

# Feline Upper Respiratory Infection



## SYMPTOMS:

- SNEEZING
- NASAL DISCHARGE
- RUNNY EYES
- COUGH
- ORAL OR NASAL ULCERS
- SNIFFLES
- FEVER
- HOARSE VOICE
- OR ANY COMBINATION THEREOF



## WHAT CATS ARE AT RISK?

The agents of feline upper respiratory infection are highly contagious and present where ever cats live in groups. Getting infected is easy; a cat simply must socialize with an infected cat or share the same human caretaker, toys or food bowls. It would seem that the average house cat would be at low risk for infection; however, it is important to realize how common upper respiratory infection is. In some areas, the infection rate is felt to be 60% or more. This means that there is an excellent chance that any cat or kitten is already infected at the time of adoption regardless of whether the cat is showing any symptoms. **Kittens are predisposed** due to their immature immune systems and are usually hit the hardest. When these kittens grow up, they are still infected and symptoms may come out whenever stress suppresses their immune system.

Typically, infected cats come from the **shelter**, are **outdoor cats**, or are housed in close contact with lots of other cats (**experiencing crowding stress**). **Persian cats are predisposed** to upper respiratory infection due to their inherent facial flattening. The average house cat who is not exposed to any rescued kittens, lives with only one or two other cats at most, never goes outside, and leads a non-stressed life is unlikely break with symptoms but may very well be asymptotically infected.

The chief infectious agents that cause feline upper respiratory infections are: **herpesvirus** and **calicivirus**, together accounting for about 90% of infections. Other agents include: Chlamydophila, Mycoplasma, Bordetella, and others. Of course, a cat or kitten may be infected with more than one agent.

Viruses are spread by the wet sneezes of infected or carrier individuals. The herpesvirus is very fragile, surviving only 18 hours outside its host; caliciviris is tougher, lasting up to 30 days. Bleach will readily inactivate either virus but calici is able to withstand unbleached laundry detergents.

## **COURSE OF INFECTION**

To some extent, the combinations of symptoms and course of infection is determined by which of numerous infectious agents is responsible. Ninety percent of feline upper respiratory infections are caused by either **feline herpes** (also called the “rhinotracheitis” virus) or **feline calicivirus**. Neither of these infections is transmissible to humans or to other animals.

Most feline colds run a course of 7 to 10 days regardless of treatment but it is important to realize that these infections are permanent and that herpesvirus infections are recurring (a property of all types of herpes infections). In kittens, herpes infections are notorious for dragging out. Stresses such as surgery (usually neutering/spaying), boarding, or introduction of a new feline companion commonly induce a fresh herpes upper respiratory episode about a week following the stressful event with active virus shedding for another couple of weeks. These episodes may recur for the life of the cat though as the cat matures, symptoms become less and less severe and ultimately may not be noticeable to the owner. Cats infected with calici may shed virus continuously, not just in times of stress, and may do so for life, though about 50% of infected cats seem to stop shedding virus at some point.

A cat with herpes is contagious to other cats for a couple of weeks after a stressful event. Cats infected with calici are contagious for several months after infection but do not appear to have recurrences the same way cats with herpes do.

## **WHEN TO BE CONCERNED: SIGNS A CAT REQUIRES HOSPITALIZATION**

- Loss of Appetite
- Congestion with open mouth breathing
- High fever or the extreme listlessness that implies a high fever (if one cannot take the cat’s temperature.)

A cold for a cat is usually just a nuisance as a cold usually is for one of us. Sometimes though an upper respiratory infection can be serious. If a cat is sick enough to stop eating or drinking, hospitalization may be needed to support him or her through the brunt of the infection. A cat (usually a kitten) can actually get dehydrated from the fluid lost in nasal discharge. Painful ulcers can form on the eyes, nose or in the mouth especially if calicivirus is involved. Sometimes fever is high enough to warrant monitoring. In young kittens, pneumonia may result from what started as an upper respiratory infection.

If you think your cat or kitten is significantly uncomfortable with a cold you should seek veterinary assistance with an office visit.

## HOW IS THIS USUALLY TREATED?

How an upper respiratory infection is treated depends on how severe it is and whether or not there seems to be a bacterial infection complicating the viral infection. A mildly symptomatic adult cat might need no treatment at all as the symptoms should naturally wane over 1-2 weeks. A heavily congested kitten is likely to need antibiotics, antivirals, and possibly even hospitalization.

### A Note on Antibiotics

Antibiotics act not only on bacteria that complicate viral infection but some upper respiratory infections are bacterial and not viral at all.

The next most common infectious agents (after herpes and calici) are ***Chlamydophila felis*** (formerly known as ***Chlamydia psittaci***) and ***Bordetella bronchiseptica***, both organisms being sensitive to the **tetracycline** family (such as doxycycline). For this reason, when antibiotics are selected, tetracyclines and their relatives are frequently chosen. Other commonly used antibiotics are: Clavamox®, azithromycin, cephalexin, and clindamycin. Oral medications, and/or eye ointments are commonly prescribed. Severely affected cats may need to have inhalational antibiotics, fluids administered intravenously or under the skin to maintain hydration, and/or some sort of assisted feeding.

## SPECIAL THERAPIES

Some cats are severely affected and addressing the secondary bacterial infection is simply not enough to achieve comfort. For these situations, antiviral medications such as famciclovir can be used to address the actual viral infection and often even chronic symptoms can be controlled at least temporarily.

Cats are too small to be able to meaningfully blow their noses or sneeze out very dry or thick sinus secretions. Oral supplementation with N-Acetylcysteine can be very helpful in breaking down this material.

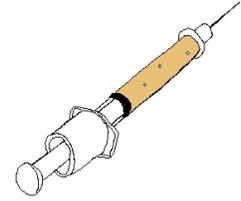
Polyprenyl immunostimulant is a biological product made by Vetimmune® presently licensed conditionally by the USDA for the treatment of feline herpes infection. This product is given orally once a day for 2 weeks and reportedly stimulates cellular immunity (as opposed to antibody-related immunity). Conditional licensing means that there is enough evidence of safety and efficacy for the product to be made available commercially but investigation is still on-going as to how well it works.

More chronically infected cats with severely blocked sinuses can have their sinuses flushed out under anesthesia. This can clear a great deal of materials out of the nasal passages but how long results persist is variable.

Consult your veterinarian before attempting any sort of home treatment.

## WHAT ARE THE VACCINATION OPTIONS?

Vaccination is unlikely to be completely preventive for the upper respiratory viruses and is instead meant to minimize the severity of the symptoms. First, one must choose between a **nasal** vaccine and an **injectable** vaccine.



The injectable vaccines which typically include feline distemper, were developed first and when vaccines for upper respiratory infections were created, they were simply added to the basic distemper injectable vaccine. Since that time science has developed a more localized form of vaccination to better address more localized types of infections.

If one selects the injectable route of vaccination, one must then decide if one wants a **“four in one”** or a **“three in one”** vaccine. You may vaccinate your cat for distemper, herpesvirus, and calicivirus or you may vaccinate for distemper, herpesvirus, calicivirus, and *Chlamydomphila felis*. Because herpes and calicivirus together account for 90% of upper respiratory infections and *Chlamydomphila* accounts for less than 10% of upper respiratory infections, the American Association of Feline Practitioner vaccination guidelines favor the “three in one” vaccine and consider the *Chlamydomphila* vaccine optional.



There is some feeling that nasal vaccines may provide a more complete stimulation to the area of the immune system responsible for defense against the infection in question. Nasal vaccination provides protection especially rapidly (3 or 4 days). Herpes and calicivirus vaccines can be given either nasally or injectably.

## A FEW WORDS ABOUT “HEMORRHAGIC CALICIVIRUS”

A particularly virulent strain of calicivirus, commonly referred to as “hemorrhagic calici,” has appeared to “pop up” out of nowhere. While few outbreaks have been reported, it is possible more have occurred and gone unrecognized. Hemorrhagic calici is highly contagious and rapidly fatal. A special vaccine, called “TruFel HC2PCh,” has become available from Elanco just for this special form of calici. While the infection is very rare, you may wish to vaccinate your cat for it and/or may wish to discuss this option for completely with your veterinarian.

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