

WHAT IS A URINALYSIS?

A urinalysis is a laboratory test of urine commonly referred to by medical professionals as a “UA.” The urine is evaluated for the presence of certain chemicals. A microscopic exam of the urine is also done to look for abnormalities.

A urinalysis is indicated for evaluating pets with urinary abnormalities such as increased urine production, increased urinary frequency, straining to urinate, bloody urine or abnormal color to the urine. This test can also be helpful in cases of unexplained fever, loss of appetite or weight loss. A urinalysis is often done when indicated by the results of an X-ray, results of blood tests indicating a problem with the urinary system or as a follow up to physical examination when abnormalities are detected.

Any evaluation for health or illness should include a urinalysis. Urinalysis results can give an idea of hydration and kidney function; it can also indicate inflammation or infections in the urinary tract.

There is no real contraindication to performing this test. Even normal results help determine health or exclude certain diseases.

WHAT DOES A URINALYSIS REVEAL?

A urinalysis helps to evaluate the function of the kidneys and the quality of the urine produced. A urinalysis usually consists of three parts; examining the physical sample, a dipstick analysis to evaluate the presence of certain substances and microscopic examination of the sediment. A urinalysis can evaluate for pyuria (white blood cells in the urine), hematuria (blood in the urine), crystalluria (crystals in the urine), the presence of abnormal amounts of glucose, ketones and protein, and urine concentration.

Normal urinalysis results include a specific gravity (SG) of 1.020 to 1.070. This measures the ability of the kidneys to concentrate urine. In the normal patient, dipstick results for protein show negative to trace amounts, negative blood, negative glucose, negative ketones, and negative to trace amounts of bilirubin. The results of the sediment testing (microscopic evaluation) is slightly dependent upon the method of urine collection (free catch, catheterization, or cystocentesis). Essentially a few red blood cells and white blood cells can be normal.

In some cases, additional procedures such as X-rays, abdominal ultrasound, X-rays with contrast (IVP or cystogram) or even exploratory surgery are needed to diagnose a problem.

How Is a Urinalysis Done?

A urinalysis is begun with the collection of a urine sample. Urine can be obtained by three methods:

Catheterization consists of inserting a flexible plastic tube into the urethra, then up into the bladder (the reservoir inside the body where urine is stored until the pet urinates).

Cystocentesis is a very common method to obtain urine from dogs and cats. This procedure involves introducing a needle directly into the bladder through the body wall. This is a relatively painless and quick procedure. The pet can



be lying or standing. The bladder is palpated (felt) and a needle is inserted into the bladder.

Free catch urine samples are obtained by catching a sample when the pet urinates. This is easy in some pets and quite difficult in others. Plastic containers, ladles, scoops and various objects can be used. The container should be as clean as possible for the most accurate of results. This method is the least “sterile” and is associated with the most lab error.

Most veterinary hospitals have the equipment to perform a urinalysis although some choose to submit samples to outside laboratories.

A urinalysis generally takes about 30 to 40 minutes to complete.

IS A URINALYSIS PAINFUL?

Whether a urinalysis is painful or not depends on the method by which urine is obtained. Catheterization is “uncomfortable” in most pets although many male pets tolerate the procedure well. Females are more difficult to catheterize due to the anatomical location of their urethra.

If urine is obtained by cystocentesis, the needle insertion through the skin can be associated with brief pain, just as any injection.

IS SEDATION OR ANESTHESIA NEEDED FOR A URINALYSIS?

Neither sedation nor anesthesia is needed in most patients; however, some pets resent positioning for a catheter placement (especially females) and may need tranquilization or ultrashort anesthesia.