

What is FIV?

Feline Immunodeficiency Virus (FIV) has been associated with cats for many years, although it was only labeled as such as recently as 1986. The virus depletes the number of white blood cells, which eventually makes the cat less able to fight off infection. However, because it is such a slow acting virus many FIV positive cats can enjoy a normal lifespan with no apparent health problems resulting from the virus.

FIV is species specific, so can only be transmitted from cat to cat, and not to humans or other animals.



Zach was born FIV+ve

FIV belongs to the same group as Human Immunodeficiency Virus (HIV) and for this reason has received much greater attention than it would otherwise have done. The mere mention of FIV, and the fact that it is sometimes inaccurately known as 'Feline Aids', strikes unnecessary terror into the heart of many cat-owners, so it is worth taking time to consider the facts dispassionately. Firstly, the viral strains used in laboratories on experimental cats were very virulent, and much previously published information is based on this. However, FIV strains in cats living normal lives tend to be much more benign, and may never cause disease.

How does a cat catch the virus?

The virus is present in the blood and saliva of infected cats. But, like HIV, it is a very 'fragile' virus, and cannot survive for long outside the body. It also requires a high dose to establish an infection in another cat. Therefore, it is not easily passed from cat to cat. The main route of infection is through biting, when virus in the saliva of an infected cat is injected directly into the blood stream of the cat it bites. Conversely, a cat which bites an infected cat, is at less risk of being infected, as the virus would not be injected straight into the blood stream, although there is still an element of risk.



Macy is Zach's mum. She probably became infected during mating. She is only 6 months older than he is

Cats who fight who are most likely to be infected. Cat fights are most likely between entire toms and these are therefore the group most at risk. Since many feral cats are unneutered and have to compete for food, there is a higher incidence of FIV in feral cats. Transmission between cats in a group who do not fight is unlikely as the virus can only survive a very brief time outside a cat's body, and it cannot be transmitted indirectly, such as on food, feeding equipment, clothes, shoes, hands etc. (unlike the situation with feline leukaemia). Recent research suggests the likelihood of cats passing on FIV to others in the same household is as low as 1-2%.

It has not been proved that the virus is transmitted sexually, although often the tom cat will hold onto the scruff of the female's neck with his teeth, so if the skin is punctured at that point, transmission is possible.

- **The take-home message here is to prevent fighting - make sure your cat is neutered!**

Preventing your cat from becoming infected

The only guaranteed way of preventing your cat becoming infected is to never let it outside, where it might meet other cats. This is a drastic, and unnecessary measure, which crucially may reduce the quality of life for cats who enjoy going outside. It's a bit like never going outside your front door just in case you get run over by a bus, basically the chances are low. The best way of helping to prevent the likelihood of infection is to make sure your cat is neutered. As well as being the most humane way of reducing the future stray population, neutering reduces the tendency to fight, or to wander.

What are the signs of FIV?

Signs that a cat has become infected can vary greatly, so it is not always apparent until a blood test is carried out. Often, the cat may develop raised lymph nodes around six to eight weeks after being infected, and they may have a high temperature. Sometimes diarrhea or conjunctivitis may develop, possibly lasting days or even weeks, with the cat then returning to apparent health. Other common signs are gingivitis (gum inflammation), sneezing, snuffling, a discharge from the nose or eyes, or kidney failure. The eyes or brain can be affected in a very small number of cases, resulting in changes in behaviour.

The fact that the virus depletes certain of the white blood cells (T lymphocytes), in theory at least, makes the cat more susceptible to other infections, and it will find it more difficult to shake them off. This is known as 'immunosuppression' and is identical to the situation in HIV infection. However, this is purely theoretical, and in practice many cats do not have any more infections than cats which are not infected with the virus.



Dylan enjoys playing with Zach

The commonest infection to occur in FIV positive cats is gingivitis and stomatitis (inflammation of the gums and other parts of the mouth). However, FIV is not the commonest cause of gingivitis. This is common in cats which are fed on an unnatural diet of sloppy canned food. Cats which are carriers of Calici-virus (one of the cat flu viruses) frequently suffer from gingivitis, as well as lot of cats which do not carry either of these viruses.

Whatever the cause, gingivitis is treated initially with a thorough dental scale and polish plus a course of anti-biotics and a steroid drug to suppress the inflammation. Various other chronic infections may also occur - conjunctivitis, diarrhoea, skin and respiratory tract infections (rhinitis or bronchitis). However, these are less common, and again, respond to treatment providing it is carried on for an adequate time.

What is their Life Expectancy?



*Leo is a Persian/Chinchilla mix.
He is 17 years old and FIV+ve*

A long-term FIV Monitoring Project was carried out at Glasgow Veterinary School over a number of years and the results indicated that a higher percentage of FIV negative cats died than FIV positive cats! A fourteen year study by Maureen Hutchison B.Sc, BVMS, MRCVS found that FIV-positive cats are more likely to die by being killed in road accidents or to be alive and well into their twilight years than they are to die from any FIV related condition. Also, a recent survey by Dr Diane D. Addie (Lecturer in Veterinary Virology, University of Glasgow) where 26 cats were monitored for ten years, found that FIV infection did not affect the cats' life expectancy.

- **Knowing what we now do of the prolonged nature of the condition, euthanasia is totally inappropriate and inhumane. Being killed in a road accident is a far higher risk for a cat than FIV.**

Testing and Treatment

Testing: The FIV test routinely carried out in veterinary practices detects antibodies, which develop four to six weeks after infection, **but this test is often unreliable** as to whether the cat has the virus. Positive test results obtained by using this simple 'ELISA' test (sometimes called a CITE test, or 'COMBO' test,) **should be confirmed by an IFA test** (Immuno-Fluorescent Antibody Test) or a Western Blot, as quite often false positives can occur. Some of the ELISA tests are so inaccurate as to make the whole test meaningless, and are producing 'false positives' (due to reacting with a variety of other compounds in the cat's blood). According to the Glasgow Companion Animal Diagnostic Unit web-site (where they give the results of an on-going survey), up to 7% of positive results with the ELISA test are negative when checked by the more accurate IFA test. **Many rescues have given up using the ELISA test, and are now using the IFA test only, saving time and money, whilst also being more accurate.**

The IFA test is not expensive (usually about £25), and will give you a definitive answer in under a week. To obtain this ask your vet to send a blood sample to either [Glasgow University's](#) Companion Animal Diagnostics (Tel: 0141 330 5777), or to [VetLab](#) in West Sussex (Tel: 01403 730176), or [University of Bristol's](#) Langford Veterinary Diagnostics (Email: vet-path@bristol.ac.uk)

Very rarely, false negative results can occur if the test is done too early for antibodies to have developed, or simply because of the inaccuracy of the ELISA test. Again the IFA test will confirm with far more accuracy.

Treatment: Treatment consists of dealing with whatever symptoms occur in the individual cat, such as common infections being treated with Antibiotics. If an FIV positive cat displays any symptoms of illness, however minor, it should be taken to a vet promptly. Once established in a cat's cells, the virus is permanent, and no proven vaccine* has yet been found.

*A vaccine was developed in the USA in 2002, but it is still too early to determine it's reliability. A big disadvantage with this vaccine is that once a cat has the vaccine, they will automatically test positive on an FIV test even though they don't have the virus.

Adopting an FIV positive cat

A healthy FIV positive cat can live for many years, and indeed can often outlive non-infected cats, but please be aware that this is not always the case. Due to their impaired immune system, the cat may succumb to illness earlier, and not reach their normal life expectancy. FIV cats will need prompt veterinary assistance for even minor symptoms.

Many rescues insist that FIV cats are homed as 'indoor cats' or go to homes with an enclosed garden to prevent contact with other cats. Certainly if the cat has any aggressive tendencies it should not be allowed free access to the outside world, or to mix with non-infected cats. Any tom cat found to be FIV positive should be neutered, and fighters managed in such a way that they do not have the necessity or opportunity to fight. Neutering them may be all that is required. It is surprising how many aggressive stray tom cats turn into docile pets when they have been castrated and no longer have to fight for every mouthful of food! With good care, many FIV+ cats can live nearly normal lifespans. It's not unusual to find FIV+ cats over 15 years of age.

- **One American study showed that FIV+ cats are far more likely to lose their lives through being euthanised as no-one was willing/able to offer them a home, than from any effects of the virus.**

FIV positive cats find it harder than most to find new homes, even though in all other respects they are normal, loving cats, and deserve a chance at a happy life. If you think you might be able to give a home to an FIV cat then please contact us at cats@pawsforlife.org.uk

Can FIV-positives and FIV-negatives live together?

The most recent research carried out at Glasgow University's Companion Animal Diagnostics indicates that the chances of FIV being passed from one cat to another in the same household is approx 1-2%. This means that if you have 100 cats (!) in a

house with one FIV positive cat, only one or two could be expected to become infected. Even when FIV was passed on, as in the Glasgow survey, none of the cats actually died of it.

In another survey a few years ago FIV was not passed from cat to cat in the same household at all. There is also an ongoing study by the Celia Hammond Animal Trust where FIV-positive and FIV-negative cats are living together, and regular 'spot tests' for the virus are carried out. Several years into this study no cases of transmission have yet been found.

There seems no reason, therefore, not to have FIV positive and negative cats in the same household, provided they are not fighters. If two cats in one household fight, they should be kept apart, given behavioural therapy or one re-homed, regardless of their FIV status. So, this is obviously a decision to be taken on a case by case basis, depending on the natures of the cats involved.



Kaspar is an FIV+ve chap enjoying a happy and healthy life

- **Cats who are allowed to go outside are more at risk of being bitten by an unknown feral or stray FIV-positive cat than by a friendly FIV-positive cat living as part of the family.**

Caring for your FIV+ cat

Good care and lots of love can help your FIV+ cat to enjoy a long life. Being kept as an 'indoor cat' will limit their exposure to infection, although may be considered as reducing their quality of life. An enclosed garden may be a good compromise. Whilst healthy, their regular annual vaccinations should be kept up to date, but do check with your vet about vaccinating if the cat is suffering symptoms. A good diet will help, including vitamin supplements such as buffered vitamin C (sodium ascorbate) and vitamin E, which builds immune system strength. At any sign of illness, take your cat to the vet, as early treatment can prevent many problems. Antibiotics can control infections, and FIV+ cats who reach a chronic stage may rely on antibiotics more frequently.

- **Don't forget, love is a powerful immune system enhancer, so don't forget to cherish your FIV+ cat!**

Boarding your FIV cat

Boarding catteries should have no problem accepting an FIV cat, since the virus cannot be transmitted by feeding equipment etc. although you should make them aware of the cat's condition. The cattery will need to know this, to ensure that they are not allowed contact with other cats, and also so that they can keep a close eye for any symptoms of illness, and act promptly.

Kittens

FIV cats should always be neutered, however if a female FIV positive cat is allowed to become pregnant it is extremely rare for the kittens to become infected with the virus. FIV differs from feline leukaemia in that respect, in that it is not passed on from the queen to kittens in utero. However, kittens born to an infected mother will absorb antibodies from her milk and will therefore give a positive response to the FIV antibody test. In these kittens the test becomes negative after 12-16 weeks, as their maternal immunity wanes. It is therefore pointless to test kittens under 16 weeks using an FIV antibody test.

Even though it is rare for kittens to be born FIV positive, if there is a clinical need to find out their FIV status, the [University of Bristol Veterinary Pathology labs](#) can carry out an antigen test, which detects the presence of the viral DNA itself rather than just the antibody. This is a relatively expensive test, but if needed, information can be obtained from them by Email: vet-path@bristol.ac.uk

Further information

For more information on FIV check these out:

www.gla.ac.uk/companion/ofiv.htm

www.yorkcats.org.uk/fiv.htm

www.celiahammond.org (and click on FIV Information)

www.v63.net/fivcats/index.html

Testing Labs

University of Glasgow, Veterinary Diagnostics, Bearsden, Glasgow, G61 1QH.
Tel: 0141 330 5777, Email: Companion@vet.gla.ac.uk Website:
www.gla.ac.uk/companion/

University of Bristol, Langford Veterinary Diagnostics, School of Clinical Veterinary Science, Langford House, Langford, Bristol, BS40 5DU, Tel: 0117 928 9412,
Website: <http://bris.ac.uk/vetpath/lvd/lvd.htm>

Vetlab Services Ltd. 4 Oakhurst Business Park, Southwater, Horsham, West Sussex, RH13 9RT, Tel: 01403 730176, Email: mail@vetlab.co.uk, Website:
www.vetlab.co.uk

The 'FIV Owners Club'

If you are owned by an FIV+ cat, or are thinking of adopting one, why not check out the 'FIV Owners Club' section on the CatChat's Forum. Go to <http://www.catchat.org/index.html> and click on Forum. Here you can meet other folks who are owned by an FIV cat, and to exchange information, ideas and experiences. We'd like to see FIV+ cats given as much chance of a long and happy life as any other cat!

help prevent the spread of FIV ~ please neuter your cat

Our grateful thanks go to Maureen Hutchison BSc, BVMS, MRCVS and to Diane Addie Ph.D of the Council of Cats Protection for advice and information when compiling this page. A very big thank you to CatChat for allowing us to put this information on our website.

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Toby enjoying life



Merlin was born in 1999