



## **Keratconjunctivitis sicca AKA Dry Eye**

### **What is keratoconjunctivitis sicca?**

Keratoconjunctivitis sicca, otherwise known as KCS or dry eye, is a condition in which tear production is abnormally low.

### **What causes KCS?**

In the majority of dogs with dry eye, the cause of reduced tear production is immune-mediated inflammation (where the body attacks its own tissues) of the lacrimal glands, which produce the tears. Less commonly, dry eye can result from damage to the nerve supplying the lacrimal gland, or due to treatment with medications that can damage the lacrimal glands.

### **What are the signs of KCS?**

Tears are vital for the normal nourishment and health maintenance of the ocular surface structures, including the conjunctiva (pink tissue around the eye) and cornea (clear surface of the eye). A lack of normal tear production thus leads to inflammation of conjunctiva (conjunctivitis), resulting in the characteristic ropey ocular discharge and redness. Inflammation of the cornea also occurs, resulting in vascularization (blood vessel in-growth) with associated edema (fluid build-up causing a cloudy appearance to the eye), brown pigmentation and scarring. Occasionally, corneal ulcers (abrasions of the surface) may also occur secondary to dry eye.

### **How is KCS treated?**

Treatment for dry eye typically involves lifelong therapy with topical ophthalmic medications including Optimune (or other form of cyclosporine) to provide some lubrication, but more importantly to stimulate the body's own tear production, reduce inflammation and sometimes reduce pigmentation, and artificial tear supplementation to lubricate the ocular surface as needed. Occasionally saline eye wash rinses are employed to help break up and remove the characteristic sticky ocular discharge. Topical ophthalmic antibiotics are also sometimes indicated to address any secondary bacterial infection of the ocular surface and/or manage corneal ulcers, to which dogs with dry eye are prone.

If medical therapy is ineffective at improving tear production, surgery may be indicated. This procedure is called a parotid duct transposition, and involves rerouting the duct from the parotid salivary gland to allow saliva to empty onto the ocular surface.

### **What is the prognosis of KCS?**

Most dogs with dry eye respond well to treatment with tear-stimulating medications such as Optimune. However, therapy usually is necessary for life because the tear production tends to decrease again shortly after discontinuing this medication.