

DRY EYE (KERTATOCONJUNCTIVIS SICA)

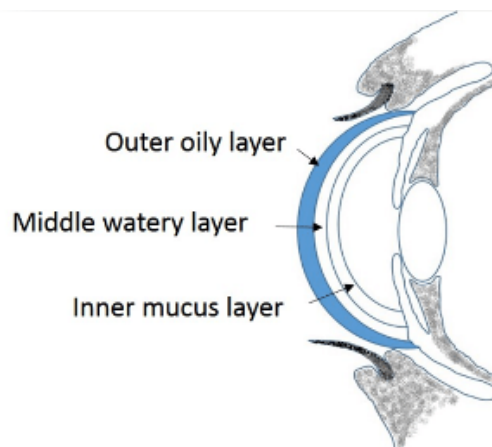


Keratoconjunctivitis/KCS/Dry Eye

Keratoconjunctivitis Sicca (KCS), commonly known as "dry eye," is a condition where a dog's eyes do not produce enough tears to keep the eye's surface properly lubricated. Tears are essential for maintaining eye health, protecting the cornea, and washing away dust and debris. Without adequate tear production, the eyes can become dry, irritated, and prone to infections, inflammation, and damage. In severe cases, left untreated it can lead to blindness.

What causes dry eye?

The tear film is made up of 3 layers – a mucus layer, a watery layer and an outer oily layer. All parts of the tear film are important for maintaining a healthy eye.



Most dry eye is due to a problem with the **watery part** of the tear film. And the majority of these cases are caused by an immune-mediated disorder - meaning that there's a fault in the dog's own immune system, causing it to mistakenly destroy the tear-producing glands, leading to reduced tear production. Some rare cases can be caused by conditions such as hypothyroidism, diabetes, a problem with the nerves that lead to the tear glands (known as 'neurogenic dry eye'), infections (e.g. canine distemper), an injury to the tear gland, or as a side effect of certain medication.

Less commonly, the **mucus or oily portion** of the tear film will be affected. This is often due to conditions affecting the health of the eyelids – e.g. allergic skin disease. These dogs will have adequate watery tear production but the tear film will evaporate or break up quickly, leaving the cornea dry. Factors such as eye conformation also influence the stability of the tear film.

Certain breeds are predisposed to dry eye including the Cocker Spaniel, Shih Tzu, Lhasa Apso, Bulldog, Schnauzer, West Highland White Terrier, Cavalier King Charles Spaniel, Yorkshire Terrier and Pug.

What are symptoms of KCS?

The signs can vary depending on the severity of the condition. Common symptoms include:

- Red, inflamed eyes
- A thick sticky eye discharge – from grey and mucus-like, through to yellow/green
- Painful eyes - squinting or blinking more than usual, or rubbing at the face/eyes
- Cloudy or dull eyes with a lack of ‘shine’
- Frequent eye infections or corneal ulcers
- Severe cases can even present with vision problems due to the extent of scarring



Mild signs



Severe signs

How is KCS diagnosed?

Dry eye is diagnosed using a **Schirmer Tear Test**. This is a painless procedure that involves putting special strips of blotting paper in the lower eyelid, between the eye and the lid. The tears wet the paper strip, which is marked in millimeters along its edge. We measure how far the paper wets in a minute. Normally, the tears wet the paper strip between 15 and 25 mm in a minute.



To assess the quality of the tear film we put a green fluorescein dye in the eye and, under a blue light, look at the stability of the tear film after blinking the eye lids.

How is KCS treated?

The treatment of dry eye aims to stimulate tear production, lubricate the eye to protect the corneal surface, and reduce inflammation and scar tissue.



Ciclosporin ointment (Optimmune): Although damaged tear gland tissue can't be repaired, this immunosuppressant eye ointment can help calm the immune system and prevent any further damage. It can also stimulate the gland to produce more tears. It's usually applied twice daily, can take 2-12 weeks to take effect, and if successful needs to be given for life.

Tacrolimus: A different immunosuppressant medication that we may need to try if ciclosporin doesn't work.

Unfortunately, in advanced cases where the whole gland has already been destroyed, immunosuppressant eye ointment won't work, so other treatments will need to be considered.



Artificial Tears: These eye drops or ointments help lubricate the eyes and provide relief from dryness. Different types are used depending on whether the dog needs the mucus, watery, or oily layer replacing, and how frequently the drops can be applied at home.

Sodium hyaluronate tears are used to replace the watery layer (e.g. Hyabak or Clinitas Soothe)

If the oily or mucus layer are affected then thicker lubricants are needed – these encourage the tears to stay longer on the surface of the eye. (e.g. lubrithal, viscotears, hylonight)

Anti-inflammatory drops: Sometimes needed alongside the above medication, to reduce inflammation or irritation of the eye.

Antibiotic ointment or drops: may also be used if an infection or ulcer is present.

We appreciate that eye drops can sometimes be challenging to administer. Do let us know if you are struggling. There's a link to a useful video below.

[How To Apply Eye Drops To Your Dog: PDSA Petwise Pet Health Hub](#)

Surgical treatment: In very severe cases, which have not responded to medical management, surgery can be performed by a specialist to redirect saliva from the salivary glands into the eye. This is not without complications, so medical treatment will always be attempted first.

Long term outlook

With appropriate treatment and regular eye care, most dogs with KCS can live normal lives with healthy, visual and pain-free eyes. However, KCS is often a chronic condition that requires lifelong medication. If left untreated, it can lead to complications such as corneal ulcers, scarring, or even blindness.

For treatment to be a success it is important that you:

- Administer eye medications consistently and as prescribed by your vet
- Monitor your dog's eyes regularly for any signs of worsening or additional symptoms
- Attend regular follow-up visits to ensure the eyes remain healthy

Further Reading

[Dry Eye Further Information](#)