



Deep Corneal Ulceration and Corneal Graft Surgery



What is the cornea?

The cornea is the clear “window” at the front of the eye. It is thin, sensitive and important for vision, so injuries can be painful and may become serious quickly.

What is a corneal ulcer?

A corneal ulcer is any wound on the cornea. It may be caused by trauma, infection, dry eye, eyelid problems or, in cats, viral disease or corneal sequestrum. Ulcers can vary in depth from a simple shallow scratch, just affecting the outer layers of the cornea, to a much deeper, larger cavity.

What is a deep corneal ulcer?

A deep corneal ulcer is one which extends into the thicker middle layer of the cornea (called the stroma). This weakens the cornea, and in general the deeper the ulcer, the more fragile the eye becomes, increasing the risk of rupture. Consequently, these cases are urgent and require prompt treatment to relieve pain and give the best chance of saving the eye and preserving vision.

What signs might I notice?

- Squinting, blinking or holding the eye closed
- Watery, sticky or pus-like discharge
- Redness, cloudiness or a visible mark/crater on the eye
- Rubbing the eye or face
- Quiet behaviour or reduced appetite due to discomfort

If your pet has any of these signs, please prevent rubbing (by using an Elizabethan collar if you have one) and seek veterinary advice promptly. Deep, infected or rapidly worsening ulcers can deteriorate quickly.

How is a deep corneal ulcer assessed?

Your vet will use specialised equipment to examine the eye and ascertain the ulcer depth, look for infection or inflammation, and identify underlying causes such as dry eye, eyelid problems or foreign material which may have caused the ulcer to develop.

Why might surgery be recommended?

Deep ulcers may not have enough corneal strength to heal safely with drops alone. Surgery is recommended when the ulcer is deep, unstable, infected, melting, close to rupture or already perforated. The aim is to stabilise the eye, relieve pain and support healing as quickly and efficiently as possible. This is most commonly achieved by grafting tissue/ and or donor material in to the ulcer, thereby restoring strength to the weakened area.

What happens during corneal graft surgery?

Under general anaesthesia, unhealthy tissue is cleaned away and a graft is stitched into the defect using very fine sutures. The graft acts as a biological patch, giving strength and helping the cornea heal.

What should I expect after surgery?

- The eye may look red, swollen or cloudy during healing.
- Blood vessels may grow into the graft; this often supports healing.
- Medication, pain relief and lubricants may be needed for several weeks.
- An Elizabethan collar must be worn to prevent rubbing.
- Follow-up visits are essential to monitor healing.

Some cloudiness or scarring is common. In many cases the graft becomes flatter and less noticeable over time, although the final appearance and vision vary between patients.

What complications are possible?

Possible risks include anaesthetic complications, infection, graft movement or failure, corneal rupture, inflammation inside the eye, scarring, reduced vision or, rarely, loss of the eye. Careful aftercare however greatly reduce these risks and surgery is generally very successful in saving the eye and preserving a good level of sight.

Key points to remember

- Deep corneal ulcers are urgent and can threaten the eye and vision.
- Surgery supports and protects a weakened cornea.
- The graft type is chosen for your pet's specific ulcer.
- Medication, collar use and follow-up checks are vital for recovery.

