



## Dry Eye

### **Definition:**

is due to the dysfunction of the lacrimal gland that produces the watery layer of the tear film.

This results in drying of the cornea which can lead to permanent damage. Additionally, the mucous layer tries to compensate by increasing production and this can lead to ocular infections.

### **Causes:**

- Immune mediated – own immune system attacking the tear gland (most common cause);
- Breed predilection – Bull Terriers, Cocker Spaniels, English Bulldogs, Cavalier King Charles Spaniels, Lhasa Apsos, Shih Tzus and West Highland Terriers
- Blepharitis – inflammation of the eyelids;
- Canine Distemper Virus;
- Congenital Gland Hypoplasia/aplasia – tear gland not fully formed or formed at all;
- Chronic Conjunctivitis;
- Drug induced – Tribriksen, Salizopyrine;
- Surgical removal of third eyelid gland;
- Facial and trigeminal nerve paralysis;
- Radiotherapy;
- Systemic disease.

### **Clinical Signs:**

- Squinting, thick eye discharge (mucky eyes), red eyes, opacity and or pigmentation of cornea, prominent third eyelid, and in severe cases vision impairment and blindness.

### **Diagnosis**

is based on history, clinical signs and a number of diagnostic tests.

- The most important test is the Schirmer Tear Test ( STT) which measures the watery tear production. It will differentiate a conjunctivitis caused by primary infection to one caused by a dry eye condition.
- A fluorescein stain is also performed to assess if any damage has been caused to the cornea.

### **Treatment:**

- a) Topical Antibiotics – to reduce any overgrowth of bacteria
- b) Topical Anti-inflammatories ( if there are no ulcers) – to reduce any inflammation of the conjunctiva and corneal surfaces and reduce the amount of long term scarring.
- c) The most important medications are those that suppress the immune system, such as Cyclosporin and Tacrolimus. They reduce inflammation and stimulate the pets own lacrimal gland to produce tears.

These medications work in 80-90% of dogs with maximal tear production occurring in 4-6 weeks. Generally these need to be given for life

These cases need rechecks regularly to monitor response and progress. A Schirmer Tear Test needs to be performed 4-6 weeks after the commencement of the treatment. This condition requires life-long medication and monitoring.

**Follow up:**