

Conjunctivitis in Cats

What is conjunctivitis?

Any medical term that ends in *-itis* means "inflammation of". *Conjunctivitis* is defined as inflammation of the conjunctiva. The *conjunctiva* is a mucous membrane, similar to the lining of the mouth and nose. This membrane, a layer of epithelial cells with mucus-secreting cells, covers the eyeball and lines the eyelids. The cat has a third eyelid, or nictitating membrane, in the inner corner of the eye, which is also covered by conjunctiva. In normal cats, the conjunctiva of the eyelids is not readily visible and has a pale, pink color. When conjunctivitis occurs, the conjunctival membranes become red and swollen and bulge from the lids. There is an increase in tear production and the tears may become cloudy. Conjunctivitis can affect one (unilateral) or both (bilateral) eyes.

What are the clinical signs of conjunctivitis?

If you see excessive tearing or watering from one or both eyes, cloudy, yellow or even greenish discharge, and prominent or reddened conjunctival membranes, your cat may have conjunctivitis. The cat should be examined immediately by your veterinarian. Your cat may squint or keep its eyes closed, because of either discomfort or *photophobia* (a reluctance to be in bright light) or, in severe cases, the conjunctival tissue or the third eyelid may be so swollen that it may partially or fully cover the eye.

What are some causes of conjunctivitis?

The most common causes of conjunctivitis can be roughly divided into two categories: **infectious diseases** and **non-infectious** conditions including allergies, hereditary conditions and tumors. Conjunctivitis may be a secondary symptom of another eye disease.

Infectious Causes of Conjunctivitis

Infectious agents such as bacteria, viruses, and fungi are the most common causes of conjunctivitis in cats. In many cases, viruses such as Feline Viral Rhinotracheitis (FVR), also known as feline herpesvirus, or Feline Calicivirus are the initial cause of inflammation. Primary viral infections are often complicated by secondary bacterial infections with a variety of bacteria including *Streptococci* and *Staphylococci*. Two special organisms, *Chlamydomphila felis* and *Mycoplasma* are also capable of initiating primary conjunctivitis.

Non-infectious Causes of Conjunctivitis

Breeds such as Persians, Himalayans and other longhaired breeds may be born with a turning in of the eyelids called *entropion*. Entropion causes corneal irritation when the eyelashes constantly rub against the eyeball. Foreign bodies such as



dust or sand may become trapped inside the eyelids, or exposure to irritant chemicals may initiate conjunctivitis that may become secondarily infected. Allergies are believed to be a common cause of conjunctivitis, but the specific allergens can sometimes be difficult to identify or avoid. Conjunctivitis is a common symptom of eye tumors.

How is conjunctivitis diagnosed?

A tentative diagnosis of conjunctivitis is made after your veterinarian rules out conditions such as a foreign body in the eye, a blocked tear duct preventing normal drainage of tears, or a corneal ulcer or other injury to the eye.

Since secondary bacterial infections cause many of the symptoms, and because there is a need to reduce the immediate pain and inflammation, treatment is usually begun based on this tentative diagnosis of infectious conjunctivitis. Most bacterial and viral infections will resolve within five to fourteen days. In cases that are not improving or where there are other animals at risk, further testing will be performed to reach a definitive diagnosis.

Specific tests will be performed, based on the medical history and results of an examination of the eye and surrounding tissues. Your veterinarian may measure the tear production and intraocular pressure (pressure within the eyes) for each eye. The cornea may be stained with fluorescein dye to look for underlying corneal injuries or ulcers, and conjunctival scrapings or biopsies may be obtained and sent to a diagnostic laboratory for specialized testing. The nasolacrimal or tear ducts may be flushed to ensure proper drainage. Blood tests will be performed to determine if the conjunctivitis is related to a systemic condition.

How is conjunctivitis treated?

The general approach to non-specific conjunctivitis is to use ophthalmic preparations containing a combination of broad-spectrum antibiotics to control the secondary bacterial infection and anti-inflammatory drugs to reduce the inflammation. These preparations come as either drops or ointment for instilling into the eyes. Local treatment may need to be supplemented with injections and pills.

If a specific diagnosis has been reached, one of the following treatment regimens may be used:



1. Herpesvirus conjunctivitis

- Although these infections are usually mild and self-limiting, the infected cat remains a carrier of the virus, and may have intermittent relapses.
- No treatment may be required for mild cases
- Antiviral medications are used in severe or poorly responsive cases
- L-lysine may be used to promote healing, and may be used for life as an immune-stimulant for cats that have recurrent problems
- Antibiotics are often used if a secondary bacterial infection is present
- Interferon-alpha may be used as an immune stimulant

2. *Chlamydophila* or mycoplasma conjunctivitis

- Tetracycline ophthalmic ointment
- Azithromycin oral antibiotic

3. Eosinophilic or Allergic conjunctivitis

- Topical corticosteroid ointment or drops
- Topical medications to stop or decrease the allergic reaction

How do I administer eye medications?

Regular and frequent treatment is essential in successfully treating conjunctivitis. Most ophthalmic drops need to be administered three to six times a day at the start of treatment. Ointments may require less frequent administration, but may be more difficult to administer. Two people may be necessary; one to hold the cat and the other to administer the eye medication, at least until the discomfort and sensitivity of the eyes has decreased. Apply 1/4 to 1/2 inch (0.6 to 1.25 cm) of ointment to each eye and then close the lids to smear the ointment across the eyeball. Liquid preparations can be applied directly onto the surface of the eye; one or two drops per eye are usually sufficient. If you have any doubts as to how to give your cat's medication, please ask us to demonstrate the proper procedure for you.

When should I expect a response?

"Even if the conjunctivitis has resolved, *do not* stop treatment until the end of the prescribed period."

Normally you will see a rapid improvement within a few days. However, even if the conjunctivitis has resolved, *do not* stop treatment until the end of the prescribed period. Stopping your cat's medication early may allow a resurgence of the infection and make it harder to eliminate the next time.

What is the prognosis for a cat diagnosed with conjunctivitis?

The prognosis depends on the specific diagnosis. With some non-infectious causes, if the underlying cause is not removed the conjunctivitis will recur. Some of the viruses that cause infectious conjunctivitis are incurable, and may persist in a hidden form (called a carrier state), with flare-ups from time to time, especially during periods of stress or illness. The therapeutic goal for these patients is to minimize the frequency and severity of recurrences through optimum nutrition, appropriate vaccination against preventable causes of disease and medical management when indicated.

This client information sheet is based on material written by: Ernest Ward, DVM

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