



Corneal Ulcers: A Pet Owner's Guide for Treatment Success

Your pet's eyesight is vital to their wellbeing, and keeping their eyes healthy is a top priority. If your pet has a corneal ulcer, following your veterinarian's plan is important for ensuring treatment success and safeguarding their future eyesight.

Simple vs. Complicated Corneal Ulcers

Simple corneal ulcers typically heal without complications, so long as you follow your veterinarian's treatment recommendations.

However, deeper ulcers and melting corneal ulcers—caused by infection with bacteria that produce cornea-degrading enzymes—are more serious. Prompt, aggressive treatment is warranted to prevent further progression, blindness, and eye loss.

WHY IS YOUR PET'S CORNEA IMPORTANT?

Your pet's cornea is the clear outer layer at the front of their eye. The transparent cornea allows light rays to enter the eye, and bends, or refracts, the light rays so they hit the retina at the correct angle for image formation. A healthy cornea appears clear and shiny.

WHAT IS A CORNEAL ULCER?

A corneal ulcer is an abrasion or wound on your pet's corneal surface that causes a break in the epithelium. The causes of common corneal ulcers include eye injury, such as a scratch from another pet; foreign bodies, such as plant material; chronic corneal irritation (e.g., abnormal eyelash growth, or eyelids that roll inward;

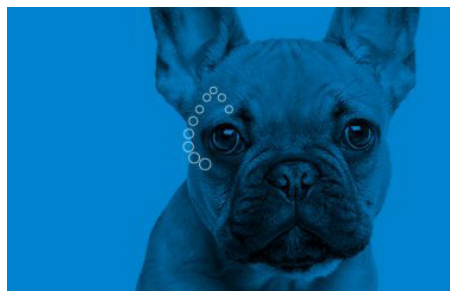
keratoconjunctivitis sicca (KCS), or "dry eye"; and exposure to chemicals, such as pet shampoo.

Most corneal ulcers are classified as simple ulcers, meaning they affect only the superficial corneal layers, and should quickly heal with prompt veterinary treatment. However, simple corneal ulcers can easily become infected and often require antibiotic treatment.

Complicated corneal ulcers are deeper and more serious, and can lead to eye rupture and blindness without aggressive treatment.

HOW ARE CORNEAL ULCERS DIAGNOSED?

A number of eye conditions can cause discomfort and reaching an accurate diagnosis is critical to ensure an appropriate treatment plan. Your veterinarian will perform a thorough eye exam to evaluate each part of your pet's eye and may apply fluorescein stain to their cornea. The stain adheres only to damaged areas where the epithelium has been lost and the underlying stroma is exposed. Positive stain uptake is



What if my pet's simple corneal ulcer does not improve?

It is imperative that you follow your veterinarian's complete treatment plan, including re-evaluation five to seven days after treatment is initiated. With treatment, simple corneal ulcers typically heal without complications. However, ulcers that do not heal may be indolent. A thorough ophthalmic exam is essential to ensure there are no other reasons why the ulceration has not healed, such as the presence of infection, dry eye, foreign body, or abnormal eyelash. If your pet's eye does not improve, or worsens, seek veterinary care immediately, either from your family veterinarian or an emergency veterinarian. Simple corneal ulcers can quickly progress to complicated ulcers, which can cause blindness or eye loss.

Article by Angela Beal, DVM.
Content reviewed by DJ Haeussler,
Jr., BS, MS, DVM, DACVO

diagnostic for the severity of a corneal ulcer.

HOW CAN I HELP ENSURE MY PET'S SIMPLE CORNEAL ULCER HEALS PROPERLY?

Successful healing is critical to safeguard your pet's vision and prevent complications, which could include eye rupture and blindness. Follow your veterinarian's complete treatment plan to ensure successful resolution. Most corneal ulcer treatment plans include multiple medications, with each contributing to the overall healing process. Your veterinarian may prescribe a combination of the following medications:

- **Topical antibiotics** — Corneal ulcers can easily be contaminated with bacteria and become infected. Antibiotics applied to the cornea in a drop or ointment formulation are important to kill bacteria and clear the way for healing.
- **Topical atropine** — Nerve endings in the corneal stroma are highly sensitive, and can cause significant pain when the protective epithelium is broken. Topical atropine helps calm irritated internal eye structures, and provides pain relief.
- **Oral pain medications** — Oral pain medications, such as nonsteroidal anti-inflammatory

drugs (NSAIDs), may be prescribed to help your pet comfortable, and reduce the desire to rub their eye.

- **Corneal barrier gel** — A barrier gel containing hyaluronic acid, which is not a medication but can be used with other prescribed treatments helps accelerate the body's own healing process. A barrier gel containing a matrix of cross-linked hyaluronic acid promotes a longer-lasting protective barrier over the corneal surface and requires less frequent administration. Always apply a repair gel last (at least 5 to 10 minutes after other treatment applications).
- **Tear stimulants** — If your pet is not producing adequate tears to lubricate the corneal surface, medications to encourage tear production may be prescribed.

By following your veterinarian's complete treatment plan, you will be providing the various components your pet's eyes need to heal. Re-evaluation is recommended within 5 to 7 days for superficial ulcers or if worsening signs are noted at home. If you have any questions about your pet's corneal ulcer treatment plan, consult your veterinarian. Do not discontinue or change any components of your pet's treatment, unless instructed by your veterinarian.