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Ask the Vet: The value of blood testing for our pets

Halloween season is upon us once again. As a reminder, please protect all pets - especially dogs - from the dangers of chocolate candies and treats. Chocolate toxicity is seen commonly this time of year, and can be life-threatening if too much is consumed.

Halloween trick or treating got me thinking about ghosts, goblins, bats and vampires ... and blood ... and blood work - though blood testing for your pet is available year-round, in sickness and in health.

Aside from the physical examination, blood work is probably the most important diagnostic tool to help discern an animal's internal health. There are numerous testing options available depending on clinical signs, age, exposure to diseases or other suspicions of illness. The simple collection and proper processing of a blood sample can provide valuable insights into metabolic abnormalities, a variety of infections - including some life-threatening ones - and inflammatory conditions. Your veterinary team will discuss options and make recommendations tailored for your pet's individual situation.

Often blood testing is recommended when there is some illness or disease present, but testing is just as valuable when your pet is seemingly healthy. If the test results are all normal, then wonderful.

When a pet's own normal results for these tests are established, we can identify trends of change over time from normal to abnormal more easily and more quickly. But - and this is important - testing when pets are seemingly healthy is often the only way to identify an abnormality very early on.

Pets that appear healthy can be good at masking diseases. A good example of this is cats that develop kidney disease. Because kidneys are very efficient, they can lose up to 75 percent of their function before we actually see outward clinical signs of insufficiency. Blood work can often detect early changes that allow us to help manage this disease properly, hopefully resulting in a longer, healthier life.

Looking at different test options, the general blood chemistry profiles evaluate a variety of parameters, including glucose, albumin, globulin, electrolytes, minerals, bilirubin, liver enzymes, pancreatic enzymes and kidney-related BUN and creatinine. These look at organ system activity in the body. More specific testing might help better measure liver function, different hormone levels or potential toxin exposures.

Complete blood counts measure hemoglobin, which carries oxygen; red blood cells, which transport hemoglobin; white blood cells, which protect from infections and react to infections and inflammation; and platelets, which are important for clotting that prevents bleeding. Also, immune system weaknesses or hyperactivities can be identified.

Viral testing for young or any sick cats is very common to help identify serious active infections or recent exposures. Routinely tested are feline leukemia virus and feline immunodeficiency virus, with test results often available within minutes.

Modern heartworm disease testing in both dogs and cats is very simple and valuable in identifying this potentially life-threatening infection.

A variety of tests are available to determine exposure to infectious diseases that are contracted through tick bites. Examples include Lyme disease and canine Ehrlichiosis. The key to curing these diseases is early detection and treatment, plus subsequent monitoring of the overall health status through the general chemistry profiles and blood counts.

Safe anesthesia in pets of any age requires healthy red blood cells with a normal hemoglobin level to carry oxygen, in addition to normally functioning kidneys and liver to properly metabolize the anesthetic medications given. Elderly or ill patients are at higher risk, so identifying abnormalities becomes even more critical due to diminished organ efficiency and reduced ability to respond to stresses at times of anesthesia and surgery. Additionally, the capacity of the surgical patient to heal properly and quickly is vital to recovery and success. Any problems identified beforehand often can be improved or corrected prior to a surgical procedure.

For pets that require long-term medications like anti-seizure or thyroid treatments, regular physical examinations and blood and other laboratory testing helps your veterinarian to make sure the medicine is helpful and effective. Medication changes may be due to the natural course of disease or onset of new diseases, weight fluctuations, lifestyle changes and aging. New therapies or alternative therapies can be offered when exam and laboratory results indicate a need.

In summary, a wide variety of blood testing is available to meet the needs of your pet at various stages of its life. Your veterinarian will offer recommendations based on history and exam findings, explain testing results and answer questions you have in helping your pet to achieve a long and happy life.