

Cat flu



CATS PROTECTION
VETERINARY GUIDE 16



Cat flu is a common illness that affects the upper respiratory tract of cats. It can be caused by a number of infectious agents, including viruses and bacteria and can be life threatening. Unfortunately, cat flu still persists, despite the availability of vaccines. The cats most severely affected include the very young, very old and those with a damaged immune system – immunosuppressed cats. Immunosuppressed cats include those infected with the feline leukaemia virus (FeLV), feline immunodeficiency virus (FIV), those with other serious illnesses and those receiving certain medication eg the drugs used in chemotherapy.

What causes cat flu?

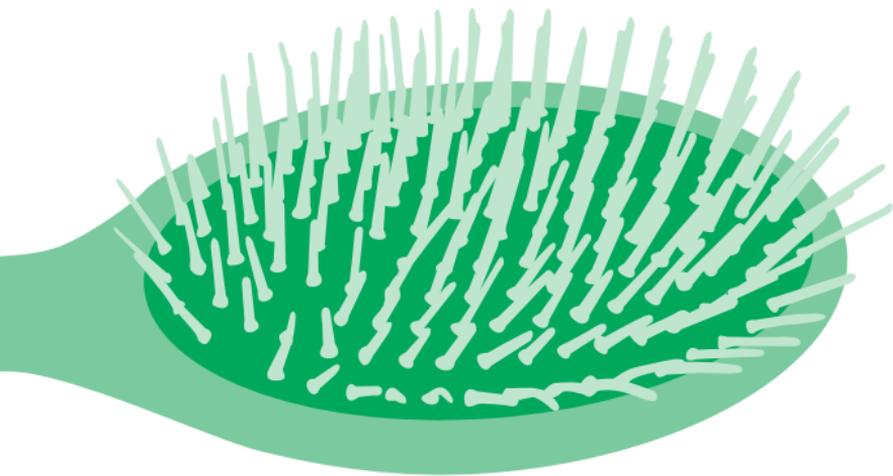
Around 80 per cent of cases of cat flu are caused by one of two viruses, feline herpesvirus (FHV) or feline calicivirus (FCV). The viruses may both be present and once they have damaged the lining of an infected cat's respiratory tract, the disease may be further complicated by additional bacterial infections. Other causes of cat flu include bacteria such as *Chlamydomphila felis* – previously known as *Chlamydia* – and *Bordetella bronchiseptica* – the cause of kennel cough in dogs.



How is it spread?

The flu viruses are spread in a number of ways, including:

- direct contact with an infected cat which is showing signs of flu – the virus is present in an infected cat's tears, saliva and nasal discharge
- sneezing can project the particles far enough to infect another nearby cat, but this route of infection is less common
- indirect contact with an infected cat's secretions. The viruses can survive in the environment for up to a week and can be carried on clothing, people's hands, food bowls, grooming equipment and other objects – known as fomites
- contact with a 'carrier' cat. These cats may be infected with and are carrying one or both of the cat flu viruses but are not showing signs of disease. During times of stress these cats may shed the virus and infect other cats



What are the signs?

There are many signs to look out for, including:

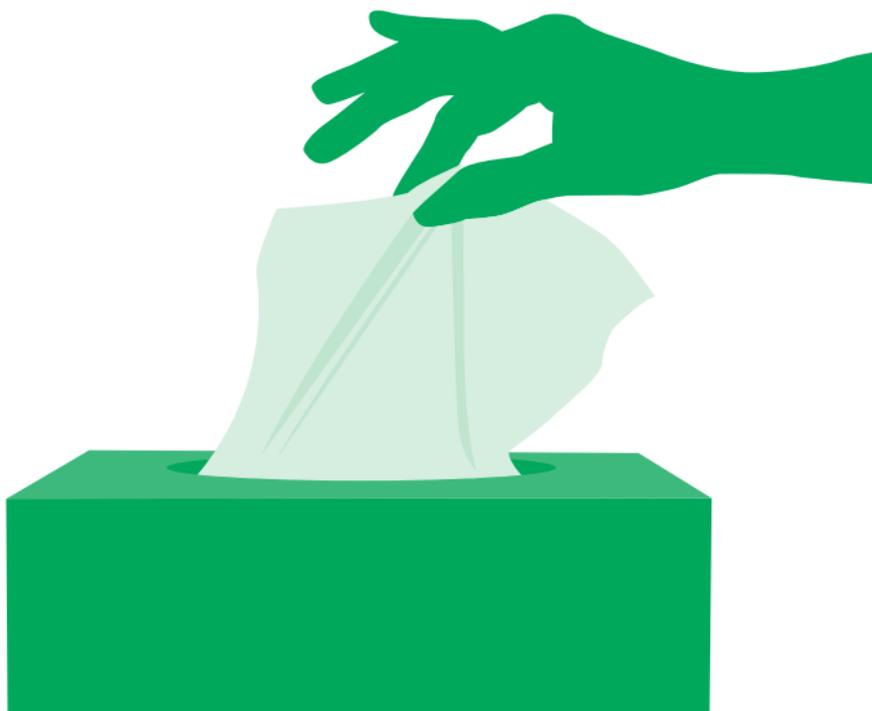
- sneezing
- runny nose and eyes
- dribbling
- quiet and subdued behaviour
- loss of appetite
- high temperature
- a cough or loss of voice
- pneumonia

FHV can cause a severe and potentially life-threatening illness. Ulcers may form on the surface of the eye and the eyelids may become inflamed and swollen, becoming stuck to the surface of the eye. It can also lead to long-term eye complications causing pain and affecting vision and/or long-term infections following damage to the nasal passages and sinuses

FCV usually causes a milder form of cat flu. In kittens, it can cause lameness and a high temperature. In adults, sometimes the only sign of an FCV infection is painful ulcers, found on the tongue, roof of the mouth or the nose. Recently however, a more severe disease caused by FCV has been identified, termed virulent systemic disease (VSD) which is highly infectious and which has a much higher death rate (see later). FCV is also thought to be associated with feline chronic gingivostomatitis in some cats – see *Veterinary Guide: Teeth and oral health*.

Chlamydophila can produce a mild form of flu. Discharge and redness of the eyes is a common feature of this infection.

Bordetella causes flu-like signs like those described above but may also progress to the chest, causing a serious infection and a relatively high death rate in kittens. Cats infected with *Bordetella* may develop a cough.



How is it diagnosed?

A diagnosis of cat flu is mainly based on the signs the cat is displaying. Your vet may take swabs from your cat's mouth, nose and eyes to be submitted to a laboratory where the virus or bacteria can be grown and identified.

How is it treated and managed?

Your vet may prescribe symptomatic treatment to control the signs of cat flu and good nursing care is required. Some anti-viral drugs or drugs to modulate the immune system may also help to control the infection, but are not currently licensed to treat cat flu. Infectious cats are rarely hospitalised because of the risk to other cats, so nursing care is usually done at home. Management of the condition includes:

- keeping your cat quiet, warm and comfortable with easy access to their key resources, such as food, water, litter tray and a bed
- minimising stress – so keep other pets and noisy children away from the patient while they recuperate
- removing discharge from their eyes and nose with a damp piece of cotton wool
- relieving nasal congestion by placing your cat in a steamy bathroom or near to a bowl of hot water – always supervise your cat around hot water
- encouraging eating by warming food or offering a range of foods little and often, particularly smelly and palatable food such as sardines. You may need to hand-feed them. If necessary, your vet may provide a special diet which can be syringe fed
- ensuring that lots of clean, fresh drinking water is provided and your cat is encouraged to drink little and often

- treatment of any secondary bacterial infections with antibiotics
- giving prescribed medication to help loosen and break up the nasal discharge and make breathing easier
- administering eye ointments
- giving antiviral medication which may help to reduce the severity of the symptoms
- treating for an extended period with oral medication is usually required to clear infection with *Chlamydomphila felis* – even after the signs of infection have gone – to prevent recurrence and prevent transmission to others – all cats in direct contact generally require treatment

If hospitalisation is required due to the severity of the flu, treatment may also include intravenous fluids via a drip for dehydrated cats and vitamin injections or drugs to help stimulate appetite. The infected cat may need to have a feeding tube placed if they are still reluctant to eat.

In multi-cat households it is recommended that infected cats are isolated and kept in a different room away from all non-infected cats. They should be provided with separate food bowls and litter trays and these should be disinfected with a suitable disinfectant as recommended by your vet. Healthy cats should be attended to first and separate clothing, footwear or overalls/aprons and gloves should be worn.

What does the future hold?

The majority of cats infected with FHV will recover, but this can take several weeks. Unfortunately, your cat may suffer ongoing problems, including permanent damage and inflammation of the lining of the nasal passages, eye, sinuses and airways due to inflammation and secondary bacterial infections. These infections leading to chronic rhinitis – inflammation of the nasal passages – or recurrent eye problems may require treatment on a regular basis.

On some occasions, cats may be so severely affected by an infection that they have to have one or both eyes removed. Early treatment is vital in preventing this outcome.

In addition, all cats infected with FHV remain infected for life, shedding the virus intermittently during their lifetime. At these times – usually occurring after a stressful experience and lasting for up to two weeks – your cat will be infectious but will not necessarily show the signs of flu.

In contrast, cats are able to clear FCV after a period of time – most cats will clear the infection and no longer be infectious after a few weeks or months. A small minority may remain infected for several years.

Can I prevent cat flu?

Regular vaccination against FHV and FCV is the most effective way of reducing the risk of developing cat flu. Vaccination can start at eight to nine weeks of age in kittens, with a second dose at 12 weeks. Boosters are required at regular intervals thereafter.

Flu vaccines are not always 100 per cent effective in preventing disease altogether but will usually prevent severe disease. If, in spite of vaccination, your cat does still develop a mild form of flu it will usually be milder and may be because:

- There are many strains of FCV and vaccines may only protect against some of them
- Your cat's immune system is overwhelmed if they are infected with a high dose of a very virulent virus
- Your cat may have other disorders affecting their immune system reducing their immune response to infection
- Your cat could already be an asymptomatic carrier of the flu viruses due to infection before vaccination

Vaccines against *Chlamydomphila felis* and *Bordetella bronchiseptica* are also available, but are not usually given on a routine basis to all cats. Your vet will decide if these are necessary by evaluating your cat's lifestyle to assess the risk of infection.

Virulent systemic disease (VSD)

The more potent disease caused by FCV which has emerged is known as virulent systemic disease (VSD). It has been identified in recent years in both the USA and UK and unfortunately has a high death rate of up to 70 per cent. Normal replication of the virus can lead to development of a virulent strain.

Cats which become infected with this strain of FCV may have swelling of the face and paws, a high temperature and severe ulcers on the head, legs and feet. Jaundice – yellow gums, eyes and skin – along with bleeding from the mouth and nose may also be seen as the disease progresses. Unusually adult cats seem to be more commonly affected by this strain than kittens and even vaccinated cats can be afflicted. The VSD virus is readily transferred on people's clothing and hands, so strict barrier nursing and isolation of affected individuals is extremely important to try and limit the spread of this fatal disease. Each outbreak occurs as a result of mutation of FCV – often due to the mixing of cats carrying different strains of FCV – and this mutation in a single cat can then cause illness in other cats. Each outbreak is a unique event and fortunately seems to naturally burn out quickly, but it can be devastating for those cats and owners affected.

Learn more about your cat online!

Take a look at our free interactive tool to help you understand cats' origins and their behaviour within our homes. <http://learnonline.cats.org.uk/content/ufo>



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For more information about Cats Protection or to make a donation, please visit www.cats.org.uk or phone our Helpline on 03000 12 12 12.

Reg Charity 203644 (England and Wales) and SC037711 (Scotland)

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