

Health and welfare information about your cat from Vetlexicon Felis.



Samples - how they help your vet

Laboratory tests are used by vets to help them diagnose disease in sick pets. Increasingly they are also used as part of a routine health check to detect hidden disease before the development of obvious symptoms. This allows your cat to be treated earlier and more effectively. Tests may be used to show whether a cat is carrying infections that could pose a threat to other cats it comes into contact with. A very important use is to test that your cat's kidneys and liver are working properly before a surgical operation.

Who carries out the test?

Many veterinary practices have their own small laboratory where a limited range of tests can be carried out. Results are obtained quickly which allows rapid decisions on treatment (a quick test may be carried out in the practice and a sample is then sent to the commercial

laboratory to check that the results are correct). If a broader range of tests is required samples will be sent to a commercial laboratory which will usually send results of routine tests back to your vet by fax, telephone or e-mail within 24 hours (although some tests may take 10 days or longer to complete). Commercial laboratories are able to advise your vet on how to interpret difficult test results. Occasionally, especially if samples are delayed in the post, they may deteriorate and your vet may need to repeat the test.

What is being tested and why?

There is a whole battery of tests which can be done on different types of sample, although not all are used to investigate every disease. Some samples are more easy to obtain than others and the effects that testing has on your cat will vary.

The tests are:

- **Blood tests:** These are the most commonly performed laboratory tests because suitable samples are usually easy to get. It is possible to tell a great deal about your cat's health or disease from the concentration of different chemicals in the blood. The proportion of different types of blood cells and the presence of proteins called antibodies (which are produced as part of the body's defence against disease) may tell your vet how well your pet is fighting the disease. Samples are usually taken from a vein in the leg or neck using a hypodermic needle and syringe. A patch of fur over the vein is shaved and the skin disinfected with surgical alcohol to clean the skin and allow your vet to see the vein more easily (a few millilitres (about a teaspoon) of blood are put into special containers to prevent it clotting). Taking a blood sample does not hurt your cat although some cats do not like being held while the sample is being taken. Some bruising may occur if your cat has delicate skin or struggles when the sample is being taken. The puncture hole will heal quickly unless your cat has a disorder that prevents the blood clotting.
- **Urine tests:** These are carried out to check for diseases such as diabetes or cystitis. Your vet will look for proteins, sugar or evidence of infection in the urine. Urine samples can be collected by catching a few drops of urine in a thoroughly cleaned container as the cat empties its bladder. However, this is sometimes difficult and it may be easier to take urine from the bottom of a clean litter tray. The sample should be kept in a sealed bottle inside a refrigerator and tested as soon as possible. When it

is not possible to wait for a naturally produced urine sample your vet may collect one using a catheter (a special tube) passed directly into the bladder through the urethra, or using a needle inserted into the bladder through the skin over the belly. It may be necessary for your vet to sedate your cat to collect a sample in this way, but these techniques are no more complicated or dangerous than taking a blood sample.

- **Faeces (droppings):** Small samples of faeces often help to identify diseases of the digestive system. The sample can be tested to see if any unusual bacteria grow indicating an infection in the intestines. Further tests may be carried out to see if your cat is unable to digest certain foods or if its faeces contain eggs from parasitic worms.
- **Swabs:** A cat's eyes, ears and nose or skin can often become infected with disease-causing bacteria, viruses or fungi. Swabs are taken by gently rubbing the affected area with a small piece of cotton wool. The swab is then either transferred on to a glass slide for examination under a microscope or cultured in the same way as a sample of faeces. The results of a culture test may take a few weeks, or longer in the case of some slow growing bugs.
- **Skin scrapings:** Cats with skin disease will be tested to see if they are infected with parasitic mites. The skin is scraped gently with the edge of a scalpel blade until bleeding occurs. This may cause minor discomfort to some cats although others tolerate it fairly well. There are usually only small numbers of mites and a large number of scrapings may have to be taken from several areas before finding them. The skin sample is transferred to a glass slide and examined under a microscope.
- **Tissue biopsies:** If a cat has a growth on its body it is normal to take a sample of tissue to find out what the mass is. This can be done by tissue biopsy (removing a small part of the lump which is examined under a microscope), or a more rapid method which works in some cases is to by put a needle into the mass and suck out a few cells. Fluid samples may be taken from the airways via a tube placed in the throat, or the digestive system via an endoscope passed into the stomach. In this way your vet can obtain more information without performing a full operation on your cat.

How many tests are needed to diagnose a disease?

With many diseases it is not possible for your vet to come up with an instant diagnosis. Your animal may have to undergo a number of tests so that the vet can rule out possible causes of the illness. While some diseases can be confirmed using a single test, others will need a large number (profile) or a sequence of tests on one or more tissues or body fluids. There are

occasions when repeat tests may be needed, for example, looking for changes in antibody levels in the blood over time.

Your vet may need to perform diagnostic tests on your cat or on samples from your cat to help him provide the best possible care for your pet. If you are unsure what a test involves or why your vet needs to do it please ask for more explanation.