



# **EYE PROBLEMS**



# eyes

Eye problems in all animals should be addressed as a priority.

Early examination by us can save corneal scarring, pain and inflammation, vision and even loss of the eye itself.

So if you have any concerns, however mild, please contact us immediately for an appointment.



## Eye Examination

On presentation of an eye problem we need to establish the history of any incident and of the general health of the pet. Some eye conditions are hereditary and so will be seen in some breeds and not others. It is important for us to establish how long the eye condition has been going on for and if there are any compounding factors that would bring us closer to a diagnosis. For example, animals with diabetes can develop cataracts at an early age and so history can give us a clue of an animal drinking and urinating excessively.

The clinical examination of the eyes will look at the following:

- Symmetry
- Menace reflex
- Pupillary light response
- Blindness
- Eyelids upper and lower
- Sclera inflammation or blood vessel injection
- Third eyelid
- Discharges
- Nasolacrimal duct patency



A topical local anaesthetic can be used to examine the surface of the eye and a fluorescent stain applied to check the corneal surface for ulceration. A mydriatic solution can then be applied to dilate the pupil and enable a thorough examination of the anterior chamber, lens and retina be done.

In the following pages, we will outline some of the most common problems of the eye.

## Corneal Ulcers

### **What is a Corneal Ulcer?**

Any break in structural integrity of the cornea can lead to a corneal ulcer. The cornea is like an onion skin – once a small area is damaged it is like peeling off a couple of layers of the onion skin in that particular area.

### **How is it diagnosed?**

A corneal ulcer can be diagnosed by using a fluorescein dye in the eye – either by using a topical local anaesthetic drop then applying the small strip onto the eye surface, or by using a diluted form of the dye dripped onto the cornea.

Areas that do not hold the dye are complete in structure, but if an area or spot develops that holds the dye, it is known as a corneal ulcer. This area has a deficit in the normal corneal membrane and is prone to infection and further ulceration.

### **What are the causes?**

Causes of superficial ulcers are;

- Extra eyelashes or ingrown eyelashes
- Dry eye
- Eyelid masses lifting the eyelid off the cornea
- Foreign objects

### **What is the treatment?**

Small superficial basic corneal ulcers will heal rapidly with the use of an antibiotic ointment and possibly a lubricant or artificial tears.

Chronic superficial ulcers may benefit from surgery in some cases in dogs.

More extensive deep ulcers are going through a process of inflammation and possible infection. We often use an antibiotic ointment or drop and an anti-inflammatory is often given orally or by injection to aid in the recovery of the corneal lesion.

These ulcers can require a Tarsorrhaphy or 3rd eyelid flap, where we surgically close the eyelids for a period of time to help healing occur. The cornea relies on tear production to provide nutrients to the surface. There are no blood vessels to supply these nutrients to the central areas of the cornea. If these were present, the animal would be looking through

blood vessels in its field of vision all the time. So when ulcers are severe, the eyelids being sutured together provides the close apposition of the tears and blood vessels to help heal the ulcer quickly.

### **Important note!**

**It is very important not to apply cortisone drops or ointment to the eye when corneal ulceration is present. The cortisone will slow healing and actually allow the ulcer to further develop.**

Some ulcers are known as melting ulcers and will continue to develop deeper and even take in the Descemet's membrane and cause bulging from the anterior chamber of the eye. Ulcers that do not heal may require a conjunctival graft – where a small amount of conjunctiva is harvested and sutured over the deficit made by the ulcer.

Depending on the severity of the ulcer, you may need to be referred to a specialist ophthalmologist who has the equipment and experience to provide the best care in these situations.



## Entropion

### What is Entropion?

Entropion is a condition in many dogs that occurs when they have excessive amount of skin around their eyes. Breeds affected include Rottweilers, Mastiffs, German Shepherds, Retrievers, Sharpei's, and other similar types.

### What causes it?

The normal anatomy of the eyelids allows them to smoothly close over the cornea of the eye to effectively blink and clear any debris from the eyes, move tears over the cornea and close to protect the corneal surface. When the eyelid rolls in, this is termed entropion. The eyelashes then are rubbing on the corneal surface causing irritation, inflammation and secondary corneal drying out. This problem normally has a genetic basis and as such the only treatment is to change the anatomy of the eyelid.

### What are the signs?

Watery eyes, thick discharge, eyelid swelling, visible 'in rolling' of the upper and lower eyelids, squinting, eye redness.

### How is it treated?

This is done via a surgical procedure to remove some of the excess skin from the eyelid. The eyelid is then corrected so that it smoothly rolls over the cornea. After surgery, the eyelids have small sutures that may need to be removed in 10 days. An Elizabethan collar is normally used to prevent the patient from scratching at the sutures.



## Kerato Conjunctivitis Sicca ( KCS or Dry Eye)

### What is Dry Eye?

A deficiency in the liquid portion of tears.

### What causes it?

Dry eye is caused by a lack of tear production from the inner corner of the eye. There are special glands in the eye that produce the tears. Tears have a cleaning and lubricating function in the eye. If they are not being produced, the corneal surface will dry out and the eye become inflamed and painful. This causes the dog to rub at the eye and can cause it cornea to ulcerate.

### What are the signs?

Dry eye typically presents as a gunked up eye that has a conjunctivitis that is unrelenting despite cleaning the eye out several times a day. We can perform a simple test called a Schirmer Tear test with a strip of blotting paper to determine if your dog has dry eye.

### What is the treatment?

Treating dry eye is typically a life long commitment as the medication does help tear production return but normally not to the full extent needed. Antibiotics may be required if conjunctivitis has set in. Dry eye treatment normally requires the drug cyclosporine, an anti immune drug that comes as an eye ointment.





## Glaucoma



### **What is glaucoma?**

Glaucoma is a build up of pressure in the eye with loss of vision because the iridio-corneal angle has been compromised. Glaucoma can occur in many animals and is often **painful and debilitating**.

### **What Causes it?**

An obstruction in the drainage of fluid from the eye.

### **What are the signs?**

This condition is termed “**blue eye**” because of the increased opacity of the anterior chamber of the eye when the intraocular pressure builds up.

Some breeds are more predisposed to glaucoma :

- Burmese cats
- Cocker Spaniel, Basset hound, Australian Cattle dog, Husky, Poodle and Maltese dogs

### **What is the treatment?**

Treatment involves reducing the inflammation by the use of topical medications. These medications reduce the intraocular pressure.



## **Cataracts**

### **What is a cataract?**

Cataracts form in the lens due to lens fibres becoming rearranged. Light is unable to pass through what was a clear lens and so only a little light hits the retina at the back of the eye and an image is not formed – hence blindness begins.

Cataracts may be rapid or slowly progressive and surgery is now available to restore vision in many cases.

### **What causes it?**

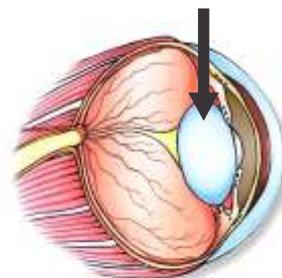
We cannot be 100% certain what causes cataracts but diabetes, inflammation, drugs, injuries and genes may be to blame.

### **What are the signs?**

Most owners notice a deterioration in their pets eyesight.

### **What is the treatment?**

Treatment depends on the severity of your pets loss of vision. Surgery is the only treatment for severe cases.





## Nuclear Sclerosis

This is the gradual grey colour that the hardening of the lens turns as a dog or cat ages. It is NOT a cataract, but it may be difficult to distinguish from a cataract without specialist ophthalmic equipment. A dog will have only slightly reduced vision.

## Night blindness



As pets age they may go through retinal degeneration that commences with the light receptors on the retina. The receptors responsible for vision in low light circumstances are the first to degenerate.

Hence we have the older pets that lose night vision first.

These animals still have great vision in bright light and through the daytime but have difficulty at night and tend to be wanting to stay close to you, and often bark at nothing at night.

Progressive retinal atrophy can be an inherited disease and testing is available to help eliminate carriers of this disease.

## Prolapsed Third Eyelid Gland



Also known as 'Cherry Eye', it is often seen in young growing animals. A prolapse of the third eyelid gland looks like a portion of pink tissue is evident in the corner of

the eye. This prolapse can cause the eyelid not to sit smoothly on the cornea and hence dry out or become irritated.

A discharge may be seen coming from the eye. The third eyelid gland then needs to be replaced back into its original position within the third eyelid (humans do not have a third eyelid). This procedure is done surgically by tucking the gland back under the third eyelid and holding it in position with a suture.

In some breeds the cartilage in the third eyelid causes the lid to buckle and the gland continually prolapses. In these cases, a specialist may be required to surgically remove some cartilage from the third eyelid to make the gland stay in place.



## Medications

**Never** use the medication prescribed for one pet on another pet. It can be very dangerous!

### Applying Ointment

1. Tilt your pet's head so their nose is pointing up.
2. Squeeze a 1/4 inch strip into the eye.
3. Make sure you keep the tube one inch away from the eye itself.

### Applying Drops

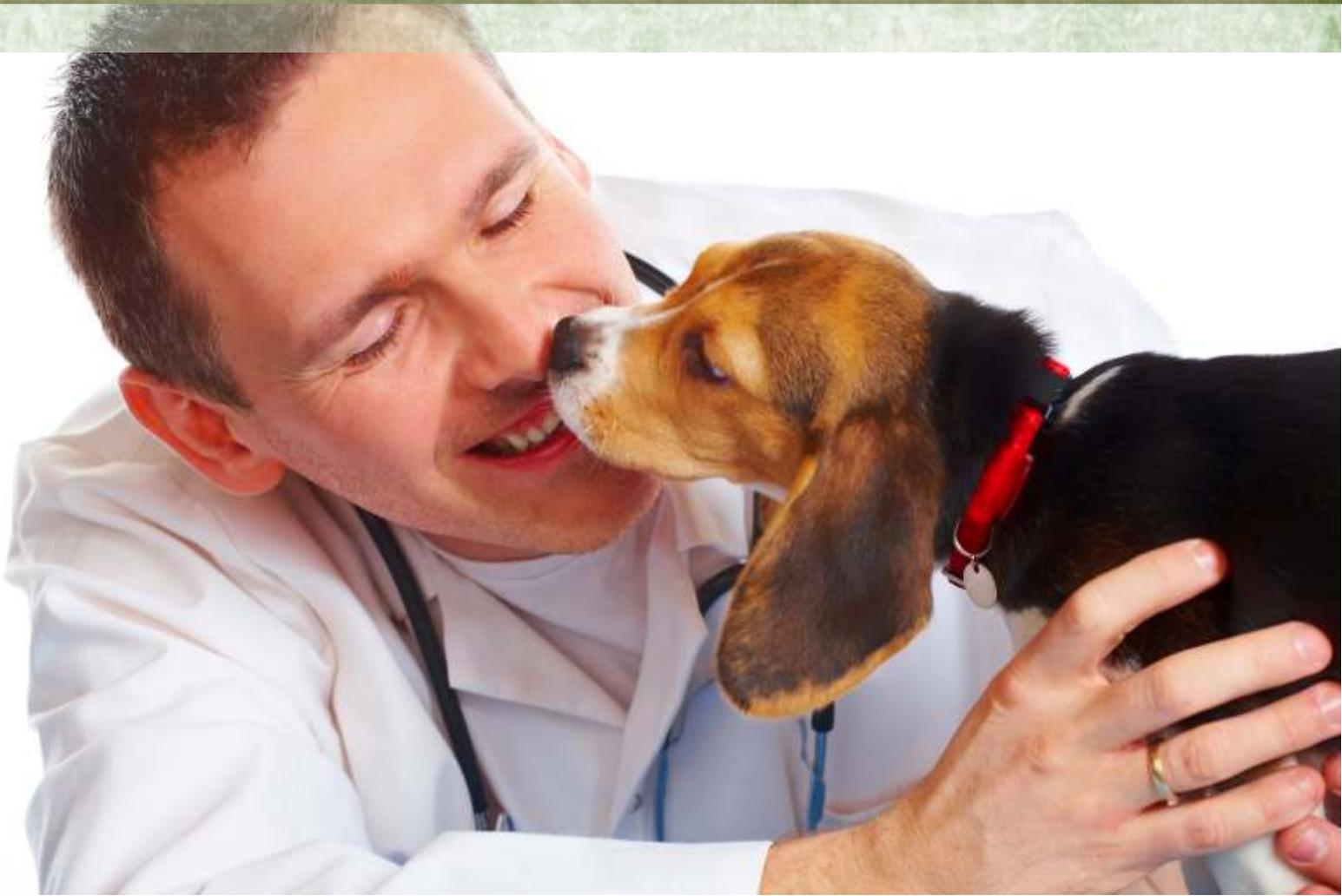
1. Tilt your pet's head so their nose is pointing up.
2. Allow one drop to fall into one eye.
3. Keep the bottle around three inches above the eye itself.
4. Never apply more than the amount directed on the label.

If more than one eye medication is being administered, allow 5 minutes between each medication. It's also best to apply the drops before the ointment.

Make sure you know your pet's right and left. When you are facing your pet, don't forget it's like a mirror image!

It is normal for your pet to rub or paw at their eye after you have administered the medication but if they appear to be in discomfort or there is excessive redness, contact the practice immediately for advice.





## **FOLLOW UP**

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During your visit, you may notice how concerned we are with an eye problem. We may ask you to revisit us several times during the healing phase. This is because eye problems can change rapidly and medications may make the difference between having normal vision or not.

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