

Cataracts and Cataract Surgery in Animals

What is a cataract and what is the cause?

A cataract is opacification of the normally transparent lens within the eye. It can range from a small opacity not significantly affecting vision through to a complete cataract blocking all vision and causing blindness. Cataracts generally lead to a cloudy or opaque appearance to the eye, but there are normal age-related changes that occur which have the appearance of a cataract. Cataracts are commonly hereditary in origin, but can be secondary to other diseases such as diabetes, ocular inflammation, trauma, retinal detachment and advanced age.

What is the treatment?

Surgery is the only available treatment for cataracts. No medical treatment has been proven to be effective in clearing cataracts, however it is a current area of research worldwide. If the cataract is associated with inflammation, anti-inflammatory drops are needed to keep the eye comfortable and prevent further complications like glaucoma.

When should a cataract not be removed?

All cataracts and suspected cataracts in animals require a thorough examination and sometimes further tests to see if surgery is in the pet's best interest. After examining an animal's eyes and finding cataracts we do not recommend surgery in the following instances:

- Insufficient vision impairment (very small or early cataracts). Surgery in these cases will not significantly improve vision and quality of life.
- Other ocular problems such as retinal disease which may mean that even if the cataract is removed, vision will still be poor.
- High anaesthetic risk patients, for example very elderly animals or those with major health problems.
- If the cost of surgery is prohibitive. Ultimately cataract surgery is an elective procedure as cataracts are not painful. Dogs cope well without vision though surgery will greatly improve quality of life.
- Advanced canine cognitive dysfunction in geriatric dogs (dementia-like signs)

What does cataract surgery involve?

Cataracts in animals are removed under general anaesthesia (humans are usually done conscious) through a small corneal incision using a probe inside the eye via a process of fragmentation, irrigation and aspiration called phacoemulsification. An artificial intraocular lens implant can be inserted in the eye after the original cataractous lens is removed. This adds to the cost of surgery but lens implantation improves close vision after surgery and is standard in human cataract surgery. Artificial lens implantation is recommended but may not be feasible in all animals. The final decision to place a lens implant is based on suitability of the individual eye at the time of surgery.

Following surgery your pet will usually go home later on the same day and return for its first post operative recheck between 1 and 5 days later. A number of post operative checks will be required over the next few months. Medications start with eye drops 4 times daily and gradually taper off over a 3 month period, although some dogs need to stay on daily drops longer term.

Diabetic patients must be managed slightly differently to non-diabetic cases. The instructions regarding insulin management on the day of surgery are detailed on a separate sheet. Some of the medication may temporarily reduce the effect of insulin administered, so significant changes in insulin doses during the post-operative period should be avoided if possible. Cases which have had pancreatitis before becoming diabetic may be at a small risk of a pancreatitis flare up following anaesthesia and surgery. Despite these factors, most diabetic patients are excellent candidates for cataract surgery.

What is the success rate of cataract surgery?

Around 90-95% of cataract extraction surgeries in animals result in good, useful vision long term. That also means that around 5-10% of all operated eyes will have some kind of unpredicted complication, meaning that useful vision is not restored. As with all surgical procedures, there can never be a guarantee of a successful outcome. The most common complications include self-trauma related inflammation, retinal detachments and glaucoma. Occasionally due to the development of scar tissue or regenerative lens material, an eye has to undergo a minor 'clean up' surgical procedure a few months after the initial surgery. This is more common in young dogs, and potentially diabetic patients.

Cataract surgery in humans has a slightly higher success rate as it is a simpler, quicker, more routine and a more controlled procedure. Cataract surgery in animals is more involved and subject to a greater variety of complications than in humans for the following reasons:

- Animal lenses are much larger in size than human lenses (approximately 4x the size), meaning a more time consuming procedure to remove them
- Animal cataracts are usually much denser, also increasing the time and effort involved with surgery
- A greater inflammatory reaction to intraocular surgery occurs in animal eyes, prolonging post operative medication periods
- Animals are less easily controlled and more prone to self injury