# Ophthalmology Glaucoma



## What is glaucoma?

Glaucoma is a type of eye disease which occurs when the fluid produced inside the eye cannot drain properly from it. This causes a build-up of fluid and pressure within the eye to unhealthy levels. The pressure build up is not only painful but can cause blindness as it leads to damage of the retina which is required for vision.

# What are the different types of glaucoma?

There are many different types of glaucoma, but they can generally be divided into inherited and non-inherited forms.

Inherited (or 'primary') glaucoma occurs in certain predisposed dog breeds as a result of mutations in their DNA which are passed from parent to offspring. For this reasons, certain dog breeds, should be examined or, where possible, have a DNA test before they are used for breeding.

Non-inherited (or 'secondary') glaucoma occurs when other diseases inside the eye lead to a problem with fluid drainage. There are many causes of secondary glaucoma including trauma, inflammation, a complication of cataract surgery and cancers of the eye.

# Identifying glaucoma

Glaucoma may either be gradual or sudden onset. When the signs are gradual (e.g. increased redness and cloudiness of the eye) they are not often picked up by owners until glaucoma is very advanced. Sudden onset glaucoma is easier to spot as the pet becomes suddenly painful and the eye quickly changes appearance and becomes blind. Prolonged increases in eye pressure may lead to enlargement of the eyeball.

## **Diagnosing glaucoma**

Diagnosis of glaucoma requires a complete eye examination and measurement of the eye's pressure with a device called a tonometer. Often, the primary care vet, may need to seek the opinion of a specialist to aid in diagnosis and form the most appropriate treatment plan.



#### **Glaucoma treatment**

Medical and surgical treatments are available for glaucoma but most glaucomas require long-term management. The choice of medical or surgical treatment depends on the type of glaucoma present.

It is important to decrease the pressure within the eye as quickly as possible in order to minimise damage. Drugs that can draw fluid out of the eye and others that decrease production of fluid are often prescribed. After the pressure is lowered, it must be stabilized to prevent future problems.

Dogs with a painful and blind eye as a result of glaucoma may need it to be removed to relieve pain (this procedure is called enucleation).



Here is a photo of a dog's eye with sudden onset glaucoma. The eye has suddenly become painful and blind. The white of the eye has become very red and the cornea very cloudy.

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