

HERVEY BAY VETERINARY SURGERY

Owner Information Series

WHY DO YOU WANT TO TEST MY PETS BLOOD?

Like us, our pets can suffer from metabolic anomalies too! Their organs can fail, and they can run out of natural ability to clot the same way we can. Routine blood screening can assist us with defining issues before they become major emergencies. Especially prior to surgery!

COMPLETE BLOOD COUNT (CBC)

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

Red Cell Count measures the total number of red blood cells per volume of blood. It is used in detecting anaemia and other disorders of red blood cells. MCV (Mean Cell Volume) measures the volume of the individual red blood cell.

- **Haemoglobin** is the oxygen-carrying pigment of red blood cells. **MCHC** and **MCH** (mean corpuscular haemoglobin concentration and mean corpuscular haemoglobin) are all measures of haemoglobin and used in differentiating some anaemias.
- **PCV** (packed Cell Volume or haematocrit) measures the percentage of red blood cells to detect anaemia and dehydration.

White Cell Count (white blood cell count) measures the body's immune cells.

Increases or decreases may indicate certain diseases, infections or inflammation.

- **Neutrophils, lymphocytes** and **monocytes** are specific types of white blood cells. Disturbances of these may indicate infection, stress, cancer, hormonal imbalances and other conditions.
- **Eosinophils** are a specific type of white blood cell that may indicate allergic or parasitic conditions.

Platelet count measures cells that help to form blood clots.

Reticulocytes are immature red blood cells. High levels indicate rebuilding of red blood cell numbers.

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, diarrhoea or toxin exposure, pets receiving long-term medications and health before anaesthesia.

- **Na** (sodium) is an electrolyte lost with vomiting, diarrhoea, kidney disease and Addison's disease. This test helps indicate hydration status.
- **K** (potassium) is an electrolyte lost with vomiting, diarrhoea or excessive urination. Increased levels may indicate kidney failure, Addison's disease, dehydration or urethral obstruction. High levels can lead to a heart attack.
- **Cl** (chloride) is an electrolyte often lost with vomiting and Addison's disease. Elevations often indicate dehydration.
- **Bicarb** is an indication of acid / base balance and can be changed with vomiting and other conditions.

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- **BUN** (blood urea nitrogen) indicates kidney function. An increased level in the blood is called azotaemia and can be caused by kidney, liver, heart disease, urethral obstruction, shock and dehydration.
- **CREA** (creatinine) reveals kidney function. This test helps distinguish between kidney and non-kidney causes of elevated BUN
- **Ca** (calcium) deviations can indicate a variety of diseases. Tumours, hyperparathyroidism, kidney disease and low albumin are just a few of the conditions that alter serum calcium.
- **PHOS** (phosphorus) elevations are often associated with kidney disease, hyperthyroidism and bleeding disorders.
- **AMYL** (amylase) elevation may indicate pancreatitis or kidney disease.
- **LIP** (lipase) is an enzyme that may indicate pancreatitis.
- **TP** (total protein) indicates hydration status and provides additional information about the liver, kidneys and infectious diseases.
- **ALB** (albumin) is a serum protein that helps evaluate hydration, haemorrhage, intestinal, liver, and kidney disease.
- **GLOB** (globulin) is a blood protein that often increases with chronic inflammation and certain disease states, including some cancers.
- **TBIL** (total bilirubin) elevations may indicate liver or haemolytic disease. This test helps identify bile duct problems and certain types of anaemia.
- **ALKP** (alkaline phosphatase) elevations may indicate liver damage, Cushing's disease or 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.
- **GGT** (gamma glutamyl transferase) is an enzyme that indicates liver disease or corticosteroid excess.
- **AST** (aspartate aminotransferase) increase may indicate liver, heart or skeletal muscle damage.
- **CK** (Creatine Kinase) is an enzyme that indicates muscle damage.
- **LDH** (Lactic Dehydrogenase) is an enzyme that can be elevated in muscle, heart and liver disease.
- **CHOL** (cholesterol) is used to aid in the diagnosis of hypothyroidism, liver disease, Cushing's disease and diabetes mellitus.
- **GLU** (glucose) is a blood sugar. Elevated levels may indicate diabetes mellitus. Low levels can cause collapse, seizures or coma.
- **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)
- **T4** (thyroxine) is a thyroid hormone. Decreased levels often signal hypothyroidism in dogs, while high levels may indicate hyperthyroidism in cats.