

DRY EYE

What is Dry Eye?

Dry Eye is also known as keratoconjunctivitis sicca (KCS) and is a condition that develops due to a lack of tear production.

Why are tears important?

Tears provide lubrication and nourishment to the surface of the eye. Without adequate tears the surface of the eye (the cornea) and the pink lining of the eyelids (the conjunctiva) can become inflamed.

Where do tears come from?

Tears are produced by tear glands and there are normally two glands for each eye.

Where do tears go?

Most tears evaporate from the surface of the eye. Excess tears that do not evaporate drain through two small tear ducts at the inner corner of the eyelids. The tears travel through a narrow duct (tube) and are deposited into the nose or throat.

What are the presenting symptoms of dry-eye?

A lack of tears can make the affected eye feel sore and you may notice an increased blink rate. Often a thick green/yellow discharge is seen and the conjunctiva can appear red and swollen. In severe cases vision can be affected and the surface of the eye may appear red and develop a dark mottled pattern. Untreated cases may develop corneal ulceration (see deep corneal ulceration).

How can we test for dry-eye?

We will perform a Schirmer tear test (STT) which involves the placement of a paper strip behind the lower eyelid. The strip is left in place for one minute and the quantity of wetting can be measured along a scale.

Are particular animals at risk of dry-eye?

Certain breeds are more prone to the disease including: Bulldogs, Cavalier King Charles Spaniels, Cocker Spaniels, Yorkshire Terriers and West Highland White Terriers.

What causes dry-eye?

There are a number of potential causal factors including infection, trauma, reaction to medication and problems with the nerve supply to the tear gland. The most common cause of dry-eye is due to destruction of the gland by the animal's own immune system.

What are the treatment options for dry-eye?

The majority of cases can be managed with topical therapy. Drugs are available that prevent the immune-mediated destruction of the tear glands and directly promotes normal tear production. We will normally also prescribe a course of topical anti-inflammatories and occasionally antibiotics if there is a concurrent infection.

What is wrong with artificial tears?

Artificial tears can be very useful in the lubrication of the eye, but they are unable to provide the nutrients carried in natural tears. In the majority of dry-eye cases treatment is aimed at increasing the production of natural tears.

What happens if there is no response to the medicine?

A surgical procedure can be performed to redirect a small quantity of saliva from the mouth onto the surface of the eye. This surgery is called a parotid duct transposition (PDT) and is carried out under a general anaesthetic. The transposed salivary duct is moved from the inside of the cheek towards the eye and small stitches are used to fix the duct in place.

What complications can occur with parotid duct transposition surgery?

Unfortunately saliva does not have the same composition as tears and small crystals can develop on the surface of the eye. Excessive wetting around the eyes may be seen at meal times and some cases may continue to require eye drops.