



## Eye Factsheet

# Dry Eye

### What is dry eye?

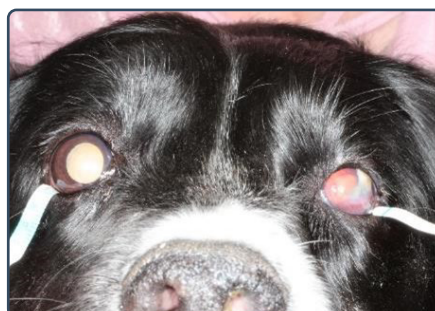
Patients suffering from dry eye lack tears to keep the eyes moist. Tears are essential to keep the cornea (clean window of the eye) healthy and protect it from wind, dust and small foreign bodies. Mild cases of dry eye often present with recurring conjunctivitis. Depending on the severity of the dryness, the cornea may become cloudy or – even worse – may develop spontaneous wounds called ‘ulcers’. This is painful and potentially blinding and so dry eye is a serious condition.



Above left a Westie with a severely dry left eye. Note how you can no longer see the left pupil whilst the right pupil is apparent with a blue shine. In the picture above right, you can see the same eye close-up. There is sticky discharge adherent to the cornea, which is no longer transparent. The conjunctiva is red and swollen.

### How is dry eye diagnosed?

Suspicion about dry eye must be raised in all patients that suffer from recurrent eye infections or unexplained corneal ulcers. To establish whether a patient produces enough tears, a simple test called the ‘Schirmer Tear Test’ (STT) is carried out. For this test, a thin piece of filter paper is placed into the inside of the lower lid. The paper is left in place for 1 minute and then removed and the amount of tears ‘wicked’ up by it are measured. Dogs with normal tear production make over 15 mm of wetting per minute on the Schirmer Tear Test – whereas dogs with dry eye have reduced readings or in severe cases no wetting at all.



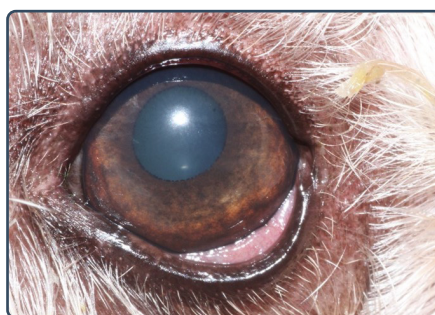
A dog with dry eye during the Schirmer Tear Test in which two thin pieces of paper measure tear production.

## Why has my dog developed dry eye (KCS)?

Most dogs develop dry eye due to a fault with their immune system where the body's own defence response destroys the tear gland. Why it happens is not entirely clear but an inherited component is suspected given that some breeds such as Westie, Pug, Bulldog and Cavalier are frequently affected. Dry eye can also occur from birth (congenital dry eye), as a side effect of some medications or due to nerve damage (please see our information sheet on 'neurogenic dry eye').

## How is dry eye treated?

In most patients with dry eye, medical treatment is started with a drug called 'Optimmune®'. This drug fights the immune-mediated destruction of the tear glands. It can take several weeks to work and the earlier in the course of their dry eye patients are treatment with Optimmune, the more successful the response usually is. Some patients show a poor response to Optimmune and in those cases we will usually change treatment to a drug called 'Tacrolimus'.



Above right eye Westie with dry eye before and above left after treatment with Tacrolimus eye drops.

## Can false tear eye drops replace Optimmune or Tacrolimus?

False tears should be used in addition to Optimmune or Tacrolimus but cannot replace their use. Only drugs like Optimmune or Tacrolimus can correct the immune imbalance and re-start tear production in your dog. It is not humanely possible to apply enough false tears to your pet's eye however hard you try – so re-starting their own tear production is the most important treatment goal.

## What happens when medical treatment does not work?

For patients where medical treatment fails, surgery to move the parotid salivary duct to the eye can help to keep the eyes moist and the patient comfortable. This treatment is not a replacement for medical treatment but a last option only for patients where Optimmune or Tacrolimus have not worked. Please see our separate information sheet on 'surgical treatment of dry eye – Parotid Duct Transposition (PDT)'.

## How long do I have to continue the treatment?

The duration of the treatment differs in each case and is related to the cause of the dry eye. However, most patients with dry eye require treatment for life.

