

# RED EYE IN DOGS AND CATS: CONJUNCTIVITIS OR WORSE?

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It should come as no surprise that conjunctivitis is the most common ophthalmic disorder in dogs and cats. But because the clinical signs of conjunctivitis can mimic those of more serious ophthalmic diseases (glaucoma and uveitis), it's important to confirm your diagnosis.

What are important clues to the severity of the condition? With conjunctivitis, the inflammation should be limited to the conjunctiva. Hyperemic conjunctival vessels are superficial, branching, and bright red. They are movable over the deeper episcleral vessels and can be blanched with topical dilute phenylephrine. With glaucoma and uveitis, the episcleral vessels are engorged; they are dark red, deep, straight, and immobile and do not blanch with topical dilute phenylephrine. With conjunctivitis, the Schirmer tear test and intraocular pressures are normal. And the cornea should be clear and no aqueous flare should be present. The pupil and pupillary responses are normal and intraocular structures should be visible.

In suspected cases of conjunctivitis (or any ophthalmic condition), a careful diagnostic workup should be performed. Initial diagnostic testing should include a Schirmer tear test, corneal fluorescein staining, intraocular pressure measurement, eyelid examination, and conjunctival cytology or culture.

## **Common Causes of Conjunctivitis**

If you do confirm conjunctivitis, the next step is identifying the cause. If both eyes are affected and abnormal clinical signs are apparent in other body systems, think underlying systemic disease. If only one eye is affected, rule out infection, tear film deficiencies, an irritant, anatomical abnormality, or deeper ocular disease.

In dogs, conjunctivitis can result from anatomical disorders, irritants, infection (usually bacterial), or atopy. Most bacterial infections are secondary conditions, most often to allergies. In cats, herpesvirus and *Chlamydomydia felis* are the most common causes of conjunctivitis. Atopy can also be an issue in cats.

## **Addressing the Problem**

Treating canine conjunctivitis is generally more straightforward than feline conjunctivitis. Clean the eye first and then apply topical ophthalmic drugs. Topical ointments can offer several advantages over solutions, including longer drug contact time with surface tissues, lack of tear dilution, smaller amount of drug entering the nasolacrimal system (and potentially less systemic effects), and protection of the cornea due to their petroleum vehicle.

Because many cases of conjunctivitis are allergic in nature, they respond well to topical steroid administration. And even if a mild infection is present, most dogs will benefit from topical steroids. Apply them three to four times daily for five to seven days. Triple antibiotic ointment with hydrocortisone (Vetropolycin® HC [bacitracin-neomycin-polmyxin-1% hydrocortisone acetate] Veterinary Ophthalmic Ointment) is one option.

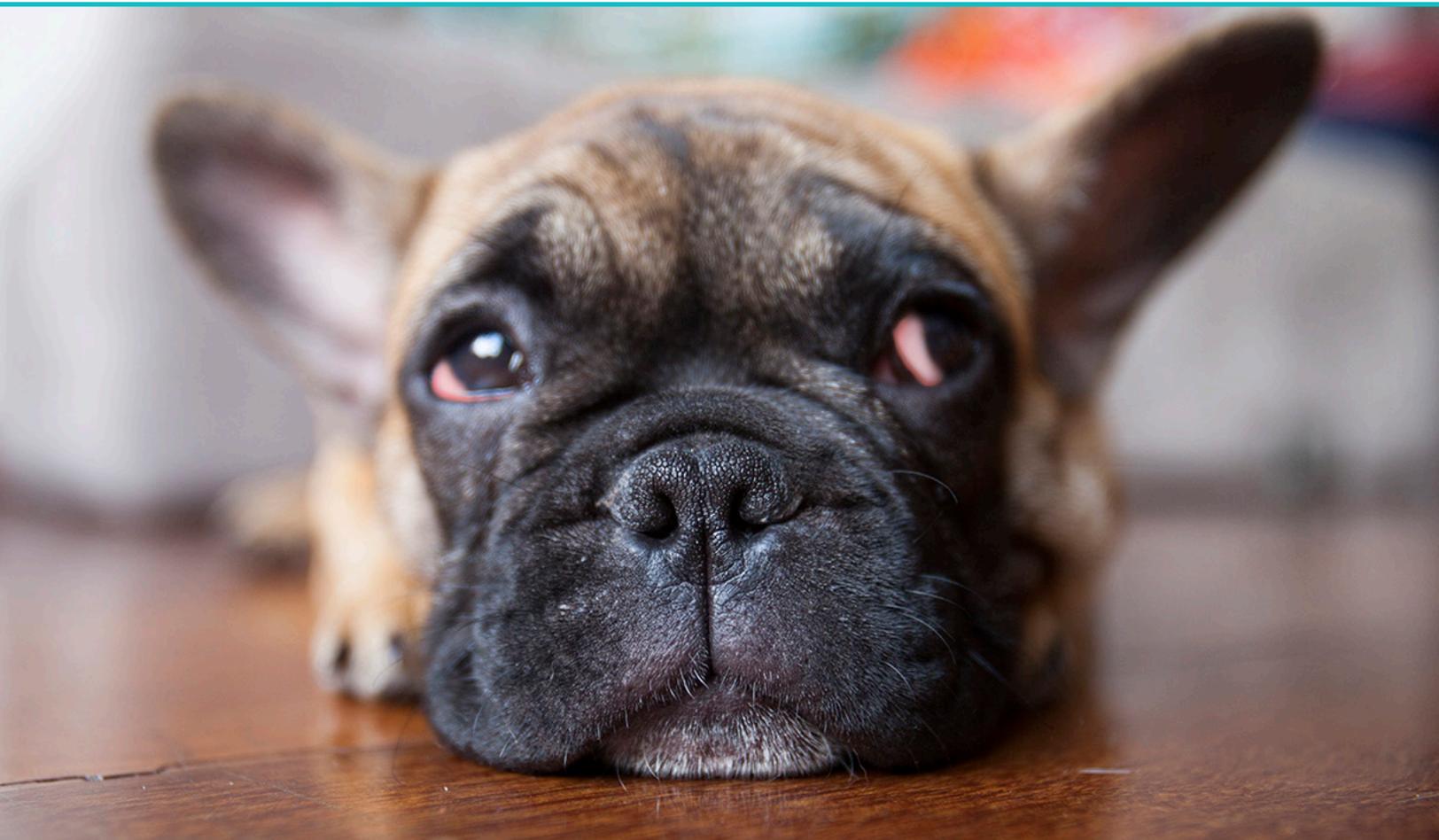
With cases of acute bacterial conjunctivitis in dogs, topical antibiotic administration may speed resolution. Apply an antibacterial ointment three to four times daily for five to seven days. Broad-spectrum antibiotics such as triple-antibiotic preparations should be used as the first line of treatment if the infection is mild to moderate and the infectious agent is unknown. Broad-spectrum agents include triple antibiotic ointment (Vetropolycin® [bacitracin-neomycin-polmyxin] Veterinary Ophthalmic Ointment) and tetracycline. Bacitracin is effective against gram-positive bacteria, polymyxin B is effective against gram-negative bacteria, and neomycin is effective against both types of bacteria. These antibiotics are also good choices because they are rarely used

systemically. With chronic bacterial conjunctivitis, investigate why the condition is chronic and treat with antibacterials based on conjunctival culture and sensitivity results.

To treat a cat with acute infectious conjunctivitis, topical tetracycline ointment is a good first choice. This product is effective against *C. felis* and secondary bacterial pathogens. In cats with conjunctivitis, topical glucocorticoids are generally avoided because most cases of conjunctivitis are infectious in nature. If there is no response to symptomatic treatment or if systemic disease signs are present, then perform a more complete diagnostic workup and consider referral to a veterinary ophthalmologist.

## Take-home points

When a dog or cat presents with a red eye, it's critical to determine whether the problem is conjunctivitis or a more serious disease. If it is conjunctivitis, treatment is generally straightforward, especially in dogs. Treatment success relies on addressing the underlying cause.



# VETROPOLYICIN®

bacitracin-neomycin-polymyxin  
veterinary ophthalmic ointment

**STERILE - ANTIBACTERIAL**

NADA # 065-016. Approved by FDA.

**DESCRIPTION:** Each gram contains Bacitracin Zinc 400 units, Neomycin Sulfate 5 mg (equivalent to 3.5 mg of Neomycin base), Polymyxin B Sulfate 10,000 units, in a base of White Petrolatum and Mineral Oil.

**ACTIONS:** The three antibiotics present in Vetropolyicin® (bacitracin-neomycin-polymyxin) veterinary ophthalmic ointment provide a broad spectrum of activity against the gram-positive and gram-negative bacteria commonly involved in superficial infections of the eyelid and conjunctiva. Bacitracin is effective against gram-positive bacteria including hemolytic and non-hemolytic streptococci and staphylococci. Resistant strains rarely develop. Neomycin is effective against both gram-positive and gram-negative bacteria including staphylococci, *Escherichia coli* and *Haemophilus influenzae* and many strains of *Proteus* and *Pseudomonas*. Polymyxin B is bactericidal to gram-negative bacteria especially *Pseudomonas*. No resistant strains have been found to develop in vivo.

**INDICATIONS:** In the treatment of superficial bacterial infections of the eyelid and conjunctiva in dogs and cats when due to organisms susceptible to the antibiotics contained in the ointment. Laboratory tests should be conducted including in vitro culturing and susceptibility tests on samples collected prior to treatment.

**PRECAUTIONS:** Sensitivity to Vetropolyicin® (bacitracin-neomycin-polymyxin) veterinary ophthalmic ointment is rare; however, if a reaction occurs, discontinue use of the preparation. As with any antibiotic preparation, prolonged use may result in the overgrowth of non-susceptible organisms including fungi. Appropriate measures should be taken if this occurs. If infection does not respond to treatment in two or three days, the diagnosis and therapy should be re-evaluated.

Care should be taken not to contaminate the applicator tip of the tube during application of the preparation. Do not allow the applicator tip to come in contact with any tissue.

**ADVERSE REACTIONS:** Itching, burning or inflammation may occur in animals sensitive to the product. Discontinue use in such cases.

**DOSAGE AND ADMINISTRATION:** Apply a thin film over the cornea three or four times daily in dogs and cats. The area should be properly cleansed prior to the use of Vetropolyicin® (bacitracin-neomycin-polymyxin) veterinary ophthalmic ointment. Foreign bodies, crusted exudates, and debris should be carefully removed.

**CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian.

**WARNING:** Do not use this product as a pre-surgical ocular lubricant. Adverse reactions of ocular irritation and corneal ulceration have been reported in association with such use.

**HOW SUPPLIED:** 3.5 g (1/8 Oz) sterile tamper proof tubes.

NDC 17033-028-38.

STORE AT 15°-25°C (59°-77°F).



**Manufactured for:**

Dechra veterinary Products  
Overland Park, KS 66211.

Ini0912  
R1112

# VETROPOLYICIN® HC

bacitracin-neomycin-polymyxin-  
hydrocortisone acetate 1%  
veterinary ophthalmic ointment

**STERILE - ANTIBACTERIAL**

NADA # 065-015. Approved by FDA.

**DESCRIPTION:** Each gram contains Bacitracin Zinc 400 units, Neomycin Sulfate 5 mg (equivalent to 3.5 mg of Neomycin base), Polymyxin B Sulfate 10,000 units, Hydrocortisone Acetate 10 mg (1%), in a base of White Petrolatum and Mineral Oil.

**ACTIONS:** The overlapping spectra of these three antibiotics provide effective bactericidal action against most commonly occurring gram-positive and gram-negative bacteria associated with infections of the eyes. The range of bactericidal activity encompasses many bacteria which are, or have become, resistant to other antibiotics, notably *Pseudomonas* and *Staphylococcus*. In susceptible organisms, resistance rarely develops, even on repeated or prolonged usage. Hydrocortisone acetate exerts a marked anti-inflammatory action at the tissue level and effectively suppresses inflammation in many disorders of the anterior segment of the eye. Local application to the eye often gives rapid relief of pain and photophobia, particularly in lesions of the cornea. The combined anti-inflammatory and antimicrobial activity of Vetropolyicin® HC (bacitracin-neomycin-polymyxin-hydrocortisone acetate 1%) veterinary ophthalmic ointment permits effective management of many disorders of the anterior segment of the eye in which combined activity is needed.

**INDICATIONS:** It may be used in acute or chronic conjunctivitis, when caused by organisms susceptible to the antibiotics contained in this ointment. Laboratory tests should be conducted including in vitro culturing and susceptibility tests on samples collected prior to treatment.

**CONTRAINDICATIONS:** Ophthalmic preparations containing corticosteroids are contraindicated in the treatment of those deep, ulcerative lesions of the cornea where the inner layer (endothelium) is involved, in fungal infections and in the presence of viral infections.

**WARNINGS:** All topical ophthalmic preparations containing corticosteroids with or without an antimicrobial agent, are contraindicated in the initial treatment of corneal ulcers. They should not be used until the infection is under control and corneal regeneration is well under way.

Clinical and experimental data have demonstrated that corticosteroids administered orally or by injection to animals may induce the first stage of parturition if used during the last trimester of pregnancy and may precipitate premature parturition followed by dystocia, fetal death, retained placenta, and metritis.

Additionally, corticosteroids administered to dogs during pregnancy have also resulted in other congenital anomalies, including deformed forelegs, phocomelia, and anasarca.

**PRECAUTIONS:** Sensitivity to the ophthalmic ointment is rare, however, if a reaction occurs, discontinue use of the preparation. The prolonged use of antibiotic-containing preparations may result in overgrowth of non-susceptible organisms including fungi. Appropriate measures should be taken if this occurs. If infection does not respond to treatment in two or three days, the diagnosis and therapy should be reevaluated. Animals under treatment with this product should be observed for usual signs of corticosteroid overdose which include polydipsia, polyuria and occasionally an increase in weight. Use of corticosteroids, depending on dose, duration, and specific steroid, may result in inhibition of endogenous steroid production following drug withdrawal. In patients presently receiving or recently withdrawn from systemic corticosteroid treatments, therapy with a rapidly acting corticosteroid should be considered in unusually stressful situations. Care should be taken not to contaminate the applicator tip during administration of the preparation.

**ADVERSE REACTIONS:** Itching, burning or inflammation may occur in animals sensitive to the product. Discontinue use in such cases. SAP and SGPT (ALT) enzyme elevations, polydipsia and polyuria have occurred following parenteral or systemic use of synthetic corticosteroids in dogs. Vomiting and diarrhea (occasionally bloody) have been observed in dogs.

Cushings syndrome in dogs has been reported in association with prolonged or repeated steroid therapy.

**DOSAGE AND ADMINISTRATION:** Apply a thin film over the cornea three or four times daily. The area to be treated should be properly cleansed prior to use. Foreign bodies, crusted exudates and debris should be carefully removed. Insert the tip of the tube beneath the lower lid and express a small quantity of the ointment into the conjunctival sac in dogs and cats.

**CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian.

**HOW SUPPLIED:** 3.5 g (1/8 Oz) sterile tamper proof tubes.

NDC 17033-030-38.

STORE AT 15°-25°C (59°-77°F).

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