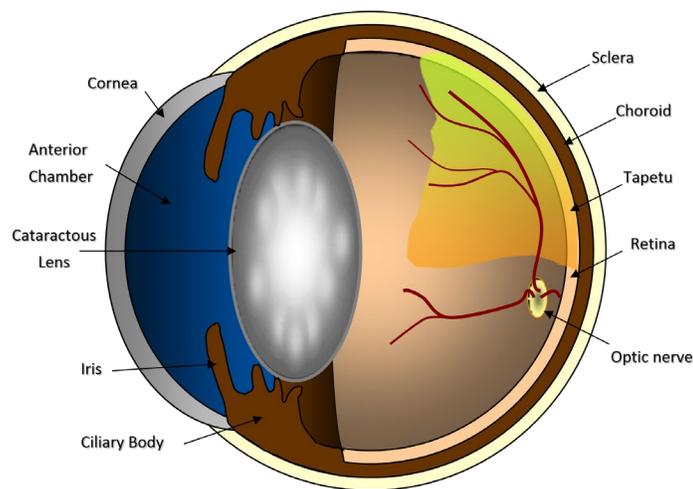


## Cataract Surgery

Cataracts are a leading cause of visual impairment among dogs. This opacification of the lens has various causes and may or may not progress to total blindness. The vision of affected dogs can often be significantly improved by surgical removal of the cataractous lens. Below are some important facts pertaining to cataract surgery and intraocular lens implantation in dogs.

### What is a cataract?

The term cataract refers to any opacity of the lens, a structure that lies within the eye (Figure 1). The function of the lens is to help focus light onto the retina. Cataracts decrease vision by interfering with light reaching the retina. Advanced cataracts are a leading cause of blindness among dogs.



**Figure 1.** Diagram of the anatomy of the canine eye. A cataract, or white opacity in the lens, is present, which can impede vision and is a leading cause of blindness in dogs.

The majority of cataracts are the result of a genetic or inherited defect involving the lens. Several breeds of dogs are known to be predisposed to developing inherited cataracts. Dogs affected with inherited cataracts should not be involved in breeding programs. Cataract formation is less commonly associated with diabetes mellitus, advanced age, trauma, or retinal disease. Depending upon the cause, cataracts may or may not progress to total blindness.

The rate of progression is often variable, ranging from weeks to years depending upon the underlying cause of cataract formation. For example, cataracts associated with diabetes mellitus can develop quickly. In some cases, diabetic cataracts can progress very rapidly, requiring immediate attention to prevent or address secondary complications associated with the cataract progression.

A frequent consequence of cataract formation is the development of inflammation within the eye which, left untreated, can potentially damage the internal structures of the eye and lower the prognosis for a successful visual outcome following cataract surgery. Therefore, early evaluation by a veterinary ophthalmologist is recommended.



### **How are cataracts treated?**

Presently, the only effective treatment of advanced or rapidly progressing cataracts is through surgical removal of the affected lens. This is accomplished under general anesthesia by making a surgical incision into the eye and using special instrumentation to ultrasonically fragment and remove the lens material. When possible, once the cataractous lens has been removed, an artificial intraocular lens is implanted into its place.

The success rate of uncomplicated cataract surgery is approximately 85-90 percent. This success rate may vary depending upon the overall health of the affected eye. An assessment should be made by a veterinary ophthalmologist to determine the relative risks and benefits of surgery.

It is imperative to note that even though there is a relatively high success rate, there are cases in which complications do arise. The consequences of these complications vary in severity and can include, but are not limited to, excessive inflammation, corneal edema (cloudiness), secondary glaucoma (an increase in the intraocular pressure), retinal detachment, intraocular infection, and total blindness. Please note there is 10-15% chance of an irreversible **BLINDING** complication following cataract surgery in dogs that are deemed ideal candidates for surgery. This means that roughly 1 in 10 dogs that are considered ideal candidates will have a blinding complication after the procedure. In dogs with other ocular abnormalities this percentage may be higher. Some complications may necessitate intensive long-term medical therapy or even additional surgeries. Although uncommon, these complications do occur. Facts pertaining to the surgery will be discussed in detail during your dog's initial cataract evaluation appointment.

### **Your local veterinarian's role**

Your local veterinarian plays a key role in proper maintenance of your dog's overall health, and their role in the successful management of cataracts is no exception. Early detection of cataracts by your veterinarian with referral for subsequent evaluation by a veterinary ophthalmologist can have a positive influence on eventual outcome. Surgery is not indicated in every case; however, it often restores functional vision to dogs whose sight was impaired due to cataracts. In addition, pre-operative bloodwork and a dental cleaning is required prior to cataract surgery. This is often performed with your local veterinarian.

### **The cost of cataract surgery**

Factors that determine the total cost include: whether one or both eyes will undergo surgery, the amount of presurgical workup required to screen for other diseases, and duration of hospitalization. Included in the cost estimate is presurgical performance of an electroretinogram, a test to assess retinal function, and an ocular ultrasound, to screen for retinal detachment. Also included is the first recheck examinations. Recheck examinations are \$150 after the first post-op exam. This estimate does not include pre-operative bloodwork, medication refills, or treatment of complications associated with cataract surgery as these costs are variable between patients.

The cost estimate for surgery in both eyes at the same time is \$6000.

The cost estimate for surgery in one eye is \$4500.



### **What to expect after surgery**

Successful cataract surgery requires a firm commitment from the owner. Cataract surgery can be an outpatient procedure. We can hospitalize patients the night before and/or after surgery as a convenience to owners for \$150 per night. Surgery patients are dropped off between **7:30-8 AM** the morning of surgery and post-operatively patients are often ready to go home by 5:00PM. Rechecks are frequent following surgery and are usually done the day following surgery, one week, 3-4 weeks, two months and 4-5 months after surgery and then once or twice yearly.

Patients need to be on oral medications for one week, wear an e-collar for two-three weeks, and have restricted activity and bathing for one month. Patients are often on frequent drop medications for approximately 4 months, however will likely benefit from having once daily drop medications lifelong. The standard post-operative schedule is for routine patients with no complications; if complications were to occur we may need to recheck more frequently or have different medication requirements.

Some post-operative inflammation and discomfort following cataract surgery is expected. Typically, the eyes may become more reddened, there may be a slight increase in ocular discharge, mild clouding, as well as minimal squinting. All of these signs represent a normal response to surgery and should resolve over the first 1-2 weeks, with marked improvement noticed over the first 3-4 days. A common question after cataract removal is "how well can my dog see?" In certain cases, vision can be difficult to assess immediately after surgery but is usually noticeable within two days with continual improvement over the first two weeks. It is not normal for the eyes to remain painful or vision to fail to improve or worsen over the first two weeks.

**Medical therapy:** The overall success of cataract surgery is highly dependent upon close compliance with the prescribed medication schedule. Medication should be given at evenly spaced intervals during waking hours. If two drops are to be given at the same time, allow at least five minutes between drops to allow maximal absorption of each medication.

**E-collar:** This collar should be left in place at all times for the first 2-3 weeks following surgery.

**Exercise:** Restrict your dog's exercise. It is advisable to keep your dog confined to a small room indoors with supervised short walks outside. Avoid leashes when possible, using a harness if necessary, to limit the amount of pressure on the neck which can elevate intraocular pressure. Do not bathe your dog or encourage roughhousing until told to do so.

**Rechecks:** The initial recheck appointment is scheduled for the day after surgery and one week following cataract surgery. Recheck exams are crucial in the management of cataract patients as important recommendations will be made based on post-operative progress. Additional recheck appointments will be scheduled as necessary but are typically recommended at three weeks, two months, and four months, then semiannually or annually thereafter.

**Problems:** In most cases, complications are minimal. However, in the event an ocular problem develops or if you have questions or concerns pertaining to post-operative management, please notify the Ophthalmology Service at Metropolitan Veterinary Hospital at 330-666-2976. Emergency services are available 24 hours a day, seven days a week.