

FELINE HERPESVIRUS INFECTION



Herpes virus is the most common viral disease of cats. It causes a mild disease in cats and kittens much like the common cold in people. At least 80% of all cats have been exposed to this virus. You may not realize that 90% of humans have *Herpes simplex* virus harbored in their nerve tissue from previous exposure to the *Herpes simplex* virus. Similarly, over 80% of cats, indoors or out, have been exposed and have Feline Herpes virus in their system.

Unless a cat's immune system is compromised by feline leukemia, cancer or other problems, the initial Herpes infection that most kittens get will run its course in a week or two. We often treat the infection with Terramycin eye ointment and sometimes with antibiotics, to lessen the risk of secondary bacterial infections like sinusitis and pneumonia. Major disease or death from infection with Herpes is rare. However, the cat that has been infected, even mildly, harbors the virus in its system for the rest of its life.

When cats are stressed by other diseases, by use of steroid medications for allergies, or from moving to a new household, traveling, a new pet or baby in the house, or any other cause, they can shed Herpes virus from their systems again. Usually they will show no obvious signs of illness but virus can be found in their tears, nasal discharge or saliva. During this reshedding time, cats are contagious to other cats and kittens. This is why kittens often catch these viruses even though the adult cat in the house, or the cats around it at a humane society or pet store, have no symptoms of infection.

Some cats do show symptoms when their Herpes flares up. Just as some people get repeated Herpes cold sores from *Herpes simplex* virus in their system, some cats will repeatedly get corneal (eye) ulcers or have chronic (long term) sneezing or nasal congestion from Herpes virus. The immune system keeps the infection at bay for the most part, but it can't get rid of it completely and the virus can and will flare up to cause disease. Some cats will flare up with eye ulcers or sneezing consistently whenever they become stressed or ill.

Persian and Himalayan cats are especially likely to have problems because their short nose makes them prone to dry eyes and they also tend to have weaker immune systems. Dental disease and sinus infections, which spread to the eyes via the tear ducts, are also more prevalent in these breeds.

Cats with corneal ulcers, or chronic or recurring upper respiratory disease, can be tested to determine if Herpes virus is the underlying cause. We use PCR testing, which tests for DNA from several viral and bacterial infections that can cause chronic respiratory disease, including Rhinotracheitis virus but also Calicivirus, Bordetella, Chlamydia, influenza and Mycoplasma.

To do this testing, a doctor will use a swab to take a sample of the cells of the conjunctiva (the inner lining of the eyelid) and the lining of the nose. Usually we need

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anesthesia to do this. The testing itself is fairly expensive. If the tests are positive for any of these diseases, we may have our diagnosis. However, cats can test positive just because they have virus in their bodies but a positive test may not mean that virus is actually causing the symptoms. Because testing is expensive and results can be confusing we usually end up trying several different medications before we finally get discouraged enough to do the PCR testing.

To add to the confusion, as many as 20% of cats with recurrent eye ulcers will test negative with this special test, even though they have the disease. This is because the virus can be lurking too deep in the ulcer or nerve tissue to be obtainable on the swab. If we have ruled out other causes of ulceration we usually still assume Herpes virus is the cause and treat for it.

Antibiotics are used for suspected Bordetella bacteria and for secondary bacterial infections that get started because a virus or other infection weakened the immune system. Most feline respiratory infections do not respond well to antibiotics but a few do. It's pretty quick and relatively easy to try antibiotics for a week or two to see if they help, but don't be surprised when it doesn't work.

An antiviral medication called famciclovir can be used to treat flare-ups of Herpes virus. Until recently, we didn't have a very good idea of how much and how often famciclovir needed to be given. A new study at the veterinary school at UC Davis showed that a dose of 90 mg/kg twice daily is both safe & effective.

Vaccination against Rhinotracheitis with a nasalgen (nose drop) vaccine, twice one month apart and then every six months thereafter, can rev up the immune system to better keep the virus under control. An amino acid supplement called lysine has been used for years to help cats with Herpesvirus but a recent large study of animal shelter cats has shown that it is not only ineffective but may actually worsen symptoms.

Probiotics have been shown in several studies to improve respiratory symptoms and is easy to try. The amount of bacteria in the probiotic needs to be very high for this purpose so we recommend a specific brand that has the correct number of good bacteria and is readily accepted by cats.

There are several eye medications that can be used for eye ulcers caused by Herpesvirus, and some cats respond better to one than another. We will need to work carefully with you to find the best treatment for your cat. Antiviral eye drops are usually effective at treating Herpes eye ulcers but they are expensive and have to be given every few hours when the ulcers flare up. A relatively new choice, cidofovir, only needs to be applied twice a day, which is a great improvement.

Some cats require lifetime therapy and others only need treatment in times of stress, such as before and after a dental cleaning, moving or a new addition to the household. Medication is usually tried first, but occasionally referral to a veterinary ophthalmologist is necessary for advanced treatment or surgery on a persistent ulcer.

Although vaccinations for Herpes virus in cats have been used for years they seem to have made no difference in the prevalence of respiratory disease in cats. Cats who have been vaccinated have milder symptoms and get better faster, but they still get the virus, and they still shed it later on. The new nasal vaccines seem to be more effective and work faster to protect kittens, but Herpes infection will not be eradicated in the near future. Our goal is to minimize symptoms and keep your cat as comfortable as possible.