

CATARACTS

About the Diagnosis

Cataracts are an abnormal opacification (clouding) of the lens inside the eye. The lens is a clear structure located behind the iris (the colored part of the eye), and its function is to focus light entering through the pupil into an image that is perceived by the retina in the back of the eye. With different extents of cataract formation, the entire lens may be opaque (cloudy) or just a part of it may be opaque. If more than 30% of the lens is opaque, vision is generally impaired in the affected eye as a result. This does not threaten vision overall if only one eye is affected, but often cataracts develop in both eyes simultaneously, which can compromise sight and even lead to blindness.

Cataracts are common in dogs but rare in cats. Some dog breeds are prone to hereditary cataracts. Breeds that commonly have inherited cataracts that progress to blindness include the miniature poodle, American cocker spaniel, and miniature schnauzer. Golden retrievers, Boston terriers, and Siberian huskies are also likely to have inherited cataracts. The most common cause of cataracts is heredity, where the likelihood of developing cataracts at some point in life is transmitted genetically. Other causes include diseases such as high blood sugar due to diabetes or low blood calcium levels. Cataracts can occur spontaneously (for no known reason) in older animals or can be a result of inflammation of the inside of the eye, called uveitis. Several infectious diseases can cause uveitis. Other causes include toxic substances, radiation, and nutritional deficiencies. Inherited cataracts may be present at birth, appear in a young pet, or not occur until the pet is older.

With cataracts, the normally black pupil looks cloudy or white in bright light. A similar, but less serious condition that resembles cataracts is called nuclear sclerosis. This is a normal, older-age-related haziness of the lens that is often referred to as "cataracts" in everyday terms. Nuclear sclerosis rarely compromises vision, is very common as dogs age, and progresses (worsens) much more slowly than true cataracts. Telling the difference between nuclear sclerosis and true cataracts is important because there is almost never a need to treat nuclear sclerosis, whereas cataracts require a search for a cause (the cataracts may be the first sign of a generalized disease that requires treatment) and may cause blindness. The difference between nuclear sclerosis and true cataracts is determined by a veterinarian during a routine examination of the eyes.

Cataracts can be diagnosed by physical examination; special instruments may be used to determine the exact location of the cataract within the lens, which can help determine the cause of the cataract (and therefore help to make the best treatment and long-term outlook known). If uveitis is also present, further tests will be run to determine if a deep-seated eye infection is causing the uveitis. Routine blood and urine tests may be recommended to evaluate the possibility of diseases that can cause high blood sugar or low blood calcium. If cataract surgery is an option, ultrasound evaluation of the eye, which is a painless procedure that is done awake, may be recommended to look for detached retinas or other eye defects that might be involved with, or masked by, cataracts. Before cataract surgery, a test called electroretinography will be used to evaluate the retina to be sure it is functional; otherwise, correction of the cataract would be of no benefit if some other part of the eye was nonfunctional and vision was not restored despite surgery. Cataract surgery can only restore vision if the other structures in the eye are normal.

Living with the Diagnosis

If surgery is an option for your pet, early treatment is recommended. Surgery is easier and has a higher success rate in the earlier stages. Cataracts that are not removed may eventually cause severe and painful, chronic eye conditions such as uveitis, glaucoma, or retinal detachment. Since the damage caused by these problems often cannot be reversed, cataract surgery should be considered early rather than late. The most important first step is to have confirmation that the cloudiness of the lens of the eye is indeed a cataract and not an "impostor" such as nuclear sclerosis. Veterinary ophthalmologists, whose work is entirely limited to treating animals with eye problems, may be a valuable resource prior to deciding about cataract surgery. They are known as Diplomates of the American College of Veterinary Ophthalmology and can be located in most large city centers in North America. Once cataracts are confirmed, it is important to schedule surgery before complications develop, since these may be irreversible. Cataracts tend to grow larger more quickly in younger dogs than in older dogs.

TREATMENT

The process that leads to cataract formation is irreversible. Therefore, no medication exists that can clear cataracts, and the treatment of choice is removal of the cataract from within the eye with surgery. The outlook for

good vision is excellent after surgical removal of inherited or diabetic cataracts. Treatment and outlook for other types of cataracts depend upon the cause. Surgery can involve removal of the cataract intact or the use of phacoemulsification, a process whereby ultrasonic waves are delivered within the eye to dissolve the cataract-containing lens, and the dissolved fragments are removed. Intraocular lenses, which are synthetic lenses that replace the lens removed with the cataract, can be implanted at the time of cataract removal for better near vision.

DOs

- Use all medications exactly as directed.
- Realize that cataracts may occur for genetic reasons or may be the first sign of a generalized disease ("tip of the iceberg" phenomenon). If you see a cloudiness to the eye that you suspect is a cataract, then a routine veterinary visit is recommended to confirm whether or not a cataract is actually present.
- Pay attention to your pet's ability to see; blindness in dogs and cats may be difficult to detect but usually involves stumbling or bumping into objects when they are in unfamiliar territory.

DON'Ts

- Don't overestimate or underestimate the possibility of cataracts when you notice that the normally black pupil has become grey or milky white. Since there are many different causes for cloudiness in the eye, a veterinary evaluation is necessary to know whether it is a cataract and if the condition is serious enough to warrant specific attention.
- If your pet has cataracts, don't allow him or her to be near high places such as the tops of stairs (use a baby gate if necessary), edges of walls or cliffs, etc. Even a small amount of lost vision may be enough to cause serious injury from a fall that would not have occurred before the cataract existed.

When to Call Your Veterinarian

- If vision seems to be deteriorating, as evidenced by bumping into objects or walls or falling or stumbling in unfamiliar territory.

Signs to Watch For

- Cloudiness or white areas visible in the pupil of the eye.
- Loss of vision.

Routine Follow-Up

- As determined by the type and extent of cataract and whether or not surgery is performed.

Additional Information

- Pets with cataracts that are known or suspected to be inherited should not be bred.