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Chances are that the last time you went to your physician for a physical examination, your health care provider handed you a sample cup and pointed to the restroom so you could "pee in the cup." This procedure has become so normal that we probably prepare by not urinating in anticipation. That is because analyzing a [urine](#) sample (doing a urinalysis) is a relatively quick and easy way to get a lot of valuable information.

Your [veterinarian](#) likely recommends running a urinalysis, not only on your cat when she is sick, but also sometimes when she seems perfectly healthy. In fact, years ago my friend, [Dr. Carl Osborne](#), a veterinarian renowned for his interest in urinary disorders, told me that, as far as he was concerned, no physical examination was complete without a urinalysis.

What can a urinalysis tell your veterinarian about your cat?

Your veterinarian will look at the following aspects of the urine sample:

- **Color and Appearance--** Is it yellow and clear/transparent as it should be or is it cloudy, dark or bloody indicating something abnormal is suspended in it (such as blood cells, [cancer](#) cells, crystals, mucus, [bacteria](#) and remnants of damaged [kidney](#) cells or casts).
- **Microscopic Appearance--** When evaluated under a microscope, a drop of urine can confirm the presence of those suspended components mentioned above.
- **Specific Gravity--** This is a test that determines the concentration of the urine as a number on a scale with 1.000 being the standard, based on distilled water, and the values increasing from there. The specific gravity reading of one single urine sample is not entirely diagnostic because urine concentration varies with hydration status and water

consumption. But the value can lead your veterinarian to pursue other tests.

- **Chemical tests--** There are many very sophisticated chemical tests that can also be performed on a urine sample, but in a routine urinalysis some of the things your veterinarian will check for are:
 - **Glucose (sugar)--** Can indicate [diabetes](#) mellitus, [kidney disease](#) or other genetic disorders.
 - **Protein in increased amounts--** Can result from infection, inflammation, hemorrhage, or other metabolic diseases.
 - **Bilirubin or bile pigments in increased numbers--** Can indicate [liver disease](#) or red blood cell destruction.
 - **Blood--** Either whole cells or just pigment from active bleeding and/or red blood cell destruction may signal infection.
 - **pH or the acidity changes of the urine--** Can indicate kidney disease or [infection](#).
 - **Ketones--** By-products of protein metabolism; their presence can indicate starvation (either literal or due to metabolic disease like [diabetes mellitus](#))

How will my veterinarian get the urine sample from my cat?

Unfortunately, I have never known a cat that was willing to urinate into a cup. That means that your veterinarian is mostly likely going to need to take the urine sample from your cat. Even trying to pass a urinary catheter is nearly impossible in an awake and alert cat. An anxious cat may urinate in the exam room allowing your veterinarian to collect that 'table top' sample. Or your veterinarian may be able to express the [bladder](#) gently until your cat urinates for a free catch sample. Samples obtained in these ways are adequate for routine testing, but evaluation of the sample has to be done in light of the fact that the final product is not necessarily what started out in the bladder since the urine passed through other locations (the prostatic urethra and the penis in a male, or the urethra and vulva in a female) along its way out. In addition it is not a sterile sample if a culture for bacteria is going to be performed.

In order to collect a clean urine specimen directly from the bladder, it is best to use a technique called “cystocentesis” which refers to inserting a small needle through the skin directly into the bladder and removing a specimen in much the same way that a blood sample is obtained. The procedure is very quick, safe and relatively painless. When you consider how much valuable information can be found in a wee bit of pee, it's well worth the effort.

Some [conditions](#) in cats benefit from on-going, at-home testing of urine samples. For example, testing urine glucose levels in a diabetic cat or urine pH in a cat prone to urinary crystal formation. The occasional use of non-absorbent, chemical-free, aquarium gravel and test strips or specially-designed cat litters can facilitate such testing. So ask your veterinarian about these options if you are treating your cat for one of these disorders.

If you have any questions or concerns, you should always visit or call your veterinarian -- they are your best resource to ensure the health and well-being of your pets.

Cat Kidney Disease Articles

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[Kidney Disease in Cats 101](#)

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