

Bloodwork Basics (and Beyond)

By Andrea Vardaro Tucker, ELS



What pet parent doesn't wish their furry friend could tell them when they don't feel quite right? Of course, our pets can't tell us that, and unfortunately they're also notoriously good at hiding many medical conditions. Luckily, veterinary professionals have a number of tests they can run to get a peek at what's going on inside your pet.

Establishing a Baseline

Vets may order any number of tests based on signs of illness that pets might show.

But here, we're going to mainly focus on lab work that most pet parents will encounter as part of routine wellness exams.

"Performing these tests routinely during wellness visits helps us establish a baseline for each pet, which can make it easier to identify trends as the pet ages," says Dr. Karen Todd-Jenkins, who's been a practicing veterinarian for more than 25 years. "An important goal of wellness visits is to diagnose illnesses earlier. This bloodwork can help us do that as well. And when the lab results are all completely normal, it gives the parent a

little peace of mind to know that their pet is healthy."

Even "abnormal" results aren't always cause for concern. Dr. Todd-Jenkins says, "I always stress that lab results have to be interpreted in context. Physical exam findings and medical history have to be taken into consideration when deciding whether an 'abnormal' lab result is truly significant." Your pet's veterinarian could decide to repeat a test after your pet fasts or make some other change, which could provide additional information.

And, as Dr. Todd-Jenkins notes, “laboratory errors can happen.”

Basic Tests

Some tests need to be sent to an outside laboratory, and others may be done in-house by the veterinary team, depending on your specific veterinary clinic. Let’s take a look at lab work that’s typically run as a regular part of routine care:

- A **complete blood count**, or **CBC**, assesses the number and condition of your pet’s red and white blood cells and platelets. Results can show if your pet is dehydrated or anemic (has a low number of healthy red blood cells) or might be experiencing an infection or clotting disorder.
- A **blood chemistry panel** or **biochemical profile** helps tell the story of how your pet’s organs are functioning. Some of the things this test can check include:
 - Blood sugar
 - Calcium
 - Electrolytes
 - Thyroid hormone
 - Kidney function
 Fasting is ideal for accurate results. Along with a CBC, a blood chemistry panel is often run before a procedure that requires sedation or anesthesia. This test helps your veterinarian rule out any underlying disease and ensure that your pet is a safe candidate for sedation or anesthesia.
- **Urinalysis** allows your vet to look for signs of health problems—like the presence of glucose, protein, or sediment—in your pet’s urine. It’s useful for assessing kidney function and checking for diabetes, dehydration, thyroid disease in cats, and adrenal disease. Vets might collect the urine at their office or give you instructions for collecting the sample at home yourself—usually just before your vet visit.
- **Fecal tests** look for health-related clues in your pet’s poop. Your vet will probably ask for a stool sample at least once a year and check it for

the presence of parasites that could harm your pet and potentially spread to other household pets and family members.

- A **thyroid function test** might be ordered as part of routine testing, to follow up on results of other tests. This test checks the level of thyroid hormones in your pet’s blood to determine how well their thyroid glands are doing their job of regulating metabolism. *Hypothyroidism*, or underactive thyroid glands, is common in dogs and can affect multiple body systems. In senior cats, *hyperthyroidism*, or overactive thyroids, is most likely and usually stems from a benign tumor in either or both thyroid glands. Rarely, cancerous tumors are the cause. As a result, the tests that make up thyroid panels differ for dogs and cats, just as potential treatments do.
- Your vet will also **screen for infectious, zoonotic, and vectorborne diseases**, such as heartworm disease, leptospirosis, canine influenza, distemper, and tickborne diseases like ehrlichiosis and Lyme disease (see page 7 to learn how to help protect your pet against ticks). Veterinarians decide which tests are essential based on factors like a pet’s locale, environment, lifestyle, species, and age.

If your vet needs more information after running initial tests, they may request follow-up bloodwork or suggest diagnostic tests like x-rays.

Wellness Testing by Life Stage

The focus for **most kittens and puppies** is on testing for infectious diseases and parasites. For instance, this may include testing kittens for feline leukemia (FeLV) and feline immunodeficiency virus (FIV) and testing healthy puppies older than 7 months for heartworm disease. Fecal testing is crucial for both as well. According to Dr. Todd-Jenkins, “Those tests are important in puppies and kittens

because these diseases can be clinically silent but cause significant illness down the road. Feline leukemia and FIV are also contagious to other cats; so—especially in a multicat household—it’s important to know the FeLV and FIV status of all the cats in the home.”

For **healthy adult pets**, your vet will likely run some basic wellness panels and determine which other tests your pet might need depending on their overall health, other test results, medications they take, and various lifestyle factors. “Although some tests are pretty routine, the tests I run should make sense for each patient,” Dr. Todd-Jenkins says.

Testing needs change significantly as pets age.

Because **senior pets** have greater risk of health complications, more frequent and more specific diagnostic tests are often needed. Dr. Todd-Jenkins says, “When pets become older, I like to discuss testing that screens for things like thyroid disease, kidney disease, diabetes, and other conditions that affect middle-aged and older patients.” Those with chronic illnesses or on certain medications may need more regular monitoring of blood levels, and treatments may need to be adjusted based on the results.

As pet parents, we know the importance of prevention in terms of regular exams and preventive medication and vaccines. But regular testing is just as essential to help your veterinarian find and treat any abnormalities promptly, and that testing schedule will be tailored to your own pet’s unique needs.

Board-certified editor in the life sciences and HealthyPet copy editor Andrea Vardaro Tucker lives outside of Pittsburgh with her human family and Westie, who is no stranger to senior lab work.