

## **Upper Respiratory Infections**

Cats may become infected with upper respiratory viruses that resemble the common cold in humans. By "upper respiratory," we mean that the infection is limited to the nose, throat, and trachea; the eyes may also become involved. Lower respiratory tract infections involve the lungs.

There are several different viruses known to cause feline upper respiratory infections (URI's). Two of these cause serious illness, resulting in anorexia, high fever, and ulcers of the tongue and cornea (surface of the eye). These viruses are the feline rhinotracheitis virus (also called feline herpesvirus) and the feline calicivirus. The remaining viruses cause mild sneezing for a few days but are rarely a serious problem.

As a rule, the uncomplicated forms of these viral infections are no more severe than a mild cold in a human. However, even mild infections can become life-threatening if secondary bacterial infections develop in the nose, oral cavity, or eyes. When this occurs, loss of appetite represents the single most serious complication. With time, the anorectic cat may become malnourished and dehydrated. In some cases, death may occur.

### **Contributing Factors**

As mentioned above, in most cases, these viral infections will run their course and the cat is expected to recover. However, when secondary bacterial infections develop, the prognosis is less certain. Also, concurrent infection with the immunosuppressive viruses (feline leukemia virus and feline immunodeficiency virus) is a complicating factor.

### **Prevalence**

The rhinotracheitis (herpes) virus is by far the most prevalent upper respiratory virus. Some prevalence studies have found that 80-90% of all cats have been infected with this virus at one time.

### **Clinical Signs**

Sneezing and ocular discharge are the most common findings with URI's. Initially, the nasal and ocular draining will be watery and clear. If secondary infection with bacteria develops, the fluid becomes thick and green or yellow in color. Depending upon which virus is involved, the conjunctiva (membranes lining the eyelid) and/or cornea (clear surface layer of the eyeball) may become inflamed or ulcerated. Also, ulcers within the oral cavity and on the surface of the nose may occur in some cases. Generally, the uncomplicated case will resolve in 4-21 days.

When the viral infection invades the sinuses, the delicate lacy bones called "turbinates" may be permanently damaged. Even after the viral infection has resolved, the damage may be irreversible. Frequently, secondary bacterial infections develop in the sinuses and become difficult or impossible to eradicate. This is called "chronic sinusitis."

### **Causes/Transmission**

The respiratory viruses are spread between cats by sneezing. When the infected cat sneezes, small droplets of nasal secretions are aerosolized. They infect other cats when they come in contact with oral, nasal, and ocular (eye) membranes.

### **Diagnosis**

For acute (sudden) infections in the young kitten or cat, a presumptive diagnosis of respiratory viral infection can be made based on the history and clinical signs. There is usually no need to distinguish between the different viruses because the treatments are essentially the same. However, when chronic eye problems develop, there may be need to do some specific testing to determine the virus responsible. These tests are not routinely done because of expense and the need for specialized laboratory facilities.

### **Treatment**

The first decision in treatment is deciding where it is best to treat your cat - should your cat be hospitalized or treated at home? If the cat is eating, it is preferable to treat it at home. However, if there are other cats at home that are not infected, it may be best to treat it in the hospital to protect the healthy cats. If the infected cat remains at home, it should be separated from the other cats and good hygiene practiced after handling. If your cat is not eating, hospitalization is preferred so that proper antibiotics and nutrition may be administered. If this is done quickly, all but a very few cats will recover completely. If your cat is being treated at home and stops eating, it should be hospitalized for more intense treatment.

### **Prevention**

If a cat has not become infected with the rhinotracheitis virus or calicivirus, vaccination is usually successful in preventing infection. For cats that are already carriers of these viruses, it is still important to vaccinate. If a carrier cat should reactivate the virus and begin shedding, periodic vaccination provides the immune system with a "reminder." This allows the immune system to produce antibodies, the defense agents of the immune system, which can be readily available to begin fighting the infection. Thus, the cat may still develop an URI, but the consequences will be less severe and the recovery will be faster. Even indoor-only cats should be vaccinated since most cats are already carriers of the viruses and need the periodic boost in immunity.

### **Prognosis**

The prognosis is generally excellent if the cat continues to eat, secondary bacterial infections are managed aggressively, and no concurrent medical conditions exist. Infection with the immunosuppressive viruses renders the cat less likely to recover, although it is not impossible. Long term problems can develop when the eyes or sinuses are involved.

### **Transmission to Humans**

These viral respiratory infections pose no health risk for humans. Although URI's have been likened to the common cold, these viruses do not infect humans.