

BASELINE BLOOD TESTS

WHY ARE LABORATORY BLOOD, PLASMA OR SERUM TESTS NECESSARY? Routine physical examination may not always reveal problems such as diabetes, thyroid function abnormalities, liver problems, kidney insufficiency, or many other metabolic or blood diseases.

Identifying baseline values, for what are referred to as blood chemistries, for your pet helps early detection of harmful medical conditions. Problems can then be dealt with before your pet's condition deteriorates, causes undue pain, or otherwise impairs the quality of his or her life. Also, test results showing normal function are beneficial and reassuring to you and to the veterinarian. In some pets, particularly cats, sedation may be required to help us obtain a blood sample.

As your pet enters the geriatric years (older age), the internal organ systems deteriorate and early detection is a key to maintaining maximum well being.

AT WHAT AGE IS A PET ENTERING THE GERIATRIC YEARS? This varies by species and size but the following list gives the ranges commonly associated with being a geriatric pet.

- Small size dogs, less than 20 pounds: 9-13 years.
- Medium size dogs, 21-50 pounds: 9-11.5 years.
- Large size dogs, 51-90 pounds: 7.5-10.5 years.
- Giant dogs, over 90 pounds: 6-9 years.
- Cats, most breeds: 8-10 years

My recommendation is this: Precluding medical necessity for earlier testing, such as surgery or illness, I like to see a complete blood chemistry test for every dog and cat by the time she or he is seven years old. For some, this may be the adult years and for others the middle years and finally for others the geriatric years. Recommendations for future testing for your pet will be determined by the initial results.

WHAT ARE THE BLOOD CHEMISTRY TESTS AND WHAT INFORMATION DO THEY PROVIDE?

Albumin (ALB) - Produced by the liver, reduced levels of this protein can point to chronic liver or kidney disease, or parasitic infections such as hookworm.

Alanine aminotransferase (ALT) - An enzyme that becomes elevated with liver disease.

Alkaline Phosphatase (ALKP) - An enzyme produced by the biliary tract (liver). Elevated levels can indicate liver disease or Cushing's syndrome.

Amylase (AMYL) - The pancreas produces and secretes amylase to aid in digestion. Elevated blood levels can indicate pancreatic and/or kidney disease.

Blood Urea Nitrogen (BUN) - BUN is produced by the liver and excreted by the kidneys. Testing for it helps to detect liver and kidney abnormalities.

Calcium (Ca²⁺) - Increased levels of this mineral can be an indicator of certain types of tumors, or parathyroid or kidney disease.

Cholesterol (CHOL) - Elevated levels of cholesterol are seen in a variety of disorders including hypothyroidism and diseases of the liver or kidney.

Creatinine (CREA) - Creatinine is a by-product of muscle metabolism and is excreted by the kidneys. Elevated levels can indicate kidney disease or urinary obstruction.

Blood Glucose (GLU) - High levels can help diagnose diabetes and can indicate stress - especially in cats. Low levels can indicate liver disease and pancreatic disease.

Phosphorus (PHOS) - High levels of this can be an indicator of kidney disease.

Total Billirubin (TBIL) - A component of bile, bilirubin is secreted by the liver into the intestinal tract. Blood bilirubin levels are useful in diagnosing problems in the bile ducts.

Total Protein (TP) - This tests the albumin and globulin levels in your pet's blood. Albumin is a protein produced in the liver, and globulins are antibodies. Low levels can indicate liver disease, kidney disease, or blood loss. High levels may reflect dehydration, chronic infection, or tumors.

Take time to acquaint yourself with the benefits of identifying baseline values for your individual pet's biochemical functioning. Your pet, you, and your veterinarian will be better able to deal with decisions about preventive care, be better informed during or after trauma or disease and most important of all, know you are basing your decisions on the best available information.

ANY FURTHER QUESTIONS YOU MAY HAVE CAN BE ANSWERED BY CALLING OUR OFFICE.

PRACTICE OF VETERINARY MEDICINE, SURGERY AND DENTISTRY