

# Feline herpesvirus-1

Feline herpesvirus (FHV-1) is an enveloped, double-stranded DNA virus. Infection is widespread in the feline population and there is a higher prevalence in multicat households. FHV-1 infection leads to epithelial necrosis with neutrophilic infiltration, which normally take 2-3 weeks to resolve. Clinical signs develop 2-6 days following exposure. Virtually all cats infected with FHV-1 will remain latently infected and act as carriers. Recrudescence usually follows a period of stress (e.g. pregnancy, cattery stay, hospital stay, new cat in household), but may be spontaneous or follow immunosuppressive medication (e.g. corticosteroids)

## When should I suspect FHV-1 infection in cats?

Feline herpesvirus (FHV) is a common cause of acute and chronic upper respiratory disease in cats – with sneezing, oraly and nasal discharge (serous, progressing to mucopurulent), sneezing, gagging, and retching. Cats may also concurrent present with pyrexia, lethargy, and inappetence

It is also a common cause of ocular disease (conjunctivitis and ulcerative keratitis).

Rarely it has also been associated with ulcerative dermatitis, bronchopneumonia, neurological signs, and reproductive failure

## How is FHV infection diagnosed?

FHV-1 is shed in ocular, nasal, and oral secretions. Diagnosis of FHV-1 infection has traditionally been by virus isolation from ocular / nasal / oropharyngeal swabs since the virus grows well in cultures of feline cells. However, culture was limited by virus preservation and over growth with concurrent feline calicivirus (where present). PCR has superceded the use of culture. The same sample can be submitted for detection of other feline ocular and respiratory pathogens including *Mycoplasma felis*, Feline Calicivirus, and *Chlamydia felis*.

The Molecular Diagnostic Unit uses a sensitive and specific quantitative PCR (qPCR) assay to detect FHV-1. Additionally, each FHV qPCR includes an internal amplification control to ensure that a valid diagnostic result is produced for every submitted sample. The sample required for the FHV-1 qPCR test is a plain (or VTM) conjunctival or oropharyngeal swab. Swabs from different sites can be combined for this assay, to increased sensitivity.



## Reception Hours

Mon-Fri 9am - 5pm

## Contact Us

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The potential for a carrier state should be considered when interpreting results. The greater the viral copy number (the lower the CT value) the more likely that FHV-1 is the causative agent of clinical signs. The presence and level of other pathogens should also be considered.

## How is FHV-1 infection treated?

Most treatment is supportive, with fluid therapy, nutritional support (e.g. placement of feeding tubes, use of mirtazapine), ocular lubricants, and antimicrobials (if secondary infection noted). Non-steroidal anti-inflammatory medication can be considered in well hydrated cats with normal renal function. Steroids are contra-indicated.

Where FHV-1 has been demonstrated (or is strongly suspected pending results) famciclovir (up to 90mg/kg orally three times daily) can be considered. Side effects are rarely seen. Topical antivirals (e.g. cidofovir) can also be considered for ocular manifestations. The use of L-lysine has been suggested, but the evidence base is poor / conflicting.

## Is FHV-1 infection preventable?

Feline herpesvirus-1 is considered a core component of the feline vaccination schedule.

Cats with infection should be barrier-nursed to limit transmission to others. Due to the potential for carrier status, where cats are housed together (e.g. hospital setting or residential cattery) 'sneeze barriers' should be used between cats from different households and examination tables (and gloves) should be cleaned between cats. FHV-1 is fragile and susceptible to common disinfectants.

More information can be found on the ABCD website: [Feline Herpesvirus infection | \(abcdcatsvets.org\)](https://www.abcdcatsvets.org/feline-herpesvirus-infection/)

***Updated January 2022 by Dr Emi Barker***

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