

CATARACTS AND CATARACT SURGERY

Cataracts are a leading cause of visual impairment in dogs and often progress to cause blindness. However, surgical removal of the lens and placement of an artificial lens implant can restore vision.

What is a cataract?

A cataract is an opacity or clouding of the normally clear lens of the eye. The lens is located behind the iris (the brown or blue part of the eye) and when a cataract is present, the pupil can appear white. Vision through a mature cataract can be compared to a window that is frosted or fogged with steam.

What causes cataracts in dogs?

The majority of cataracts in dogs are due to an inherited (genetic) defect in the lens. This type occurs most frequently in purebred dogs where they may be present at birth or develop later in young to middle-aged animals. Dogs affected with hereditary cataracts should not be bred. Other causes of cataracts include trauma, diabetes mellitus, advanced age, uveitis (intraocular inflammation), and retinal diseases.

How are cataracts treated?

Currently, the only effective treatment for cataracts is surgical removal either by phacoemulsification or extracapsular cataract extraction. Surgery is performed under general anesthesia with an operating microscope. Both techniques remove the front part of the lens capsule and leave the posterior capsule intact for placement of an intraocular lens implant. Phacoemulsification involves the use of ultrasonic waves to break up the lens, and the lens fragments are aspirated and irrigated. This procedure is done through a small corneal incision and is most useful in removing softer lenses. Extracapsular extraction involves a 180-degree corneal incision and manual expression of the lens in one piece. This technique is used in the removal of very dense cataracts, such as those in older animals. Lasers are not used to remove cataracts nor are there any medications effective in treating or preventing cataracts. Animals are farsighted after cataract surgery and will have functional vision, but may have difficulty with depth perception. In some cases an intraocular lens implant may be inserted to improve near vision after surgery.

How successful is cataract surgery?

Cataract surgery is not 100% successful. Success rates usually vary between 85%-90%. The surgical success rate for cataracts in the early stage is higher than for advanced cataracts that have been present

for months to years. Once removed, cataracts do not regrow but over time, scarring of the lens capsule may occur which can result in a slow decrease in vision. In uncomplicated cases, vision will begin to improve a few days after surgery and gradually improve as the inflammation within the eye resolves.

What are the risks and complications of cataract surgery?

There are always risks associated with any type of surgery or general anesthesia. Postoperative vision-threatening complications that can occur include glaucoma, bleeding retinal detachment, and rarely infection. If complications do occur, the eye may not regain vision. Some complications may require long-term medical treatment or even additional surgery.

How do you know if your pet is a good candidate for surgery?

Following the initial ophthalmic exam, your pet will need up-to-date blood work and a physical exam by your general veterinarian to ensure his/her overall health. Age alone does not limit the possibility of surgery. Depending on your pet's health, other diagnostic tests may also be needed prior to surgery, such as chest x-rays or an EKG. Additional diagnostics performed by the veterinary ophthalmologist to determine if your pet is a candidate include ocular ultrasound to check for retinal detachment, and an electroretinogram (ERG) to assess retinal health. Older animals or animals with long-standing cataracts may have decreased retinal function. If the ERG value is too low, surgery will not be performed. If the ERG is in the "gray zone" then you and your veterinary ophthalmologist must decide if you still want to have surgery. If surgery is performed with an ERG test in the gray zone there is no guarantee of how long, or how well, your pet will see after surgery. This is a risk you must be willing to accept if you decide on cataract surgery.

What can I expect after surgery?

Cataract surgery is done on an outpatient basis. Your pet will be admitted into the hospital the morning of surgery and will usually be discharged later the same day after being monitored in the hospital. Some cases may be hospitalized overnight. When you come to pick up your pet, you will notice a shaved area surrounding the eye and on the leg (for administration of the anesthetic). This area was shaved to ensure a sterile surgical site. The eye may seem red and swollen. This is normal inflammation following the surgery and will slowly resolve over the next several days. Your pet will need to wear a large plastic collar for 3-4 weeks after surgery to prevent trauma to the eye. Although he may not like it, he will learn to tolerate it and can eat and sleep with it on. It is very important to avoid injury to the eye after this delicate surgery. The stitches in the cornea will dissolve 3-5 weeks after surgery, leaving behind a

corneal scar that will not interfere with vision. Your pet should be kept away from other animals for the first 2 weeks and no bathing/grooming or strenuous exercise for 1 month after surgery. Postoperative rechecks are required the day after surgery, at 1, 2, 4, and 6 weeks after surgery, and additionally as needed. Your pet's vision may return immediately following surgery. However, in general, vision will improve as the inflammation decreases in the days and weeks following surgery.

Owner Participation

As the owner of your pet, you will have a lot of work to do in helping to achieve a successful outcome from cataract surgery. The period following your pet's cataract surgery requires a lot of time and patience from you. This time may seem stressful and overwhelming, but with time you will see it is all worth it. Several types of eye drops need to be given 3-4 times daily for approximately 6-8 weeks after surgery. Oral medications are also given for a few weeks postoperatively as well. The medications are gradually decreased and eventually discontinued as the inflammation within the eye resolves. Some cases however, especially diabetics, need long-term maintenance therapy after surgery.