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Information for Blood Testing

* Please read the following information carefully regarding blood tests for your animal(s). If you have any questions, please ask any of our staff.*

< FAQ >

1 What is blood test(s)? Why are they needed?

Blood tests are a valuable diagnostic tool that may provide crucial information about an animal's overall health and detect underlying medical conditions before proceeding with additional procedures. This process is critical as pre-existing conditions may go unnoticed without a comprehensive blood test, impacting the success of certain medical procedures. Blood test results also help veterinarians understand an animal's health status, make appropriate recommendations, explain risks, and interpret presented signs and symptoms. The veterinarian suggests a blood test for the animal based on one or more of the following reasons:

1.1 **Routine Check-up:** Blood tests are commonly included in routine health check-ups for animals. They play a vital role in establishing a baseline of your animal's health and may uncover underlying issues that may not be immediately apparent.

1.2 **Pre-Surgical Assessment:** Prior to performing surgery on your animal, it may be necessary to request a blood test. This test is conducted to assess your animal's organ function, blood clotting ability, and overall health.

1.3 **Monitoring Chronic Conditions:** For animals experiencing chronic conditions such as diabetes, kidney disease, or thyroid disorders, regular blood tests are essential. These tests allow us to monitor the progression of the disease, evaluate the effectiveness of treatment, and make any necessary adjustments to medications.

1.4 **Medication Monitoring:** Certain medications, particularly those taken over an extended period, may have potential side effects or require regular monitoring. Blood tests can be instrumental in assessing the impact of medications on the animal's organs and overall health.

1.5 **Screening for Diseases:** Blood tests serve as a valuable screening tool for various diseases, such as heartworm disease, Feline Leukemia Virus (FeLV), Feline Immunodeficiency Virus (FIV), and others. Early detection enables timely treatment and effective management.

1.6 **Geriatric Care:** Senior animals require more frequent monitoring of their health. Blood tests can aid in identifying age-related issues, such as organ dysfunction or hormonal imbalances.

1.7 **Unexplained Symptoms:** If the animal is exhibiting unexplained signs such as weight loss, lethargy, or changes in behavior, a blood test can assist in identifying underlying cause. It can provide valuable information about organ function, infection, inflammation, and other potential factors.

2 Is there any risk involved in blood tests?

Like any medical procedure, there are risks associated with blood tests, such as allergic reaction, cyanosis, loss of consciousness, or cardiac arrest. While severe complications are rare, animals may experience nervousness, mild discomfort, minor bruising, bleeding at the blood draw site, or infection. However, blood test results provide valuable information to veterinarians for assessing the current health status, evaluating treatment effectiveness, and determining appropriate treatment directions.

3 What types of blood tests might animals need?

Veterinarians may recommend specific blood tests, such as a Comprehensive Blood Test (includes CBC + Biochemistry + Electrolytes), or infectious disease screenings. The recommended blood tests depend on factors like the animal's age, medical history, and current health. **If an owner chooses not to proceed with the recommended blood test(s), s/he assume the risks of potential unidentified severe conditions or diseases, including complications or even fatality during or after the medical procedures and recovery.**

4 What are some pre-cautions that Owner(s) should be aware of with blood tests?

Prior to conducting any blood test(s), Owner should carefully follow with the Veterinarian's instructions, including any requirements such as fasting, and inform them about the animal's current medication, past treatment(s), recent abnormalities. The blood test(s) typically takes around 30 minutes to be performed at the Hospital, and the results are usually available within that time. However, if assistance from an external laboratory is necessary, it may take up to 7 working days for the results to be obtained.

＜Common Types of Blood Tests＞

The following list, though not exhaustive, outlines the parameters that can be tested through blood tests. It is important to note that not all parameters are tested in every blood test. The items presented specifically focuses on the most common blood tests offered at our hospital. If you have any concerns or questions regarding the blood testing procedure or the specific tests recommended by the veterinarian, please do not hesitate to discuss them with our staff.

#	Type	Item	Result
1	CBC ($250)	RBC (red blood cell count)	Increases in these parameters may support dehydration or a disease of increased production of RBCs; decreases may indicate anemia and decreased oxygen-carrying capability of the blood; the test may be positive due to hematuria, hemoglobinuria or myoglobinuria; blood in the urine is often a sign of inflammation, infection and/or trauma.
2		HCT (hematocrit)	
3		HGB (hemoglobin)	
4		MCV (mean cell volume)	Increases may indicate the presence of larger than normal cells, which may be related to young cells during response to an anemia; decreases may indicate the presence of smaller than normal cells, which may be associated with chronic blood loss/iron deficiency.
5		MCH (mean cell hemoglobin)	Increases suggest the presence of hemolysis or an interference in hemoglobin measurement; decreases suggest decreased hemoglobin concentration, which can be seen during response to anemia and chronic blood loss/iron deficiency.
6		MCHC (mean cell hemoglobin concentration)	
7		RDW (red cell distribution width)	Increases in this objective measure of variability of RBC size may indicates increased variability in size that may aid the veterinarian in identifying the cause of an RBC problem.
8		RETIC (reticulocytes)	Increases may indicate growing numbers of immature RBCs, indicating a response to a peripheral demand for RBCs; decreases may indicate few or no immature RBCs, indicating the body is unable to respond to a demand for RBCs (nonregenerative anemia).
9		WBC (white blood cell)	Increases may be due to inflammation, stress, excitement and leukemia; decreases may be due to overwhelming inflammation and bone marrow failure; excessive numbers of WBC indicate inflammation somewhere in the urinary tract.
10		NEU (neutrophils)	Inflammatory cell may associate with infectious and noninfectious disease processes.
11		LYM (lymphocytes)	Immune cell highly responsive to “stress” and potentially increased during chronic infection.
12		MONO (monocytes)	Inflammatory cell may associate with repair of tissue injury.
13		EOS (eosinophils)	Inflammatory cell may associate with parasitic disease, hypersensitivity and allergy.
14		BASO (basophils)	
15		PLT (platelet)	Increases in these parameters of overall platelet mass are potentially associated with hypercoagulable state; decreases may be seen with decreased production (bone marrow failure), increased consumption (coagulation, inflammation, etc.) and destruction in the blood (infectious, immune-mediated, etc.)
16		PCT (platelet crit)	
17		MPV (mean platelet volume)	Increases may indicate presence of larger than normal platelets commonly associated with response to need for platelets (not significant in the cat).
18		PDW (platelet distribution width)	Increases in this objective measure of variability of platelet size may indicate increased variability in size which may be an indicator of response to a need for platelets (not significant in the cat); decreases may be seen with immune-mediated thrombocytopenia.
19	Pre-Op ($350)/ Biochemistry	GLU (glucose)	Increases may indicate diabetes mellitus; decreases may be due to liver disease, pancreatic disease and other conditions and could lead to collapse, seizure, or coma; high levels are usually associated with an elevated blood glucose concentration.
20		CREA (creatinine)	increases may be seen with decreased kidney function and other conditions as noted with BUN, but is not affected by a recent high protein diet; decreases may be seen with overhydration.
21		BUN (blood urea nitrogen)	Increases may be seen with decreased kidney function, dehydration, heart disease, shock or urinary obstruction as well as following a high protein diet; decreases may be seen with overhydration.
22		TP (total protein)	Increases may indicate dehydration or an inflammatory condition; decreases may be seen in decreased liver function, blood loss, gastrointestinal loss and kidney loss.
23		GLOB (globulin)	Increases may be seen with inflammation and potential chronic infection; decreases may be seen with blood loss, gastrointestinal loss and immune deficiencies.
24		ALB (albumin)	Increases may indicate dehydration; decreases may be seen with decreased liver function, blood loss, gastrointestinal disease or kidney disease.
25		ALT (alanine aminotransferase)	Increases may indicate liver cell damage.
26		ALKP (alkaline phosphatase)	Increases may indicate a liver abnormality (cholestasis), Cushing’s disease, active bone growth in young pets, active bone remodeling after bone injury; may be induced by multiple drugs and nonspecific conditions.
27		GGT (gamma glutamyl transferase)	Increases may indicate a certain type of liver abnormality (cholestasis).

28	Biochemistry (CBC + Biochemistry $750)	TBIL (total bilirubin)	Increases may be seen with liver disease (cholestasis and insufficiency) and certain types of anemia.
29		CHOL (cholesterol)	Increases may be seen with a variety of metabolic disturbances including diabetes mellitus, hypothyroidism, Cushing's disease, pancreatitis and some types of kidney disease; decreases may be seen with liver insufficiency and intestinal disease.
30		AMYL (amylase)	Increases may be seen with pancreatitis, kidney disease, gastrointestinal disease or certain drug treatments; degree of change and other laboratory data may help identify pancreatitis specifically.
31		LIPA (lipase)	
32		PHOS (phosphorus)	Elevations may seen with decreased kidney loss through conditions like kidney disease, increased intake through the gastrointestinal tract and increased release from injured tissues; decreases may be seen with increased loss or decreased intake.
33		Ca+ (calcium)	Increases may be seen as a result of a variety of diseases including kidney disease, certain cancer types, certain toxicities and parathyroid disease; decreases may be seen with certain parathyroid diseases and with low albumin.
34	Electrolytes ($250)	Na+ (sodium)	Increases may indicate dehydration; decreases may be seen with loss during diarrhea and vomiting or with Addison's and kidney disease.
35		K+ (potassium)	Increases may indicate kidney disease due to decreased excretion, with Addison's disease, dehydration and kidney obstruction; decreases may be seen with loss during diarrhea or vomiting.
36		Cl- (chloride)	Increases may indicate dehydration; decreases may be seen with loss during diarrhea or vomiting.
37	4DX Plus ($130)	Heartworm	May test for deadly parasites that can live in the heart, major blood vessels and the lungs.
38	Parvo ($160)	Canine Parvovirus	May test for one of the most common and severe gastrointestinal diseases in young dogs.
39	FIV/FeLV ($160)	FIV (feline immunodeficiency virus)	Tests for two of the major causes of illness and death in cats.
40		FeLV (feline leukemia viruses)	
41	CK ($120)	CK (creatine kinase)	Increases may associate with muscle damage.
42	Cortisol ($225)	Cortisol	Increases may be seen with Cushing's disease (measured in different protocols including ACTH stimulation and Dexamethasone suppression tests); decreases may be seen with Addison's disease.
43	T4 ($180)	T4 (thyroxine)	Increases may indicate hyperthyroidism (primarily cats); decreases may indicate hypothyroidism (primarily dogs)
44	LAC ($70)	Lactate	Increases may indicate either local or general decreased blood perfusion and can potentially serve as a prognostic indicator for the critical patient.
45	FRU ($180)	FRU (fructosamine)	Increased fructosamine may indicate lack of or inadequate glucose regulation due to diabetes mellitus.
46	cPL ($180)	cPL (canine pancreas-specific lipase)	Abnormal indicates pancreatitis likely.
47	fPL ($180)	fPL (feline pancreas-specific lipase)	
48	proBNP ($285)	proBNP	Abnormal may indicate evidence of increased stretch and stress on myocardium.
49	SDMA ($285)	SDMA (Symmetric dimethylarginine)	SDMA may released into the circulation during protein degradation and is excreted by the kidneys.
50	Bile acid ($225)	Bile acid	Increases in this blood component may be an indication of decreased liver function, abnormalities in blood flow to the liver or possible bile duct obstruction.

Should there be any inconsistency or conflict between the English and Chinese versions of this information, the English version shall prevail. Should you wish to refer to the English version of this form, please contact our receptionist or your attending veterinarian for a copy.