

Ask the Vet

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Why All the Fuss About Bloodwork?

“Get me a CBC, chem seven, TP and ‘crit stat!’” If you watch popular television programs like *Gray’s Anatomy*, *Private Practice* or *Animal ER*, this may sound familiar. But what does it mean and what does it matter to you as a pet owner? These words refer to important blood tests that are performed by doctors to determine the health of their patients. You may have recently been asked to have wellness or pre-surgical blood tests performed on your pet. You probably wonder why they matter and what information does it provide to your pet’s doctor. These tests provide valuable insight into the well being of your pet and help veterinarians make informed decisions that increase our understanding of your pet’s health. Whether for an annual check-up or prior to a surgical procedure, bloodwork is beneficial for interpreting animals’ health since they cannot tell us if something has changed in their lives. We rely on you, the pet owner, to be observant regarding your beloved four-legged friends water intake, elimination habits, food intake and energy level. For some people this information is readily available, but in many busy households or for outdoor pets, this information is not easily determined.

Veterinarians can determine a lot about a patient’s general health from a thorough physical examination and history. But we can not see if the internal organs are performing properly. The blood tests that we tailor to your pet’s age, state of health and past history provide additional information we can use to create specific health plans to keep your loved one around as long as possible and keep them healthy. Just like with people, the earlier we can find a problem, the more likely we will be in treating or managing that problem. And since our patients age at a rate of five to seven times faster than we do, annual blood tests are even more important. If you had a family member in the hospital, and your doctor recommended blood tests, when would you not want to do everything possible for them? That is the same for veterinary patients and many of the same tests are just as important.

Let’s look at some of the common blood tests to see what we can learn:

CBC (Complete Blood Count) - This test examines the cells in the blood stream. Blood is made up of liquid (plasma) and cells. The various blood cells have different jobs. Red blood cells carry oxygen throughout the body. White blood cells help the body fight infection. Platelets control bleeding by forming clots. Changes in the cell counts can indicate anemia, infections, bleeding disorders, dehydration and the ability of the body to fight infections. Blood chemistries evaluate various internal organs such as the liver, kidneys, pancreas, heart and lungs. Early changes in these blood values may occur before your pet shows symptoms of disease. Also evaluating liver and kidney values are important before surgery since most anesthetics are broken down by the liver and removed from the body by the kidneys.

BUN (Blood Urea Nitrogen) - Used to check kidney function. High levels relate to decreased kidney function. Low levels can be related to some types of liver disease.

Creatinine - also related to kidney function. Tends to be a more sensitive measure to kidney disease.

PHOS (phosphorous) - Elevated levels relate to kidney disease, mobilization of bone stores, bleeding disorders or hyperthyroidism.

ALT (Alanine aminotransferase) - A liver enzyme found in the liver cells. Elevated values related to active liver damage, cell leakage. It does explain the cause.

AST (aspartate aminotransferase) - increases relate to liver disease, heart or muscle damage.

SAP (Serum alkaline phosphatase) - increases can be related to liver damage, active bone growth in young animals, adrenal gland disease or in response to anti-inflammatory or seizure control drugs.

TBili (total bilirubin) - increases relate to liver or gallbladder disease or destruction of red blood cells.

GLU (glucose) - is a blood sugar. Used to test for diabetes mellitus, hypoglycemia or septicemia.

ALB (albumin) - small molecular weight blood protein. Used to test for hydration, kidney disease, digestive problems, and liver or kidney problems.

GLOB (globulin) - a blood protein that can increase with chronic inflammation and other diseases.

CHOL (cholesterol) - used to aid in diagnosis of hypothyroidism, liver disease, Cushing’s disease and diabetes mellitus.

AMY (amylase) - a digestive enzyme when elevated can be a sign of pancreatitis or kidney disease

LIP (lipase) - elevated levels are associated with pancreatitis.

Electrolytes - levels can vary with vomiting, diarrhea, Addison’s disease, or other metabolic diseases.

HCT (hematocrit) - measures the percentage of cells in a volume of blood. Mostly made up of red blood cells, so a quick test for anemia.

TP (total proteins) - indicates hydration level and provides additional information about the liver, kidneys and infectious diseases.

So the next time you are told that your pet needs blood work done, you will hopefully better understand the purpose. If you have additional questions, please visit your local veterinary hospital. Many hospitals are able to perform these tests on site, giving you information the same day.

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