

## True Ocular Emergencies

There are four types of **acute onset eye problems** that should be considered true emergencies:

1. Acute onset blindness
2. Acute onset red or cloudy eye
3. Acute onset painful eye (squinting or excessive blinking)
4. Anything dangling from the eye (including the eye itself)

An owner that calls with an animal with one of these problems, the animal should be seen immediately.

### Acute Onset Blindness

There are a number of causes for animal to go suddenly blind. Some of these diseases involve only the eye and others involve other neurologic (i.e., central nervous system) problems. It's important to the eyes be evaluated immediately.

Causes of sudden blindness:

1. **Bilateral retinal detachment**--this is when the retina detaches off the back the eye. It can occur from trauma, from hypertension, or from other systemic diseases such as ehrlichiosis. Retinal detachments can be diagnosed using an indirect ophthalmoscope. Immediate medical treatment may allow the retinal detachment to reattach, thus saving vision.
2. **Sudden acquired retinal degeneration**--this syndrome is often seen in female dogs. Dogs will suddenly go blind, usually associated with episodes of increased thirst and appetite. Initially, the eye looked normal except for being blind and the pupils being dilated. After several weeks, however, the retina becomes degenerated in appearance. There is no treatment for this condition but it needs to be differentiated from other neurologic conditions such as a brain neoplasm. It is recommended that an electroretinogram be performed to ensure that the eye is the problem.
3. **Acute onset glaucoma**--this painful disorder is commonly associated with a cloudy cornea in a dilated pupil. The eyes can also be very red. Diagnosis is made by measuring an elevated intraocular pressure (with a Schiottz tonometer or Tonopen). Immediate treatment (IV mannitol, topical latanoprost, topical Trusopt) by the veterinarian is needed to save vision.
4. **Anterior uveitis**--this is when the internal structures of the eye becomes inflamed. Anterior uveitis causes the eye to be cloudy, painful, and red. There are many different causes for this inflammation including systemic illnesses.
5. **Optic neuritis**--this is where the nerve that goes from the eye to the brain becomes inflamed. It is diagnosed by examining the eye and can be treated effectively in many cases.
6. **Central nervous system disease**--an animal that is blind due to central nervous system disease commonly has other clinical signs. These central signs may consist of a head tilt, seizure activity, or weakness in their limbs.

### Acute Onset Red or Cloudy Eye

There are many different causes for an eye to become red or cloudy. If the eye becomes red acutely, it is an ocular emergency. The most common causes for an acute onset red and cloudy eye are as follows:

1. **Superficial corneal ulcer**--this is when there is a break for wound in the epithelium of the cornea. A corneal ulcer can be diagnosed with a fluorescein dye test. Most corneal ulcers heal well with topical antibiotics.
2. **Conjunctivitis**--this is a common condition where the constant high of a surrounding the eye becomes inflamed. In dogs is usually bacterial in origin and cats it's usually due to herpes virus infection.
3. **Acute onset glaucoma**--see above
4. **Anterior uveitis**--see above

### **Acute Onset Painful Eye**

An eye that is acutely painful should be seen on emergency. Animals with painful eyes keep them tightly closed and frequently have watery or mucopurulent discharge from the eyes. Eyes that are very painful need to be handled delicately. The animal may be reluctant to allow close examination. Many of these animals need to be tranquilized to allow adequate examination of the eye. Causes for an acutely painful eye include:

1. **Superficial corneal ulcer**--see above
2. **Conjunctivitis**--see above
3. **Corneal laceration**--extreme caution needs to be performed when an ocular laceration may be present, especially if it appears that liquid is leaking from the eye. Do not handle the eye until the animal is tranquilizer to prevent further damage to the eye.
4. **Ocular foreign body**--this can cause the eye to be intensely painful, therefore topical anesthetic (such as proparacaine) and possible systemic tranquilization (or general anesthesia) may be needed for thorough examination of the eye.
5. **Acute onset glaucoma**--see above
6. **Anterior uveitis**--see above

### **Things Dangling from the Eye**

These are some of the most disgusting ocular emergencies. Inform the owner not to clean the eye or wipe away any discharge dangling from the eye. Also, tell the owner not to put any fluid or lubricants on the eye. This is to help prevent any further damage or contamination of the eye. If the owner has an Elizabethan collar they can go ahead and the put it on the dog or cat to help prevent trauma. Common ocular "danglers" include:

1. **Traumatic ocular proptosis**--this is when the eye pops out of the orbit. This most commonly occurs after dogfights or hit by car (HBC). The eyelids become trapped behind the globe causing the entire eye to swell. If the eye not replaced very quickly, permanent damage and possibly loss of the eye can occur. General anesthesia is required for replacement of the eye.
2. **Eyelid lacerations**--this is a common condition. Because the eyelids have excellent blood supply, a dangling piece of eyelids should never be trimmed off. Instead, all eyelids pieces should be corrected surgically. This surgical procedure should be performed as soon as practical and to prevent further trauma to the eye and eyelids.
3. **Perforated corneal ulcers and lacerations**--when there is a full thickness hole in the cornea, dark iris tissue will frequently prolapse. Many times other material such as fibrin and lens material may also prolapse from the corneal wound. These full thickness corneal wounds have a poor prognosis, and need to be repaired surgically.

4. **Mucus or purulent discharge**--stringy discharge can often dangle from the eye, especially in animals that have conjunctivitis, corneal ulcers or dry eye.

### **Summary**

In general, when a client calls with an animal that has an acute onset eye problem, it's safest to see the animal on emergency. The most important thing is that the animal is not allowed to cause further damage.

Elizabethan collars help prevent trauma. Delicate handling of the eye and surrounding tissues is important to prevent further damage.