

## OPTIONS FOR CHRONIC, LOW- GRADE TEARING & TEAR-STAINING

Depending on your pet's diagnosis, he or she may benefit from a procedure to correct the underlying cause of chronic tearing.



**No treatment.** Some forms of tear-staining are purely cosmetic and do not necessarily require specific treatment.



**Long-term therapy.** Use of an ocular lubricant to minimize contact and irritation of hairs on the surface of the eye may decrease the secondary or reflex increase in tearing and corneal scarring that can result over time.



**Cryotherapy.** When used to freeze the hair follicles, this procedure will allow the abnormal hairs contacting the ocular surface to be plucked, helping to prevent them from returning.



**Surgery.** Surgical procedures to alter the shape and conformation of the eyelids are other options. These could involve a medial canthoplasty (most commonly), entropion surgery, opening of the nasolacrimal ducts, and/or removal of a problematic nasal fold, among others. In more severe cases, surgery is often the most successful treatment option as it more permanently addresses the underlying problem.

## OVER-THE-COUNTER PRODUCTS

There are many over-the-counter preparations for tear-staining, including pads, wipes, shampoos, and tetracycline-containing chews and supplements. However, none of these preparations address the underlying cause of the tearing and tear-staining. Some can be effective in the short-term, but generally require lifelong therapy to be effective.

**Note:** Every case of tearing and tear-staining may have slightly different causes and therefore different ideal treatment plans.

## ANIMAL VISION CENTER of VIRGINIA

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Monday, Wednesday, Friday 9:00 a.m. - 5:00 p.m.

Tuesday, Thursday 9:00 a.m. - 6:30 p.m.

One Saturday a Month 11:00 a.m. - 2:00 p.m.

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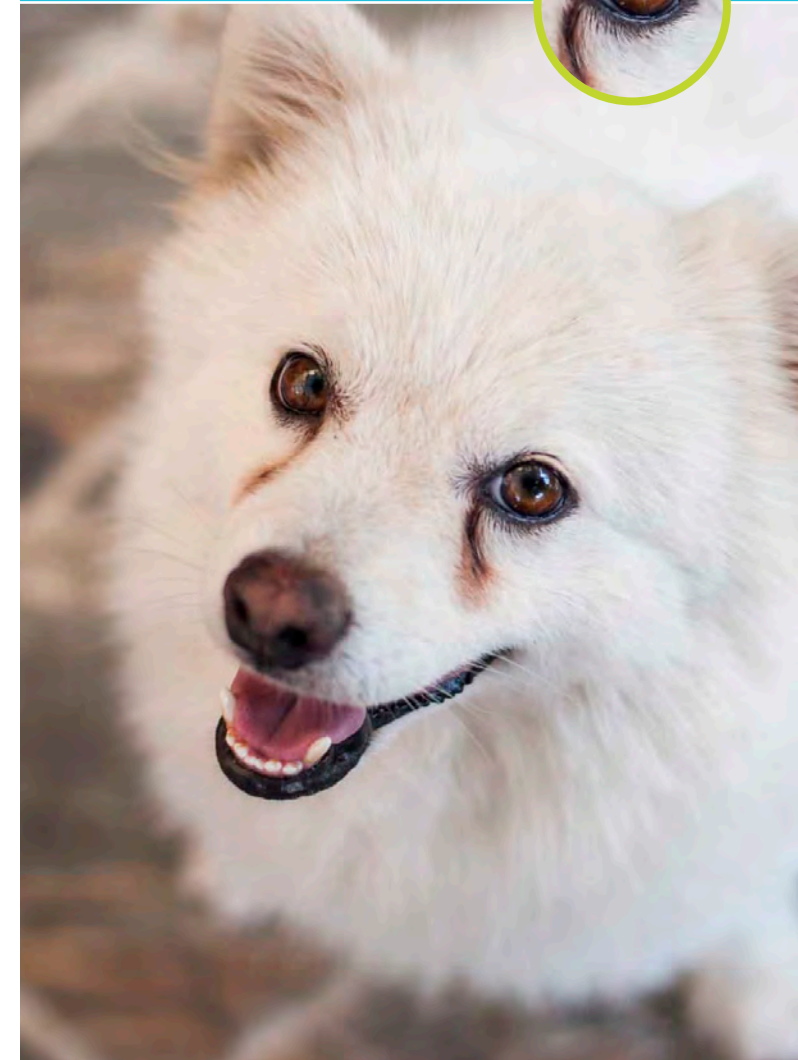
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# TEARING & TEAR-STAINING TREATMENT



 **ANIMAL  
VISION  
CENTER  
of VIRGINIA**

*Providing quality  
ophthalmic care  
for animals of all  
shapes and sizes  
so they can see a  
better life*

## ABOUT TEARING & TEAR-STAINING

Tearing is due to an overflow of tears, which can result in staining under and around the eyes. In addition to visible tears, your pet may show signs of squinting, redness or irritation. There are many problems that can cause tearing and tear-staining of the face. Some of the contributing factors are due to eyelid conformation, but tearing can also indicate more serious ocular disease. Always ask your family veterinarian or veterinary ophthalmologist for an evaluation if your pet experiences tearing problems so he or she can be examined thoroughly.

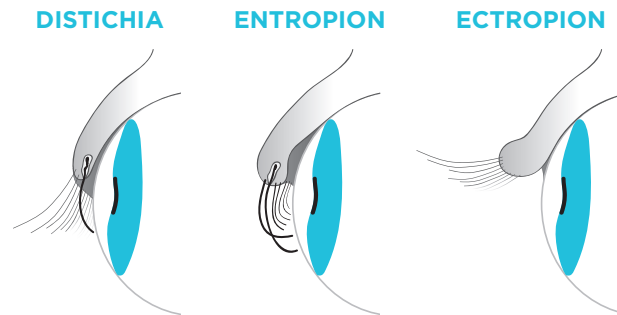


While this brochure primarily addresses the causes of chronic tearing, it's important to know that a sudden increase in tearing can indicate a more significant and vision-threatening underlying disease, such as a corneal ulcer, glaucoma or uveitis (inflammation within the eye). If you notice an abrupt change in your pet's tearing, notify your family veterinarian or a veterinary ophthalmologist immediately.

## EYELID FUNCTION AND ANATOMY

The shape and function of the eyelids, and the relationship of the eyelids to the ocular surface, play a large role in whether a pet develops a problem with chronic tearing.

**Eyelid function** is three-fold. It protects the surface of the eye from harmful UV radiation; keeps the ocular surface from drying out through blinking and the distribution of tears; and removes foreign debris from the ocular surface. Over the years, canine breeding programs have both intentionally and inadvertently selected for eyelid conformational changes that differ from the ancestral or wolf phenotype of dogs. Just look around, and you will see the dramatic difference in the appearance of the eyes across various canine breeds.



**COMMON CAUSES OF TEARING: DISTICHIA (ABNORMAL EYELID HAIR), ENTROPION (ROLLING IN OF EYELID MARGIN) AND ECTROPION (ROLLING OUT OF EYELID).**

**Eyelash function** protects the eyes from small particles, such as sand, dust and debris, from gaining access to the ocular surface. Function can become problematic, however, when there are extra hairs or lashes growing in the wrong location (distichia, ectopic cilia), or when the eyelid does not rest properly on the ocular surface and instead rolls inward (entropion) or outward (ectropion) to allow the hairs to rub directly on the cornea. This leads to chronic irritation and reflex tearing.

## WHY DOES MY PET HAVE CHRONIC TEARING?

While each case of tearing should be evaluated on an individual basis to determine the specific underlying cause and degree of concern, certain breeds are predisposed to tearing and tear-staining based on the relationship of the eyelids to the ocular surface. Check your pet against the following breeds to learn more:

**Dolichocephalic or long-nosed breeds** (Labradors, Shepherds, Huskies, Retrievers, etc.) tend to have a "well-fitting" globe to eyelid conformation similar to those of their wolf ancestors, and generally have minimal problems with tearing.

**Brachycephalic or short-nosed breeds** (Pugs, Shih tzus, Bulldogs, Llasa apsos, Cavalier King Charles spaniels, etc.) often have very large eyelid openings (euryblepharon) and shallow orbits. These features create a large/round-eyed appearance, resulting in excessive exposure of the ocular surface and decreased complete blinking (lagophthalmos). When combined with haired skin folds near the eye (nasal folds, brow folds) and/or poor tear quality, this can result in devastating damage to the eye and the potential for discomfort and blindness through the development of corneal ulcers and excessive scarring and pigmentation of the ocular surface.

**Toy breeds** (Toy Poodle, Maltese, Havanese, Yorkie, Bichon, etc.) frequently have smaller, very tightly-fitting eyelids that do not allow normal access to the tear drainage system. Additionally, there is often hair growth on the lacrimal caruncle, a small bit of tissue on inside corner of the eye that allows tears to wick down onto the face from the inside corner of the eye.

**Giant and hound breeds** (Mastiffs, Newfoundlands, Great Danes, Bloodhounds, Basset hounds, etc.) are prone to have large, floppy eyelids that are not functional in their ability to distribute tears normally on the ocular surface and often have regions that roll inward or outward (entropion/ectropion) resulting in tears spilling onto the face.

