



Elham Valley Referrals

PREPARING FOR CATARACT SURGERY

Your pet has been diagnosed with cataract, which is opacity within the lens of the eye. This information sheet is to help you understand what a cataract is, the benefits and risks of cataract surgery, and what it involves on your part.

Anatomy of the eye

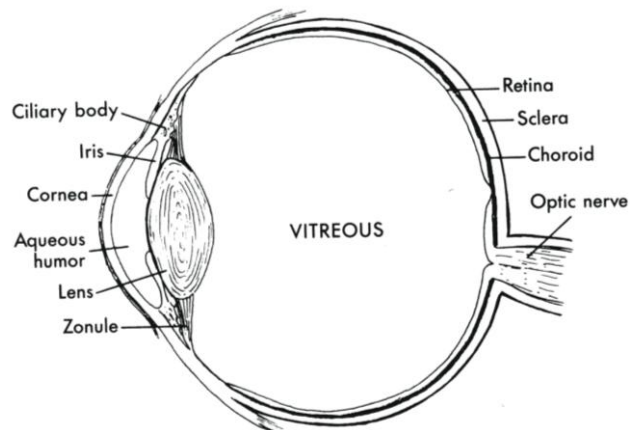
The lens is located behind the iris, the brown or blue part of the eye. The lens should be clear to allow light to pass through to the back of the eye. The lens is enclosed in a thin capsule, which is the consistency of cellophane.

In front of the lens, there is a clear fluid, the aqueous, and behind it is a thicker fluid, the vitreous, which helps to keep the retina attached.

The retina is a layer of cells at the back of the eye which functions like the film in a camera. It receives the light, transmits the nerve impulses via the optic nerve to the brain, and allows the patient to see.

Causes of cataract

Cataract may develop because of an inherited defect; as part of the ageing process; or secondary to diabetes, trauma, inflammation or retinal degenerations. In dogs, diabetes is a common cause of cataract.



Cataract progression

A cataract may affect different parts of the lens and can progress to involve the whole lens, eventually leading to blindness. As cataracts progress, they go through three different stages: immature, mature and hypermature. In the later stage, the cataract may leak proteins that cause inflammation inside the eye. This is called lens-induced uveitis. Eyes that have inflammation are not as good candidates for surgery.

Potential outcomes

With modern techniques for cataract surgery, success rates are usually over 90%. Complications which may occur include severe inflammation, bleeding into the eye, retinal detachment, glaucoma and, very rarely, infections. Although cataracts do not re-grow, scarring may occur inside the eye over time which could result in a slow decrease in vision. Although the success rate is usually good, you need to be aware that there are potential complications.

Although cataract surgery is generally not a long procedure, there is a potential anaesthetic risk as with any type of surgery. However, we minimise the risk by thorough pre-anaesthetic examination, use of the most up-to-date anaesthetic techniques and equipment, and close monitoring during the procedure.

If your pet is diabetic, it is essential that their diabetes is well-controlled with insulin before we consider cataract surgery. It is important that you understand that the anaesthetic, the need to starve your animal prior to surgery, and post-operative medication might destabilise the diabetes. For this reason, we monitor patients' glucose levels not by a urine test but directly, via blood samples, while they are with us. We will also ask you to bring their normal food and insulin to minimise changes in their daily routine. We would appreciate a written record of the last urine test results, quantity of food given, and timetable of meals as well as the time and dose of insulin

Owner participation

Our cataract patients are hospitalised on the day of surgery until the afternoon /evening.

As the owner you will have a lot of work to do on their return home to help achieve a successful outcome after cataract surgery.

Your pet will have to wear an Elizabethan 'buster' collar/"cone" to prevent them damaging the eye for several weeks.

Several types of drops will have to be given three to four times daily for a few weeks to several months after surgery, as well as oral medications.

Several re-checks are required after surgery, typically after one week, one month, two months then every six months, however this depends on how your pet heals, and more frequent visits may be required.

You should not decide to go ahead with surgery if you are not prepared for the post-operative management. Cataract surgery is an elective (non-compulsory) procedure that requires a considerable amount of expense, as well as time and effort.

Patient selection and preparation for surgery

In order for your pet to be considered for cataract surgery it is important that they are not suffering from other potentially more serious illnesses. Pre-operative blood tests are performed routinely to rule out any undetected kidney or liver disease that could affect your pets' ability to cope with anaesthesia.

To check that your pet has normal retinal function and ensure that they will benefit from surgery, we need to perform an electronic test called an electroretinogram (ERG). This test is performed under general anaesthetic. Using a special contact lens, we record the electrical response of the retina to bright flashes of light. Older patients, or patients with retinal disease, may have poor results and if the ERG value is too low, surgery may not be appropriate.

Sometimes the results of the ERG test fall into a mid-range "grey zone", and in such cases you and your ophthalmologist must decide whether to proceed with surgery. If this is the case, you must be aware that there is no guarantee of how well the patient will be able to see after the operation (even if the surgical result is otherwise excellent).

Surgical procedure

Cataract surgery consists of removing the lens and front part of the lens capsule. The back of the capsule is left in place to maintain the normal arrangement of structures in the eye. Unlike some forms of human cataract surgery, a general anaesthetic is always required in animals.

The technique we use is called phacoemulsification. This uses a small probe that generates high frequency vibrations to break up the cataract. The probe is introduced through a tiny incision (cut) in the cornea at the front of the eye, and the solid material is then broken up and removed. The advantage of this technique is the small size of the incision and the fact that it causes relatively little trauma to the eye.

In some instances the lens is too hard to be fragmented, or is unstable and needs to be removed in one piece through a larger incision. Recovery time tends to be slightly longer and success rates are lower with this technique. The condition of very hard cataracts can be a

problem in older dogs and those who have had cataracts for a long time. Unstable lenses are seen particularly in terrier breeds and in some elderly dogs.

Intraocular Lenses (IOLs)

A prosthetic (artificial) lens may be placed inside the eye once the cataract has been removed, held in place by the remaining thin membrane of the lens capsule. The IOL helps bring light to a focus on the retina, to try and give the best possible visual outcome for your pet. Without an IOL the eye will be rather long-sighted, although for most animals this will still be a vast improvement on their vision prior to surgery.