# FELINE RHINOTRACHEITIS

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<th>Animal Group(s) Affected</th>
<th>Transmission</th>
<th>Clinical Signs</th>
<th>Severity</th>
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<th>Prevention and Control</th>
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<td>Felidae</td>
<td>Droplets, fomites</td>
<td>Ocular nasal discharge, anorexia, depression</td>
<td>High morbidity, low mortality</td>
<td>Lysine, penciclovir, famciclovir, supportive care</td>
<td>Vaccination</td>
<td>No</td>
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**Fact Sheet compiled by:** Ray Wack; updated by Christine Molter

**Sheet completed on:** 1 March 2011; updated 3 November 2012

**Fact Sheet Reviewed by:** Ray Wack, Lynelle R. Johnson

**Susceptible animal groups:** Felidae

**Causative organism:** Feline herpesvirus type-1

**Zoonotic potential:** None

**Distribution:** Worldwide

**Incubation period:** 2 – 6 days (recrudescence ~ 7 days after stressful event)

**Clinical signs:** Fever, sneezing, rhinitis, conjunctivitis, ulcerative keratitis, salivation, initially serous then mucopurulent ocular and nasal discharge, anorexia, and depression may all be observed. Chronic cases may develop ulcerative keratitis and stomatitis. Disease generally has high morbidity and low mortality except in kittens or geriatric cats, which have higher mortality. Co-infection with other respiratory viruses (especially calicivirus) and secondary bacterial infections are common. In cheetah, proliferative skin lesions at mucocutaneous interfaces have been observed.

**Post-mortem, gross, or histologic findings:** Erythematous swollen nasal mucus membranes and conjunctiva, hyperemic larynx and trachea, serous or purulent discharge in nares or eyes, early in the disease acidophilic intranuclear inclusions may be seen in affected epithelial cells.

**Diagnosis:** Clinical signs tend to be more upper respiratory and ocular than calicivirus infections. PCR and viral isolation performed on oronasal swabs can indicate presence of the infectious organism, but do not confirm FHV-1 as the causative agent of disease. PCR performed on facial dermatitis lesions and some ocular lesions (including corneal sequestra) is highly correlated with FHV-1 as the causative agent of disease. Cytology identification of acidophilic intranuclear inclusions affected epithelium is diagnostic. In chronically infected cats, virus isolation is often negative due to intermittent shedding.

**Material required for laboratory analysis:** Oronasal swabs, conjunctival scraping, respiratory epithelium

**Relevant diagnostic laboratories:**
Washington Animal Disease Diagnostic Lab
Bustad Hall Room 155N
Pullman WA 99164-7034
509-335-9696
waddl@vetmed.wsu.edu
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Animal Health Diagnostic Center
College of Veterinary Medicine, Cornell University
PO Box 5786
240 Farrier Rd
Ithaca, NY 14852-5786
### Feline Rhinotracheitis

**Treatment:** General supportive treatment, including broad spectrum antibiotics - such as amoxicillin with clavulanic acid, cephalosporins, trimethoprim/sulfa, or fluoroquinolones - for secondary bacterial infections; lysine and famciclovir may be helpful as they inhibit viral replication. Supportive oxygen may be required in severe cases with dyspnea. Nutritional support and fluid therapy are often required due to anorexia. Proliferative skin lesions may require wide excision or cryosurgery in cheetahs.

**Prevention and control:** Inactive and modified live vaccines usually in combination with other feline viruses are available. Vaccination does not prevent infection or shedding but may reduce severity of signs and decrease the amount of shedding. Generally only inactivated, parental vaccines such as Felo-vax PCT (Fort Dodge) are used in non-domestic felids as modified live virus vaccines have been associated with disease in some individuals and species. Primary vaccination consists of 1 ml of vaccine given every 2 – 3 weeks from 6 weeks through 18 weeks of age or a minimum of 3 vaccines in an unvaccinated adult cat. Response to vaccination should be documented with serum neutralization (SN) titer 2 – 3 weeks after the last vaccine. A SN titer of > or equal to 1:16 is considered protective. Antibody titers frequently decline rapidly in exotics and may not accurately reflect susceptibility. Cellular and mucosal immunity are important in moderating or preventing disease. Triannual booster vaccinations are recommended but more frequent vaccination may be required if there is high exposure risk, due to the rapid antibody decline is some species.

**Suggested disinfectant for housing facilities:** Virus susceptible to most disinfectants, 6% household bleach diluted at 1:32 applied to a clean surface, quaternary ammonium disinfectants, peroxyn compounds.

**Notification:** None

**Measures required under the Animal Disease Surveillance Plan:** None

**Measures required for introducing animals to infected animal:** Felids should be vaccinated with response to vaccine documented prior to exposure to known positive cats.

**Conditions for restoring disease-free status after an outbreak:** Virus is shed intermittently potentially for remaining life of infected animal but does not survive long in dry environments.

**Experts who may be consulted:**
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**References:**


