What are cataracts?
The lens is a structure inside the eye which allows your pet to focus on objects. Opacification of the lens is called a “cataract.” A cataract may be present in one or both eyes and will often lead to decreased vision and blindness, as well as risk of severe inflammation within the eye. Cataracts can form due to diabetes, an injury, or disease process within the eye itself. An animal may also be born with a predisposition to developing cataracts.

How are cataracts diagnosed?
Cataracts are diagnosed by examination by a veterinary ophthalmologist, who will use a specialized device to look closely at the lens to determine the stage of the cataract(s). Some animals with a hazy appearing lens actually have nuclear sclerosis, a diagnosis which indicates normal aging changes of the lens and does not usually require surgical treatment. Cataracts can be classified as incipient (very small), immature/incomplete (progressive but not entirely obstructing vision), mature/complete (encompassing the entire lens and causing blindness), and hypermature/resorbing (late-stage of cataracts where the lens begins to degenerate).

What are the treatment options?
With cataracts, there is usually mild to severe leakage of lens proteins into the eye, leading to inflammation called uveitis. Many veterinarians will prescribe an anti-inflammatory medication to decrease the risk of uveitis; this however will not reduce the opacification of the cataract (vision loss will persist). The only treatment to remove the cataract, reduce risk of uveitis, and restore vision is to have cataract surgery (termed a “phacoemulsification”) performed by a veterinary ophthalmologist. The surgery will remove the diseased lens, with an artificial lens placed, if possible.

What does surgery entail?
The actual surgical procedure typically lasts about 2 hours with time before and after dedicated to the initiation of general anesthesia and the wake-up process, respectively. Under general anesthesia, the ophthalmologist will make a small incision into the cornea (the translucent part of the eye surface) prior to removing the abnormal lens material from the eye with microsurgical instruments. Think of it as using a tiny vacuum to clear away the diseased lens. If possible, a new artificial lens will be placed within the eye. Stitches are used to close the cornea following the procedure, and these will dissolve on their own over time.

Pre-surgical testing
To determine if your pet is a good candidate for cataract surgery, the patient must have a full ophthalmic examination performed by a veterinary ophthalmologist. The ophthalmologist will determine if the stage of cataract is appropriate for surgery and if there are any other conditions related to the eye that may increase risks of the procedure. For example, the cornea will be evaluated for ulceration or excessive scarring that may make cataract surgery less worthwhile. The eye will be evaluated for inflammation and attempts will be made to treat any inflammation prior to surgery.

A test called an “Electroretinogram” or “ERG” will be used to determine that the function of the retina is appropriate. Because of the opacity of the lens in cataracts, ophthalmologists are unable to visualize the portion of the eye that lies behind the lens, including the retina. The retina is the part of the eye that transmits signals to the brain to allow an animal to see. An ERG allows the ophthalmologist to determine whether the retina will work appropriately and allow the animal to see following removal of the cataract so that the surgery is worthwhile.

To ensure the animal is an appropriate candidate for surgery, baseline bloodwork will be performed at LSU or at your local veterinarian’s clinic. As cataract surgery requires complete sterility, it is important to ensure your pet has no systemic...
underlying infections that may lead to infection of the surgical site. Ear and dental exams/cleaning will be performed, in addition to a urinalysis. These exams can be performed with your primary veterinarian. In addition, if your pet has an underlying heart condition, additional evaluation by a cardiologist with an echocardiogram will be recommended to ensure the heart is healthy enough for surgery.

If your pet is diabetic, a urinalysis with urine culture is required in addition to the previously listed tests due to predisposition to developing urinary tract infections. A recent (4 weeks prior to surgery) blood glucose curve will also be necessary prior to surgery, performed by your local veterinarian.

Timing
At LSU, the process for cataract surgery takes place over 3 days, following the initial appointment(s) to ensure all preoperative testing has taken place and inflammation in the eyes is minimal. Your pet will have the ERG testing on Day 1. If the animal passes ERG testing, surgery will be planned for the following day. Your pet can either go home after Day 1 and return early in the morning on Day 2, or your pet can stay overnight in the hospital. Your pet will need to be fasted overnight prior to surgery - this means no food after midnight, though they may be given some water. Following surgery, your pet will be closely monitored overnight in the hospital until Day 3. As long as the animal does well following surgery and no major side complications have emerged, your pet will be discharged on Day 3.

Risks
Risks of surgery, in addition to anesthetic complications, include the development of glaucoma (excessive pressure within the eye), uveitis (inflammation within the eye), retinal detachment and corneal ulceration. Because of these risks, multiple recheck evaluations will be scheduled following cataract surgery (listed below). It is important to note that many of these complications cause permanent vision loss and discomfort, which may require additional therapy (medical and surgical) to address.

Aftercare
As important as the surgery itself is the aftercare required for your pet at home. An Elizabethan collar (a firm plastic cone) should be worn at all times for a minimum of 4 weeks following surgery. The animal should be separated from any housemates with whom they may rough-house to avoid catastrophic damage to the surgical site(s). Play should be kept to a minimum for the first 2 weeks to allow the surgical site(s) to heal appropriately- specifically, Tug-of-War, fetch, swimming, etc. should be avoided.

Medications
A major part of the aftercare process is medication administration. Typically, 4 to 6 medications will be given immediately following surgery, with some of these medications being administered up to 6 times daily. Some level of these medications will be needed for life, although the frequency of medications is often reduced over time. Please note that frequencies and amount of medications may vary depending on the case.

Rechecks
Rechecks are essential to monitor for complications following surgery. The typical recheck schedule (without complications) includes recheck evaluations at 1 week, 3 weeks 7 weeks, 2 months, 4 months, 6 months, and every 6 months following surgery. The cost of the first 2 rechecks is included in the surgical estimate you have been provided. Please note that the recheck schedule may vary depending on your pet’s treatment plan.

Typical Outcome of Surgery
Cataract surgery is successful (vision is present) in approximately 85% of dogs which receive the surgery. Most animals will be able to see immediately following the surgery.

Cost of Surgery
Please discuss the cost of surgery with the ophthalmologist during your pet’s appointment.

Summary
While cataract surgery requires important aftercare, the surgery allows the restoration of vision, improves quality of life, and prevents significant complications from progression of the cataract itself. Please ask your ophthalmologist about any additional questions you may have. Thank you for visiting the LSU Veterinary Teaching Hospital’s Ophthalmology Service!

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