  Significance: Hematocrit measures the proportion of blood volume occupied by RBCs. High levels can suggest dehydration, while low levels may indicate anemia.

- **WHITE BLOOD CELLS (WBC)**
  Normal Range: 6,000 - 17,000 cells/µL
  Significance: WBCs are crucial for immune response. Elevated levels often indicate infection or inflammation, while low levels might suggest a compromised immune system.

- **NEUTROPHILS**
  Normal Range: 3,000 - 12,000 cells/µL
  Significance: Neutrophils fight bacterial infections. High levels can indicate bacterial infection or stress, while low levels may suggest severe infection or bone marrow problems.

- **LYMPHOCYTES**
  Normal Range: 1,000 - 4,800 cells/µL
  Significance: Lymphocytes are key in fighting viral infections. High levels can suggest viral infections or chronic inflammation, while low levels might indicate stress or immune deficiency.

- **MONOCYTES**
  Normal Range: 150 - 1,350 cells/µL
  Significance: Monocytes help in fighting infections and cleaning up dead cells. Elevated levels can indicate chronic inflammation or stress.

- **EOSINOPHILS**
  Normal Range: 100 - 1,250 cells/µL
  Significance: Eosinophils combat parasites and are involved in allergic reactions. High levels can indicate allergies or parasitic infections.

- **BASOPHILS**
  Normal Range: 0 - 100 cells/µL
  Significance: Basophils are involved in allergic responses and inflammation. High levels are rare but can indicate certain types of leukemia or chronic inflammation.

- **PLATELETS (PLT)**
  Normal Range: 150,000 - 400,000 cells/µL
  Significance: Platelets are essential for blood clotting. Low levels can indicate a risk of bleeding, while high levels may suggest inflammation or bone marrow issues.

CHEMISTRY PANEL

The blood chemistry panel focuses on identifying potential issues in various organ systems by measuring specific enzymes, proteins, and substances in the blood. Each parameter in the panel offers crucial insights into the health and function of a dog's organs, such as the liver, kidneys, pancreas, and more. Here's a breakdown of how the blood chemistry panel can detect disruptions in different organ systems:

- **BLOOD UREA NITROGEN (BUN)**
  Normal Range: 7 - 27 mg/dL
  Organ System: Kidneys
  Significance: High levels can indicate kidney dysfunction or dehydration, while low levels might suggest liver disease or malnutrition.

- **CREATININE (CREA)**
  Normal Range: 0.5 - 1.6 mg/dL
  Organ System: Kidneys
  Significance: Elevated levels indicate impaired kidney function or severe dehydration.

- **GLUCOSE (GLU)**
  Normal Range: 60 - 125 mg/dL
  Organ System: Endocrine System (Pancreas)
  Significance: High levels can indicate diabetes mellitus, while low levels can suggest hypoglycemia.

- **TOTAL PROTEIN (TP)**
  Normal Range: 5.2 - 7.8 g/dL
  Organ System: Liver and Immune System
  Significance: High levels can indicate dehydration or chronic inflammation; low levels might suggest liver disease or malnutrition.

- **ALBUMIN (ALB)**
  Normal Range: 2.6 - 4.0 g/dL
  Organ System: Liver
  Significance: Low levels can indicate liver disease, kidney disease, or poor nutrition.

- **GLOBULIN (GLOB)**
  Normal Range: 2.1 - 3.7 g/dL
  Organ System: Immune System
  Significance: Elevated levels can indicate chronic inflammation or infection; low levels might suggest immune deficiencies.

- **ALANINE AMINOTRANSFERASE (ALT)**
  Normal Range: 10 - 125 U/L
  Organ System: Liver
  Significance: High levels indicate liver cell damage or disease.

ALKALINE PHOSPHATASE (ALP)

- Normal Range: 23 - 212 U/L
  Organ System: Liver and Bone
  Significance: Elevated levels can indicate liver disease, bile duct obstruction, bone disorders, or certain cancers.

- **ASPARTATE AMINOTRANSFERASE (AST)**
  Normal Range: 5 - 55 U/L
  Organ System: Liver and Muscle
  Significance: High levels can indicate liver damage or muscle injury.

- **BILIRUBIN (BIL)**
  Normal Range: 0.1 - 0.6 mg/dL
  Organ System: Liver
  Significance: Elevated levels can indicate liver disease, bile duct obstruction, or increased red blood cell breakdown.

- **CHOLESTEROL (CHOL)**
  Normal Range: 110 - 320 mg/dL
  Organ System: Endocrine System
  Significance: High levels can indicate hypothyroidism, kidney disease, or other metabolic disorders.

- **CALCIUM (CA)**
  Normal Range: 8.9 - 11.4 mg/dL
  Organ System: Parathyroid and Bone
  Significance: High levels can indicate certain cancers, hyperparathyroidism, or other conditions; low levels might suggest kidney disease or malnutrition.

- **PHOSPHORUS (PHOS)**
  Normal Range: 2.5 - 6.2 mg/dL
  Organ System: Kidneys and Bone
  Significance: Elevated levels can indicate kidney disease; low levels might suggest malnutrition or bone disorders.

- **SODIUM (NA)**
  Normal Range: 142 - 154 mEq/L
  Organ System: Kidneys and Endocrine System
  Significance: High levels can indicate dehydration; low levels might suggest kidney disease or Addison's disease.

- **POTASSIUM (K)**
  Normal Range: 3.4 - 5.6 mEq/L
  Organ System: Kidneys and Muscular System
  Significance: Elevated levels can indicate kidney disease or Addison's disease; low levels might suggest malnutrition or use of certain diuretics.