

Feline Leukaemia Virus (FeLV)

What is FeLV?

Feline Leukaemia Virus is a retrovirus. This is a family of viruses to which the HIV (human AIDS virus) and FIV (Feline Immunodeficiency Virus) belong. However, FeLV belongs to a different subfamily.

FeLV is one of the most important virus diseases of the domestic cat. It **cannot** be transmitted to humans or other species. The virus produces a wide variety of diseases that are rarely curable and ultimately result in death.

How is FeLV spread from cat to cat?

FeLV is shed in the saliva, urine, faeces, milk and nasal secretions of infected cats. The virus is very infectious, but prolonged and close contact between cats is necessary for transmission via mutual grooming or sharing a food bowl. The saliva from infected cats seems to be the major source of infection and so cat fights/bites are a common cause of infection. Transmission can also occur from queens to kittens either whilst in the uterus or by sucking milk. However, FeLV can be a major source of infertility or abortion, so the birth of FeLV positive kittens is rare. The virus does not survive well in the environment.

Obviously, the most commonly affected animals are the free roaming entire males that commonly fight with other cats, or cats that live in large population numbers whereby the virus can pass from one to another easily. Young cats, particularly less than six months old, are especially vulnerable.

Can a cat fight off the virus?

The cat's response to infection with the virus depends on a number of factors, which include the particular strain of virus involved, the infecting dose of the virus, the duration of exposure, the state of the cat's own immune system and the age of the cat at the time of infection.

Once infected, one of three events may occur:

- The cat may become immune.
- The cat may remain permanently infected. These cats are contagious to other cats and develop symptoms of the disease.
- The cat may appear to recover but fail to fully eliminate the virus, ie: have a latent (hidden) infection. These cats will carry the virus and, following a period of stress in later life, may go on to develop clinical disease. These cats are a potential risk to other cats.

What are the usual clinical signs?

In most cases cats will show a general malaise (lethargy) and have a fever two to four weeks after initial infection. However, these signs are seldom significant and often go unnoticed.

Typically an infected cat will go on to develop one or more chronic or recurrent problems. These can be divided into two groups:

- Tumour diseases, eg: leukaemia, lymphoma.
- Non-tumour diseases, eg: gum inflammation, anaemia, non-healing skin lesions, cat 'flu (despite vaccination), fertility problems, abortions and auto-immune disease (cat's immune system attacks itself).

There is a very wide range of clinical signs and none is specifically associated with FeLV infection. Clinical signs can include lost appetite, lethargy, depression, pale colour of mucus membranes due to anaemia, fever (high temperature), vomiting, diarrhoea, constipation, swollen glands, nervous signs, limb pain, lameness, small tumours on the skin and other signs depending on where tumours are sited.

What is the outlook for the cat with FeLV?

The outlook must always be guarded, but a positive test need not condemn a cat **providing** it is not clinically ill.

FeLV infection has a long incubation period and there may be a considerable period (three months to three years) before the cat becomes very ill, however, FeLV positive cats are very contagious, ie: spread the disease very readily and must be kept strictly isolated during this time.

Is there any treatment?

There is no direct treatment to eliminate the virus. Antiviral drugs have been tried with little affect. A newer treatment called recombinant feline interferon has been licensed, but further studies are needed to clarify its use.

Treatment in these cases therefore relies on supportive therapies for secondary infections and other related illnesses that need to be treated promptly and aggressively.

Is there a vaccine available?

There are several very successful vaccines that are routinely used for FeLV vaccination. They induce an immune response thus preventing persistent infection by the virus. As with all vaccines, they are not 100% effective and so a vaccinated animal should not knowingly be allowed to associate with a known carrier. Equally, any new cats entering a new colony should be screened whether vaccinated or not.

How is FeLV diagnosed?

Diagnosis is made by blood sampling the affected individual. Test kits commonly used work by detecting one of the viral proteins. It is also possible to detect FeLV infection by three other tests (virus isolation, immunofluorescence and PCR) in special diagnostic laboratories.

As with all tests, rarely, there may be false results. Therefore, if a test is positive it may be suggested to confirm this with a second test at a different time.

What if your cat has FeLV?

For a cat that tests positive considerations must be made to the affected cat and to cats that they come in contact with. The virus is very infectious and in contact cats are at risk. For this reason it is advised that positive cats are isolated.

In **breeding catteries** cats should be tested prior to their arrival. Positive cats should not join. Negative cats could be re-tested twelve weeks later to ensure a negative result and that the animal was not incubating disease at the time of the first test.

If you have any further queries, please contact your veterinary surgeon.



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Quick Reference Guide

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