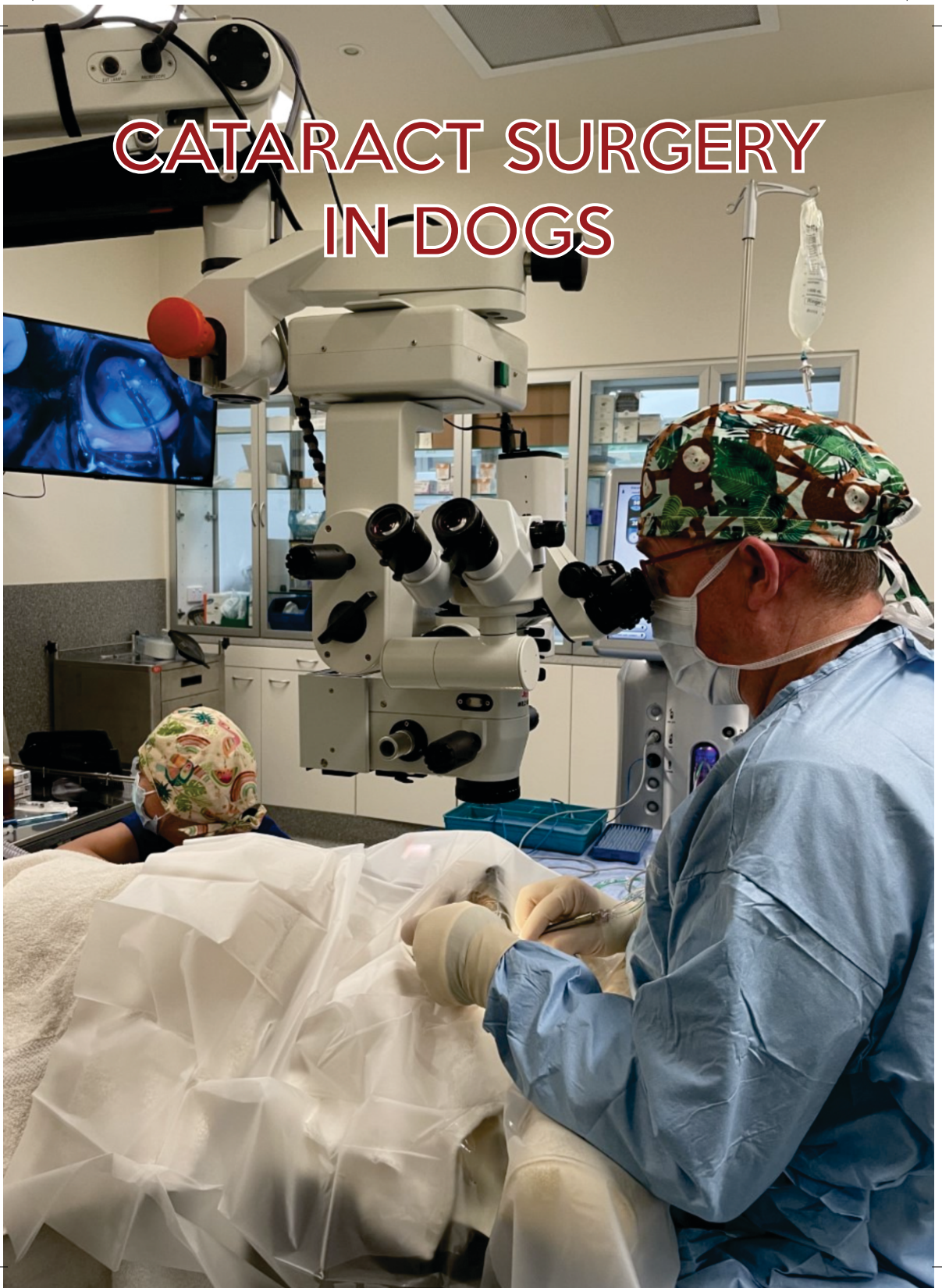
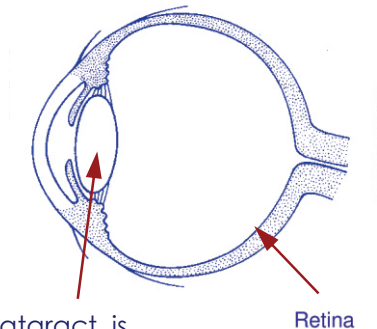


CATARACT SURGERY IN DOGS



What is a cataract?

A cataract is an opacity of a structure inside the eye called the lens. The lens is usually clear and transparent, and helps to focus an image onto the retina, at the back of the eye. The same process happens inside a camera, with the lens focusing an image onto the film in the back of the camera. Having a camera with a foggy lens is somewhat similar to having a cataract - both produce very poor images! In humans, cataracts are one of the most common causes of blindness, especially in third-world countries.



A cataract is an opacity of the lens inside the eye.

What causes cataracts?

Many things can cause cataracts, and often we cannot be 100% certain of the cause in each and every case. Most cataracts seen in dogs are caused by genes inherited from parents, however diabetes, injuries, inflammation, drugs and nutrition may also be to blame.

What are the signs of cataracts?

Owners of dogs with cataracts usually report a deterioration in their pet's eyesight. Poor eyesight may be noticed as an increase in 'clumsiness', a change in personality (lethargy or aggression), or a reluctance to go into the dark, among other things. Sometimes our clients notice a white area in their dog's pupil (the black circle in the middle of the eye), or their referring veterinarian notices the problem during a routine physical examination.

What can we do for cataracts?

In the past, people have tried all sorts of medications to clear cataracts. With our current medical knowledge, we know that surgery is the only cure. This doesn't mean that your pet **must** have cataract surgery, as some cataracts do not affect vision enough to warrant the procedure. You can discuss your pet's suitability for surgery with one of our eye specialists.

Why is cataract surgery recommended earlier than later?

Assessment and treatment of cataracts before they become too advanced is important for two reasons:

1. We need to assess the retina (the light sensitive membrane at the back of the eye), to ensure it is normal. This can be done more easily when the cataracts are not too dense, enabling us to see the retina with specialised diagnostic examination instruments.

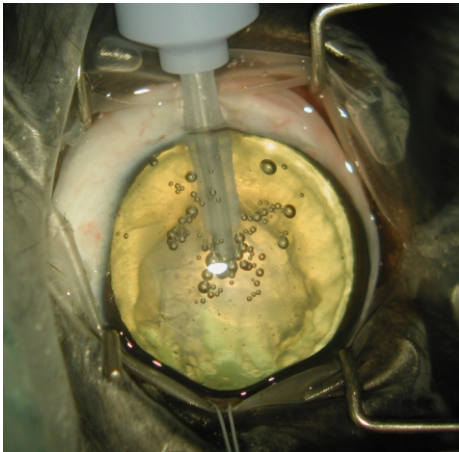
If the cataracts are too dense we may need to do more specialised tests, such as **ultrasound** or **electroretinography (ERG)**, to evaluate the structure and function of the back of the eye to ensure a successful outcome. These tests are often done on the same day that we intend to do the cataract surgery. If your pet fails either of these tests, then we may recommend that surgery not be performed as it will not improve vision for your pet.

2. If left in place for too long, a cataract can cause inflammation inside the eye. Sometimes medication can control the inflammation, and help control the associated pain. In the long term, however, the inflammation within the eye may become so severe that glaucoma (increased pressure in the eye) and uncontrollable pain may occur. In these cases, cataract surgery will not be an option for improving vision.

Also cataracts which have been present for some time can develop other problems such as opacity in the normally clear capsule surrounding the lens, or breakdown of the lens zonules which hold the lens in place. These secondary changes can reduce the chances of achieving the best outcome. Even if you decide not to have the cataract surgery, regular rechecking by one of our eye specialists would be recommended to monitor the progression of the cataract, and the associated problems in your dog.

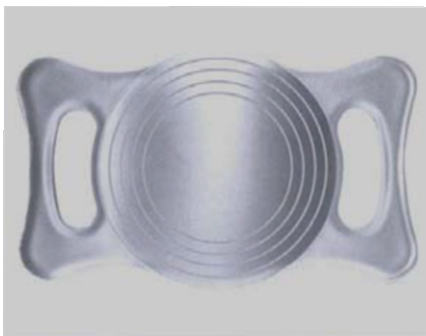
The cataract surgery procedure.

The surgical techniques used to remove cataracts in animals are almost identical to those used in humans. The technique most widely used is called **phacofragmentation**, and uses ultrasound energy to break the lens into tiny pieces which are then sucked out of the eye. Most cataracts are removed through a small 'keyhole' incision 3-4mm wide in the top of the eye. Removal does not involve the use of a laser, as some people mistakenly believe.



Picture of a typical 'keyhole' incision phacoemulsification cataract surgery in progress. The hollow needle probe is shattering the lens into tiny fragments and sucking them out at the same time.

In most cases, after the cataract is removed, an artificial lens (**IOL**) can be inserted into the lens capsule to correct close distance vision back to normal. Not all dogs are candidates for an artificial lens. This is because in some patients the natural lens capsule is not able to hold steady the IOL. The decision to place an artificial lens depends on various factors, and is usually made by the surgeon during the procedure.



Picture of a typical intraocular lens implant. The central circular section is called the optic. This replaces the normal light bending function of the natural lens. The two little 'bow ties' on either side are called haptics and these hold the optic centrally in the eye.

How successful is cataract surgery?

The success rate for cataract surgery in dogs has markedly increased over the last 20 years, mainly as a result of new research and improved less invasive surgical techniques through small incisions in the eye. In general, our patients achieve good, long-term vision around 80-85% of the time. Age and progression of the cataract and other complicating issues such as (but not limited to) poorly controlled diabetes, increased intraocular pressure, chronic inflammation, breed predisposition and ocular surface disease can increase the risk of complications and a poor outcome. Your dog's perceived individual risks will be discussed with you by the ophthalmologist. As with all surgery, however, it is impossible to give an unqualified 100% guarantee of success with no complications.

What are some of the complications of cataract surgery?

The most common complications after cataract surgery include:

- ▶ ongoing inflammation in the eye/s
- ▶ lens capsular opacifications
- ▶ transient intraocular pressure spikes
- ▶ corneal ulceration

More rare complications include:

- ▶ uncontrollable glaucoma
- ▶ retinal detachments
- ▶ bleeding into the eye
- ▶ endophthalmitis (overwhelming infection in the eye)

Many of the problems are unpredictable. Some can occur hours, days, weeks even years after surgery. In the worst case scenario, despite best efforts from all parties, the eye/s can deteriorate to the point of unrelenting blindness and pain. This would necessitate removal of the eye/s. Fortunately, this is rare, but you must be aware of the possible outcomes.

For this reason we strongly recommend you follow very closely all post operative instructions including those for medications and follow up appointments. Not doing so can increase the risk of poor outcome.

The above may seem daunting, but in reality most patients are already blind or very visually impaired in the affected eye/s at the time of cataract surgery so there is a lot to gain vision wise and little to lose.

Many complications listed above can also actually occur naturally as an inevitable consequence of the cataract maturing and festering within the eye/s slowly causing damage by a process called 'lens induced uveitis' (inflammation). In some studies it has been shown that cataract removal (cataract surgery) and or long term use of anti-inflammatory drops can significantly reduce the likelihood of certain complications.

Are there risks in having a general anaesthetic?

The major difference between human and canine cataract surgery is that dogs still require general anaesthesia. Although modern anaesthetics are generally safe, rarely complications and deaths can occur, and owners must accept this risk. To minimise the chances of an anaesthetic complication, a detailed history of your dog's previous and current medical problems is taken before surgery. For animals over 10 years old, we recommend that your veterinarian perform preoperative blood tests. For dogs with heart or lung problems, a referral to a cardiac specialist may be recommended to assess the relative risk of anaesthesia. Modern anaesthetic agents and techniques are used during the cataract surgery, and the patient is constantly monitored during both the procedure and the recovery phase of anaesthetic.

What happens after cataract surgery?

Usually your pet will be discharged from hospital on the afternoon of surgery. It is important to keep your dog **quiet** for the first two weeks afterwards, and **limit exercise** to strict leash walks, preferably with a chest harness (throat collars can increase the pressure in the eyes). Your dog should not be allowed to play with toys or balls, romp with other dogs, or travel with his or her head out of a car window. At first, you may be using topical medications up to **4 times daily**. Over time the frequency of medication required decreases. In some cases long term medication with eye drops will be recommended.

Post Op availability/emergency protocol:

We do not provide a 24/7 service. During clinic hours please contact us by phone and we will endeavor to make an appointment ASAP.

Should you encounter concerns outside of normal clinic hours it is recommended to take your pet to the Animal Emergency Service (contact details on back cover.) Or your local emergency veterinary clinic if you live far from our clinic.

What is the cost of surgery?

The cost of cataract surgery is reasonable when one considers the expense and maintenance of the highly specialised equipment used, as well as the level of expertise required on the part of the surgeon. The disposable items and prosthetic lenses used during surgery can be expensive, and have to be imported from overseas. However, we are constantly striving to keep the costs within reasonable limits so that you pet can enjoy a better quality of life by being able to see again.

Your veterinary eye specialist will endeavour to give you as accurate an estimate of costs as possible before surgery. Please understand however that this is an estimate only and the final cost may vary slightly depending on circumstances at the time of surgery.

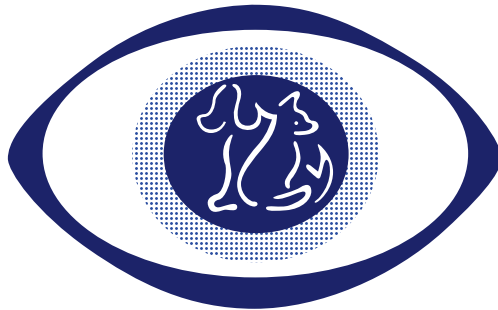
The estimated fee includes pre-operative tests where necessary, anaesthesia, theatre fees, disposable theatre items, drugs and hospitalisation and the GST. The first two rechecks after cataract surgery are included in the estimate. After this time a standard revisit fee will usually apply. Further drugs prescribed at rechecks after surgery will also be an additional cost. In the event of complications, we will always attempt to keep any associated additional costs as low as possible.

In Australia, we are very lucky to have the Medicare system pay for human health care costs. As a cost comparison cataract surgery in both eyes **on a human patient** is approximately \$12,000, and this is done under sedation with local anaesthetic nerve blocks. it would be even more expensive under general anaesthesia. We are often unaware of these costs due to the way our healthcare system works. More and more people are getting pet insurance for their animals these days and this can help immensely with the financial burden of pet care.

Please feel free to discuss any further questions you may have about cataract surgery with one of the eye specialists at **Animal Eye Services**.

Animal Eye Services are not able to offer 24 hour emergency care and if you have concerns about your pet's condition outside of normal business hours it is recommended to attend the Animal Emergency Services on **(07) 3423 1888** co-located within the same building at **1 Lexington Road, Underwood**. They are a separate practice and will charge for services provided.

ANIMAL EYE SERVICES



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F: 07 3841 7022

E: animaleye@animaleye.net.au

W: www.animaleye.com.au

HOURS

Monday - Thursday: 8am - 6pm
Friday: 8am - 4pm
closed weekends and public holidays

OUT OF HOURS

Please contact:
The animal Emergency Services
(07) 3423 1888 co-located within the same
building at 1 Lexington Road, Underwood. OR
Your local emergency veterinary clinic if you
live far away.