

Cataracts and Cataract Surgery in the Dog

Many dogs develop cataracts in their lifetime and many become almost blinded by their cataracts such that their quality of life is affected.

The majority of cataracts can be operated on, giving the dogs their vision back and thereby improving their quality of life. But in some, their cataracts are not suitable for surgery and so the dogs must learn to live with their reduced vision and there are a number of things that the owner can do to make their dog's quality of life better.

The aim of this article is:

1. to explain cataracts and the cataract surgical procedure
2. to clarify the most suitable patient and the most suitable time for cataract surgery and
3. to describe ways to make the quality of life better for the visually impaired/blind dog who cannot undergo cataract surgery.

What is a cataract?

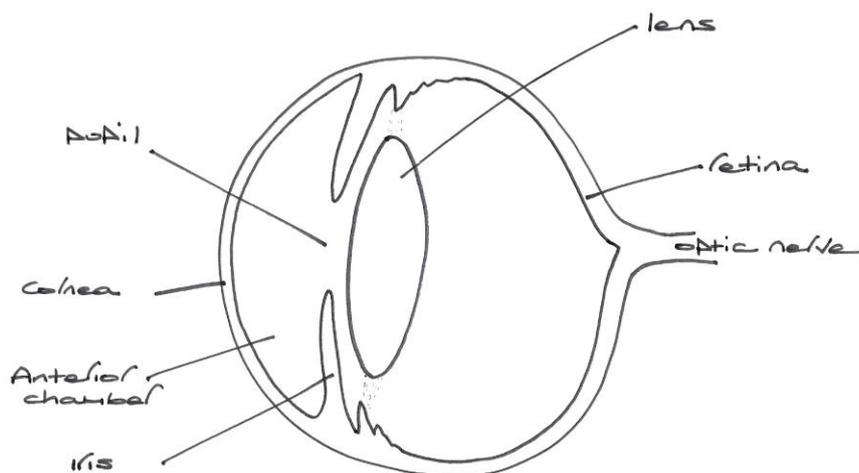
A cataract is a white opacity of the lens through which you cannot see.

Picture of a normal eye and one with a cataract



The lens is the main refracting structure in the eye which focuses incoming light rays on the retina.

Simplified cross section of an eye



In its normal state the lens is transparent and consists predominantly of soluble proteins. With increasing age the solubility of the lens proteins decreases and the lens nucleus becomes denser imparting a bluish/grey appearance to the lens. This age-related change is reported not to affect the dog's vision since it does not impair the passage of light rays. A cataract however does affect the dog's vision because it does impair light rays.

Cataracts can be congenital, inherited, developmental, and secondary to metabolic disease such as diabetes.

Cataracts can be incomplete and not significantly affect vision but, if the cataract becomes complete and fills the lens then the dog will struggle to see clearly.

Cataracts go through stages of development described as immature, mature and hypermature. The more mature the cataract, the greater the impairment of vision.

Some cataracts develop through these stages so quickly, as in diabetes, that many dogs are given little time to adjust to their reduced vision and become seemingly 'depressed' by this dramatic change.

Pictures of dogs with cataracts before and after cataract surgery



Cataract Surgery:

The surgical procedure used today is the same as that used in man where a small handpiece with an ultrasonically vibrating tip is used to break up and soften the cataract which is then aspirated out of the eye, a technique called phacoemulsification.

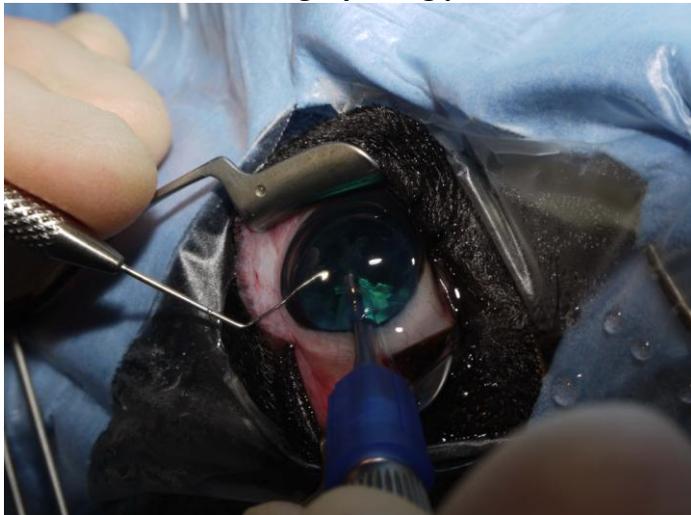
Picture of a phaco handpiece



There is no medical treatment for cataracts.

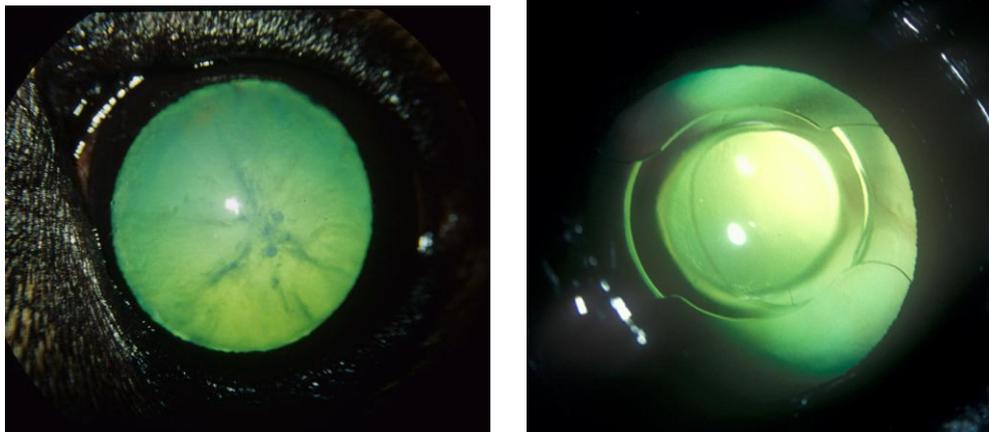
The phacoemulsification surgical procedure has advantages over the old-fashioned manual extraction of cataracts in that the incision wound in the eye is smaller, the surgical time shorter and there is a more complete removal of the lens content, all resulting in a better post-operative result.

Picture of cataract surgery being performed



Cataract surgery in the dog carries a 90-95% success rate these days, returning dogs to their pre-cataract state almost completely especially if synthetic intraocular lenses are implanted at the time of surgery.

Picture of an eye before surgery and after surgery with an IOL inserted



Who is the most ideal patient for cataract surgery?

The most suitable patient is one with a gentle/calm temperament, one who has no other significant eye or health problems and one where the cataracts have only recently developed to completion and maturity. If cataracts are left in eyes for too long, they become increasingly hard and there becomes an increased likelihood that there will be other lens-induced complications in the eye, all of which would render these eyes not so suitable for surgery since there would be an increased risk of post-operative complications.

The dog must be fit enough to undergo this elective surgical procedure hence must be examined thoroughly by a veterinary surgeon prior to being referred to a veterinary ophthalmologist to ensure the dog's suitability.

Pre-anaesthetic blood tests are a normal requirement and, if the dog is diabetic, the patient must be stabilised prior to surgery.

The post-operative management is quite involved and requires lots of care by the owner. The dog must be kept as quiet as is possible for a week or 2 after surgery and all treatments must be administered with care and for some time after surgery.

Intra-operative and post-operative complications can arise but luckily these are fairly infrequent and rarely of any significance but must be understood prior to proceeding with the surgery.

What difference does cataract surgery make?

A huge difference if all goes well, especially in those dogs where the cataract development and hence the onset of blindness was quite rapid. Following successful cataract surgery owners often say things such as 'you have returned a puppy to me' or 'I had forgotten just how naughty my dog could be!' and the overall feeling from owners is that it was well worth all the effort.

Dog before and after cataract surgery



What if my dog cannot have surgery?

Not every dog is suitable for cataract surgery. Your dog may have significant underlying disease which would increase your dog's anaesthetic risk. Your dog's age +/- or temperament may be considered not suitable for surgery (your dog may be considered too old +/- or too excitable). Your dog may have significant other ocular problems and, the cataracts may have been present for too long making them unsuitable for surgery.

Just because your dog cannot undergo surgery does not mean he cannot lead a reasonable life. There are many dogs out there that are blind for a number of reasons yet are still very happy and coping with their blindness.

You can make things easier for your blind dog by simply:

1. keeping the layout of your home and your garden the same
2. keeping to familiar walks
3. using lots of audible cues and toys
4. walking your dog on a harness and lead rather than on a collar and lead since it makes them feel more secure and makes them easier for you to control.
5. getting them a canine friend (if practical), and preferably one of similar size and temperament and with no eye problems who hopefully would become 'their eyes' for them. Speak to your local dog rescue centre.

In conclusion:

If your dog's eyes become opaque and his vision becomes affected then see your own vet for a diagnosis and, if your dog has cataracts then consider your dog for cataract surgery. Don't wait until the cataracts get hard, present them early for evaluation by an ophthalmologist since the early cataract has the better surgical result.

If your dog cannot undergo surgery however, do what you can to make your dog's quality of life better by simple considerations for blindness.