

### What is feline herpesvirus upper respiratory disease?

- It is caused by feline herpesvirus (FHV), which has a worldwide distribution, also in non-domestic felids.
- FHV often occurs in association with feline calicivirus and bacteria.
- FHV remains latent after clinical recovery and most cats become lifelong latent virus carriers.
- Stress or immunosuppressive drugs (e.g. corticosteroid treatment) may lead to virus reactivation and shedding.

### Infection

- Sick cats shed FHV in oral, nasal and conjunctival secretions; shedding may last for 3 weeks.
- Infection requires direct contact with a shedding cat or close contact with infectious secretions.
- Infection is common when cats are housed in groups such as in boarding and breeding catteries, shelters and multi-cat households.
- Kittens become infected (with or without clinical signs) from their infected mothers.

### Clinical signs

- Acute rhinitis and conjunctivitis, usually accompanied by fever, depression, ocular pain and anorexia. Clinical signs are particularly severe in young kittens; fatal pneumonia may occur.
- Ulcerative, dendritic keratitis. FHV is the most important cause of corneal ulceration.
- Signs usually resolve within one or two weeks.

### Diagnosis

- Diagnostic samples include conjunctival, corneal or oropharyngeal swabs and corneal biopsies.
- Do not sample cats recently vaccinated with a modified-live vaccine.
- Positive PCR results should be interpreted with caution, as they may be due to low-level shedding or presence of DNA from latent virus. Quantitative PCR assays may be

useful: high viral loads are indicative of active infection.

- Virus isolation is less sensitive than PCR, but indicates live virus.
- Conjunctival samples should be taken before the application of fluorescein or Rose Bengal.
- Serological tests are not recommended.

### Disease management

- Supportive therapy (including fluid therapy) and good nursing care are essential.
- Anorectic cats should be fed blended, highly palatable, warmed-up food.
- Mucolytic drugs (e.g. bromhexidine) or nebulisation with saline may offer relief.
- In severe cases, broad-spectrum antibiotics may be given to prevent secondary bacterial infections.
- Systemic or topical antiviral drugs may be used for the treatment of acute FHV ocular disease.
- In shelters, new cats should be quarantined for 3 weeks.
- In breeding catteries, queens should kitten in isolation and the kittens should not mix with other cats until vaccinated.
- FHV is quite labile and is susceptible to most disinfectants, antiseptics and detergents.

### Vaccination recommendations

- All healthy cats should be vaccinated using an FHV containing vaccine (core vaccine component).
- Asymptomatic FIV or FeLV-infected cats can be successfully vaccinated against FHV.
- Two injections at 9 and 12 weeks of age are recommended; the final dose of the primary vaccination course should be given at 10 to 16 months of age.
- Adult cats with an unknown or uncertain vaccination status should also receive two doses at an interval of 2 to 4 weeks, and a further vaccine dose one year later.
- Revaccinations should be given at yearly intervals. For cats in low-risk situations

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- (e.g. indoor-only cats), three-yearly intervals suffice.
- If revaccinations have lapsed:
    - a single injection suffices if  $\leq 3$  years since the last vaccination
    - two injections 2-4 weeks apart if  $> 3$  years since the last vaccination.
  - Asymptomatic carrier cats and cats that have recovered from FHV-associated disease are usually not protected for life and should also be vaccinated.



Image courtesy of Boehringer Ingelheim

■ Acute (painful) conjunctivitis and keratitis.



Image courtesy of Boehringer Ingelheim

■ Haemorrhagic pneumonia in a cat with FHV infection.

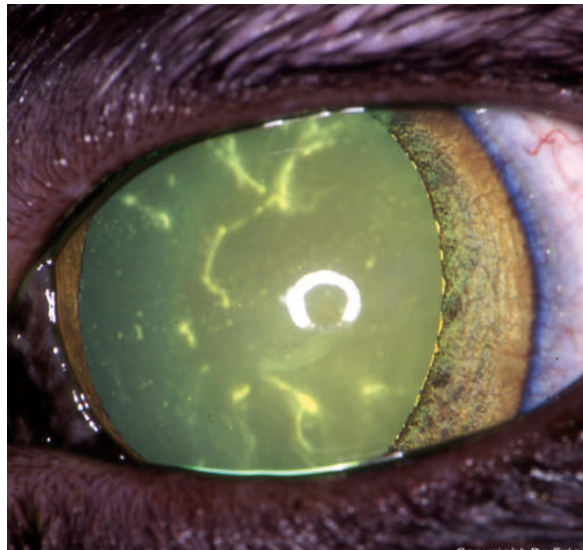


Image courtesy of Eric Déan, Vétocil

■ Dendritic ulcerative keratitis in an FHV-infected cat.



Image courtesy of Albert Lloret, ABCD

■ Acute rhinitis and keratoconjunctivitis



Image courtesy of Julia Beatty

■ Acute conjunctivitis in a kitten with FHV infection.