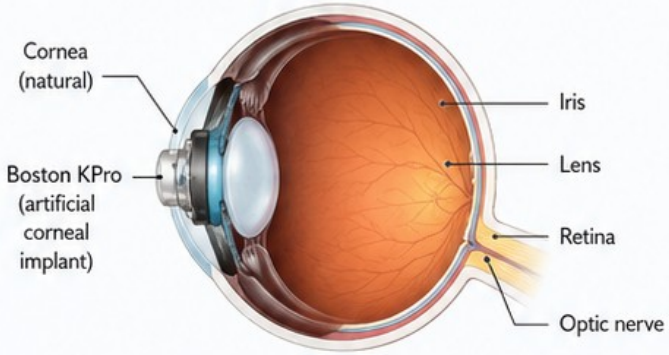
Boston Keratoprosthesis (Boston KPro) for Dogs

Client Information Brochure

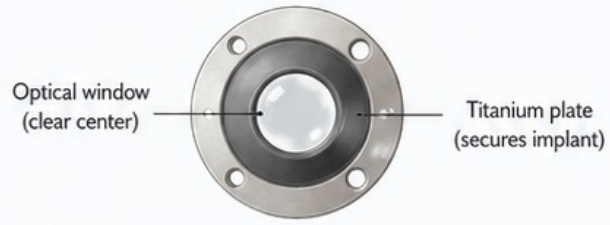


A Boston keratoprosthesis, often called a Boston KPro, is an artificial cornea. It is designed to create a clear optical window in eyes with severe corneal opacity when conventional corneal transplantation or standard medical therapy is unlikely to succeed. In dogs, this is a highly specialized rescue procedure and not every patient is a candidate.

Anatomy of the Dog Eye and Boston KPro



Front view of Boston KPro



What problems can it help treat?

- Severe corneal scarring or complete corneal opacity
- Selected cases of chronic superficial keratitis with dense pigmentation or fibrosis
- Some eyes with severe corneal edema or endothelial failure
- Eyes at high risk for failure of a standard corneal graft
- Cases in which other medical or surgical options have been exhausted

Possible benefits

- May restore a clear central visual axis
- May improve useful vision and navigation
- May improve quality of life in selected blind or visually impaired dogs
- Provides an option when traditional therapy has a poor prognosis

What does the surgery involve?

1. Preoperative eye testing confirms that the rest of the eye can still support vision.
2. Under general anesthesia, the central diseased cornea is removed.
3. The Boston KPro device is placed into a donor corneal carrier and implanted into the eye.
4. The eye is protected with medications and careful postoperative monitoring.

Important to know

Boston KPro surgery in dogs requires long-term follow-up and careful home care. The procedure may help some dogs, but it can also carry significant risks and may require additional surgery.

Specialized Care
Performed by veterinary ophthalmology specialists with advanced training and experience.

Compassionate Approach
We focus on improving your dog's comfort, safety, and long-term quality of life.

Personalized Plan
Every dog is unique. We'll develop a plan that is tailored to your dog's needs.

Partner in Care
Your participation in home care is essential for the best possible outcome.

This brochure is for education only and does not replace a consultation with a veterinary ophthalmologist.

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Risks, Complications, and Home Care



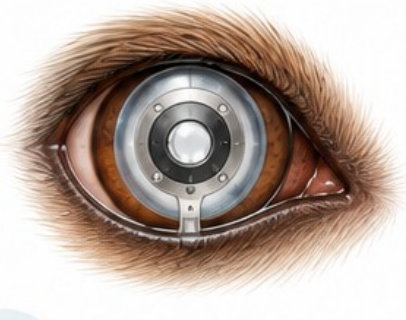
Boston KPro can offer an important treatment option for selected dogs, but it also requires a strong commitment to postoperative care. Complications can occur even with excellent surgery and careful follow-up, so owners should understand both the benefits and the risks before proceeding.

Possible risks and complications

- Infection, keratitis, or endophthalmitis
- Implant extrusion, loosening, or poor retention
- Corneal melt, stromal necrosis, or wound breakdown
- Retroprosthetic membrane formation
- Granulation tissue or inflammatory tissue over the optical window
- Glaucoma or increased eye pressure
- Persistent inflammation, discomfort, or pain
- Cataract, retinal detachment, or other intraocular complications
- Limited visual improvement or failure to regain vision
- Need for additional procedures, revision surgery, or in severe cases enucleation

What are the possible benefits?

In carefully selected dogs, Boston KPro may improve comfort, restore some useful vision, and provide a treatment option when more conventional approaches are unlikely to work. The goal is to create a clear optical window and improve quality of life, but the degree of vision regained can vary from dog to dog.



Home care after surgery

- Use all prescribed eye drops and oral medications exactly as directed
- Keep the protective collar on as instructed
- Prevent rubbing, scratching, dust exposure, and rough play
- Avoid swimming or dirty water exposure unless your doctor specifically approves it
- Attend all scheduled recheck visits
- Monitor the eye every day for changes



Call your veterinary ophthalmologist immediately if you notice:

- Sudden squinting or signs of pain
- Increased redness, swelling, or discharge
- Cloudiness, bleeding, or a change in the appearance of the implant
- A sudden drop in vision or bumping into objects
- The implant appears displaced or the eye looks more sunken or abnormal



Follow-up schedule

1. Early postoperative checks are often needed within the first 1–2 weeks
2. Additional visits are commonly scheduled during the first several months
3. Long-term monitoring remains important because some complications can occur later



Owner commitment

Successful management depends on long-term follow-up, daily home care, and rapid response if problems develop. Even when surgery is initially successful, additional treatment may still be needed later.

Observe Daily
Watch for any changes in the eye, comfort, or behavior.

Medications Matter
Consistent use of eye drops and medications is critical.

Keep Appointments
Regular rechecks help catch issues early and protect the implant.

We're Here to Help
Contact your veterinary ophthalmology team with any concerns.

Discuss your dog's individual prognosis, alternatives, and candidacy with a veterinary ophthalmologist.