COMPLETE HAEMATOLOGY TESTS

A complete haematology test helps your vet evaluate the health of the cellular component of your pet's blood. The test is relatively quick and easy as it just requires a simple blood test. Haematology is generally composed of 2 evaluations:

- The cell count, also called a complete blood count (CBC), helps quantify the population of cells in the blood. See the list of different cells and parameters measured below.
- The evaluation of cell morphology (or shape) which requires a microscopic assessment of a blood smear. It provides important information about blood cell function, and it sometimes can indicate the presence of blood parasites.

A complete haematology test is a routine but vital diagnostic tool that helps your vet assess the health of your pet and detect serious diseases.

Red Blood Cells (RBCs)
RBCs transport oxygen from the lungs to all body tissues, ensuring cellular energy production. A low number of RBCs, also called anaemia, is a condition characterised by fatigue, weakness, and pale gums. It can indicate the presence of a serious underlying disease.

Haemoglobin (HGB)
Haemoglobin is an iron-rich protein that allows RBCs to transport oxygen around the body.

Haematocrit (HCT)
HCT signifies the proportion of blood occupied by RBCs. Abnormal HCT can indicate dehydration or underlying disease process.

Mean Cell Volume (MCV)
The average size of individual RBCs.

Mean Corpuscular Haemoglobin (MCH)
The average amount of haemoglobin in each RBC.

Mean Corpuscular Haemoglobin Concentration (MCHC)
The average concentration of haemoglobin in RBCs.

Red Cell Distribution Width (RDW)
RDW Measures of the degree of variation in RBC size. Low RDW means the cells are uniform in size, high RDW means the cells vary greatly in size.

White blood cells (WBCs)
WBCs form the body's immune system, fighting infections and diseases. An abnormal WBC count can signal infection, inflammation, or immune disorders. There are 5 types of WBCs:

- Lymphocytes (LYM)
- Monocytes (MON)
- Neutrophils (NEU)
- Eosinophils (EOS)
- Basophils (BAS)

Platelets (PLTs) – also called Thrombocytes
PLTs are essential for blood clotting and preventing excessive bleeding from injuries. Inadequate PLT levels can be caused by serious diseases. For example, assessing PLTs can be important prior to a surgical procedure.

Mean Platelet Volume (MPV)
Average volume of individual platelets.

Platelet Distribution Width (PDW)
This measures the uniformity of the platelet size.

Platelet Haematocrit (PCT)
This measures what percentage of the blood is made up of platelets compared to fluid.

Understanding Blood Results

A PET OWNER'S GUIDE

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Comprehensive blood tests, including haematology and chemistry tests, serve as a crucial diagnostic tool in veterinary medicine. These routine tests are relatively quick and safe and provide valuable insights into the cellular components, organ function, metabolic activity, and electrolyte balance within your pet's blood. These tests help your vet diagnose and manage potential health issues which can significantly improve treatment outcomes and contribute to your pet's long-term health and well-being.

CHEMISTRY TESTS

Chemistry blood tests assess the fluid component of the blood, providing useful indicators of the health and function of your pet's organ systems and fluid balance.
Chemistry tests may include the following:

Alanine Aminotransferase (ALT)
An enzyme released by the liver when the liver is damaged. Elevations may be a sign of liver damage or disease or many other things such as diabetes mellitus, Cushing's disease, pancreatitis and more.

Albumin (ALB)
A protein made by the liver that circulates in the blood. Low levels can indicate liver, kidney, or intestinal disease.

Alkaline Phosphatase (ALP)
Elevations can indicate liver swelling, or decreased bile flow caused by liver disease or hormonal disorders such as thyroid disease, diabetes, Cushing's Disease, or Addison's Disease, and may also be an indicator of certain bone diseases. It can also be elevated as a result of certain drugs such as anti-seizure medications.

Amylase (AMY)
An enzyme produced to help digest food. Elevated levels can indicate disease of the pancreas, intestines, or kidneys.

Aspartate Aminotransferase (AST)
An enzyme found in the liver, heart, skeletal muscle, kidneys, brain, and red blood cells. AST is an important enzyme in amino acid metabolism and increases can be related to liver or muscle damage.

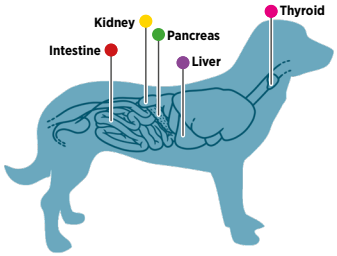
Bile Acids (BA)
Vital for identifying and monitoring liver disease, bile acids are one of the best measures of liver function.

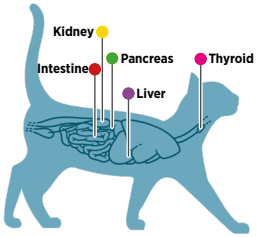
Blood Urea Nitrogen (BUN)
Made by the liver and removed from the body by the kidneys, BUN levels show hydration status and help to evaluate the kidneys and liver.

Calcium (Ca)
Elevations can be an early sign of certain cancers. Imbalanced calcium and phosphorus levels are indicative of certain metabolic disease, such as those of the parathyroid gland and kidney disease.

Chloride (CL)
Chloride is a major electrolyte, along with Sodium and Potassium. Electrolytes are important to maintain the fluid balance within the body. Vomiting and diarrhoea can lead to loss of chloride, whilst increased chloride could indicate dehydration.

Cholesterol (CHOL)
Changes may be an indication of a variety of disorders, including liver and thyroid disease. Low values may be a sign that the liver is not working well.





Creatine Kinase (CK)
Creatine Kinase is an enzyme found in the muscles, heart and brain. It can be increased by muscle damage, heavy exercise or by eating a high protein meal.

Creatinine (CRE)
An important value to monitor kidney function.

Gamma Glutamyl Transferase (GGT)
A liver enzyme that helps to differentiate among different types of liver disease but can also be elevated as a result of certain drugs such as anti-seizure medications.

Globulin (GLOB)
A body protein that, if elevated, may indicate chronic inflammation or infection. It can also be increased due to dehydration and cancer.

Glucose (GLU)
Elevated levels can indicate stress (cats) or problems, such as diabetes. Low levels can be associated with liver disease, cancer or severe infection.

Phosphorus (PHOS)
Important to monitor for kidney disease, as well as its balance with calcium to monitor many conditions.

Potassium (K+)
Potassium levels are important for normal muscle function and heart rate and for monitoring pets with chronic kidney disease.

Sodium (Na+)
Just like Chloride, Sodium is required to maintain body fluid balance. Increased Sodium can indicate dehydration, whilst decreases could be due to vomiting, diarrhoea, Addison's disease or kidney disease.

Thyroxine (T4)
An excellent screening test for thyroid gland function in dogs and cats. The thyroid glands play a major role in metabolism.

Total Bilirubin (TBIL)
An important value to evaluate the liver and when there is a low red blood cell count (anaemia).

Total Protein (TP)
An estimate of the total protein in the body. Changes can help identify many conditions such as anaemia, dehydration and diseases of the liver, kidneys, and gastrointestinal tract.

Total Carbon Dioxide (tCO2)
A measure of the carbon dioxide in the blood and is used, along with electrolytes, to determine the acid-base balance of the body. This is important when choosing an intravenous fluid therapy.

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